Village of PEMBERTON

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Village of Pemberton Water System

Annual Report - 2023

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. Public feedback and comments are always welcomed and should be directed to Village staff or Vancouver Coastal Health (Squamish) officials.

Consumption (cubic meters/day)

Daily flow is recorded at the Wellhouse located in Pioneer Park. Table 1 displays the maximum, minimum, average, and total water flows for 2023 and includes the previous two years for comparison. The volumes have been consistent over the past three years. Variations can be attributed to population growth, climatic factors, conservation efforts and leak detection and repairs. For daily results, please refer to **Appendix I.**

Table 1 - Overall Water Consumption Summary

	2021 Consumption	2022 Consumption	2023 Consumption
Average Flow/day:	1,915 m^3	2,055 m^3	2,052 m^3
High Flow/day:	4,264 m^3 *(August 13, 2021)*	4,295 m^3 *(July 28, 2022)*	4,034 m^3 *(July 22, 2023)*
Low Flow/day:	843 m^3 *(December 4, 2021)*	1129 m^3 *(December 9, 2022)*	977 m^3 *(November 28, 2023)*
Total Annual	700,987 m^3	750,002 m^3	749,115 m^3

Chlorination

Chlorination 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 points ensure consistent dosing. Daily readings of the previous 24-hour minimum residuals are recorded. The annual numbers are shown in Table 2.

Table 2 - 2023 Chlorine Residual Summary

	Residual (mg/L)
Average:	0.29
High:	0.43
Low:	0.18

To ensure that target chlorine residuals are achieved within the distribution system, the Village also carries out manual sampling at 7 sites throughout the distribution system each week.

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

Water Chemistry:

The annual Total Metals, Volatile Organic Compounds, and Trihalomethane sampling was conducted on January 18, 2023. Samples were taken from various key locations including production Wells #2 & #3, Pemberton Farm Rd. Sample Station, Ridge Booster Pump and Re-chlorination Station, and the Industrial Park Sample Station. The test results indicate that all test parameters are within Health Canada Maximum Acceptable Concentration (MAC) limits. There has been a noted gradual increase in Manganese levels observed in both Wells 2 and 3 over regular operational testing, occasionally surpassing the aesthetic objective (AO) of 0.02 mg/L (20 µg/L). The average Manganese for Well 2 and 3 are 88.4 µg/L and 47.5 µg/L respectively over the 11 samples collected in 2023. Consequently, the village has initiated plans for Well redevelopment on both Well 2 & 3 in 2024, aimed at lowering the concentrations of manganese and iron in the water supply in the short term. Further, the Village completed a water treatment preliminary investigation in 2021 and will be continuing with preliminary designs for a new water treatment in 2024, subject to grant funding, to address the elevated manganese levels. For full water quality test results from the year 2023, please refer **Appendix II**.

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. A water conditioning plant was designed and constructed in 2016 – 2017 and utilizes Sodium Carbonate (Soda Ash) to increase the pH and Alkalinity of Pemberton's well water, prior to distribution. In October 2017, the Village established a target pH of 7 and an (alkalinity) between 40 and 80mg/L as measured as CaCO3

(Calcium Carbonate). In addition to the automated control system, water samples are tested weekly from 7 sample stations throughout the distribution system, and pH and alkalinity are recorded. For results, please refer to **Appendix III**.

Flush Message

In 2015 Vancouver Coastal Health Authority requested that the following message be communicated to residents:

Anytime the water in a particular faucet has not been used for six hours or longer, "flush" your cold-water pipes by running the water until cold and you notice a change in temperature. (This could take as little as five to thirty seconds if there has been recent heavy water use such as showering or toilet flushing. Otherwise, it could take two minutes or longer.) The more time water has been sitting in your home's pipes, the more lead it may contain. Use only water from the cold-tap for drinking, cooking, and especially making baby formula. Hot water is likely to contain higher levels of lead. The two actions recommended above are very important to the health of your family. They will probably be effective in reducing lead levels because most of the lead in household water usually comes from the plumbing in your house, not from the local water supply. Conserving water is still important. Rather than just running the water down the drain you could use the water for things such as watering your plants (Zubel,2014). If residents have any questions, they are encouraged to contact the Vancouver Coastal Health Authorities Drinking Water Officer at 604-892-2293.

Cross Connection Control:

To maintain safe drinking water and remain in compliance with the Vancouver Coastal Health Authority (VCH), the Village of Pemberton has begun a utility-wide Cross Connection Control / Backflow Prevention Program. A cross connection is any actual or potential connection between drinking water and a non-potable substance (contaminant). Backflow is the reverse flow from normal within a piping system. When a cross connection and backflow are combined, often the result is a contaminant entering our drinking water.

In 2018, the Cross Connection Control Bylaw was passed by council and an initial assessment and database was completed for Village infrastructure. The Cross Connection Control program is ongoing.

Bacteriological Analysis:

Water samples are collected and submitted weekly to the laboratory at Vancouver Coastal Health for Bacteriological analysis. These samples are taken directly from both active sources (Well #2 and #3), as well as the following locations:

- Oak St
- Village Office
- Health Centre
- Treatment Plant
- Ridge Pump Station
- Industrial Park (Mount Currie water source)
- Pemberton Meadows Rd.
- Pemberton Farm Rd (West)

All results for the 2023 period were negative for Escherichia coli.

The individual results are on file at Vancouver Coastal Health (Squamish) and the Village Office, and are posted regularly online at:
www.healthspace.ca/Clients/VCHA/CoastGaribaldi/CoastGaribaldi_Website.nsf

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

Appendix I

2023 Daily Total Consumption
and Chlorine Residual

APPENDIX I - 2023 Daily Total Consumption and Chlorine Residual

Daily Total Consumption and Chlorine Residual

2020			2021		2022		2023	
Date	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2
	m3	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)
January								
1	1,313	0.3	1317	0.14	1303	0.30	1576	0.28
2	1,238	0.34	1286	0.13	1285	0.30	1571	0.31
3	1,194	0.34	1266	0.15	1199	0.31	1556	0.31
4	1,321	0.3	1433	0.16	1230	0.30	1515	0.30
5	1,287	0.3	2470	0.18	1149	0.31	1522	0.30
6	1,297	0.3	1198	0.16	1281	0.30	1493	0.34
7	1,139	0.3	2497	0.22	1174	0.30	1537	0.29
8	1,238	0.3	1698	0.24	1346	0.30	1537	0.25
9	1,241	0.31	1276	0.25	1286	0.24	1393	0.23
10	1,121	0.33	1300	0.27	1310	0.18	1449	0.21
11	1,249	0.33	1087	0.26	1180	0.20	1340	0.22
12	1,263	0.31	1265	0.26	1192	0.24	1547	0.27
13	1,142	0.32	1245	0.26	1243	0.28	1406	0.29
14	1,365	0.32	1264	0.28	1087	0.34	1571	0.27
15	1,331	0.32	1194	0.28	1435	0.35	1365	0.26
16	1,287	0.32	1172	0.29	1664	0.34	1580	0.26
17	1,280	0.32	1238	0.27	1697	0.34	1422	0.32
18	1,295	0.32	1221	0.26	1629	0.33	1385	0.29
19	1,306	0.32	1067	0.29	1637	0.35	1532	0.31
20	1,336	0.32	1245	0.29	1607	0.34	1382	0.29
21	1,316	0.32	1251	0.27	1573	0.36	1445	0.26
22	1,202	0.24	1121	0.27	1640	0.34	1422	0.26
23	1,342	0.26	1143	0.25	1657	0.35	1464	0.25
24	1,198	0.29	1150	0.24	1706	0.36	1359	0.25
25	1,211	0.29	1231	0.24	1670	0.36	1381	0.23
26	1,308	0.29	1250	0.25	1673	0.31	1573	0.22
27	1,325	0.29	1239	0.24	1725	0.33	1454	0.24
28	1,337	0.35	1195	0.22	1662	0.33	1540	0.25
29	1,257	0.29	1211	0.27	1644	0.34	1397	0.28
30	1,236	0.29	1263	0.22	1626	0.33	1411	0.29
31	1,308	0.31	1181	0.22	1661	0.34	1567	0.31
Monthly Total	39,284		40,974		45,172	0.31	45,694	0.27

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Daily Total Consumption and Chlorine Residual

2020			2021		2022		2023	
Date	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2
	m3	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)
February								
1	1,319	0.31	1091	0.22	1651	0.33	1368	0.33
2	1,291	0.31	1149	0.21	1608	0.29	1533	0.32
3	1,292	0.37	1093	0.19	1584	0.31	1402	0.33
4	1,270	0.37	1050	0.19	1597	0.33	1377	0.33
5	1,193	0.34	1280	0.20	1701	0.32	1542	0.33
6	1,220	0.32	1208	0.21	1670	0.31	1429	0.32
7	1,287	0.35	1354	0.22	1697	0.31	1492	0.32
8	1,280	0.35	1310	0.24	1603	0.31	1382	0.31
9	1,284	0.35	1290	0.24	1673	0.30	1577	0.32
10	1,310	0.37	1225	0.23	1589	0.33	1503	0.32
11	1,312	0.37	1372	0.26	1653	0.31	1552	0.32
12	1,271	0.37	1547	0.24	1677	0.32	1483	0.32
13	1,517	0.35	1511	0.28	1650	0.32	1585	0.32
14	1,201	0.3	1704	0.27	1568	0.31	1410	0.31
15	1,254	0.29	1468	0.27	1744	0.30	1457	0.30
16	1,299	0.29	1619	0.29	1516	0.30	1591	0.27
17	1,308	0.29	1592	0.29	1690	0.29	1543	0.27
18	1,301	0.29	1410	0.29	1542	0.29	1560	0.28
19	1,319	0.29	1336	0.32	1626	0.30	1420	0.26
20	1,118	0.29	1436	0.30	1700	0.31	1606	0.26
21	1,272	0.28	1436	0.30	1678	0.31	1521	0.25
22	1,328	0.28	1502	0.29	1809	0.31	1640	0.24
23	1,164	0.28	1458	0.27	1678	0.28	1645	0.22
24	1,230	0.31	1685	0.30	1681	0.29	1508	0.22
25	1,253	0.32	1378	0.33	1667	0.29	1571	0.23
26	1,124	0.33	1889	0.34	1782	0.29	1583	0.23
27	1,132	0.3	1450	0.35	1656	0.30	1425	0.32
28	1,074	0.29	1309	0.33	1652	0.31	1415	0.35
29	1,237	0.29						
Monthly Total	36,457		37,792		46,343	0.31	42,118	0.29

APPENDIX I - 2023 Daily Total Consumption and Chlorine Residual

Daily Total Consumption and Chlorine Residual

2020			2021		2022		2023	
Date	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2
	m3	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)
March								
1	1,129	0.29	965	0.32	1730	0.32	1388	0.40
2	1,235	0.28	1373	0.34	1712	0.26	1442	0.38
3	1,089	0.29	1730	0.35	1632	0.37	1384	0.37
4	1,241	0.28	1483	0.32	1668	0.33	1414	0.42
5	1,285	0.29	1384	0.33	1673	0.37	1460	0.43
6	1,312	0.29	1259	0.27	1698	0.47	1432	0.40
7	1,100	0.29	1172	0.28	1609	0.48	1345	0.39
8	1,271	0.29	1284	0.27	1629	0.29	1489	0.38
9	1,287	0.29	1285	0.27	1132	0.28	1387	0.35
10	1,137	0.27	1136	0.26	1611	0.27	1325	0.37
11	1,200	0.27	1278	0.27	1615	0.33	1540	0.40
12	1,195	0.27	1212	0.31	1597	0.33	1339	0.38
13	1,284	0.27	1233	0.32	1941	0.32	1449	0.38
14	1,207	0.27	1262	0.35	1330	0.30	1363	0.38
15	1,348	0.28	1327	0.33	1579	0.35	1291	0.34
16	1,308	0.27	1180	0.37	1677	0.36	1299	0.31
17	1,212	0.27	1387	0.37	1554	0.36	1419	0.29
18	1,318	0.27	1368	0.38	1492	0.36	1038	0.27
19	1,174	0.28	1336	0.33	1648	0.37	1817	0.19
20	1,291	0.3	1284	0.35	1451	0.40	1344	0.23
21	1,327	0.3	1177	0.35	1655	0.39	1378	0.29
22	1,143	0.3	1255	0.34	2075	0.33	1341	0.31
23	1,314	0.3	1300	0.35	1522	0.32	1412	0.30
24	1,161	0.26	1274	0.33	1653	0.33	1395	0.32
25	1,349	0.26	1340	0.33	1652	0.34	1331	0.33
26	1,234	0.26	1482	0.33	1469	0.32	1378	0.31
27	1,243	0.27	1302	0.31	1629	0.34	1496	0.30
28	1,300	0.27	1227	0.25	1761	0.35	1283	0.35
29	1,315	0.27	1317	0.31	1651	0.33	1420	0.37
30	1,242	0.27	1235	0.31	1921	0.34	1341	0.34
31	1,344	0.29	1232	0.29	1581	0.35	1287	0.33
Monthly Total	38,593		40,078		50,547	0.34	43,028	0.34

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Daily Total Consumption and Chlorine Residual

2020			2021		2022		2023	
Date	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2
	m3	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)
April								
1	1,330	0.28	1202	0.32	1962	0.36	1301	0.35
2	1,155	0.25	1338	0.32	1761	0.36	1425	0.34
3	1,297	0.26	1342	0.31	1672	0.36	1425	0.34
4	1,307	0.26	1318	0.30	1687	0.37	1526	0.34
5	1,131	0.26	1320	0.29	1680	0.37	1728	0.34
6	1,301	0.26	1374	0.32	1693	0.36	1539	0.35
7	1,141	0.28	1280	0.29	1929	0.36	1419	0.35
8	1,381	0.28	1311	0.28	1905	0.36	1364	0.35
9	1,339	0.3	1275	0.28	1976	0.35	1339	0.35
10	1,272	0.3	1502	0.24	1612	0.34	1353	0.36
11	1,351	0.3	1342	0.28	1507	0.34	1388	0.36
12	1,417	0.3	1384	0.26	2159	0.33	1474	0.35
13	1,398	0.3	1249	0.23	1811	0.32	1348	0.35
14	1,430	0.34	1477	0.25	1688	0.31	1234	0.35
15	1,420	0.34	1340	0.22	1595	0.32	1317	0.37
16	1,249	0.34	1483	0.36	1616	0.31	1454	0.35
17	1,357	0.34	1508	0.33	1631	0.31	1268	0.35
18	1,787	0.34	1416	0.32	1616	0.30	1253	0.36
19	1,506	0.34	1742	0.31	1664	0.31	1322	0.36
20	1,647	0.34	1598	0.31	1701	0.30	1157	0.36
21	1,756	0.31	1569	0.31	1799	0.33	1269	0.35
22	1,621	0.31	1674	0.30	1768	0.33	1340	0.35
23	1,560	0.31	1671	0.31	1782	0.33	1158	0.35
24	1,554	0.31	1588	0.31	1674	0.35	1344	0.35
25	2,117	0.28	1602	0.31	1891	0.33	1222	0.35
26	1,840	0.28	1677	0.32	1692	0.34	1406	0.35
27	1,846	0.3	1731	0.32	1790	0.33	1554	0.36
28	1,561	0.32	1822	0.33	1872	0.33	1601	0.38
29	1,685	0.3	1589	0.32	1976	0.35	1716	0.39
30	1,580	0.29	1648	0.33	1888	0.35	1830	0.37
Monthly Total	44,335		44,374		52,994	0.34	42,074	0.35

APPENDIX I - 2023 Daily Total Consumption and Chlorine Residual

Daily Total Consumption and Chlorine Residual

2020			2021		2022		2023	
Date	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2
	m3	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)
May								
1	1,541	0.25	1764	0.32	1944	0.37	1949	0.36
2	1,812	0.25	2008	0.33	2108	0.38	1742	0.37
3	1,623	0.25	1922	0.32	2068	0.33	1964	0.35
4	1,571	0.25	1907	0.34	1931	0.33	1955	0.35
5	1,529	0.29	2191	0.35	1969	0.32	2340	0.35
6	1,956	0.29	1976	0.34	1769	0.33	2151	0.35
7	2,018	0.28	1991	0.27	2360	0.33	1791	0.35
8	1,973	0.27	2269	0.26	2098	0.32	1942	0.36
9	2,275	0.25	1959	0.25	2037	0.33	1995	0.32
10	2,441	0.28	2370	0.26	1748	0.33	2221	0.33
11	2,493	0.28	2237	0.27	2031	0.31	2576	0.34
12	2,409	0.28	2398	0.28	2013	0.31	2184	0.34
13	2,527	0.3	2078	0.28	1884	0.32	2467	0.34
14	2,368	0.35	2444	0.29	1772	0.31	2505	0.33
15	2,470	0.33	2406	0.30	1683	0.31	2984	0.33
16	2,511	0.4	2540	0.29	1961	0.32	2870	0.34
17	2,365	0.25	2778	0.29	1594	0.31	3012	0.35
18	2,343	0.22	2102	0.30	1583	0.31	3243	0.35
19	2,510	0.25	2087	0.29	1615	0.31	3019	0.34
20	2,795	0.33	2005	0.28	1573	0.33	3241	0.37
21	2,452	0.28	2270	0.28	1719	0.32	3387	0.34
22	2,245	0.28	2610	0.28	1750	0.32	3249	0.35
23	2,344	0.27	2682	0.29	2006	0.32	2830	0.36
24	2,440	0.27	2547	0.30	2136	0.34	2531	0.38
25	2,548	0.27	2579	0.29	1900	0.34	2721	0.34
26	2,392	0.27	2588	0.31	1868	0.32	3072	0.34
27	2,573	0.27	2819	0.25	1855	0.32	3309	0.37
28	2,806	0.32	2291	0.26	1722	0.31	3126	0.30
29	2,841	0.35	2162	0.26	1881	0.31	3509	0.28
30	2,911	0.36	2644	0.27	2190	0.31	3349	0.31
31	2,664	0.33	2711	0.29	2018	0.31	2987	0.31
Monthly Total	71,745		71,333		58,787	0.32	82,221	0.34

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Daily Total Consumption and Chlorine Residual

2020			2021		2022		2023	
Date	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2
	m3	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)
June								
1	2,254	0.44	1743	0.29	1944	0.30	2185	0.33
2	2,431	0.36	3183	0.29	2135	0.31	2350	0.34
3	2,376	0.36	3963	0.14	2229	0.33	3212	0.36
4	2,352	0.39	3043	0.26	2008	0.33	3291	0.38
5	2,440	0.3	2602	0.27	2000	0.32	3466	0.40
6	2,163	0.31	2628	0.28	2191	0.31	3370	0.40
7	2,962	0.34	2444	0.27	2019	0.31	3581	0.25
8	2,898	0.34	2474	0.27	2233	0.32	3661	0.40
9	2,483	0.34	2483	0.28	2084	0.33	3759	0.39
10	2,452	0.34	2464	0.29	2166	0.32	3319	0.39
11	2,472	0.35	2463	0.30	1988	0.30	2889	0.36
12	2,364	0.35	2603	0.32	2103	0.32	3277	0.33
13	2,127	0.35	2589	0.33	2636	0.33	3449	0.32
14	2,288	0.5	2284	0.32	2314	0.33	3166	0.30
15	2,388	0.5	2036	0.32	2344	0.32	2627	0.30
16	2,328	0.32	2135	0.33	2300	0.31	2921	0.30
17	2,574	0.27	2237	0.31	2319	0.30	2754	0.32
18	3,096	0.34	2979	0.33	2271	0.29	2827	0.30
19	2,990	0.36	2803	0.33	2149	0.27	2805	0.30
20	3,220	0.37	2741	0.34	2314	0.27	2605	0.30
21	2,573	0.35	3006	0.32	2401	0.35	2319	0.27
22	2,879	0.3	3464	0.29	2132	0.37	2436	0.30
23	2,720	0.37	3441	0.33	2098	0.34	2446	0.31
24	2,944	0.37	3825	0.33	2673	0.37	3100	0.26
25	2,323	0.35	3543	0.31	2868	0.37	2671	0.26
26	2,646	0.3	3603	0.32	2898	0.36	2890	0.31
27	2,836	0.32	3633	0.34	3393	0.37	3177	0.34
28	2,650	0.32	3846	0.28	3094	0.37	3610	0.35
29	2,518	0.32	4246	0.28	2655	0.35	4018	0.34
30	2,700	0.31	3911	0.26	2679	0.33	3840	0.28
Monthly Total	77,450		88,414		70,638	0.33	92,021	0.33

APPENDIX I - 2023 Daily Total Consumption and Chlorine Residual

Daily Total Consumption and Chlorine Residual

2020			2021		2022		2023	
Date	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2
	m3	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)
July								
1	2,254	0.31	4253	0.40	3066	0.35	3736	0.36
2	2,402	0.31	4208	0.40	3135	0.34	3592	0.35
3	2,200	0.31	3611	0.37	3007	0.30	3705	0.24
4	2,262	0.31	3629	0.39	2794	0.31	3736	0.27
5	2,402	0.31	3768	0.41	2121	0.19	3817	0.36
6	2,349	0.31	3954	0.41	2185	0.20	3913	0.34
7	2,718	0.29	3991	0.41	2620	0.24	3957	0.28
8	2,906	0.31	3747	0.41	2377	0.28	3679	0.31
9	2,695	0.33	3708	0.41	2428	0.28	3644	0.32
10	2,585	0.34	3822	0.40	2455	0.29	3996	0.34
11	2,475	0.34	3757	0.42	2886	0.29	4018	0.35
12	2,803	0.34	3948	0.44	2717	0.30	3738	0.33
13	2,354	0.34	3866	0.37	2755	0.30	3786	0.29
14	2,462	0.24	4111	0.37	3010	0.29	3416	0.29
15	2,717	0.25	4070	0.35	3265	0.30	3809	0.32
16	2,730	0.29	4255	0.35	2732	0.31	3762	0.31
17	2,792	0.3	3920	0.34	2607	0.32	3745	0.27
18	2,735	0.3	3570	0.30	2727	0.31	3349	0.30
19	2,889	0.3	3522	0.33	2846	0.30	3375	0.28
20	2,981	0.33	3748	0.30	2900	0.31	3873	0.32
21	3,308	0.31	3724	0.34	3277	0.31	4008	0.29
22	3,485	0.29	3827	0.33	3460	0.38	4034	0.26
23	3,215	0.27	3797	0.35	3322	0.37	3806	0.24
24	3,107	0.3	1814	0.31	3181	0.34	3819	0.24
25	3,406	0.3	3566	0.32	3346	0.34	3079	0.25
26	2,903	0.3	3509	0.32	3298	0.33	2732	0.28
27	3,189	0.3	3717	0.34	4111	0.35	2917	0.32
28	3,731	0.29	3778	0.33	4295	0.37	3460	0.23
29	3,774	0.32	4127	0.34	4064	0.34	3506	0.29
30	3,356	0.26	3984	0.34	3952	0.34	3536	0.20
31	3,360	0.33	3872	0.34	3811	0.35	3767	0.26
Monthly Total	88,547		117,172		94,751	0.31	113,310	0.29

APPENDIX I - 2023 Daily Total Consumption and Chlorine Residual

Daily Total Consumption and Chlorine Residual

2020			2021		2022		2023	
Date	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2
	m3	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)
August								
1	3,127	0.33	3359	0.34	3871	0.35	3405	0.31
2	3,318	0.33	3087	0.32	3602	0.34	3227	0.31
3	3,467	0.33	3403	0.33	3643	0.33	3410	0.28
4	3,473	0.36	3653	0.36	3085	0.33	3411	0.30
5	3,181	0.34	3917	0.35	2348	0.34	3537	0.34
6	3,441	0.34	3994	0.36	2621	0.33	3541	0.30
7	2,659	0.36	3314	0.30	3102	0.33	3549	0.29
8	2,585	0.36	2785	0.33	3427	0.33	3357	0.30
9	3,015	0.31	2629	0.35	3477	0.34	2764	0.26
10	2,769	0.33	2931	0.36	3032	0.34	2639	0.25
11	3,464	0.33	3125	0.36	3241	0.33	2814	0.30
12	3,068	0.32	3862	0.37	3350	0.35	3112	0.28
13	3,045	0.34	4264	0.37	3524	0.34	3591	0.27
14	3,350	0.37	3753	0.37	3207	0.32	3583	0.26
15	3,332	0.28	3523	0.37	3723	0.32	3586	0.30
16	3,688	0.36	3101	0.37	3257	0.31	3496	0.30
17	3,622	0.39	3061	0.37	3415	0.30	3831	0.29
18	3,012	0.32	2599	0.35	3538	0.28	3846	0.28
19	3,290	0.35	2858	0.35	3425	0.33	3571	0.31
20	3,241	0.34	3460	0.35	3313	0.30	3348	0.30
21	2,813	0.29	2574	0.35	3325	0.32	3222	0.29
22	2,660	0.29	2131	0.34	3567	0.35	3052	0.29
23	2,402	0.29	2455	0.34	3374	0.34	3003	0.29
24	2,422	0.34	2196	0.32	3287	0.34	2866	0.28
25	2,598	0.29	2525	0.31	3455	0.32	3140	0.27
26	2,514	0.34	2741	0.35	3371	0.34	2889	0.25
27	2,899	0.34	2748	0.34	3377	0.29	2813	0.26
28	2,780	0.31	2497	0.35	3020	0.28	3053	0.25
29	2,906	0.31	2644	0.35	3331	0.29	2872	0.28
30	2,728	0.31	2788	0.34	3125	0.27	2385	0.26
31	2,586	0.31	2595	0.34	3000	0.27	2543	0.26
Monthly Total	93,457		94,573		102,434	0.32	99,459	0.28

APPENDIX I - 2023 Daily Total Consumption and Chlorine Residual

Daily Total Consumption and Chlorine Residual

2020			2021		2022		2023	
Date	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2
	m3	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)
September								
1	2,500	0.33	2420	0.33	3393	0.27	2434	0.26
2	2,504	0.33	2502	0.33	3353	0.25	2254	0.23
3	2,954	0.28	2682	0.33	3505	0.26	2448	0.22
4	3,031	0.27	2686	0.34	3155	0.24	2692	0.22
5	2,926	0.27	2317	0.33	3001	0.25	2466	0.28
6	2,629	0.27	2227	0.33	2657	0.24	2422	0.28
7	2,642	0.22	2479	0.33	2281	0.28	2509	0.28
8	2,629	0.25	2499	0.34	3629	0.32	2739	0.26
9	2,695	0.27	2253	0.34	3358	0.33	2478	0.24
10	2,737	0.28	2418	0.40	2869	0.32	2618	0.21
11	2,945	0.28	2302	0.34	3121	0.32	2568	0.22
12	2,794	0.28	2133	0.33	3011	0.30	2324	0.20
13	2,566	0.28	2317	0.32	3049	0.32	2149	0.24
14	2,473	0.28	2222	0.33	2806	0.32	2363	0.29
15	2,378	0.26	2079	0.32	2826	0.29	2966	0.30
16	2,062	0.27	1893	0.30	2826	0.30	3256	0.30
17	2,397	0.28	1863	0.30	2601	0.30	2930	0.26
18	2,388	0.28	1764	0.30	2387	0.28	3085	0.26
19	2,447	0.29	1622	0.30	2649	0.29	2636	0.23
20	1,849	0.27	1474	0.28	2461	0.28	2361	0.19
21	1,892	0.27	1462	0.28	2614	0.28	2250	0.24
22	1,816	0.26	1543	0.28	2590	0.30	2925	0.27
23	1,901	0.29	1589	0.28	2453	0.32	2365	0.23
24	1,820	0.28	1630	0.27	2362	0.33	2188	0.22
25	1,799	0.28	1474	0.27	2443	0.33	2177	0.23
26	1,856	0.28	1600	0.27	2403	0.33	1885	0.25
27	1,705	0.28	1444	0.26	2380	0.34	2094	0.23
28	1,509	0.28	1202	0.26	2310	0.33	1686	0.22
29	1,578	0.26	1324	0.26	2532	0.35	1634	0.21
30	1,706	0.25	1590	0.27	2083	0.32	1675	0.20
Monthly Total	69,129		59,010		83,111	0.30	72,577	0.24

APPENDIX I - 2023 Daily Total Consumption and Chlorine Residual

Daily Total Consumption and Chlorine Residual

2020			2021		2022		2023	
Date	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2
	m3	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)
October								
1	1,565	0.23	2301	0.29	2279	0.33	1620	0.19
2	1,653	0.24	1356	0.29	2086	0.32	1644	0.19
3	1,614	0.25	1320	0.28	2390	0.32	1592	0.18
4	1,612	0.25	1356	0.27	2160	0.30	1519	0.21
5	1,628	0.25	1265	0.27	2244	0.30	1400	0.20
6	1,479	0.25	1301	0.27	2162	0.33	1664	0.31
7	1,475	0.25	1301	0.26	2171	0.31	1827	0.30
8	1,462	0.25	1230	0.26	2122	0.31	1521	0.25
9	1,470	0.25	1382	0.25	2160	0.31	1523	0.23
10	1,452	0.25	1244	0.26	2133	0.31	2475	0.24
11	1,444	0.25	1228	0.26	2011	0.32	1372	0.26
12	1,299	0.25	1279	0.25	2050	0.32	1343	0.29
13	1,460	0.25	1354	0.33	2093	0.31	1435	0.24
14	1,488	0.25	1235	0.40	1843	0.31	1469	0.25
15	1,285	0.22	1163	0.39	1928	0.30	1476	0.19
16	1,604	0.2	1165	0.37	2135	0.30	1468	0.19
17	1,429	0.22	1178	0.34	2479	0.29	1466	0.24
18	1,338	0.23	1170	0.31	1764	0.29	1283	0.23
19	1,386	0.23	1201	0.31	1677	0.29	1349	0.22
20	1,368	0.26	1270	0.31	1734	0.29	1503	0.21
21	1,364	0.28	1226	0.32	1539	0.28	1432	0.25
22	1,390	0.28	1278	0.31	1541	0.27	1246	0.23
23	1,619	0.26	1223	0.34	1446	0.22	1256	0.29
24	1,419	0.26	1130	0.32	1559	0.24	1396	0.29
25	1,388	0.26	1100	0.32	1507	0.24	1346	0.31
26	1,288	0.26	1156	0.31	1488	0.27	1354	0.26
27	1,284	0.22	1434	0.33	1368	0.28	1306	0.23
28	1,408	0.25	1370	0.31	1338	0.29	1334	0.24
29	1,174	0.25	1152	0.29	1301	0.30	1380	0.23
30	1,280	0.25	1231	0.31	1372	0.29	1369	0.33
31	1,290	0.25	1197	0.27	1258	0.30	1305	0.27
Monthly Total	44,413		39,797.9		57,333	0.30	45,671	0.24

APPENDIX I - 2023 Daily Total Consumption and Chlorine Residual

Daily Total Consumption and Chlorine Residual

2020			2021		2022		2023	
Date	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2
	m3	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)
November								
1	1,324	0.25	1195	0.28	1354	0.29	1211	0.24
2	1,201	0.26	1381	0.28	1452	0.30	1282	0.25
3	1,345	0.26	1437	0.28	1339	0.30	1205	0.23
4	1,397	0.27	1498	0.29	1366	0.30	1109	0.24
5	1,212	0.25	1085	0.28	1310	0.30	1195	0.23
6	1,284	0.22	1049	0.27	1195	0.30	1157	0.24
7	1,187	0.23	1195	0.27	1358	0.29	1231	0.30
8	1,374	0.23	1084	0.26	1195	0.29	1227	0.28
9	1,130	0.23	1212	0.27	1310	0.29	1172	0.24
10	1,369	0.21	1031	0.34	1666	0.29	1124	0.28
11	1,264	0.23	1288	0.35	1461	0.29	1225	0.23
12	1,195	0.26	1090	0.34	1282	0.31	1143	0.24
13	1,444	0.26	1048	0.35	1352	0.32	1164	0.20
14	1,154	0.3	1069	0.35	1331	0.32	1267	0.22
15	1,342	0.3	1109	0.34	1461	0.33	1143	0.21
16	1,306	0.3	1016	0.32	1370	0.34	1209	0.22
17	1,213	0.3	1193	0.33	1524	0.34	1163	0.21
18	1,300	0.3	1072	0.35	1499	0.31	1152	0.19
19	1,209	0.29	1121	0.33	1338	0.31	1205	0.18
20	1,230	0.28	1021	0.34	1517	0.31	1200	0.21
21	1,170	0.31	1051	0.34	1397	0.29	1121	0.28
22	1,323	0.28	1186	0.32	1415	0.29	1039	0.29
23	1,292	0.28	1039	0.30	1334	0.38	1193	0.28
24	1,204	0.29	1084	0.32	1402	0.36	1139	0.32
25	1,199	0.28	1043	0.31	1436	0.35	1225	0.32
26	1,253	0.28	963	0.31	1402	0.33	1272	0.26
27	1,296	0.27	1068	0.31	1571	0.34	1406	0.32
28	1,145	0.27	995	0.31	1391	0.33	977	0.29
29	1,179	0.27	1173	0.32	1439	0.34	1137	0.34
30	1,297	0.27	1078	0.32	1402	0.33	1176	0.24
Monthly Total	36,495		33,496		41,868	0.32	35,469	0.25

APPENDIX I - 2023 Daily Total Consumption and Chlorine Residual

Daily Total Consumption and Chlorine Residual

2020			2021		2022		2023	
Date	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2	Daily	Daily Cl2
	m3	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)	Cubic metre	Residual (ppm)
December								
1	1,291	0.27	920	0.33	1449	0.34	1142	0.25
2	1,191	0.27	1051	0.35	1414	0.32	1243	0.28
3	1,214	0.26	1054	0.34	1402	0.33	1620	0.29
4	1,144	0.26	843	0.35	1364	0.31	1239	0.33
5	1,200	0.26	972	0.33	1311	0.29	1190	0.27
6	1,224	0.26	1032	0.33	1544	0.27	986	0.23
7	1,244	0.26	995	0.37	1411	0.29	1176	0.28
8	1,319	0.24	1148	0.38	1443	0.32	1053	0.31
9	1,244	0.25	969	0.43	1129	0.31	1174	0.25
10	1,200	0.25	1042	0.34	1511	0.29	1098	0.25
11	1,204	0.24	1050	0.35	1394	0.28	1102	0.26
12	1,342	0.25	1022	0.35	1452	0.29	1010	0.30
13	1,119	0.25	1015	0.34	1360	0.32	1149	0.25
14	1,317	0.25	1163	0.39	1539	0.32	1117	0.20
15	1,069	0.23	1015	0.32	1292	0.31	1100	0.25
16	1,535	0.21	1046	0.35	1431	0.29	1099	0.22
17	1,038	0.19	1134	0.34	1462	0.28	1069	0.23
18	1,063	0.18	1063	0.33	1410	0.27	1155	0.25
19	1,163	0.19	1054	0.32	1586	0.26	1113	0.24
20	1,170	0.19	1200	0.32	1435	0.26	1049	0.20
21	1,048	0.19	1140	0.33	1616	0.27	1120	0.24
22	1,429	0.19	1145	0.34	1478	0.26	1045	0.22
23	1,187	0.18	1137	0.35	1505	0.29	1144	0.26
24	1,071	0.18	1086	0.34	1594	0.29	1126	0.24
25	1,174	0.18	1287	0.34	1639	0.31	1019	0.24
26	1,074	0.18	1189	0.32	1526	0.31	1053	0.27
27	1,074	0.18	1192	0.31	1718	0.31	1094	0.23
28	1,111	0.14	1250	0.30	1773	0.30	1223	0.22
29	1,203	0.19	1253	0.30	1572	0.30	1186	0.21
30	1,172	0.19	1271	0.29	1641	0.31	1376	0.20
31	1,163	0.14	1235	0.30	1624	0.29	1203	0.21
Monthly Total	36,995	0.22	33,972	0.34	46,024	0.30	35,473	0.25
2020 Total m3	676,900		700,987		750,002		749,115	
Daily Average	1,855	0.29	1,915	0.31	2057	0.32	2052	0.29
Max Day	3,774	0.5	4,264	0.44	4295	0.48	4034	0.43
Min Day	1,038	0.14	843	0.13	1129	0.18	977	0.18

Appendix II

2023 Annual Chemical Analysis
of Drinking Water

Your Project #: Annual Water Sample
Your C.O.C. #: 685113-01-01

Attention: Jeff Westlake

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

Report Date: 2023/01/27
Report #: R3293219
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C304398
Received: 2023/01/20, 08:00

Sample Matrix: Drinking Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	5	N/A	2023/01/21	BBY6SOP-00026	SM 23 2320 B m
Chloride/Sulphate by Auto Colourimetry	5	N/A	2023/01/23	BBY6SOP-00011 / BBY6SOP-00017	SM23-4500-Cl/SO4-E m
Colour (True) by Kone Lab	5	N/A	2023/01/20	BBY6SOP-00057	SM 23 2120 C m
Conductivity @25C	5	N/A	2023/01/21	BBY6SOP-00026	SM 23 2510 B m
Fluoride	5	N/A	2023/01/20	BBY6SOP-00048	SM 23 4500-F C m
Hardness Total (calculated as CaCO3) (1)	5	N/A	2023/01/23	BBY WI-00033	Auto Calc
Mercury (Total) by CV	5	2023/01/24	2023/01/24	AB SOP-00084	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	5	N/A	2023/01/23	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total)	5	N/A	2023/01/21	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Nitrate + Nitrite (N)	5	N/A	2023/01/21	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrite (N) by CFA	5	N/A	2023/01/21	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrogen - Nitrate (as N)	5	N/A	2023/01/21	BBY WI-00033	Auto Calc
pH @25°C (2)	5	N/A	2023/01/21	BBY6SOP-00026	SM 23 4500-H+ B m
Total Dissolved Solids (Filt. Residue)	5	2023/01/25	2023/01/26	BBY6SOP-00033	SM 23 2540 C m
Total Trihalomethanes Calculation	3	N/A	2023/01/23	BBY WI-00033	Auto Calc
Turbidity	5	N/A	2023/01/21	BBY6SOP-00027	SM 23 2130 B m
VOCs, VH, F1, LH in Water by HS GC/MS	5	N/A	2023/01/23	BBY8SOP-00009 / BBY8SOP-00011 / BBY8SOP-00012	BCMOE BCLM Jul2017 m
Volatile HC-BTEX (3)	3	N/A	2023/01/23	BBY WI-00033	Auto Calc

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: Annual Water Sample
Your C.O.C. #: 685113-01-01

Attention: Jeff Westlake

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

Report Date: 2023/01/27
Report #: R3293219
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C304398

Received: 2023/01/20, 08:00

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. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

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) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(2) The CCME method requires 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 CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.
(3) VPH = VH - (Benzene + Toluene + Ethylbenzene + m & p-Xylene + o-Xylene + Styrene)

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
27 Jan 2023 09:37:02

Please direct all questions regarding this Certificate of Analysis to:
Customer Solutions, Western Canada Customer Experience Team
Email: customersolutionswest@bureauveritas.com
Phone# (604) 734 7276

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This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Raphael Kwan, Senior Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C304398
Report Date: 2023/01/27

VILLAGE OF PEMBERTON
Client Project #: Annual Water Sample

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					BKN739	BKN740	BKN741		
Sampling Date					2023/01/18 08:30	2023/01/18 08:40	2023/01/18 09:00		
COC Number					685113-01-01	685113-01-01	685113-01-01		
	UNITS	MAC	AO	OG	WELL #2	WELL #3	FARM RO	RDL	QC Batch
ANIONS									
Nitrite (N)	mg/L	1	-	-	<0.0050	<0.0050	<0.0050	0.0050	A860499
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	65.0	29.2	30.2	0.50	A859320
Nitrate (N)	mg/L	10	-	-	0.241	0.112	0.107	0.020	A859358
Misc. Inorganics									
Conductivity	uS/cm	-	-	-	240	100	170	2.0	A861518
pH	pH	-	-	7.0:10.5	**6.70**	**6.58**	7.16	N/A	A861515
Total Dissolved Solids	mg/L	-	500	-	150	60	92	10	A863326
Anions									
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	<1.0	<1.0	1.0	A861517
Alkalinity (Total as CaCO3)	mg/L	-	-	-	34	16	56	1.0	A861517
Bicarbonate (HCO3)	mg/L	-	-	-	42	20	69	1.0	A861517
Carbonate (CO3)	mg/L	-	-	-	<1.0	<1.0	<1.0	1.0	A861517
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	<0.050	<0.050	0.050	A859880
Hydroxide (OH)	mg/L	-	-	-	<1.0	<1.0	<1.0	1.0	A861517
Chloride (Cl)	mg/L	-	250	-	36	11	12	1.0	A860087
Sulphate (SO4)	mg/L	-	500	-	20	10	11	1.0	A860087
MISCELLANEOUS									
True Colour	Col. Unit	-	15	-	<5.0	<5.0	<5.0	5.0	A859949
Nutrients									
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.241	0.112	0.107	0.020	A860498
Physical Properties									
Turbidity	NTU	see remark	see remark	see remark	0.51	0.31	0.36	0.10	A860474

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C304398
Report Date: 2023/01/27

VILLAGE OF PEMBERTON
Client Project #: Annual Water Sample

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					BKN742		BKN743		
Sampling Date					2023/01/18 09:30		2023/01/18 10:00		
COC Number					685113-01-01		685113-01-01		
	UNITS	MAC	AO	OG	RIDGE PIS	QC Batch	INDUSTRIAL PARK	RDL	QC Batch
ANIONS									
Nitrite (N)	mg/L	1	-	-	<0.0050	A860499	<0.0050	0.0050	A860499
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	30.4	A859320	29.6	0.50	A859320
Nitrate (N)	mg/L	10	-	-	0.105	A859358	0.100	0.020	A859358
Misc. Inorganics									
Conductivity	uS/cm	-	-	-	170	A861518	77	2.0	A861518
pH	pH	-	-	7.0:10.5	7.22	A861515	**6.85**	N/A	A861515
Total Dissolved Solids	mg/L	-	500	-	96	A863326	60	10	A863326
Anions									
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	A861517	<1.0	1.0	A861517
Alkalinity (Total as CaCO3)	mg/L	-	-	-	57	A861517	25	1.0	A861517
Bicarbonate (HCO3)	mg/L	-	-	-	70	A861517	30	1.0	A861517
Carbonate (CO3)	mg/L	-	-	-	<1.0	A861517	<1.0	1.0	A861517
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	A859880	<0.050	0.050	A859880
Hydroxide (OH)	mg/L	-	-	-	<1.0	A861517	<1.0	1.0	A861517
Chloride (Cl)	mg/L	-	250	-	12	A860091	1.3	1.0	A860091
Sulphate (SO4)	mg/L	-	500	-	11	A860091	10	1.0	A860091
MISCELLANEOUS									
True Colour	Col. Unit	-	15	-	<5.0	A859949	<5.0	5.0	A859957
Nutrients									
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.105	A860498	0.100	0.020	A860498
Physical Properties									
Turbidity	NTU	see remark	see remark	see remark	0.18	A860474	0.18	0.10	A860474

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C304398
Report Date: 2023/01/27

VILLAGE OF PEMBERTON
Client Project #: Annual Water Sample

MERCURY BY COLD VAPOR (DRINKING WATER)

Bureau Veritas ID			BKN739	BKN740	BKN741	BKN742	BKN743		
Sampling Date			2023/01/18 08:30	2023/01/18 08:40	2023/01/18 09:00	2023/01/18 09:30	2023/01/18 10:00		
COC Number			685113-01-01	685113-01-01	685113-01-01	685113-01-01	685113-01-01		
	UNITS	MAC	WELL #2	WELL #3	FARM RO	RIDGE PIS	INDUSTRIAL PARK	RDL	QC Batch
Elements									
Total Mercury (Hg)	ug/L	1	<0.0019	<0.0019	<0.0019	<0.0019	<0.0019	0.0019	A861894

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C304398
Report Date: 2023/01/27

VILLAGE OF PEMBERTON
Client Project #: Annual Water Sample

ELEMENTS BY ATOMIC SPECTROSCOPY (DRINKING WATER)

Bureau Veritas ID					BKN739	BKN740	BKN741	BKN742		
Sampling Date					2023/01/18 08:30	2023/01/18 08:40	2023/01/18 09:00	2023/01/18 09:30		
COC Number					685113-01-01	685113-01-01	685113-01-01	685113-01-01		
	UNITS	MAC	AO	OG	WELL #2	WELL #3	FARM RO	RIDGE PIS	RDL	QC Batch
Total Metals by ICPMS										
Total Aluminum (Al)	ug/L	2900	-	100	5.5	7.6	<3.0	<3.0	3.0	A860022
Total Antimony (Sb)	ug/L	6	-	-	<0.50	<0.50	<0.50	<0.50	0.50	A860022
Total Arsenic (As)	ug/L	10	-	-	<0.10	<0.10	<0.10	<0.10	0.10	A860022
Total Barium (Ba)	ug/L	2000	-	-	40.0	17.9	18.3	18.2	1.0	A860022
Total Boron (B)	ug/L	5000	-	-	118	<50	<50	<50	50	A860022
Total Cadmium (Cd)	ug/L	7	-	-	0.010	0.025	<0.010	<0.010	0.010	A860022
Total Chromium (Cr)	ug/L	50	-	-	<1.0	<1.0	<1.0	<1.0	1.0	A860022
Total Cobalt (Co)	ug/L	-	-	-	<0.20	<0.20	<0.20	<0.20	0.20	A860022
Total Copper (Cu)	ug/L	2000	1000	-	3.11	7.89	6.11	4.19	0.20	A860022
Total Iron (Fe)	ug/L	-	300	-	65.7	8.6	6.9	10.6	5.0	A860022
Total Lead (Pb)	ug/L	5	-	-	0.29	<0.20	<0.20	<0.20	0.20	A860022
Total Manganese (Mn)	ug/L	120	20	-	**64.9**	**33.5**	2.6	2.5	1.0	A860022
Total Molybdenum (Mo)	ug/L	-	-	-	2.1	<1.0	<1.0	<1.0	1.0	A860022
Total Nickel (Ni)	ug/L	-	-	-	<1.0	<1.0	<1.0	<1.0	1.0	A860022
Total Selenium (Se)	ug/L	50	-	-	<0.10	<0.10	<0.10	<0.10	0.10	A860022
Total Silver (Ag)	ug/L	-	-	-	<0.020	<0.020	<0.020	<0.020	0.020	A860022
Total Strontium (Sr)	ug/L	7000	-	-	140	59.5	60.2	60.9	1.0	A860022
Total Uranium (U)	ug/L	20	-	-	<0.10	<0.10	<0.10	<0.10	0.10	A860022
Total Vanadium (V)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0	A860022
Total Zinc (Zn)	ug/L	-	5000	-	19.2	<5.0	<5.0	5.6	5.0	A860022
Total Calcium (Ca)	mg/L	-	-	-	23.7	10.6	11.0	11.1	0.050	A859363
Total Magnesium (Mg)	mg/L	-	-	-	1.42	0.631	0.643	0.662	0.050	A859363
Total Potassium (K)	mg/L	-	-	-	2.37	1.00	1.02	1.02	0.050	A859363
Total Sodium (Na)	mg/L	-	200	-	13.7	4.66	21.3	21.0	0.050	A859363
Total Sulphur (S)	mg/L	-	-	-	5.0	<3.0	<3.0	<3.0	3.0	A859363

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

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Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C304398
Report Date: 2023/01/27

VILLAGE OF PEMBERTON
Client Project #: Annual Water Sample

ELEMENTS BY ATOMIC SPECTROSCOPY (DRINKING WATER)

Bureau Veritas ID					BKN743		
Sampling Date					2023/01/18 10:00		
COC Number					685113-01-01		
	UNITS	MAC	AO	OG	INDUSTRIAL PARK	RDL	QC Batch
Total Metals by ICPMS							
Total Aluminum (Al)	ug/L	2900	-	100	<3.0	3.0	A860022
Total Antimony (Sb)	ug/L	6	-	-	<0.50	0.50	A860022
Total Arsenic (As)	ug/L	10	-	-	0.11	0.10	A860022
Total Barium (Ba)	ug/L	2000	-	-	5.8	1.0	A860022
Total Boron (B)	ug/L	5000	-	-	<50	50	A860022
Total Cadmium (Cd)	ug/L	7	-	-	<0.010	0.010	A860022
Total Chromium (Cr)	ug/L	50	-	-	<1.0	1.0	A860022
Total Cobalt (Co)	ug/L	-	-	-	<0.20	0.20	A860022
Total Copper (Cu)	ug/L	2000	1000	-	4.35	0.20	A860022
Total Iron (Fe)	ug/L	-	300	-	10.2	5.0	A860022
Total Lead (Pb)	ug/L	5	-	-	<0.20	0.20	A860022
Total Manganese (Mn)	ug/L	120	20	-	<1.0	1.0	A860022
Total Molybdenum (Mo)	ug/L	-	-	-	<1.0	1.0	A860022
Total Nickel (Ni)	ug/L	-	-	-	<1.0	1.0	A860022
Total Selenium (Se)	ug/L	50	-	-	<0.10	0.10	A860022
Total Silver (Ag)	ug/L	-	-	-	<0.020	0.020	A860022
Total Strontium (Sr)	ug/L	7000	-	-	30.9	1.0	A860022
Total Uranium (U)	ug/L	20	-	-	<0.10	0.10	A860022
Total Vanadium (V)	ug/L	-	-	-	<5.0	5.0	A860022
Total Zinc (Zn)	ug/L	-	5000	-	<5.0	5.0	A860022
Total Calcium (Ca)	mg/L	-	-	-	10.3	0.050	A859363
Total Magnesium (Mg)	mg/L	-	-	-	0.930	0.050	A859363
Total Potassium (K)	mg/L	-	-	-	0.494	0.050	A859363
Total Sodium (Na)	mg/L	-	200	-	1.60	0.050	A859363
Total Sulphur (S)	mg/L	-	-	-	<3.0	3.0	A859363

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C304398
Report Date: 2023/01/27

VILLAGE OF PEMBERTON
Client Project #: Annual Water Sample

TRIHALOMETHANES (THM) IN WATER

Bureau Veritas ID			BKN741	BKN742			BKN743		
Sampling Date			2023/01/18 09:00	2023/01/18 09:30			2023/01/18 10:00		
COC Number			685113-01-01	685113-01-01			685113-01-01		
	UNITS	MAC	FARM RO	RIDGE PIS	RDL	QC Batch	INDUSTRIAL PARK	RDL	QC Batch
Volatiles									
Total Trihalomethanes	ug/L	100	3.6	4.0	1.0	A859364	2.1	1.0	A859364
Bromodichloromethane	ug/L	-	<1.0	<1.0	1.0	A859861			
Bromoform	ug/L	-	1.3	1.3	1.0	A859861			
Dibromochloromethane	ug/L	-	2.3	2.7	1.0	A859861			
Chloroform	ug/L	-	<1.0	<1.0	1.0	A859861			
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	-	115	100		A859861			
4-Bromofluorobenzene (sur.)	%	-	84	85		A859861			
D4-1,2-Dichloroethane (sur.)	%	-	127	103		A859861			

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C304398
Report Date: 2023/01/27

VILLAGE OF PEMBERTON
Client Project #: Annual Water Sample

CSR VOC + VPH IN WATER (DRINKING WATER)

Bureau Veritas ID				BKN739	BKN740	BKN743		
Sampling Date				2023/01/18 08:30	2023/01/18 08:40	2023/01/18 10:00		
COC Number				685113-01-01	685113-01-01	685113-01-01		
	UNITS	MAC	AO	WELL #2	WELL #3	INDUSTRIAL PARK	RDL	QC Batch
Calculated Parameters								
VPH (VH6 to 10 - BTEX)	ug/L	-	-	<300	<300	<300	300	A859310
Volatiles								
VH C6-C10	ug/L	-	-	<300	<300	<300	300	A859861
1,1,1,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	<0.50	0.50	A859861
1,1,1-trichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	0.50	A859861
1,1,2,2-tetrachloroethane	ug/L	-	-	<0.50	<0.50	<0.50	0.50	A859861
1,1,2Trichloro-1,2,2Trifluoroethane	ug/L	-	-	<2.0	<2.0	<2.0	2.0	A859861
1,1,2-trichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	0.50	A859861
1,1-dichloroethane	ug/L	-	-	<0.50	<0.50	<0.50	0.50	A859861
1,1-dichloroethene	ug/L	14	-	<0.50	<0.50	<0.50	0.50	A859861
1,2-dichlorobenzene	ug/L	200	3	<0.50	<0.50	<0.50	0.50	A859861
1,2-dichloroethane	ug/L	5	-	<0.50	<0.50	<0.50	0.50	A859861
1,2-dichloropropane	ug/L	-	-	<0.50	<0.50	<0.50	0.50	A859861
1,3-Butadiene	ug/L	-	-	<0.50	<0.50	<0.50	0.50	A859861
1,3-dichlorobenzene	ug/L	-	-	<0.50	<0.50	<0.50	0.50	A859861
1,4-dichlorobenzene	ug/L	5	1	<0.50	<0.50	<0.50	0.50	A859861
Benzene	ug/L	5	-	<0.40	<0.40	<0.40	0.40	A859861
Bromobenzene	ug/L	-	-	<2.0	<2.0	<2.0	2.0	A859861
Bromodichloromethane	ug/L	-	-	<1.0	<1.0	<1.0	1.0	A859861
Bromoform	ug/L	-	-	<1.0	<1.0	<1.0	1.0	A859861
Bromomethane	ug/L	-	-	<1.0	<1.0	<1.0	1.0	A859861
Carbon tetrachloride	ug/L	2	-	<0.50	<0.50	<0.50	0.50	A859861
Chlorobenzene	ug/L	80	30	<0.50	<0.50	<0.50	0.50	A859861
Dibromochloromethane	ug/L	-	-	<1.0	<1.0	<1.0	1.0	A859861
Chloroethane	ug/L	-	-	<1.0	<1.0	<1.0	1.0	A859861
Chloroform	ug/L	-	-	<1.0	<1.0	2.1	1.0	A859861
Chloromethane	ug/L	-	-	<1.0	<1.0	<1.0	1.0	A859861
cis-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	<1.0	1.0	A859861
cis-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	<1.0	1.0	A859861
Dibromomethane	ug/L	-	-	<0.90	<0.90	<0.90	0.90	A859861
Dichlorodifluoromethane	ug/L	-	-	<2.0	<2.0	<2.0	2.0	A859861
Dichloromethane	ug/L	50	-	<2.0	<2.0	<2.0	2.0	A859861
Ethylbenzene	ug/L	140	1.6	<0.40	<0.40	<0.40	0.40	A859861

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C304398
Report Date: 2023/01/27

VILLAGE OF PEMBERTON
Client Project #: Annual Water Sample

CSR VOC + VPH IN WATER (DRINKING WATER)

Bureau Veritas ID				BKN739	BKN740	BKN743		
Sampling Date				2023/01/18 08:30	2023/01/18 08:40	2023/01/18 10:00		
COC Number				685113-01-01	685113-01-01	685113-01-01		
	UNITS	MAC	AO	WELL #2	WELL #3	INDUSTRIAL PARK	RDL	QC Batch
Methyl-tert-butylether (MTBE)	ug/L	-	15	<4.0	<4.0	<4.0	4.0	A859861
Styrene	ug/L	-	-	<0.50	<0.50	<0.50	0.50	A859861
Tetrachloroethene	ug/L	10	-	<0.50	<0.50	<0.50	0.50	A859861
Toluene	ug/L	60	24	<0.40	<0.40	<0.40	0.40	A859861
trans-1,2-dichloroethene	ug/L	-	-	<1.0	<1.0	<1.0	1.0	A859861
trans-1,3-dichloropropene	ug/L	-	-	<1.0	<1.0	<1.0	1.0	A859861
Trichloroethene	ug/L	5	-	<0.50	<0.50	<0.50	0.50	A859861
Trichlorofluoromethane	ug/L	-	-	<4.0	<4.0	<4.0	4.0	A859861
Vinyl chloride	ug/L	2	-	<0.50	<0.50	<0.50	0.50	A859861
m & p-Xylene	ug/L	-	-	<0.40	<0.40	<0.40	0.40	A859861
o-Xylene	ug/L	-	-	<0.40	<0.40	<0.40	0.40	A859861
Xylenes (Total)	ug/L	90	20	<0.40	<0.40	<0.40	0.40	A859861
Surrogate Recovery (%)								
1,4-Difluorobenzene (sur.)	%	-	-	100	115	115		A859861
4-Bromofluorobenzene (sur.)	%	-	-	85	84	84		A859861
D4-1,2-Dichloroethane (sur.)	%	-	-	129	102	102		A859861

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C304398
Report Date: 2023/01/27

VILLAGE OF PEMBERTON
Client Project #: Annual Water Sample

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, September 2020.

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.
4. To ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of 1.0 NTU or less.
Measurement of Uncertainty has not been accounted for when stating conformity to the selected criteria, where applicable.

Results relate only to the items tested.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C304398
Report Date: 2023/01/27

QUALITY ASSURANCE REPORT

VILLAGE OF PEMBERTON
Client Project #: Annual Water Sample

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A859861	1,4-Difluorobenzene (sur.)	2023/01/23	98	50 - 140	97	50 - 140	99	%		
A859861	4-Bromofluorobenzene (sur.)	2023/01/23	101	50 - 140	97	50 - 140	83	%		
A859861	D4-1,2-Dichloroethane (sur.)	2023/01/23	102	50 - 140	96	50 - 140	94	%		
A859861	1,1,1,2-tetrachloroethane	2023/01/23	98	50 - 140	90	60 - 130	<0.50	ug/L	NC	30
A859861	1,1,1-trichloroethane	2023/01/23	101	50 - 140	94	60 - 130	<0.50	ug/L	NC	30
A859861	1,1,2,2-tetrachloroethane	2023/01/23	93	50 - 140	88	60 - 130	<0.50	ug/L	NC	30
A859861	1,1,2Trichloro-1,2,2Trifluoroethane	2023/01/23	104	50 - 140	100	60 - 130	<2.0	ug/L	NC	30
A859861	1,1,2-trichloroethane	2023/01/23	97	50 - 140	88	60 - 130	<0.50	ug/L	NC	30
A859861	1,1-dichloroethane	2023/01/23	119	50 - 140	94	60 - 130	<0.50	ug/L	NC	30
A859861	1,1-dichloroethene	2023/01/23	107	50 - 140	102	60 - 130	<0.50	ug/L	NC	30
A859861	1,2-dichlorobenzene	2023/01/23	101	50 - 140	98	60 - 130	<0.50	ug/L	NC	30
A859861	1,2-dichloroethane	2023/01/23	104	50 - 140	96	60 - 130	<0.50	ug/L	NC	30
A859861	1,2-dichloropropane	2023/01/23	103	50 - 140	96	60 - 130	<0.50	ug/L	NC	30
A859861	1,3-Butadiene	2023/01/23	100	50 - 140	96	50 - 140	<0.50	ug/L	NC	30
A859861	1,3-dichlorobenzene	2023/01/23	104	50 - 140	102	60 - 130	<0.50	ug/L	NC	30
A859861	1,4-dichlorobenzene	2023/01/23	101	50 - 140	99	60 - 130	<0.50	ug/L	NC	30
A859861	Benzene	2023/01/23	128	50 - 140	99	60 - 130	<0.40	ug/L	NC	30
A859861	Bromobenzene	2023/01/23	94	50 - 140	90	60 - 130	<2.0	ug/L	NC	30
A859861	Bromodichloromethane	2023/01/23	110	50 - 140	105	60 - 130	<1.0	ug/L	NC	30
A859861	Bromoform	2023/01/23	86	50 - 140	79	60 - 130	<1.0	ug/L	NC	30
A859861	Bromomethane	2023/01/23	113	50 - 140	92	50 - 140	<1.0	ug/L	NC	30
A859861	Carbon tetrachloride	2023/01/23	104	50 - 140	96	60 - 130	<0.50	ug/L	NC	30
A859861	Chlorobenzene	2023/01/23	94	50 - 140	89	60 - 130	<0.50	ug/L	NC	30
A859861	Chloroethane	2023/01/23	108	50 - 140	106	50 - 140	<1.0	ug/L	NC	30
A859861	Chloroform	2023/01/23	94	50 - 140	87	60 - 130	<1.0	ug/L	NC	30
A859861	Chloromethane	2023/01/23	96	50 - 140	87	50 - 140	<1.0	ug/L	NC	30
A859861	cis-1,2-dichloroethene	2023/01/23	104	50 - 140	96	60 - 130	<1.0	ug/L	NC	30
A859861	cis-1,3-dichloropropene	2023/01/23	98	50 - 140	77	50 - 140	<1.0	ug/L	NC	30
A859861	Dibromochloromethane	2023/01/23	98	50 - 140	89	60 - 130	<1.0	ug/L	NC	30
A859861	Dibromomethane	2023/01/23	100	50 - 140	91	60 - 130	<0.90	ug/L		
A859861	Dichlorodifluoromethane	2023/01/23	95	50 - 140	90	50 - 140	<2.0	ug/L	NC	30
A859861	Dichloromethane	2023/01/23	99	50 - 140	92	60 - 130	<2.0	ug/L	NC	30
A859861	Ethylbenzene	2023/01/23	112	50 - 140	107	60 - 130	<0.40	ug/L	NC	30

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C304398
Report Date: 2023/01/27

QUALITY ASSURANCE REPORT(CONT'D)

VILLAGE OF PEMBERTON
Client Project #: Annual Water Sample

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A859861	m & p-Xylene	2023/01/23	92	50 - 140	88	60 - 130	<0.40	ug/L	NC	30
A859861	Methyl-tert-butylether (MTBE)	2023/01/23	101	50 - 140	94	60 - 130	<4.0	ug/L	NC	30
A859861	o-Xylene	2023/01/23	87	50 - 140	83	60 - 130	<0.40	ug/L	NC	30
A859861	Styrene	2023/01/23	89	50 - 140	85	60 - 130	<0.50	ug/L	NC	30
A859861	Tetrachloroethene	2023/01/23	96	50 - 140	92	60 - 130	<0.50	ug/L	1.1	30
A859861	Toluene	2023/01/23	92	50 - 140	94	60 - 130	<0.40	ug/L	2.9	30
A859861	trans-1,2-dichloroethene	2023/01/23	104	50 - 140	99	60 - 130	<1.0	ug/L	NC	30
A859861	trans-1,3-dichloropropene	2023/01/23	99	50 - 140	73	50 - 140	<1.0	ug/L	NC	30
A859861	Trichloroethene	2023/01/23	109	50 - 140	113	60 - 130	<0.50	ug/L	NC	30
A859861	Trichlorofluoromethane	2023/01/23	193 (1)	50 - 140	85	60 - 130	<4.0	ug/L	NC	30
A859861	VH C6-C10	2023/01/23			100	70 - 130	<300	ug/L	NC	30
A859861	Vinyl chloride	2023/01/23	84	50 - 140	79	50 - 140	<0.50	ug/L	NC	30
A859861	Xylenes (Total)	2023/01/23					<0.40	ug/L	NC	30
A859880	Dissolved Fluoride (F)	2023/01/20	NC	80 - 120	96	80 - 120	<0.050	mg/L	4.4	20
A859949	True Colour	2023/01/20			98	80 - 120	<5.0	Col. Unit	NC	20
A859957	True Colour	2023/01/20			110	80 - 120	<5.0	Col. Unit	NC	20
A860022	Total Aluminum (Al)	2023/01/21	100	80 - 120	104	80 - 120	<3.0	ug/L	1.1	20
A860022	Total Antimony (Sb)	2023/01/21	101	80 - 120	104	80 - 120	<0.50	ug/L	NC	20
A860022	Total Arsenic (As)	2023/01/21	101	80 - 120	103	80 - 120	<0.10	ug/L	NC	20
A860022	Total Barium (Ba)	2023/01/21	96	80 - 120	101	80 - 120	<1.0	ug/L	1.7	20
A860022	Total Boron (B)	2023/01/21	96	80 - 120	102	80 - 120	<50	ug/L	1.6	20
A860022	Total Cadmium (Cd)	2023/01/21	101	80 - 120	105	80 - 120	<0.010	ug/L	0.76	20
A860022	Total Chromium (Cr)	2023/01/21	99	80 - 120	104	80 - 120	<1.0	ug/L	NC	20
A860022	Total Cobalt (Co)	2023/01/21	98	80 - 120	102	80 - 120	<0.20	ug/L	NC	20
A860022	Total Copper (Cu)	2023/01/21	95	80 - 120	100	80 - 120	<0.20	ug/L	1.9	20
A860022	Total Iron (Fe)	2023/01/21	95	80 - 120	105	80 - 120	<5.0	ug/L	0.76	20
A860022	Total Lead (Pb)	2023/01/21	99	80 - 120	104	80 - 120	<0.20	ug/L	0.49	20
A860022	Total Manganese (Mn)	2023/01/21	NC	80 - 120	103	80 - 120	<1.0	ug/L	1.1	20
A860022	Total Molybdenum (Mo)	2023/01/21	103	80 - 120	103	80 - 120	<1.0	ug/L	3.8	20
A860022	Total Nickel (Ni)	2023/01/21	97	80 - 120	102	80 - 120	<1.0	ug/L	NC	20
A860022	Total Selenium (Se)	2023/01/21	97	80 - 120	102	80 - 120	<0.10	ug/L	NC	20
A860022	Total Silver (Ag)	2023/01/21	101	80 - 120	103	80 - 120	<0.020	ug/L	NC	20
A860022	Total Strontium (Sr)	2023/01/21	NC	80 - 120	102	80 - 120	<1.0	ug/L	0.0021	20

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C304398
Report Date: 2023/01/27

QUALITY ASSURANCE REPORT(CONT'D)

VILLAGE OF PEMBERTON
Client Project #: Annual Water Sample

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A860022	Total Uranium (U)	2023/01/21	102	80 - 120	106	80 - 120	<0.10	ug/L	NC	20
A860022	Total Vanadium (V)	2023/01/21	101	80 - 120	104	80 - 120	<5.0	ug/L	NC	20
A860022	Total Zinc (Zn)	2023/01/21	101	80 - 120	106	80 - 120	<5.0	ug/L	0.25	20
A860087	Chloride (Cl)	2023/01/23	103	80 - 120	102	80 - 120	<1.0	mg/L	NC	20
A860087	Sulphate (SO4)	2023/01/23	NC	80 - 120	102	80 - 120	<1.0	mg/L		
A860091	Chloride (Cl)	2023/01/23	102	80 - 120	104	80 - 120	<1.0	mg/L	7.2	20
A860091	Sulphate (SO4)	2023/01/23	96	80 - 120	101	80 - 120	<1.0	mg/L	NC	20
A860474	Turbidity	2023/01/21			103	80 - 120	<0.10	NTU	3.7	20
A860498	Nitrate plus Nitrite (N)	2023/01/21	108	80 - 120	106	80 - 120	<0.020	mg/L	1.4	25
A860499	Nitrite (N)	2023/01/21	106	80 - 120	103	80 - 120	<0.0050	mg/L	NC	20
A861515	pH	2023/01/21			101	97 - 103			0.89	N/A
A861517	Alkalinity (PP as CaCO3)	2023/01/21					<1.0	mg/L		
A861517	Alkalinity (Total as CaCO3)	2023/01/21			97	80 - 120	<1.0	mg/L		
A861517	Bicarbonate (HCO3)	2023/01/21					<1.0	mg/L		
A861517	Carbonate (CO3)	2023/01/21					<1.0	mg/L		
A861517	Hydroxide (OH)	2023/01/21					<1.0	mg/L		
A861518	Conductivity	2023/01/21			102	80 - 120	<2.0	uS/cm	0	10
A861894	Total Mercury (Hg)	2023/01/24	100	80 - 120	116	80 - 120	<0.0019	ug/L	NC	20
A863326	Total Dissolved Solids	2023/01/26	102	80 - 120	95	80 - 120	<10	mg/L	4.1	20

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.

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Bureau Veritas
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel (604) 734 7276 Toll-free 800-563-6266 Fax (604) 731 2386 www.bvna.com

C304398_COC

Page of

Bottle Order #: 685113

Chain Of Custody Record

Project Manager: Customer Solutions

C#685113-01-01

INVOICE TO:		Report Information		Project Information	
Company Name	#99020 VILLAGE OF PEMBERTON	Company Name		Quotation #	C21923
Contact Name	Accounts Payable	Contact Name	Jeff Westlake	P.O. #	
Address	Box 100 7400 Prospect St	Address	Cell 604-905-8924	Project #	Annual Water Sample
	Pemberton BC V0N 2L0			Project Name	
Phone	(604) 894-6811 Fax (604) 894-6855	Phone	(604) 894-6125 Fax	Site #	
Email	accountspayable@pemberton.ca	Email	jwestlake@pemberton.ca	Sampled By	

Regulatory Criteria:
- [ ] CSR
- [ ] CCME
- [ ] BC Water Quality
- [ ] Other

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
1 DAY [ ] 2 Day [ ] 3 Day [ ] Date Required: _____
Rush Confirmation Number: _____ (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Drinking Water Package w/o Microbiology	Trihalomethanes (THM) in Water	CSR VOC + VPH in Water	# of Bottles	Comments
1		Well # 2	23/01/18	0830			✓		✓		
2		Well # 3	23/01/18	0840			✓		✓		
3		Farm RD	23/01/18	0900			✓	✓			
4		Ridge P/S	23/01/18	0930			✓	✓			
5		Industrial Park	23/01/18	1000			✓	✓	✓		
6											
7											
8											
9											
10											

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Jeff Westlake JEFF WESTLAKE	23/01/18	1030	Edelare Cecili	23/01/20	0800		[ ]	7.7.8	[ ] Yes [✓] No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

ice pack: yes

Your C.O.C. #: 686852-01-01

Attention: Jeff Westlake

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

Report Date: 2023/02/23
Report #: R3302925
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C311103
Received: 2023/02/16, 08:30

Sample Matrix: Drinking Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	4	N/A	2023/02/16	BBY6SOP-00026	SM 23 2320 B m
Chloride/Sulphate by Auto Colourimetry	4	N/A	2023/02/17	BBY6SOP-00011 / BBY6SOP-00017	SM23-4500-Cl/SO4-E m
Colour (True) by Kone Lab	4	N/A	2023/02/16	BBY6SOP-00057	SM 23 2120 C m
Conductivity @25C	4	N/A	2023/02/16	BBY6SOP-00026	SM 23 2510 B m
Fluoride	4	N/A	2023/02/17	BBY6SOP-00048	SM 23 4500-F C m
Hardness Total (calculated as CaCO3) (1)	1	N/A	2023/02/17	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (1)	3	N/A	2023/02/22	BBY WI-00033	Auto Calc
Mercury (Total) by CV	4	2023/02/16	2023/02/16	AB SOP-00084	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2023/02/17	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (total)	3	N/A	2023/02/22	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total)	3	N/A	2023/02/18	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Elements by CRC ICPMS (total)	1	2023/02/16	2023/02/17	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Nitrate + Nitrite (N)	4	N/A	2023/02/18	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrite (N) by CFA	4	N/A	2023/02/18	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrogen - Nitrate (as N)	4	N/A	2023/02/18	BBY WI-00033	Auto Calc
pH @25°C (2)	4	N/A	2023/02/16	BBY6SOP-00026	SM 23 4500-H+ B m
Total Dissolved Solids (Filt. Residue)	4	2023/02/21	2023/02/22	BBY6SOP-00033	SM 23 2540 C m
Turbidity	4	N/A	2023/02/16	BBY6SOP-00027	SM 23 2130 B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your C.O.C. #: 686852-01-01

Attention: Jeff Westlake

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

Report Date: 2023/02/23
Report #: R3302925
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C311103

Received: 2023/02/16, 08:30

implied. Bureau Veritas 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 Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

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. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
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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) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(2) The CCME method requires 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 CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

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Bureau Veritas
23 Feb 2023 12:55:23

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Email: customersolutionswest@bureauveritas.com
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For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Raphael Kwan, Senior Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C311103
Report Date: 2023/02/23

VILLAGE OF PEMBERTON

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					BLZ419		BLZ420		
Sampling Date					2023/02/15 08:30		2023/02/15 09:00		
COC Number					686852-01-01		686852-01-01		
	UNITS	MAC	AO	OG	WELL #2	QC Batch	WELL #3	RDL	QC Batch
ANIONS									
Nitrite (N)	mg/L	1	-	-	<0.0050	A886990	<0.0050	0.0050	A886990
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	68.1	A884259	28.4	0.50	A884259
Nitrate (N)	mg/L	10	-	-	0.266	A884268	0.121	0.020	A884268
Misc. Inorganics									
Conductivity	uS/cm	-	-	-	240	A885734	96	2.0	A885734
pH	pH	-	-	7.0:10.5	**6.83**	A885721	**6.62**	N/A	A885721
Total Dissolved Solids	mg/L	-	500	-	130	A888143	60	10	A888143
Anions									
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	A885733	<1.0	1.0	A885733
Alkalinity (Total as CaCO3)	mg/L	-	-	-	35	A885733	16	1.0	A885733
Bicarbonate (HCO3)	mg/L	-	-	-	43	A885733	20	1.0	A885733
Carbonate (CO3)	mg/L	-	-	-	<1.0	A885733	<1.0	1.0	A885733
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	A885799	<0.050	0.050	A885799
Hydroxide (OH)	mg/L	-	-	-	<1.0	A885733	<1.0	1.0	A885733
Chloride (Cl)	mg/L	-	250	-	46	A886071	10	1.0	A886071
Sulphate (SO4)	mg/L	-	500	-	21	A886071	10	1.0	A886071
MISCELLANEOUS									
True Colour	Col. Unit	-	15	-	<5.0	A884655	<5.0	5.0	A884655
Nutrients									
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.266	A886989	0.121	0.020	A886989
Physical Properties									
Turbidity	NTU	see remark	see remark	see remark	0.16	A884873	<0.10	0.10	A884864

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

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Bureau Veritas Job #: C311103
Report Date: 2023/02/23

VILLAGE OF PEMBERTON

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					BLZ421	BLZ422		
Sampling Date					2023/02/15 09:30	2023/02/15 10:00		
COC Number					686852-01-01	686852-01-01		
	UNITS	MAC	AO	OG	RIDGE	FARM RD	RDL	QC Batch
ANIONS								
Nitrite (N)	mg/L	1	-	-	<0.0050	<0.0050	0.0050	A886990
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	-	-	-	30.1	30.1	0.50	A884259
Nitrate (N)	mg/L	10	-	-	0.122	0.127	0.020	A884268
Misc. Inorganics								
Conductivity	uS/cm	-	-	-	160	160	2.0	A885734
pH	pH	-	-	7.0:10.5	7.17	7.19	N/A	A885721
Total Dissolved Solids	mg/L	-	500	-	110	100	10	A888143
Anions								
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	<1.0	1.0	A885733
Alkalinity (Total as CaCO3)	mg/L	-	-	-	53	53	1.0	A885733
Bicarbonate (HCO3)	mg/L	-	-	-	65	64	1.0	A885733
Carbonate (CO3)	mg/L	-	-	-	<1.0	<1.0	1.0	A885733
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	<0.050	0.050	A885799
Hydroxide (OH)	mg/L	-	-	-	<1.0	<1.0	1.0	A885733
Chloride (Cl)	mg/L	-	250	-	11	12	1.0	A886071
Sulphate (SO4)	mg/L	-	500	-	10	10	1.0	A886071
MISCELLANEOUS								
True Colour	Col. Unit	-	15	-	<5.0	<5.0	5.0	A884655
Nutrients								
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.122	0.127	0.020	A886989
Physical Properties								
Turbidity	NTU	see remark	see remark	see remark	0.12	<0.10	0.10	A884873

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

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Bureau Veritas Job #: C311103
Report Date: 2023/02/23

VILLAGE OF PEMBERTON

MERCURY BY COLD VAPOR (DRINKING WATER)

Bureau Veritas ID			BLZ419	BLZ420	BLZ421	BLZ422		
Sampling Date			2023/02/15 08:30	2023/02/15 09:00	2023/02/15 09:30	2023/02/15 10:00		
COC Number			686852-01-01	686852-01-01	686852-01-01	686852-01-01		
	UNITS	MAC	WELL #2	WELL #3	RIDGE	FARM RD	RDL	QC Batch
Elements								
Total Mercury (Hg)	ug/L	1	<0.0019	<0.0019	<0.0019	<0.0019	0.0019	A884182

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C311103
Report Date: 2023/02/23

VILLAGE OF PEMBERTON

ELEMENTS BY ATOMIC SPECTROSCOPY (DRINKING WATER)

Bureau Veritas ID					BLZ419			BLZ420		
Sampling Date					2023/02/15 08:30			2023/02/15 09:00		
COC Number					686852-01-01			686852-01-01		
	UNITS	MAC	AO	OG	WELL #2	RDL	QC Batch	WELL #3	RDL	QC Batch
Total Metals by ICPMS										
Total Aluminum (Al)	ug/L	2900	-	100	4.3	3.0	A886216	9.0	3.0	A885139
Total Antimony (Sb)	ug/L	6	-	-	<0.50	0.50	A886216	<0.50	0.50	A885139
Total Arsenic (As)	ug/L	10	-	-	<0.10	0.10	A886216	<0.10	0.10	A885139
Total Barium (Ba)	ug/L	2000	-	-	40.4	1.0	A886216	17.3	1.0	A885139
Total Boron (B)	ug/L	5000	-	-	113	50	A886216	<50	50	A885139
Total Cadmium (Cd)	ug/L	7	-	-	<0.010	0.010	A886216	0.020	0.010	A885139
Total Chromium (Cr)	ug/L	50	-	-	<1.0	1.0	A886216	<1.0	1.0	A885139
Total Cobalt (Co)	ug/L	-	-	-	<0.20	0.20	A886216	<0.20	0.20	A885139
Total Copper (Cu)	ug/L	2000	1000	-	2.44	0.20	A886216	7.34	0.50	A885139
Total Iron (Fe)	ug/L	-	300	-	43.9	5.0	A886216	12	10	A885139
Total Lead (Pb)	ug/L	5	-	-	0.22	0.20	A886216	<0.20	0.20	A885139
Total Manganese (Mn)	ug/L	120	20	-	**59.5**	1.0	A886216	**31.1**	1.0	A885139
Total Molybdenum (Mo)	ug/L	-	-	-	1.9	1.0	A886216	<1.0	1.0	A885139
Total Nickel (Ni)	ug/L	-	-	-	<1.0	1.0	A886216	<1.0	1.0	A885139
Total Selenium (Se)	ug/L	50	-	-	<0.10	0.10	A886216	<0.10	0.10	A885139
Total Silver (Ag)	ug/L	-	-	-	<0.020	0.020	A886216	<0.020	0.020	A885139
Total Strontium (Sr)	ug/L	7000	-	-	139	1.0	A886216	56.1	1.0	A885139
Total Uranium (U)	ug/L	20	-	-	<0.10	0.10	A886216	<0.10	0.10	A885139
Total Vanadium (V)	ug/L	-	-	-	<5.0	5.0	A886216	<5.0	5.0	A885139
Total Zinc (Zn)	ug/L	-	5000	-	13.7	5.0	A886216	<5.0	5.0	A885139
Total Calcium (Ca)	mg/L	-	-	-	24.8	0.050	A884266	10.4	0.050	A884266
Total Magnesium (Mg)	mg/L	-	-	-	1.50	0.050	A884266	0.580	0.050	A884266
Total Potassium (K)	mg/L	-	-	-	2.49	0.050	A884266	0.925	0.050	A884266
Total Sodium (Na)	mg/L	-	200	-	14.1	0.050	A884266	4.31	0.050	A884266
Total Sulphur (S)	mg/L	-	-	-	5.6	3.0	A884266	3.3	3.0	A884266

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C311103
Report Date: 2023/02/23

VILLAGE OF PEMBERTON

ELEMENTS BY ATOMIC SPECTROSCOPY (DRINKING WATER)

Bureau Veritas ID					BLZ421	BLZ422		
Sampling Date					2023/02/15 09:30	2023/02/15 10:00		
COC Number					686852-01-01	686852-01-01		
	UNITS	MAC	AO	OG	RIDGE	FARM RD	RDL	QC Batch
Total Metals by ICPMS								
Total Aluminum (Al)	ug/L	2900	-	100	<3.0	<3.0	3.0	A886216
Total Antimony (Sb)	ug/L	6	-	-	<0.50	<0.50	0.50	A886216
Total Arsenic (As)	ug/L	10	-	-	<0.10	<0.10	0.10	A886216
Total Barium (Ba)	ug/L	2000	-	-	17.3	17.8	1.0	A886216
Total Boron (B)	ug/L	5000	-	-	<50	<50	50	A886216
Total Cadmium (Cd)	ug/L	7	-	-	<0.010	<0.010	0.010	A886216
Total Chromium (Cr)	ug/L	50	-	-	<1.0	<1.0	1.0	A886216
Total Cobalt (Co)	ug/L	-	-	-	<0.20	<0.20	0.20	A886216
Total Copper (Cu)	ug/L	2000	1000	-	3.76	6.77	0.20	A886216
Total Iron (Fe)	ug/L	-	300	-	18.8	5.9	5.0	A886216
Total Lead (Pb)	ug/L	5	-	-	<0.20	<0.20	0.20	A886216
Total Manganese (Mn)	ug/L	120	20	-	2.5	3.2	1.0	A886216
Total Molybdenum (Mo)	ug/L	-	-	-	<1.0	<1.0	1.0	A886216
Total Nickel (Ni)	ug/L	-	-	-	<1.0	<1.0	1.0	A886216
Total Selenium (Se)	ug/L	50	-	-	<0.10	<0.10	0.10	A886216
Total Silver (Ag)	ug/L	-	-	-	<0.020	<0.020	0.020	A886216
Total Strontium (Sr)	ug/L	7000	-	-	58.8	59.2	1.0	A886216
Total Uranium (U)	ug/L	20	-	-	<0.10	<0.10	0.10	A886216
Total Vanadium (V)	ug/L	-	-	-	<5.0	<5.0	5.0	A886216
Total Zinc (Zn)	ug/L	-	5000	-	8.6	<5.0	5.0	A886216
Total Calcium (Ca)	mg/L	-	-	-	11.0	11.0	0.050	A884266
Total Magnesium (Mg)	mg/L	-	-	-	0.645	0.637	0.050	A884266
Total Potassium (K)	mg/L	-	-	-	1.02	1.04	0.050	A884266
Total Sodium (Na)	mg/L	-	200	-	20.7	20.9	0.050	A884266
Total Sulphur (S)	mg/L	-	-	-	<3.0	<3.0	3.0	A884266

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C311103
Report Date: 2023/02/23

VILLAGE OF PEMBERTON

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, September 2020.

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.
4. To ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of 1.0 NTU or less.
Measurement of Uncertainty has not been accounted for when stating conformity to the selected criteria, where applicable.

Results relate only to the items tested.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C311103
Report Date: 2023/02/23

QUALITY ASSURANCE REPORT

VILLAGE OF PEMBERTON

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A884182	Total Mercury (Hg)	2023/02/16	89	80 - 120	107	80 - 120	<0.0019	ug/L	NC	20
A884655	True Colour	2023/02/16			98	80 - 120	<5.0	Col. Unit	NC	20
A884864	Turbidity	2023/02/16			101	80 - 120	<0.10	NTU	4.4	20
A884873	Turbidity	2023/02/16			101	80 - 120	<0.10	NTU	0.48	20
A885139	Total Aluminum (Al)	2023/02/17	98	80 - 120	99	80 - 120	<3.0	ug/L	NC	20
A885139	Total Antimony (Sb)	2023/02/17	103	80 - 120	102	80 - 120	<0.50	ug/L	NC	20
A885139	Total Arsenic (As)	2023/02/17	107	80 - 120	102	80 - 120	<0.10	ug/L	4.4	20
A885139	Total Barium (Ba)	2023/02/17	105	80 - 120	101	80 - 120	<1.0	ug/L	4.6	20
A885139	Total Boron (B)	2023/02/17	93	80 - 120	103	80 - 120	<50	ug/L	9.1	20
A885139	Total Cadmium (Cd)	2023/02/17	100	80 - 120	103	80 - 120	<0.010	ug/L	2.8	20
A885139	Total Chromium (Cr)	2023/02/17	98	80 - 120	102	80 - 120	<1.0	ug/L	NC	20
A885139	Total Cobalt (Co)	2023/02/17	94	80 - 120	99	80 - 120	<0.20	ug/L	NC	20
A885139	Total Copper (Cu)	2023/02/17	94	80 - 120	101	80 - 120	<0.50	ug/L	NC	20
A885139	Total Iron (Fe)	2023/02/17	NC	80 - 120	106	80 - 120	<10	ug/L	4.6	20
A885139	Total Lead (Pb)	2023/02/17	99	80 - 120	100	80 - 120	<0.20	ug/L	5.9	20
A885139	Total Manganese (Mn)	2023/02/17	NC	80 - 120	102	80 - 120	<1.0	ug/L	5.9	20
A885139	Total Molybdenum (Mo)	2023/02/17	NC	80 - 120	104	80 - 120	<1.0	ug/L	5.5	20
A885139	Total Nickel (Ni)	2023/02/17	96	80 - 120	102	80 - 120	<1.0	ug/L	NC	20
A885139	Total Selenium (Se)	2023/02/17	95	80 - 120	104	80 - 120	<0.10	ug/L	11	20
A885139	Total Silver (Ag)	2023/02/17	100	80 - 120	103	80 - 120	<0.020	ug/L	NC	20
A885139	Total Strontium (Sr)	2023/02/17	NC	80 - 120	100	80 - 120	<1.0	ug/L	5.9	20
A885139	Total Uranium (U)	2023/02/17	106	80 - 120	101	80 - 120	<0.10	ug/L	4.3	20
A885139	Total Vanadium (V)	2023/02/17	101	80 - 120	103	80 - 120	<5.0	ug/L	NC	20
A885139	Total Zinc (Zn)	2023/02/17	98	80 - 120	104	80 - 120	<5.0	ug/L	7.1	20
A885721	pH	2023/02/16			102	97 - 103			0.13	N/A
A885733	Alkalinity (PP as CaCO3)	2023/02/16					<1.0	mg/L	NC	20
A885733	Alkalinity (Total as CaCO3)	2023/02/16	NC	80 - 120	98	80 - 120	<1.0	mg/L	2.0	20
A885733	Bicarbonate (HCO3)	2023/02/16					<1.0	mg/L	2.0	20
A885733	Carbonate (CO3)	2023/02/16					<1.0	mg/L	NC	20
A885733	Hydroxide (OH)	2023/02/16					<1.0	mg/L	NC	20
A885734	Conductivity	2023/02/16			101	80 - 120	<2.0	uS/cm	0.24	10
A885799	Dissolved Fluoride (F)	2023/02/17	97	80 - 120	94	80 - 120	<0.050	mg/L	NC	20
A886071	Chloride (Cl)	2023/02/17	NC	80 - 120	100	80 - 120	<1.0	mg/L	42	
A886071	Sulphate (SO4)	2023/02/17	NC	80 - 120	98	80 - 120	<1.0	mg/L	2.0	20

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Bureau Veritas Job #: C311103
Report Date: 2023/02/23

QUALITY ASSURANCE REPORT(CONT'D)

VILLAGE OF PEMBERTON

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A886216	Total Aluminum (Al)	2023/02/18	99	80 - 120	97	80 - 120	<3.0	ug/L		
A886216	Total Antimony (Sb)	2023/02/18	100	80 - 120	98	80 - 120	<0.50	ug/L		
A886216	Total Arsenic (As)	2023/02/18	104	80 - 120	100	80 - 120	<0.10	ug/L		
A886216	Total Barium (Ba)	2023/02/18	98	80 - 120	98	80 - 120	<1.0	ug/L		
A886216	Total Boron (B)	2023/02/18	87	80 - 120	93	80 - 120	<50	ug/L		
A886216	Total Cadmium (Cd)	2023/02/18	97	80 - 120	95	80 - 120	<0.010	ug/L		
A886216	Total Chromium (Cr)	2023/02/18	97	80 - 120	97	80 - 120	<1.0	ug/L		
A886216	Total Cobalt (Co)	2023/02/18	95	80 - 120	96	80 - 120	<0.20	ug/L		
A886216	Total Copper (Cu)	2023/02/18	93	80 - 120	95	80 - 120	<0.20	ug/L		
A886216	Total Iron (Fe)	2023/02/18	NC	80 - 120	101	80 - 120	<5.0	ug/L		
A886216	Total Lead (Pb)	2023/02/18	102	80 - 120	102	80 - 120	<0.20	ug/L		
A886216	Total Manganese (Mn)	2023/02/18	NC	80 - 120	97	80 - 120	<1.0	ug/L		
A886216	Total Molybdenum (Mo)	2023/02/18	105	80 - 120	98	80 - 120	<1.0	ug/L		
A886216	Total Nickel (Ni)	2023/02/18	94	80 - 120	95	80 - 120	<1.0	ug/L		
A886216	Total Selenium (Se)	2023/02/18	98	80 - 120	97	80 - 120	<0.10	ug/L		
A886216	Total Silver (Ag)	2023/02/18	95	80 - 120	96	80 - 120	<0.020	ug/L		
A886216	Total Strontium (Sr)	2023/02/18	NC	80 - 120	98	80 - 120	<1.0	ug/L		
A886216	Total Uranium (U)	2023/02/18	105	80 - 120	102	80 - 120	<0.10	ug/L		
A886216	Total Vanadium (V)	2023/02/18	98	80 - 120	96	80 - 120	<5.0	ug/L		
A886216	Total Zinc (Zn)	2023/02/18	95	80 - 120	96	80 - 120	<5.0	ug/L		
A886989	Nitrate plus Nitrite (N)	2023/02/18	109	80 - 120	106	80 - 120	<0.020	mg/L	0.53	25
A886990	Nitrite (N)	2023/02/18	101	80 - 120	106	80 - 120	<0.0050	mg/L	3.1	20
A888143	Total Dissolved Solids	2023/02/22	100	80 - 120	108	80 - 120	<10	mg/L	NC	20

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.

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).

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Bureau Veritas
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel (604) 734 7276 Toll-free 800-563-6266 Fax (604) 731 2386 www.bvna.com

Page of

C311103_COC

INVOICE TO:	
Company Name	#99020 VILLAGE OF PEMBERTON
Contact Name	Accounts Payable
Address	Box 100 7400 Prospect St Pemberton BC V0N 2L0
Phone	(604) 894-6811 Fax (604) 894-6855
Email	accountspayable@pemberton.ca

Report Information	
Company Name	VILLAGE OF PEMBERTON
Contact Name	JEFF WESTLAKE
Address	
Phone	604-905-8924 Fax
Email	jwestlake@pemberton.ca

Project Information	
Quotation #	C21923
P.O. #	
Project #	
Project Name	
Site #	
Sampled By	

Only

Bottle Order #: 686852

Chain Of Custody Record: C#686852-01-01

Project Manager: Customer Solutions

Regulatory Criteria:

- [ ] CSR
- [ ] CCME
- [x] BC Water Quality
- [ ] Other ______

Special Instructions: PLEASE PLOT AGAINST AO & MAC

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Drinking Water Package w/o Microbiology	# of Bottles	Comments
1		WELL #2	23/02/15	0830			✓		
2		WELL #3	23/02/15	0900			✓		
3		RIDGE	23/02/15	0930			✓		
4		FARM RD	23/02/15	1000			✓		
5									
6									
7									
8									
9									
10									

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [ ]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
1 DAY [ ] 2 Day [ ] 3 Day [ ] Date Required: ______ [ ]
Rush Confirmation Number: ______ (call lab for #)

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
[signature] JEFF WESTLAKE	23/02/15	11:00	[signature] Edelane Croini	2023/02/16	0830	

Lab Use Only: Time Sensitive [ ] — Temperature (°C) on Receipt 8, 6, 6 — Custody Seal Intact on Cooler? [ ] Yes [x] No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

ice pack: yes

Your C.O.C. #: 689365-01-01

Attention: Jeff Westlake

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

Report Date: 2023/03/30
Report #: R3316886
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C320383
Received: 2023/03/24, 08:00

Sample Matrix: Drinking Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	3	N/A	2023/03/24	BBY6SOP-00026	SM 23 2320 B m
Alkalinity @25C (pp, total), CO3,HCO3,OH	1	N/A	2023/03/25	BBY6SOP-00026	SM 23 2320 B m
Chloride/Sulphate by Auto Colourimetry	4	N/A	2023/03/24	BBY6SOP-00011 / BBY6SOP-00017	SM23-4500-Cl/SO4-E m
Colour (True) by Kone Lab	4	N/A	2023/03/24	BBY6SOP-00057	SM 23 2120 C m
Conductivity @25C	3	N/A	2023/03/24	BBY6SOP-00026	SM 23 2510 B m
Conductivity @25C	1	N/A	2023/03/25	BBY6SOP-00026	SM 23 2510 B m
Fluoride	4	N/A	2023/03/30	BBY6SOP-00048	SM 23 4500-F C m
Hardness Total (calculated as CaCO3) (1)	4	N/A	2023/03/28	BBY WI-00033	Auto Calc
Mercury (Total) by CV	4	2023/03/24	2023/03/24	AB SOP-00084	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	4	N/A	2023/03/28	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total)	4	N/A	2023/03/27	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Nitrate + Nitrite (N)	4	N/A	2023/03/24	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrite (N) by CFA	4	N/A	2023/03/24	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrogen - Nitrate (as N)	4	N/A	2023/03/27	BBY WI-00033	Auto Calc
pH @25°C (2)	3	N/A	2023/03/24	BBY6SOP-00026	SM 23 4500-H+ B m
pH @25°C (2)	1	N/A	2023/03/25	BBY6SOP-00026	SM 23 4500-H+ B m
Total Dissolved Solids (Filt. Residue)	4	2023/03/28	2023/03/29	BBY6SOP-00033	SM 23 2540 C m
Turbidity	4	N/A	2023/03/24	BBY6SOP-00027	SM 23 2130 B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your C.O.C. #: 689365-01-01

Attention: Jeff Westlake

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

Report Date: 2023/03/30
Report #: R3316886
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C320383

Received: 2023/03/24, 08:00

Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

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. When sampling is not conducted by Bureau Veritas, results relate to the supplied 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) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).

(2) The CCME method requires 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 CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
30 Mar 2023 17:14:05

Please direct all questions regarding this Certificate of Analysis to:
Customer Solutions, Western Canada Customer Experience Team
Email: customersolutionswest@bureauveritas.com
Phone# (604) 734 7276

==========

This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Raphael Kwan, Senior Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C320383
Report Date: 2023/03/30

VILLAGE OF PEMBERTON

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					BNY771		BNY772		
Sampling Date					2023/03/23 07:30		2023/03/23 07:40		
COC Number					689365-01-01		689365-01-01		
	UNITS	**MAC**	**AO**	**OG**	**WELL #2**	**QC Batch**	**WELL #3**	**RDL**	**QC Batch**
ANIONS									
Nitrite (N)	mg/L	1	-	-	<0.0050	A919335	<0.0050	0.0050	A919338
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	76.2	A918347	30.0	0.50	A918347
Nitrate (N)	mg/L	10	-	-	0.233	A918346	0.117	0.020	A918346
Misc. Inorganics									
Conductivity	uS/cm	-	-	-	250	A920791	95	2.0	A920791
pH	pH	-	-	7.0:10.5	**6.35**	A920783	**6.54**	N/A	A920783
Total Dissolved Solids	mg/L	-	500	-	160	A921675	72	10	A921675
Anions									
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	A920788	<1.0	1.0	A920788
Alkalinity (Total as CaCO3)	mg/L	-	-	-	38	A920788	16	1.0	A920788
Bicarbonate (HCO3)	mg/L	-	-	-	46	A920788	19	1.0	A920788
Carbonate (CO3)	mg/L	-	-	-	<1.0	A920788	<1.0	1.0	A920788
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	A924034	<0.050	0.050	A924034
Hydroxide (OH)	mg/L	-	-	-	<1.0	A920788	<1.0	1.0	A920788
Chloride (Cl)	mg/L	-	250	-	38	A919204	9.0	1.0	A919204
Sulphate (SO4)	mg/L	-	500	-	19	A919204	9.6	1.0	A919204
MISCELLANEOUS									
True Colour	Col. Unit	-	15	-	<5.0	A919079	<5.0	5.0	A919079
Nutrients									
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.233	A919334	0.117	0.020	A919336
Physical Properties									
Turbidity	NTU	see remark	see remark	see remark	0.50	A918984	0.10	0.10	A918984

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

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Bureau Veritas Job #: C320383
Report Date: 2023/03/30

VILLAGE OF PEMBERTON

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					BNY773		BNY774		
Sampling Date					2023/03/23 07:50		2023/03/23 08:00		
COC Number					689365-01-01		689365-01-01		
	UNITS	MAC	AO	OG	RIDGE	QC Batch	FARM	RDL	QC Batch
ANIONS									
Nitrite (N)	mg/L	1	-	-	<0.0050 (1)	A919342	<0.0050	0.0050	A919338
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	31.0	A918347	30.9	0.50	A918347
Nitrate (N)	mg/L	10	-	-	0.119	A918346	0.126	0.020	A918346
Misc. Inorganics									
Conductivity	uS/cm	-	-	-	170	A920791	160	2.0	A920801
pH	pH	-	-	7.0:10.5	7.08	A920783	7.09	N/A	A920798
Total Dissolved Solids	mg/L	-	500	-	110	A921675	120	10	A921675
Anions									
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	A920788	<1.0	1.0	A920799
Alkalinity (Total as CaCO3)	mg/L	-	-	-	56	A920788	54	1.0	A920799
Bicarbonate (HCO3)	mg/L	-	-	-	68	A920788	66	1.0	A920799
Carbonate (CO3)	mg/L	-	-	-	<1.0	A920788	<1.0	1.0	A920799
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	A924034	<0.050	0.050	A924034
Hydroxide (OH)	mg/L	-	-	-	<1.0	A920788	<1.0	1.0	A920799
Chloride (Cl)	mg/L	-	250	-	9.9	A919204	10	1.0	A919204
Sulphate (SO4)	mg/L	-	500	-	9.7	A919204	9.8	1.0	A919204
MISCELLANEOUS									
True Colour	Col. Unit	-	15	-	<5.0	A919079	<5.0	5.0	A919079
Nutrients									
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.119	A919340	0.126	0.020	A919336
Physical Properties									
Turbidity	NTU	see remark	see remark	see remark	0.20	A918984	0.10	0.10	A918984

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Matrix spike exceeds acceptance limits due to suspected matrix interference.

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Bureau Veritas Job #: C320383
Report Date: 2023/03/30

VILLAGE OF PEMBERTON

MERCURY BY COLD VAPOR (DRINKING WATER)

Bureau Veritas ID			BNY771	BNY772	BNY773	BNY774		
Sampling Date			2023/03/23 07:30	2023/03/23 07:40	2023/03/23 07:50	2023/03/23 08:00		
COC Number			689365-01-01	689365-01-01	689365-01-01	689365-01-01		
	UNITS	MAC	WELL #2	WELL #3	RIDGE	FARM	RDL	QC Batch
Elements								
Total Mercury (Hg)	ug/L	1	0.0020	<0.0019	<0.0019	<0.0019	0.0019	A919234

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C320383
Report Date: 2023/03/30

VILLAGE OF PEMBERTON

ELEMENTS BY ATOMIC SPECTROSCOPY (DRINKING WATER)

Bureau Veritas ID					BNY771	BNY772	BNY773	BNY774		
Sampling Date					2023/03/23 07:30	2023/03/23 07:40	2023/03/23 07:50	2023/03/23 08:00		
COC Number					689365-01-01	689365-01-01	689365-01-01	689365-01-01		
	UNITS	MAC	AO	OG	WELL #2	WELL #3	RIDGE	FARM	RDL	QC Batch
Total Metals by ICPMS										
Total Aluminum (Al)	ug/L	2900	-	100	10.2	7.4	<3.0	<3.0	3.0	A920493
Total Antimony (Sb)	ug/L	6	-	-	<0.50	<0.50	<0.50	<0.50	0.50	A920493
Total Arsenic (As)	ug/L	10	-	-	<0.10	<0.10	<0.10	<0.10	0.10	A920493
Total Barium (Ba)	ug/L	2000	-	-	45.1	18.3	17.9	17.9	1.0	A920493
Total Boron (B)	ug/L	5000	-	-	123	<50	<50	<50	50	A920493
Total Cadmium (Cd)	ug/L	7	-	-	<0.010	0.022	<0.010	<0.010	0.010	A920493
Total Chromium (Cr)	ug/L	50	-	-	<1.0	<1.0	<1.0	<1.0	1.0	A920493
Total Cobalt (Co)	ug/L	-	-	-	0.20	<0.20	<0.20	<0.20	0.20	A920493
Total Copper (Cu)	ug/L	2000	1000	-	6.24	10.1	3.62	7.47	0.20	A920493
Total Iron (Fe)	ug/L	-	300	-	106	11.4	18.0	7.0	5.0	A920493
Total Lead (Pb)	ug/L	5	-	-	0.25	<0.20	<0.20	<0.20	0.20	A920493
Total Manganese (Mn)	ug/L	120	20	-	**72.5**	**32.4**	2.4	2.5	1.0	A920493
Total Molybdenum (Mo)	ug/L	-	-	-	2.2	<1.0	<1.0	<1.0	1.0	A920493
Total Nickel (Ni)	ug/L	-	-	-	<1.0	<1.0	<1.0	<1.0	1.0	A920493
Total Selenium (Se)	ug/L	50	-	-	<0.10	<0.10	<0.10	<0.10	0.10	A920493
Total Silver (Ag)	ug/L	-	-	-	<0.020	<0.020	<0.020	<0.020	0.020	A920493
Total Strontium (Sr)	ug/L	7000	-	-	169	58.7	58.0	59.2	1.0	A920493
Total Uranium (U)	ug/L	20	-	-	<0.10	<0.10	<0.10	<0.10	0.10	A920493
Total Vanadium (V)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0	A920493
Total Zinc (Zn)	ug/L	-	5000	-	40.3	<5.0	11.6	<5.0	5.0	A920493
Total Calcium (Ca)	mg/L	-	-	-	27.8	11.0	11.2	11.3	0.050	A918610
Total Magnesium (Mg)	mg/L	-	-	-	1.65	0.640	0.729	0.635	0.050	A918610
Total Potassium (K)	mg/L	-	-	-	2.57	1.01	0.999	0.996	0.050	A918610
Total Sodium (Na)	mg/L	-	200	-	15.1	4.80	23.6	22.5	0.050	A918610
Total Sulphur (S)	mg/L	-	-	-	6.8	3.8	3.5	3.5	3.0	A918610

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C320383
Report Date: 2023/03/30

VILLAGE OF PEMBERTON

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, September 2020.

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.
4. To ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of 1.0 NTU or less.
Measurement of Uncertainty has not been accounted for when stating conformity to the selected criteria, where applicable.

Results relate only to the items tested.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C320383
Report Date: 2023/03/30

QUALITY ASSURANCE REPORT

VILLAGE OF PEMBERTON

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A918984	Turbidity	2023/03/24			101	80 - 120	<0.10	NTU	4.2	20
A919079	True Colour	2023/03/24			94	80 - 120	<5.0	Col. Unit	NC	20
A919204	Chloride (Cl)	2023/03/24	NC	80 - 120	99	80 - 120	<1.0	mg/L	0.31	20
A919204	Sulphate (SO4)	2023/03/24	99	80 - 120	94	80 - 120	<1.0	mg/L		
A919234	Total Mercury (Hg)	2023/03/24	102	80 - 120	101	80 - 120	<0.0019	ug/L	NC	20
A919334	Nitrate plus Nitrite (N)	2023/03/24	103	80 - 120	103	80 - 120	<0.020	mg/L	0.33	25
A919335	Nitrite (N)	2023/03/24	64 (1)	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20
A919336	Nitrate plus Nitrite (N)	2023/03/24	99	80 - 120	104	80 - 120	<0.020	mg/L	0.26	25
A919338	Nitrite (N)	2023/03/24	97	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20
A919340	Nitrate plus Nitrite (N)	2023/03/24	101	80 - 120	102	80 - 120	<0.020	mg/L	0.25	25
A919342	Nitrite (N)	2023/03/24	65 (1)	80 - 120	99	80 - 120	<0.0050	mg/L	NC	20
A920493	Total Aluminum (Al)	2023/03/27	99	80 - 120	106	80 - 120	<3.0	ug/L		
A920493	Total Antimony (Sb)	2023/03/27	104	80 - 120	109	80 - 120	<0.50	ug/L		
A920493	Total Arsenic (As)	2023/03/27	104	80 - 120	106	80 - 120	<0.10	ug/L	0.41	20
A920493	Total Barium (Ba)	2023/03/27	102	80 - 120	107	80 - 120	<1.0	ug/L		
A920493	Total Boron (B)	2023/03/27	NC	80 - 120	103	80 - 120	<50	ug/L		
A920493	Total Cadmium (Cd)	2023/03/27	103	80 - 120	108	80 - 120	<0.010	ug/L		
A920493	Total Chromium (Cr)	2023/03/27	95	80 - 120	103	80 - 120	<1.0	ug/L		
A920493	Total Cobalt (Co)	2023/03/27	103	80 - 120	109	80 - 120	<0.20	ug/L		
A920493	Total Copper (Cu)	2023/03/27	94	80 - 120	104	80 - 120	<0.20	ug/L		
A920493	Total Iron (Fe)	2023/03/27	105	80 - 120	112	80 - 120	<5.0	ug/L		
A920493	Total Lead (Pb)	2023/03/27	100	80 - 120	106	80 - 120	<0.20	ug/L		
A920493	Total Manganese (Mn)	2023/03/27	99	80 - 120	108	80 - 120	<1.0	ug/L		
A920493	Total Molybdenum (Mo)	2023/03/27	110	80 - 120	108	80 - 120	<1.0	ug/L		
A920493	Total Nickel (Ni)	2023/03/27	98	80 - 120	107	80 - 120	<1.0	ug/L		
A920493	Total Selenium (Se)	2023/03/27	105	80 - 120	109	80 - 120	<0.10	ug/L		
A920493	Total Silver (Ag)	2023/03/27	102	80 - 120	107	80 - 120	<0.020	ug/L		
A920493	Total Strontium (Sr)	2023/03/27	107	80 - 120	106	80 - 120	<1.0	ug/L		
A920493	Total Uranium (U)	2023/03/27	106	80 - 120	110	80 - 120	<0.10	ug/L		
A920493	Total Vanadium (V)	2023/03/27	98	80 - 120	104	80 - 120	<5.0	ug/L		
A920493	Total Zinc (Zn)	2023/03/27	97	80 - 120	110	80 - 120	<5.0	ug/L		
A920783	pH	2023/03/24			102	97 - 103				
A920788	Alkalinity (PP as CaCO3)	2023/03/24					<1.0	mg/L	52	
A920788	Alkalinity (Total as CaCO3)	2023/03/24			94	80 - 120	<1.0	mg/L		

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Bureau Veritas Job #: C320383
Report Date: 2023/03/30

QUALITY ASSURANCE REPORT(CONT'D)

VILLAGE OF PEMBERTON

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A920788	Bicarbonate (HCO3)	2023/03/24					<1.0	mg/L		
A920788	Carbonate (CO3)	2023/03/24					<1.0	mg/L		
A920788	Hydroxide (OH)	2023/03/24					<1.0	mg/L		
A920791	Conductivity	2023/03/24			101	80 - 120	<2.0	uS/cm		
A920798	pH	2023/03/25			101	97 - 103			1.1	N/A
A920799	Alkalinity (PP as CaCO3)	2023/03/25					<1.0	mg/L	NC	20
A920799	Alkalinity (Total as CaCO3)	2023/03/25	NC	80 - 120	94	80 - 120	<1.0	mg/L	0.50	20
A920799	Bicarbonate (HCO3)	2023/03/25					<1.0	mg/L	0.50	20
A920799	Carbonate (CO3)	2023/03/25					<1.0	mg/L	NC	20
A920799	Hydroxide (OH)	2023/03/25					<1.0	mg/L	NC	20
A920801	Conductivity	2023/03/25			101	80 - 120	<2.0	uS/cm	1.2	10
A921675	Total Dissolved Solids	2023/03/29	100	80 - 120	94	80 - 120	<10	mg/L	4.1	20
A924034	Dissolved Fluoride (F)	2023/03/30	111	80 - 120	104	80 - 120	<0.050	mg/L	NC	20

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.

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.

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Bureau Veritas
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.bvna.com

Page of

C320383_COC

Bottle Order #: 689365

C#689365-01-01

INVOICE TO:		Report Information		Project Information		Chain Of Custody Record	Project Manager
Company Name	#99020 VILLAGE OF PEMBERTON	Company Name		Quotation #	C21923		
Contact Name	Accounts Payable	Contact Name	Jeff Westlake	P.O. #			Customer Solutions
Address	Box 100 7400 Prospect St	Address		Project #			
	Pemberton BC V0N 2L0			Project Name			
Phone	(604) 894-6811 Fax (604) 894-6855	Phone	(604) 894-6125 Fax	Site #			
Email	accountspayable@pemberton.ca	Email	jwestlake@pemberton.ca	Sampled By			

Regulatory Criteria:
- ☐ CSR
- ☐ CCME
- ☐ BC Water Quality
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified): ☐
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
1 DAY ☐ 2 Day ☐ 3 Day ☐ Date Required: ☐
Rush Confirmation Number: (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Drinking Water Package w/o Microbiology	# of Bottles	Comments
1		WELL #2	2023/03/23	7:30AM			✓		
2		WELL #3	2023/03/23	7:40AM			✓		
3		RIDGE	2023/03/23	7:50AM			✓		
4		FARM.	2023/03/23	8:00AM			✓		
5									
6									
7									
8									
9									
10									

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Reece Clark Rdark	23/03/23	9:00am	AMR AMR 2023/3	2023/03/26	08:00		☐	6/6/6	☐ Yes ☑ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

Icc: Y

Bureau Veritas Canada (2019) Inc.

Your C.O.C. #: 692993-01-01

Attention: Jeff Westlake

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

Report Date: 2023/05/26
Report #: R3340622
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C335804
Received: 2023/05/19, 08:10

Sample Matrix: Drinking Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	4	N/A	2023/05/20	BBY6SOP-00026	SM 23 2320 B m
Chloride/Sulphate by Auto Colourimetry	4	N/A	2023/05/24	BBY6SOP-00011 / BBY6SOP-00017	SM24-4500-Cl/SO4-E m
Colour (True) by Kone Lab	4	N/A	2023/05/19	BBY6SOP-00057	SM 23 2120 C m
Conductivity @25C	4	N/A	2023/05/20	BBY6SOP-00026	SM 23 2510 B m
Fluoride	4	N/A	2023/05/23	BBY6SOP-00048	SM 23 4500-F C m
Hardness Total (calculated as CaCO3) (1)	4	N/A	2023/05/24	BBY WI-00033	Auto Calc
Mercury (Total) by CV	4	2023/05/25	2023/05/25	AB SOP-00084	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	4	N/A	2023/05/24	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total)	4	N/A	2023/05/23	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Nitrate + Nitrite (N)	4	N/A	2023/05/19	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrite (N) by CFA	4	N/A	2023/05/19	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrogen - Nitrate (as N)	4	N/A	2023/05/20	BBY WI-00033	Auto Calc
pH @25°C (2)	4	N/A	2023/05/20	BBY6SOP-00026	SM 23 4500-H+ B m
Total Dissolved Solids (Filt. Residue)	4	2023/05/24	2023/05/25	BBY6SOP-00033	SM 23 2540 C m
Turbidity	4	N/A	2023/05/19	BBY6SOP-00027	SM 23 2130 B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas 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 Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your C.O.C. #: 692993-01-01

Attention: Jeff Westlake

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

Report Date: 2023/05/26
Report #: R3340622
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C335804
Received: 2023/05/19, 08:10

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. When sampling is not conducted by Bureau Veritas, results relate to the supplied 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) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(2) The CCME method requires 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 CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
26 May 2023 11:50:56

Please direct all questions regarding this Certificate of Analysis to:
Customer Solutions, Western Canada Customer Experience Team
Email: customersolutionswest@bureauveritas.com
Phone# (604) 734 7276

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This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Raphael Kwan, Senior Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

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Bureau Veritas Job #: C335804
Report Date: 2023/05/26

VILLAGE OF PEMBERTON

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					BQS826		BQS827	BQS828		
Sampling Date					2023/05/18 08:30		2023/05/18 08:45	2023/05/18 09:00		
COC Number					692993-01-01		692993-01-01	692993-01-01		
	UNITS	MAC	AO	OG	WELL#2	QC Batch	WELL#3	RIDGE	RDL	QC Batch
ANIONS										
Nitrite (N)	mg/L	1	-	-	<0.0050	A968055	<0.0050	<0.0050 (1)	0.0050	A968055
Calculated Parameters										
Total Hardness (CaCO3)	mg/L	-	-	-	63.4	A967342	30.0	29.8	0.50	A967342
Nitrate (N)	mg/L	10	-	-	0.319	A967289	0.152	0.149	0.020	A967289
Misc. Inorganics										
Conductivity	uS/cm	-	-	-	240	A969541	100	170	2.0	A969541
pH	pH	-	-	7.0:10.5	**6.94**	A969527	**6.78**	7.45	N/A	A969527
Total Dissolved Solids	mg/L	-	500	-	150	A970473	68	96	10	A970473
Anions										
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	A969531	<1.0	<1.0	1.0	A969531
Alkalinity (Total as CaCO3)	mg/L	-	-	-	31	A969531	16	52	1.0	A969531
Bicarbonate (HCO3)	mg/L	-	-	-	38	A969531	19	63	1.0	A969531
Carbonate (CO3)	mg/L	-	-	-	<1.0	A969531	<1.0	<1.0	1.0	A969531
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	A969495	<0.050	<0.050	0.050	A969495
Hydroxide (OH)	mg/L	-	-	-	<1.0	A969531	<1.0	<1.0	1.0	A969531
Chloride (Cl)	mg/L	-	250	-	35	A970632	11	12	1.0	A970639
Sulphate (SO4)	mg/L	-	500	-	19	A970632	11	11	1.0	A970639
MISCELLANEOUS										
True Colour	Col. Unit	-	15	-	<5.0	A967475	<5.0	<5.0	5.0	A967475
Nutrients										
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.319	A968053	0.152	0.149	0.020	A968053
Physical Properties										
Turbidity	NTU	see remark	see remark	see remark	0.24	A968050	<0.10	0.13	0.10	A968050

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Matrix spike exceeds acceptance limits due to suspected matrix interference.

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Bureau Veritas Job #: C335804
Report Date: 2023/05/26

VILLAGE OF PEMBERTON

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					BQS829		
Sampling Date					2023/05/18 09:15		
COC Number					692993-01-01		
	UNITS	MAC	AO	OG	FARM RD	RDL	QC Batch
ANIONS							
Nitrite (N)	mg/L	1	-	-	<0.0050	0.0050	A968055
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	-	-	-	29.8	0.50	A967342
Nitrate (N)	mg/L	10	-	-	0.149	0.020	A967289
Misc. Inorganics							
Conductivity	uS/cm	-	-	-	170	2.0	A969541
pH	pH	-	-	7.0:10.5	7.51	N/A	A969527
Total Dissolved Solids	mg/L	-	500	-	88	10	A970473
Anions							
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	1.0	A969531
Alkalinity (Total as CaCO3)	mg/L	-	-	-	52	1.0	A969531
Bicarbonate (HCO3)	mg/L	-	-	-	64	1.0	A969531
Carbonate (CO3)	mg/L	-	-	-	<1.0	1.0	A969531
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	0.050	A969495
Hydroxide (OH)	mg/L	-	-	-	<1.0	1.0	A969531
Chloride (Cl)	mg/L	-	250	-	12	1.0	A970628
Sulphate (SO4)	mg/L	-	500	-	11	1.0	A970628
MISCELLANEOUS							
True Colour	Col. Unit	-	15	-	<5.0	5.0	A967475
Nutrients							
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.149	0.020	A968053
Physical Properties							
Turbidity	NTU	see remark	see remark	see remark	0.12	0.10	A968050

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

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Bureau Veritas Job #: C335804
Report Date: 2023/05/26

VILLAGE OF PEMBERTON

MERCURY BY COLD VAPOR (DRINKING WATER)

Bureau Veritas ID			BQS826	BQS827	BQS828	BQS829		
Sampling Date			2023/05/18 08:30	2023/05/18 08:45	2023/05/18 09:00	2023/05/18 09:15		
COC Number			692993-01-01	692993-01-01	692993-01-01	692993-01-01		
	UNITS	MAC	WELL#2	WELL#3	RIDGE	FARM RD	RDL	QC Batch
Elements								
Total Mercury (Hg)	ug/L	1	<0.0019	<0.0019	<0.0019	<0.0019	0.0019	A972500

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

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Bureau Veritas Job #: C335804
Report Date: 2023/05/26

VILLAGE OF PEMBERTON

ELEMENTS BY ATOMIC SPECTROSCOPY (DRINKING WATER)

Bureau Veritas ID					BQS826	BQS827	BQS828	BQS829		
Sampling Date					2023/05/18 08:30	2023/05/18 08:45	2023/05/18 09:00	2023/05/18 09:15		
COC Number					692993-01-01	692993-01-01	692993-01-01	692993-01-01		
	UNITS	MAC	AO	OG	WELL#2	WELL#3	RIDGE	FARM RD	RDL	QC Batch
Total Metals by ICPMS										
Total Aluminum (Al)	ug/L	2900	-	100	5.3	7.2	<3.0	8.3	3.0	A968317
Total Antimony (Sb)	ug/L	6	-	-	<0.50	<0.50	<0.50	<0.50	0.50	A968317
Total Arsenic (As)	ug/L	10	-	-	<0.10	<0.10	<0.10	<0.10	0.10	A968317
Total Barium (Ba)	ug/L	2000	-	-	43.1	18.7	18.6	19.2	1.0	A968317
Total Boron (B)	ug/L	5000	-	-	98	<50	<50	<50	50	A968317
Total Cadmium (Cd)	ug/L	7	-	-	<0.010	0.018	<0.010	0.026	0.010	A968317
Total Chromium (Cr)	ug/L	50	-	-	<1.0	<1.0	<1.0	<1.0	1.0	A968317
Total Cobalt (Co)	ug/L	-	-	-	<0.20	<0.20	<0.20	<0.20	0.20	A968317
Total Copper (Cu)	ug/L	2000	1000	-	1.41	10.5	4.84	8.62	0.20	A968317
Total Iron (Fe)	ug/L	-	300	-	81.5	8.4	<5.0	11.6	5.0	A968317
Total Lead (Pb)	ug/L	5	-	-	<0.20	<0.20	<0.20	<0.20	0.20	A968317
Total Manganese (Mn)	ug/L	120	20	-	**61.5**	**33.5**	4.4	**21.9**	1.0	A968317
Total Molybdenum (Mo)	ug/L	-	-	-	2.0	<1.0	<1.0	<1.0	1.0	A968317
Total Nickel (Ni)	ug/L	-	-	-	<1.0	<1.0	<1.0	2.2	1.0	A968317
Total Selenium (Se)	ug/L	50	-	-	<0.10	<0.10	<0.10	<0.10	0.10	A968317
Total Silver (Ag)	ug/L	-	-	-	<0.020	<0.020	<0.020	<0.020	0.020	A968317
Total Strontium (Sr)	ug/L	7000	-	-	143	60.7	61.5	61.2	1.0	A968317
Total Uranium (U)	ug/L	20	-	-	<0.10	<0.10	<0.10	<0.10	0.10	A968317
Total Vanadium (V)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0	A968317
Total Zinc (Zn)	ug/L	-	5000	-	26.0	<5.0	9.3	<5.0	5.0	A968317
Total Calcium (Ca)	mg/L	-	-	-	23.2	11.0	10.9	10.9	0.050	A967340
Total Magnesium (Mg)	mg/L	-	-	-	1.32	0.609	0.624	0.618	0.050	A967340
Total Potassium (K)	mg/L	-	-	-	2.47	0.993	0.980	0.983	0.050	A967340
Total Sodium (Na)	mg/L	-	200	-	14.0	4.65	21.0	21.2	0.050	A967340
Total Sulphur (S)	mg/L	-	-	-	6.2	3.3	3.5	3.4	3.0	A967340

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C335804
Report Date: 2023/05/26

VILLAGE OF PEMBERTON

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, September 2020.

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.
4. To ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of 1.0 NTU or less.
Measurement of Uncertainty has not been accounted for when stating conformity to the selected criteria, where applicable.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

VILLAGE OF PEMBERTON

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A967475	True Colour	2023/05/19			105	80 - 120	<5.0	Col. Unit	NC	20
A968050	Turbidity	2023/05/19			106	80 - 120	<0.10	NTU	1.1	20
A968053	Nitrate plus Nitrite (N)	2023/05/19	104	80 - 120	108	80 - 120	<0.020	mg/L	1.4	25
A968055	Nitrite (N)	2023/05/19	21 (1)	80 - 120	105	80 - 120	<0.0050	mg/L	NC	20
A968317	Total Aluminum (Al)	2023/05/23	98	80 - 120	101	80 - 120	<3.0	ug/L	3.3	20
A968317	Total Antimony (Sb)	2023/05/23	97	80 - 120	100	80 - 120	<0.50	ug/L	NC	20
A968317	Total Arsenic (As)	2023/05/23	98	80 - 120	102	80 - 120	<0.10	ug/L	1.5	20
A968317	Total Barium (Ba)	2023/05/23	96	80 - 120	100	80 - 120	<1.0	ug/L	1.2	20
A968317	Total Boron (B)	2023/05/23	103	80 - 120	108	80 - 120	<50	ug/L	NC	20
A968317	Total Cadmium (Cd)	2023/05/23	96	80 - 120	101	80 - 120	<0.010	ug/L	2.0	20
A968317	Total Chromium (Cr)	2023/05/23	95	80 - 120	99	80 - 120	<1.0	ug/L	NC	20
A968317	Total Cobalt (Co)	2023/05/23	90	80 - 120	94	80 - 120	<0.20	ug/L	2.2	20
A968317	Total Copper (Cu)	2023/05/23	94	80 - 120	101	80 - 120	<0.20	ug/L	5.5	20
A968317	Total Iron (Fe)	2023/05/23	NC	80 - 120	101	80 - 120	<5.0	ug/L	0.38	20
A968317	Total Lead (Pb)	2023/05/23	94	80 - 120	99	80 - 120	<0.20	ug/L	NC	20
A968317	Total Manganese (Mn)	2023/05/23	NC	80 - 120	100	80 - 120	<1.0	ug/L	0.61	20
A968317	Total Molybdenum (Mo)	2023/05/23	NC	80 - 120	103	80 - 120	<1.0	ug/L	0.54	20
A968317	Total Nickel (Ni)	2023/05/23	94	80 - 120	100	80 - 120	<1.0	ug/L	1.6	20
A968317	Total Selenium (Se)	2023/05/23	98	80 - 120	99	80 - 120	<0.10	ug/L	2.3	20
A968317	Total Silver (Ag)	2023/05/23	97	80 - 120	102	80 - 120	<0.020	ug/L	NC	20
A968317	Total Strontium (Sr)	2023/05/23	NC	80 - 120	102	80 - 120	<1.0	ug/L	0.79	20
A968317	Total Uranium (U)	2023/05/23	99	80 - 120	104	80 - 120	<0.10	ug/L	1.3	20
A968317	Total Vanadium (V)	2023/05/23	96	80 - 120	99	80 - 120	<5.0	ug/L	NC	20
A968317	Total Zinc (Zn)	2023/05/23	96	80 - 120	100	80 - 120	<5.0	ug/L	NC	20
A969495	Dissolved Fluoride (F)	2023/05/23	114	80 - 120	102	80 - 120	<0.050	mg/L	7.1	20
A969527	pH	2023/05/20			101	97 - 103			0	N/A
A969531	Alkalinity (PP as CaCO3)	2023/05/20					<1.0	mg/L	NC	20
A969531	Alkalinity (Total as CaCO3)	2023/05/20	20 (1)	80 - 120	93	80 - 120	<1.0	mg/L	NC	20
A969531	Bicarbonate (HCO3)	2023/05/20					<1.0	mg/L	NC	20
A969531	Carbonate (CO3)	2023/05/20					<1.0	mg/L	NC	20
A969531	Hydroxide (OH)	2023/05/20					<1.0	mg/L	NC	20
A969541	Conductivity	2023/05/20			104	80 - 120	<2.0	uS/cm		
A970473	Total Dissolved Solids	2023/05/25	103	80 - 120	104	80 - 120	<10	mg/L	1.2	20
A970628	Chloride (Cl)	2023/05/24	NC	80 - 120	101	80 - 120	<1.0	mg/L		

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QUALITY ASSURANCE REPORT(CONT'D)

VILLAGE OF PEMBERTON

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A970628	Sulphate (SO4)	2023/05/24	NC	80 - 120	96	80 - 120	<1.0	mg/L	1.2	20
A970632	Chloride (Cl)	2023/05/24	NC	80 - 120	101	80 - 120	<1.0	mg/L	0.83	20
A970632	Sulphate (SO4)	2023/05/24	107	80 - 120	99	80 - 120	<1.0	mg/L	NC	20
A970639	Chloride (Cl)	2023/05/24	107	80 - 120	104	80 - 120	<1.0	mg/L	3.6	20
A970639	Sulphate (SO4)	2023/05/24	102	80 - 120	99	80 - 120	<1.0	mg/L	3.9	20
A972500	Total Mercury (Hg)	2023/05/25	81	80 - 120	89	80 - 120	<0.0019	ug/L	7.0	20

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.

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.

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4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.bvna.com

Page of

C335804_COC

Bottle Order #: 592993

INVOICE TO:		Report Information		Project Information	
Company Name	#99020 VILLAGE OF PEMBERTON	Company Name		Quotation #	C21923
Contact Name	Accounts Payable	Contact Name	Jeff Westlake	P.O. #	
Address	Box 100 7400 Prospect St	Address		Project #	
	Pemberton BC V0N 2L0			Project Name	
Phone	(604) 894-6811 Fax: (604) 894-6855	Phone	(604) 894-6125 Fax:	Site #	
Email	accountspayable@pemberton.ca	Email	jwestlake@pemberton.ca	Sampled By	

Chain Of Custody Record: C#592993-01-01
Project Manager: Customer Solutions

Regulatory Criteria:
- [ ] CSR
- [ ] CCME
- [x] BC Water Quality
- [ ] Other

Special Instructions:
- Please put against AO &
- please also email Mac RClark@pemberton.ca

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified): [ ]
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
1 DAY [ ] 2 Day [ ] 3 Day [ ] Date Required: [ ]
Rush Confirmation Number: (call lab for #)

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Drinking Water Package w/o Microbiology	# of Bottles	Comments
1		Well #2	23/05/18	8:30			X		
2		Well #3	23/05/18	8:45			X		
3		Ridge	23/05/18	9:00			X		
4		Farm Rd	23/05/18	9:15			X		
5									
6									
7									
8									
9									
10									

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
K Clark Reece Clark	23/05/18	9:30AM	Emily Lovell	23/05/19	08:10		[ ]	12, 16, 13	[ ] Yes [ ] No N/A

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Ice packs present, frozen

Your Project #: Drinking Water without Microbi
Your C.O.C. #: 697806-01-01

Attention: Reece Clark

VILLAGE OF PEMBERTON
Shipping Address for Reece Cla
7400 Prospect Street
Box 100
BC
Canada V0N 2L0

Report Date: 2023/07/06
Report #: R3360505
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C349012
Received: 2023/06/30, 08:00

Sample Matrix: Drinking Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	4	N/A	2023/07/04	BBY6SOP-00026	SM 24 2320 B m
Chloride/Sulphate by Auto Colourimetry	4	N/A	2023/07/05	BBY6SOP-00011 / BBY6SOP-00017	SM24-4500-Cl/SO4-E m
Colour (True) by Kone Lab	4	N/A	2023/07/01	BBY6SOP-00057	SM 23 2120 C m
Conductivity @25C	4	N/A	2023/07/04	BBY6SOP-00026	SM 24 2510 B m
Fluoride	4	N/A	2023/07/04	BBY6SOP-00048	SM 24 4500-F C m
Hardness Total (calculated as CaCO3) (1)	4	N/A	2023/07/05	BBY WI-00033	Auto Calc
Mercury (Total) by CV	4	2023/07/05	2023/07/05	AB SOP-00084	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	4	N/A	2023/07/05	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total)	4	N/A	2023/07/04	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Nitrate + Nitrite (N)	4	N/A	2023/07/01	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrite (N) by CFA	4	N/A	2023/07/01	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrogen - Nitrate (as N)	4	N/A	2023/07/05	BBY WI-00033	Auto Calc
pH @25°C (2)	4	N/A	2023/07/04	BBY6SOP-00026	SM 24 4500-H+ B m
Total Dissolved Solids (Filt. Residue)	4	2023/07/05	2023/07/06	BBY6SOP-00033	SM 23 2540 C m
Turbidity	4	N/A	2023/06/30	BBY6SOP-00027	SM 23 2130 B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas 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 Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the

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Your Project #: Drinking Water without Microbi
Your C.O.C. #: 697806-01-01

Attention: Reece Clark

VILLAGE OF PEMBERTON
Shipping Address for Reece Cla
7400 Prospect Street
Box 100
BC
Canada V0N 2L0

Report Date: 2023/07/06
Report #: R3360505
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C349012
Received: 2023/06/30, 08:00
customer or their agent.

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. When sampling is not conducted by Bureau Veritas, results relate to the supplied 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) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(2) The CCME method requires 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 CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
06 Jul 2023 16:57:55

Please direct all questions regarding this Certificate of Analysis to:
Customer Solutions, Western Canada Customer Experience Team
Email: customersolutionswest@bureauveritas.com
Phone# (604) 734 7276

==========

This report has been generated and distributed using a secure automated process.
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For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Raphael Kwan, Senior Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

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Bureau Veritas Job #: C349012
Report Date: 2023/07/06

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					BTR744		BTR745		
Sampling Date					2023/06/29 08:30		2023/06/29 08:45		
COC Number					697806-01-01		697806-01-01		
	UNITS	MAC	AO	OG	WELL #2	QC Batch	WELL #3	RDL	QC Batch
ANIONS									
Nitrite (N)	mg/L	1	-	-	<0.0050	B018956	<0.0050	0.0050	B018956
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	61.5	B017247	30.0	0.50	B017247
Nitrate (N)	mg/L	10	-	-	0.218	B017331	0.151	0.020	B017331
Misc. Inorganics									
Conductivity	uS/cm	-	-	-	230	B020210	110	2.0	B020210
pH	pH	-	-	7.0:10.5	**6.58**	B020209	**6.34**	N/A	B020209
Total Dissolved Solids	mg/L	-	500	-	140	B020255	78	10	B021585
Anions									
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	B020205	<1.0	1.0	B020205
Alkalinity (Total as CaCO3)	mg/L	-	-	-	34	B020205	18	1.0	B020205
Bicarbonate (HCO3)	mg/L	-	-	-	41	B020205	22	1.0	B020205
Carbonate (CO3)	mg/L	-	-	-	<1.0	B020205	<1.0	1.0	B020205
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	B020731	<0.050	0.050	B020731
Hydroxide (OH)	mg/L	-	-	-	<1.0	B020205	<1.0	1.0	B020205
Chloride (Cl)	mg/L	-	250	-	36	B021468	12	1.0	B021468
Sulphate (SO4)	mg/L	-	500	-	20	B021468	11	1.0	B021468
MISCELLANEOUS									
True Colour	Col. Unit	-	15	-	<5.0	B018786	<5.0	5.0	B018786
Nutrients									
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.218	B018955	0.151	0.020	B018955
Physical Properties									
Turbidity	NTU	see remark	see remark	see remark	0.16	B018384	<0.10	0.10	B018384

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

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Report Date: 2023/07/06

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					BTR746	BTR747		
Sampling Date					2023/06/29 09:00	2023/06/29 09:15		
COC Number					697806-01-01	697806-01-01		
	UNITS	MAC	AO	OG	RIDGE	FARM RD.	RDL	QC Batch
ANIONS								
Nitrite (N)	mg/L	1	-	-	<0.0050	<0.0050 (1)	0.0050	B018956
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	-	-	-	33.7	33.4	0.50	B017247
Nitrate (N)	mg/L	10	-	-	0.161	0.161	0.020	B017331
Misc. Inorganics								
Conductivity	uS/cm	-	-	-	190	190	2.0	B020210
pH	pH	-	-	7.0:10.5	**6.95**	**6.89**	N/A	B020209
Total Dissolved Solids	mg/L	-	500	-	96	96	10	B020255
Anions								
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	<1.0	1.0	B020205
Alkalinity (Total as CaCO3)	mg/L	-	-	-	57	55	1.0	B020205
Bicarbonate (HCO3)	mg/L	-	-	-	69	67	1.0	B020205
Carbonate (CO3)	mg/L	-	-	-	<1.0	<1.0	1.0	B020205
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	<0.050	0.050	B020731
Hydroxide (OH)	mg/L	-	-	-	<1.0	<1.0	1.0	B020205
Chloride (Cl)	mg/L	-	250	-	15	15	1.0	B021468
Sulphate (SO4)	mg/L	-	500	-	12	12	1.0	B021468
MISCELLANEOUS								
True Colour	Col. Unit	-	15	-	<5.0	<5.0	5.0	B018786
Nutrients								
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.161	0.161	0.020	B018955
Physical Properties								
Turbidity	NTU	see remark	see remark	see remark	<0.10	0.19	0.10	B018384

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Matrix spike exceeds acceptance limits due to suspected matrix interference.

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VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

MERCURY BY COLD VAPOR (DRINKING WATER)

Bureau Veritas ID			BTR744	BTR745	BTR746	BTR747		
Sampling Date			2023/06/29 08:30	2023/06/29 08:45	2023/06/29 09:00	2023/06/29 09:15		
COC Number			697806-01-01	697806-01-01	697806-01-01	697806-01-01		
	UNITS	MAC	WELL #2	WELL #3	RIDGE	FARM RD.	RDL	QC Batch
Elements								
Total Mercury (Hg)	ug/L	1	<0.0019	<0.0019	<0.0019	<0.0019	0.0019	B021102

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

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Report Date: 2023/07/06

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

ELEMENTS BY ATOMIC SPECTROSCOPY (DRINKING WATER)

Bureau Veritas ID					BTR744	BTR745	BTR746	BTR747		
Sampling Date					2023/06/29 08:30	2023/06/29 08:45	2023/06/29 09:00	2023/06/29 09:15		
COC Number					697806-01-01	697806-01-01	697806-01-01	697806-01-01		
	UNITS	MAC	AO	OG	WELL #2	WELL #3	RIDGE	FARM RD.	RDL	QC Batch
Total Metals by ICPMS										
Total Aluminum (Al)	ug/L	2900	-	100	3.6	7.9	3.9	4.1	3.0	B020196
Total Antimony (Sb)	ug/L	6	-	-	<0.50	<0.50	<0.50	<0.50	0.50	B020196
Total Arsenic (As)	ug/L	10	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B020196
Total Barium (Ba)	ug/L	2000	-	-	42.2	19.2	21.1	21.6	1.0	B020196
Total Boron (B)	ug/L	5000	-	-	99	<50	<50	<50	50	B020196
Total Cadmium (Cd)	ug/L	7	-	-	0.012	0.022	0.014	0.013	0.010	B020196
Total Chromium (Cr)	ug/L	50	-	-	5.0	<1.0	<1.0	<1.0	1.0	B020196
Total Cobalt (Co)	ug/L	-	-	-	<0.20	<0.20	<0.20	<0.20	0.20	B020196
Total Copper (Cu)	ug/L	2000	1000	-	0.94	10.3	4.06	7.09	0.20	B020196
Total Iron (Fe)	ug/L	-	300	-	38.9	15.4	5.4	8.2	5.0	B020196
Total Lead (Pb)	ug/L	5	-	-	<0.20	<0.20	<0.20	<0.20	0.20	B020196
Total Manganese (Mn)	ug/L	120	20	-	**67.9**	**33.2**	6.4	9.1	1.0	B020196
Total Molybdenum (Mo)	ug/L	-	-	-	7.0	<1.0	<1.0	<1.0	1.0	B020196
Total Nickel (Ni)	ug/L	-	-	-	21.0	<1.0	1.0	<1.0	1.0	B020196
Total Selenium (Se)	ug/L	50	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B020196
Total Silver (Ag)	ug/L	-	-	-	<0.020	<0.020	<0.020	<0.020	0.020	B020196
Total Strontium (Sr)	ug/L	7000	-	-	137	63.0	70.5	69.4	1.0	B020196
Total Uranium (U)	ug/L	20	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B020196
Total Vanadium (V)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0	B020196
Total Zinc (Zn)	ug/L	-	5000	-	28.0	<5.0	8.4	<5.0	5.0	B020196
Total Calcium (Ca)	mg/L	-	-	-	22.3	10.9	12.3	12.1	0.050	B017735
Total Magnesium (Mg)	mg/L	-	-	-	1.43	0.683	0.739	0.753	0.050	B017735
Total Potassium (K)	mg/L	-	-	-	2.35	1.08	1.17	1.19	0.050	B017735
Total Sodium (Na)	mg/L	-	200	-	13.8	5.42	23.1	23.3	0.050	B017735
Total Sulphur (S)	mg/L	-	-	-	5.8	3.2	4.3	4.2	3.0	B017735

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

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Bureau Veritas Job #: C349012
Report Date: 2023/07/06

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

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, September 2022.

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.
4. To ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of 1.0 NTU or less.
Measurement of Uncertainty has not been accounted for when stating conformity to the selected criteria, where applicable.

Results relate only to the items tested.

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Bureau Veritas Job #: C349012
Report Date: 2023/07/06

QUALITY ASSURANCE REPORT

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B018384	Turbidity	2023/06/30			102	80 - 120	<0.10	NTU	0.77	20
B018786	True Colour	2023/07/01			99	80 - 120	<5.0	Col. Unit	NC	20
B018955	Nitrate plus Nitrite (N)	2023/07/01	101	80 - 120	110	80 - 120	<0.020	mg/L	1.2	25
B018956	Nitrite (N)	2023/07/01	64 (1)	80 - 120	104	80 - 120	<0.0050	mg/L	NC	20
B020196	Total Aluminum (Al)	2023/07/04	104	80 - 120	101	80 - 120	<3.0	ug/L	0.92	20
B020196	Total Antimony (Sb)	2023/07/04	105	80 - 120	101	80 - 120	<0.50	ug/L	NC	20
B020196	Total Arsenic (As)	2023/07/04	102	80 - 120	99	80 - 120	<0.10	ug/L	11	20
B020196	Total Barium (Ba)	2023/07/04	101	80 - 120	97	80 - 120	<1.0	ug/L	0.021	20
B020196	Total Boron (B)	2023/07/04	102	80 - 120	104	80 - 120	<50	ug/L	NC	20
B020196	Total Cadmium (Cd)	2023/07/04	101	80 - 120	98	80 - 120	<0.010	ug/L	NC	20
B020196	Total Chromium (Cr)	2023/07/04	102	80 - 120	99	80 - 120	<1.0	ug/L	NC	20
B020196	Total Cobalt (Co)	2023/07/04	98	80 - 120	96	80 - 120	<0.20	ug/L	NC	20
B020196	Total Copper (Cu)	2023/07/04	98	80 - 120	96	80 - 120	<0.20	ug/L	0.56	20
B020196	Total Iron (Fe)	2023/07/04	99	80 - 120	100	80 - 120	<5.0	ug/L	5.6	20
B020196	Total Lead (Pb)	2023/07/04	98	80 - 120	97	80 - 120	<0.20	ug/L	2.7	20
B020196	Total Manganese (Mn)	2023/07/04	101	80 - 120	99	80 - 120	<1.0	ug/L	2.4	20
B020196	Total Molybdenum (Mo)	2023/07/04	101	80 - 120	98	80 - 120	<1.0	ug/L	NC	20
B020196	Total Nickel (Ni)	2023/07/04	102	80 - 120	99	80 - 120	<1.0	ug/L	NC	20
B020196	Total Selenium (Se)	2023/07/04	104	80 - 120	101	80 - 120	<0.10	ug/L	NC	20
B020196	Total Silver (Ag)	2023/07/04	100	80 - 120	98	80 - 120	<0.020	ug/L	NC	20
B020196	Total Strontium (Sr)	2023/07/04	99	80 - 120	97	80 - 120	<1.0	ug/L	0.52	20
B020196	Total Uranium (U)	2023/07/04	97	80 - 120	93	80 - 120	<0.10	ug/L	NC	20
B020196	Total Vanadium (V)	2023/07/04	102	80 - 120	99	80 - 120	<5.0	ug/L	NC	20
B020196	Total Zinc (Zn)	2023/07/04	103	80 - 120	101	80 - 120	<5.0	ug/L	NC	20
B020205	Alkalinity (PP as CaCO3)	2023/07/04					<1.0	mg/L	NC	20
B020205	Alkalinity (Total as CaCO3)	2023/07/04			99	80 - 120	<1.0	mg/L	1.3	20
B020205	Bicarbonate (HCO3)	2023/07/04					<1.0	mg/L	1.3	20
B020205	Carbonate (CO3)	2023/07/04					<1.0	mg/L	NC	20
B020205	Hydroxide (OH)	2023/07/04					<1.0	mg/L	NC	20
B020209	pH	2023/07/04			100	97 - 103			1.1	N/A
B020210	Conductivity	2023/07/04			99	90 - 110	<2.0	uS/cm	0	10
B020255	Total Dissolved Solids	2023/07/06	100	80 - 120	100	80 - 120	<10	mg/L	0.72	20
B020731	Dissolved Fluoride (F)	2023/07/04	112	80 - 120	104	80 - 120	<0.050	mg/L	6.5	20

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Bureau Veritas Job #: C349012
Report Date: 2023/07/06

QUALITY ASSURANCE REPORT(CONT'D)

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B021102	Total Mercury (Hg)	2023/07/05	102	80 - 120	103	80 - 120	<0.0019	ug/L	NC	20
B021468	Chloride (Cl)	2023/07/05	110	80 - 120	99	80 - 120	<1.0	mg/L	NC	20
B021468	Sulphate (SO4)	2023/07/05	112	80 - 120	104	80 - 120	<1.0	mg/L	0.089	20
B021585	Total Dissolved Solids	2023/07/06	100	80 - 120	91	80 - 120	<10	mg/L	14	20

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.

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.

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Bureau Veritas
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.bvna.com

C

age of

C349012_COC

INVOICE TO:		Report Information		Project Information	
Company Name	#99020 VILLAGE OF PEMBERTON	Company Name	#47499 VILLAGE OF PEMBERTON	Quotation #	C21923
Contact Name	Accounts Payable	Contact Name	Reece Clark	P.O. #	
Address	Box 100 7400 Prospect St	Address	7400 Prospect Street Box 100	Project #	Drinking Water without Microbi
	Pemberton BC V0N 2L0		BC V0N 2L0	Project Name	
Phone	(604) 894-6811 Fax: (604) 894-6855	Phone	(604) 353-5845 Fax:	Site #	
Email	accountspayable@pemberton.ca	Email	rclark@pemberton.ca	Sampled By	

Chain Of Custody Record | Project Manager

C#997806-01-01 | Customer Solutions

Regulatory Criteria:
- ☐ CSR
- ☐ CCME
- ☑ BC Water Quality
- ☐ Other

Special Instructions: Please plot against AO & MAC

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified): ☐
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
1 DAY ☐ 2 Day ☐ 3 Day ☐ Date Required: ☐
Rush Confirmation Number: (call lab for #)

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Drinking Water Package w/o Microbiology	# of Bottles	Comments
1		Well #2	23/06/29	8:30			✓		
2		Well #3	23/06/29	8:45			✓		
3		Ridge	23/06/29	9:00			✓		
4		Farm Rd.	23/06/29	9:15			✓		
5									
6									
7									
8									
9									
10									

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
R Clark Reece Clark	23/06/29	9:30	John Dickson Wong	23/06/30	0800		☐	12,13,14	☐ Yes ☑ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Ice pack: Yes. melted.

Your Project #: Drinking Water without Microbi
Your C.O.C. #: C#701177-01-01

Attention: Reece Clark

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

Report Date: 2023/08/04
Report #: R3376325
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C357454
Received: 2023/07/28, 08:21

Sample Matrix: Drinking Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	4	N/A	2023/07/28	BBY6SOP-00026	SM 24 2320 B m
Chloride/Sulphate by Auto Colourimetry	4	N/A	2023/07/31	BBY6SOP-00011 / BBY6SOP-00017	SM24-4500-Cl/SO4-E m
Color (True) by Automated Analyzer	4	N/A	2023/07/28	BBY6SOP-00057	SM 23 2120 C m
Conductivity @25C	4	N/A	2023/07/28	BBY6SOP-00026	SM 24 2510 B m
Fluoride	4	N/A	2023/07/31	BBY6SOP-00048	SM 24 4500-F C m
Hardness Total (calculated as CaCO3) (1)	4	N/A	2023/08/03	BBY WI-00033	Auto Calc
Mercury (Total) by CV	4	2023/08/02	2023/08/03	AB SOP-00084	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	4	N/A	2023/08/03	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total)	4	N/A	2023/08/02	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Nitrate + Nitrite (N)	4	N/A	2023/07/28	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrite (N) by CFA	4	N/A	2023/07/28	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrogen - Nitrate (as N)	4	N/A	2023/07/29	BBY WI-00033	Auto Calc
pH @25°C (2)	4	N/A	2023/07/28	BBY6SOP-00026	SM 24 4500-H+ B m
Total Dissolved Solids (Filt. Residue)	3	2023/07/31	2023/08/01	BBY6SOP-00033	SM 24 2540 C m
Total Dissolved Solids (Filt. Residue)	1	2023/08/01	2023/08/02	BBY6SOP-00033	SM 24 2540 C m
Turbidity	4	N/A	2023/07/29	BBY6SOP-00027	SM 23 2130 B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas 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 Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the

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Your Project #: Drinking Water without Microbi
Your C.O.C. #: C#701177-01-01

Attention: Reece Clark

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

Report Date: 2023/08/04
Report #: R3376325
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C357454
Received: 2023/07/28, 08:21
customer or their agent.

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. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

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) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(2) The CCME method requires 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 CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
04 Aug 2023 09:46:58

Please direct all questions regarding this Certificate of Analysis to:
Customer Solutions, Western Canada Customer Experience Team
Email: customersolutionswest@bureauveritas.com
Phone# (604) 734 7276

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This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Raphael Kwan, Senior Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

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Bureau Veritas Job #: C357454
Report Date: 2023/08/04

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					BVO614		BVO615		
Sampling Date					2023/07/27 08:00		2023/07/27 08:15		
COC Number					C#701177-01-01		C#701177-01-01		
	UNITS	MAC	AO	OG	WELL#2	QC Batch	WELL#3	RDL	QC Batch
ANIONS									
Nitrite (N)	mg/L	1	-	-	<0.0050	B052323	<0.0050	0.0050	B052323
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	69.1	B051424	35.6	0.50	B051424
Nitrate (N)	mg/L	10	-	-	0.130	B051528	0.141	0.020	B051528
Misc. Inorganics									
Conductivity	uS/cm	-	-	-	240	B052286	120	2.0	B052286
pH	pH	-	-	7.0:10.5	**6.42**	B052285	**6.29**	N/A	B052285
Total Dissolved Solids	mg/L	-	500	-	190	B054249	94	10	B054249
Anions									
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	B052271	<1.0	1.0	B052271
Alkalinity (Total as CaCO3)	mg/L	-	-	-	34	B052271	18	1.0	B052271
Bicarbonate (HCO3)	mg/L	-	-	-	42	B052271	22	1.0	B052271
Carbonate (CO3)	mg/L	-	-	-	<1.0	B052271	<1.0	1.0	B052271
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	B054607	<0.050	0.050	B054607
Hydroxide (OH)	mg/L	-	-	-	<1.0	B052271	<1.0	1.0	B052271
Chloride (Cl)	mg/L	-	250	-	37	B054451	14	1.0	B054451
Sulphate (SO4)	mg/L	-	500	-	19	B054451	11	1.0	B054451
MISCELLANEOUS									
True Colour	Col. Unit	-	15	-	<5.0	B052263	<5.0	5.0	B052263
Nutrients									
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.130	B052322	0.141	0.020	B052322
Physical Properties									
Turbidity	NTU	see remark	see remark	see remark	0.15	B052988	0.16	0.10	B052967

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

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Bureau Veritas Job #: C357454
Report Date: 2023/08/04

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					BVO616		BVO617		
Sampling Date					2023/07/27 08:30		2023/07/27 08:45		
COC Number					C#701177-01-01		C#701177-01-01		
	UNITS	MAC	AO	OG	RIDGE	QC Batch	FARM RD	RDL	QC Batch
ANIONS									
Nitrite (N)	mg/L	1	-	-	<0.0050	B052323	<0.0050	0.0050	B052323
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	38.5	B051424	36.9	0.50	B051424
Nitrate (N)	mg/L	10	-	-	0.145	B051528	0.145	0.020	B051528
Misc. Inorganics									
Conductivity	uS/cm	-	-	-	190	B052286	190	2.0	B052286
pH	pH	-	-	7.0:10.5	**6.90**	B052285	**6.90**	N/A	B052285
Total Dissolved Solids	mg/L	-	500	-	130	B054249	100	10	B055515
Anions									
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	B052271	<1.0	1.0	B052271
Alkalinity (Total as CaCO3)	mg/L	-	-	-	55	B052271	55	1.0	B052271
Bicarbonate (HCO3)	mg/L	-	-	-	67	B052271	67	1.0	B052271
Carbonate (CO3)	mg/L	-	-	-	<1.0	B052271	<1.0	1.0	B052271
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	B054607	<0.050	0.050	B054607
Hydroxide (OH)	mg/L	-	-	-	<1.0	B052271	<1.0	1.0	B052271
Chloride (Cl)	mg/L	-	250	-	15	B054451	15	1.0	B054451
Sulphate (SO4)	mg/L	-	500	-	11	B054451	12	1.0	B054451
MISCELLANEOUS									
True Colour	Col. Unit	-	15	-	<5.0	B052263	<5.0	5.0	B052263
Nutrients									
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.145	B052322	0.145	0.020	B052322
Physical Properties									
Turbidity	NTU	see remark	see remark	see remark	<0.10	B052988	<0.10	0.10	B052967

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C357454
Report Date: 2023/08/04

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

MERCURY BY COLD VAPOR (DRINKING WATER)

Bureau Veritas ID			BVO614	BVO615	BVO616	BVO617		
Sampling Date			2023/07/27 08:00	2023/07/27 08:15	2023/07/27 08:30	2023/07/27 08:45		
COC Number			C#701177-01-01	C#701177-01-01	C#701177-01-01	C#701177-01-01		
	UNITS	MAC	WELL#2	WELL#3	RIDGE	FARM RD	RDL	QC Batch
Elements								
Total Mercury (Hg)	ug/L	1	<0.0019	<0.0019	<0.0019	<0.0019	0.0019	B057893

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

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Bureau Veritas Job #: C357454
Report Date: 2023/08/04

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

ELEMENTS BY ATOMIC SPECTROSCOPY (DRINKING WATER)

Bureau Veritas ID					BVO614	BVO615	BVO616	BVO617		
Sampling Date					2023/07/27 08:00	2023/07/27 08:15	2023/07/27 08:30	2023/07/27 08:45		
COC Number					C#701177-01-01	C#701177-01-01	C#701177-01-01	C#701177-01-01		
	UNITS	MAC	AO	OG	WELL#2	WELL#3	RIDGE	FARM RD	RDL	QC Batch
Total Metals by ICPMS										
Total Aluminum (Al)	ug/L	2900	-	100	3.4	7.4	3.4	3.4	3.0	B057284
Total Antimony (Sb)	ug/L	6	-	-	<0.50	<0.50	<0.50	<0.50	0.50	B057284
Total Arsenic (As)	ug/L	10	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B057284
Total Barium (Ba)	ug/L	2000	-	-	44.3	21.9	22.4	22.3	1.0	B057284
Total Boron (B)	ug/L	5000	-	-	106	<50	<50	<50	50	B057284
Total Cadmium (Cd)	ug/L	7	-	-	0.014	0.027	0.012	0.011	0.010	B057284
Total Chromium (Cr)	ug/L	50	-	-	<1.0	<1.0	<1.0	<1.0	1.0	B057284
Total Cobalt (Co)	ug/L	-	-	-	<0.20	<0.20	<0.20	<0.20	0.20	B057284
Total Copper (Cu)	ug/L	2000	1000	-	1.06	9.38	4.32	9.19	0.20	B057284
Total Iron (Fe)	ug/L	-	300	-	38.8	23.0	8.4	8.8	5.0	B057284
Total Lead (Pb)	ug/L	5	-	-	<0.20	<0.20	<0.20	<0.20	0.20	B057284
Total Manganese (Mn)	ug/L	120	20	-	**77.4**	**42.6**	5.6	8.7	1.0	B057284
Total Molybdenum (Mo)	ug/L	-	-	-	2.3	<1.0	<1.0	<1.0	1.0	B057284
Total Nickel (Ni)	ug/L	-	-	-	<1.0	<1.0	<1.0	<1.0	1.0	B057284
Total Selenium (Se)	ug/L	50	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B057284
Total Silver (Ag)	ug/L	-	-	-	<0.020	<0.020	<0.020	<0.020	0.020	B057284
Total Strontium (Sr)	ug/L	7000	-	-	147	70.7	75.7	74.1	1.0	B057284
Total Uranium (U)	ug/L	20	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B057284
Total Vanadium (V)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0	B057284
Total Zinc (Zn)	ug/L	-	5000	-	26.8	<5.0	8.2	<5.0	5.0	B057284
Total Calcium (Ca)	mg/L	-	-	-	25.1	13.0	14.1	13.5	0.050	B051764
Total Magnesium (Mg)	mg/L	-	-	-	1.53	0.745	0.806	0.779	0.050	B051764
Total Potassium (K)	mg/L	-	-	-	2.55	1.16	1.23	1.21	0.050	B051764
Total Sodium (Na)	mg/L	-	200	-	13.8	5.80	23.1	22.9	0.050	B051764
Total Sulphur (S)	mg/L	-	-	-	6.3	3.9	4.0	4.0	3.0	B051764

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C357454
Report Date: 2023/08/04

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

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, September 2022.

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.
4. To ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of 1.0 NTU or less.
Measurement of Uncertainty has not been accounted for when stating conformity to the selected criteria, where applicable.

Results relate only to the items tested.

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Bureau Veritas Job #: C357454
Report Date: 2023/08/04

QUALITY ASSURANCE REPORT

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B052263	True Colour	2023/07/28			89	80 - 120	<5.0	Col. Unit	NC	20
B052271	Alkalinity (PP as CaCO3)	2023/07/28					<1.0	mg/L	NC	20
B052271	Alkalinity (Total as CaCO3)	2023/07/28			98	80 - 120	<1.0	mg/L	0.67	20
B052271	Bicarbonate (HCO3)	2023/07/28					<1.0	mg/L	0.67	20
B052271	Carbonate (CO3)	2023/07/28					<1.0	mg/L	NC	20
B052271	Hydroxide (OH)	2023/07/28					<1.0	mg/L	NC	20
B052285	pH	2023/07/28			100	97 - 103			0.56	N/A
B052286	Conductivity	2023/07/28			99	90 - 110	<2.0	uS/cm	1.1	10
B052322	Nitrate plus Nitrite (N)	2023/07/28	98	80 - 120	108	80 - 120	<0.020	mg/L	NC	25
B052323	Nitrite (N)	2023/07/28	93	80 - 120	107	80 - 120	<0.0050	mg/L	NC	20
B052967	Turbidity	2023/07/29			104	80 - 120	<0.10	NTU	14	20
B052988	Turbidity	2023/07/29			104	80 - 120	<0.10	NTU	7.9	20
B054249	Total Dissolved Solids	2023/08/01	101	80 - 120	110	80 - 120	<10	mg/L	0	20
B054451	Chloride (Cl)	2023/07/31	NC	80 - 120	102	80 - 120	<1.0	mg/L	7.2	20
B054451	Sulphate (SO4)	2023/07/31	NC	80 - 120	102	80 - 120	<1.0	mg/L	2.2	20
B054607	Dissolved Fluoride (F)	2023/07/31	105	80 - 120	98	80 - 120	<0.050	mg/L	NC	20
B055515	Total Dissolved Solids	2023/08/02	96	80 - 120	98	80 - 120	<10	mg/L	6.1	20
B057284	Total Aluminum (Al)	2023/08/02	101	80 - 120	100	80 - 120	<3.0	ug/L	NC	20
B057284	Total Antimony (Sb)	2023/08/02	100	80 - 120	101	80 - 120	<0.50	ug/L	NC	20
B057284	Total Arsenic (As)	2023/08/02	103	80 - 120	100	80 - 120	<0.10	ug/L	3.0	20
B057284	Total Barium (Ba)	2023/08/02	99	80 - 120	99	80 - 120	<1.0	ug/L	0.53	20
B057284	Total Boron (B)	2023/08/02	103	80 - 120	100	80 - 120	<50	ug/L	NC	20
B057284	Total Cadmium (Cd)	2023/08/02	100	80 - 120	99	80 - 120	<0.010	ug/L	3.9	20
B057284	Total Chromium (Cr)	2023/08/02	94	80 - 120	95	80 - 120	<1.0	ug/L	NC	20
B057284	Total Cobalt (Co)	2023/08/02	93	80 - 120	94	80 - 120	<0.20	ug/L	NC	20
B057284	Total Copper (Cu)	2023/08/02	91	80 - 120	94	80 - 120	<0.20	ug/L	0.90	20
B057284	Total Iron (Fe)	2023/08/02	104	80 - 120	100	80 - 120	<5.0	ug/L	1.1	20
B057284	Total Lead (Pb)	2023/08/02	100	80 - 120	98	80 - 120	<0.20	ug/L	0.50	20
B057284	Total Manganese (Mn)	2023/08/02	NC	80 - 120	98	80 - 120	<1.0	ug/L	0.73	20
B057284	Total Molybdenum (Mo)	2023/08/02	104	80 - 120	102	80 - 120	<1.0	ug/L	NC	20
B057284	Total Nickel (Ni)	2023/08/02	94	80 - 120	97	80 - 120	<1.0	ug/L	1.4	20
B057284	Total Selenium (Se)	2023/08/02	102	80 - 120	100	80 - 120	<0.10	ug/L	5.4	20
B057284	Total Silver (Ag)	2023/08/02	101	80 - 120	100	80 - 120	<0.020	ug/L	NC	20

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Bureau Veritas Job #: C357454
Report Date: 2023/08/04

QUALITY ASSURANCE REPORT(CONT'D)

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B057284	Total Strontium (Sr)	2023/08/02	NC	80 - 120	101	80 - 120	<1.0	ug/L	0.39	20
B057284	Total Uranium (U)	2023/08/02	106	80 - 120	101	80 - 120	<0.10	ug/L	NC	20
B057284	Total Vanadium (V)	2023/08/02	99	80 - 120	97	80 - 120	<5.0	ug/L	NC	20
B057284	Total Zinc (Zn)	2023/08/02	96	80 - 120	99	80 - 120	<5.0	ug/L	1.6	20
B057893	Total Mercury (Hg)	2023/08/03	83	80 - 120	110	80 - 120	<0.0019	ug/L	NC	20

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.

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).

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Bureau Veritas
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.bvna.com

Page of

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#99020 VILLAGE OF PEMBERTON	Company Name		Quotation #	C21923	Bureau Veritas Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Reece Clark	P.O. #			701177
Address	Box 100 7400 Prospect St Pemberton BC V0N 2L0	Address		Project #	Drinking Water without Microbi	Chain Of Custody Record	Project Manager
Phone	(604) 894-6811 Fax: (604) 894-6855	Phone	(604) 353-5845 Fax:	Project Name		C#701177-01-01	Customer Solutions
Email	accountspayable@pemberton.ca	Email	rclark@pemberton.ca	Site #			
				Sampled By			

Regulatory Criteria:
- ☐ CSR
- ☐ CCME
- ☑ BC Water Quality
- ☐ Other

Special Instructions: Please plot against AO & MAC

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (If applies to entire submission)
1 DAY ☐ 2 Day ☐ 3 Day ☐ Date Required: ☐
Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Drinking Water Package w/o Microbiology	# of Bottles	Comments
1		Well #2	23/07/27	8:00AM			✓		
2		Well #3	23/07/27	8:15 AM			✓		
3		Ridge	23/07/27	8:30 AM			✓		
4		Farm Rd.	23/07/27	8:45AM			✓		
5									
6									
7									
8									
9									
10									

C357454_COC

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
R Clark Reece Clark	23/07/27	9:00AM	HARIGNA JOSHI	2023/07/28	08:21		☐	9, 9, 10	☐ Yes ☒ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

ICE PACK: MELTED

Your Project #: DRINKING WATER WITHOUT MICRO
Your C.O.C. #: 703502-01-01

Attention: Reece Clark

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

Report Date: 2023/08/31
Report #: R3388754
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C366247
Received: 2023/08/25, 09:38

Sample Matrix: Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	4	N/A	2023/08/28	BBY6SOP-00026	SM 24 2320 B m
Chloride/Sulphate by Auto Colourimetry	4	N/A	2023/08/30	BBY6SOP-00011 / BBY6SOP-00017	SM24-4500-Cl/SO4-E m
Color (True) by Automated Analyzer	4	N/A	2023/08/26	BBY6SOP-00057	SM 24 2120 C m
Conductivity @25C	4	N/A	2023/08/28	BBY6SOP-00026	SM 24 2510 B m
Fluoride	4	N/A	2023/08/28	BBY6SOP-00048	SM 24 4500-F C m
Hardness Total (calculated as CaCO3) (1)	4	N/A	2023/08/31	BBY WI-00033	Auto Calc
Mercury (Total) by CV	4	2023/08/29	2023/08/29	AB SOP-00084	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	4	N/A	2023/08/31	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total)	4	N/A	2023/08/29	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Nitrate + Nitrite (N)	4	N/A	2023/08/26	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrite (N) by CFA	4	N/A	2023/08/26	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrogen - Nitrate (as N)	4	N/A	2023/08/26	BBY WI-00033	Auto Calc
pH @25°C (2)	4	N/A	2023/08/28	BBY6SOP-00026	SM 24 4500-H+ B m
Total Dissolved Solids (Filt. Residue)	1	2023/08/28	2023/08/29	BBY6SOP-00033	SM 24 2540 C m
Total Dissolved Solids (Filt. Residue)	3	2023/08/29	2023/08/30	BBY6SOP-00033	SM 24 2540 C m
Turbidity	4	N/A	2023/08/26	BBY6SOP-00027	SM 24 2130 B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas 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 Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the

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Your Project #: DRINKING WATER WITHOUT MICRO
Your C.O.C. #: 703502-01-01

Attention: Reece Clark

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

Report Date: 2023/08/31
Report #: R3388754
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C366247
Received: 2023/08/25, 09:38
customer or their agent.

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. When sampling is not conducted by Bureau Veritas, results relate to the supplied 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) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(2) The CCME method requires 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 CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

Bureau Veritas
31 Aug 2023 14:46:44

Please direct all questions regarding this Certificate of Analysis to:
Customer Solutions, Western Canada Customer Experience Team
Email: customersolutionswest@bureauveritas.com
Phone# (604) 734 7276

==========

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For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Raphael Kwan, Senior Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C366247
Report Date: 2023/08/31

VILLAGE OF PEMBERTON
Client Project #: DRINKING WATER WITHOUT MICRO

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID					BXN566	BXN567		BXN568		
Sampling Date					2023/08/24 08:00	2023/08/24 08:15		2023/08/24 08:30		
COC Number					703502-01-01	703502-01-01		703502-01-01		
	UNITS	MAC	AO	OG	WELL #2	WELL #3	QC Batch	RIDGE	RDL	QC Batch
ANIONS										
Nitrite (N)	mg/L	1	-	-	<0.0050	<0.0050	B085882	<0.0050	0.0050	B085882
Calculated Parameters										
Total Hardness (CaCO3)	mg/L	-	-	-	64.4	34.8	B084775	38.2	0.50	B084775
Nitrate (N)	mg/L	10	-	-	0.089	0.115	B084780	0.116	0.020	B084780
Misc. Inorganics										
Conductivity	uS/cm	-	-	-	230	120	B087051	210	2.0	B087051
pH	pH	-	-	7.0:10.5	**6.68**	**6.47**	B087037	7.49	N/A	B087037
Total Dissolved Solids	mg/L	-	500	-	160	82	B087836	120	10	B087859
Anions										
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	<1.0	B087049	<1.0	1.0	B087049
Alkalinity (Total as CaCO3)	mg/L	-	-	-	32	21	B087049	60	1.0	B087049
Bicarbonate (HCO3)	mg/L	-	-	-	40	26	B087049	74	1.0	B087049
Carbonate (CO3)	mg/L	-	-	-	<1.0	<1.0	B087049	<1.0	1.0	B087049
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	<0.050	B086775	<0.050	0.050	B086775
Hydroxide (OH)	mg/L	-	-	-	<1.0	<1.0	B087049	<1.0	1.0	B087049
Chloride (Cl)	mg/L	-	250	-	37	15	B089461	19	1.0	B089461
Sulphate (SO4)	mg/L	-	500	-	18	12	B089461	12	1.0	B089461
MISCELLANEOUS										
True Colour	Col. Unit	-	15	-	<5.0	<5.0	B085820	<5.0	5.0	B085820
Nutrients										
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.089	0.115	B085881	0.116	0.020	B085881
Physical Properties										
Turbidity	NTU	see remark	see remark	see remark	<0.10	0.12	B085648	<0.10	0.10	B085648

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C366247
Report Date: 2023/08/31

VILLAGE OF PEMBERTON
Client Project #: DRINKING WATER WITHOUT MICRO

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID					BXN569		
Sampling Date					2023/08/24 08:45		
COC Number					703502-01-01		
	UNITS	MAC	AO	OG	FARM RD.	RDL	QC Batch
ANIONS							
Nitrite (N)	mg/L	1	-	-	<0.0050	0.0050	B085882
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	-	-	-	38.5	0.50	B084775
Nitrate (N)	mg/L	10	-	-	0.116	0.020	B084780
Misc. Inorganics							
Conductivity	uS/cm	-	-	-	210	2.0	B087051
pH	pH	-	-	7.0:10.5	7.38	N/A	B087037
Total Dissolved Solids	mg/L	-	500	-	120	10	B086603
Anions							
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	1.0	B087049
Alkalinity (Total as CaCO3)	mg/L	-	-	-	62	1.0	B087049
Bicarbonate (HCO3)	mg/L	-	-	-	75	1.0	B087049
Carbonate (CO3)	mg/L	-	-	-	<1.0	1.0	B087049
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	0.050	B086775
Hydroxide (OH)	mg/L	-	-	-	<1.0	1.0	B087049
Chloride (Cl)	mg/L	-	250	-	18	1.0	B089469
Sulphate (SO4)	mg/L	-	500	-	12	1.0	B089469
MISCELLANEOUS							
True Colour	Col. Unit	-	15	-	<5.0	5.0	B085820
Nutrients							
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.116	0.020	B085881
Physical Properties							
Turbidity	NTU	see remark	see remark	see remark	<0.10	0.10	B085648

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

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Bureau Veritas Job #: C366247
Report Date: 2023/08/31

VILLAGE OF PEMBERTON
Client Project #: DRINKING WATER WITHOUT MICRO

MERCURY BY COLD VAPOR (WATER)

Bureau Veritas ID			BXN566	BXN567	BXN568	BXN569		
Sampling Date			2023/08/24 08:00	2023/08/24 08:15	2023/08/24 08:30	2023/08/24 08:45		
COC Number			703502-01-01	703502-01-01	703502-01-01	703502-01-01		
	UNITS	MAC	WELL #2	WELL #3	RIDGE	FARM RD.	RDL	QC Batch
Elements								
Total Mercury (Hg)	ug/L	1	<0.0019	<0.0019	<0.0019	<0.0019	0.0019	B087785

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

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Bureau Veritas Job #: C366247
Report Date: 2023/08/31

VILLAGE OF PEMBERTON
Client Project #: DRINKING WATER WITHOUT MICRO

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID					BXN566	BXN567	BXN568	BXN569		
Sampling Date					2023/08/24 08:00	2023/08/24 08:15	2023/08/24 08:30	2023/08/24 08:45		
COC Number					703502-01-01	703502-01-01	703502-01-01	703502-01-01		
	UNITS	MAC	AO	OG	WELL #2	WELL #3	RIDGE	FARM RD.	RDL	QC Batch
Total Metals by ICPMS										
Total Aluminum (Al)	ug/L	2900	-	100	3.3	7.3	3.5	3.7	3.0	B088209
Total Antimony (Sb)	ug/L	6	-	-	<0.50	<0.50	<0.50	<0.50	0.50	B088209
Total Arsenic (As)	ug/L	10	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B088209
Total Barium (Ba)	ug/L	2000	-	-	42.8	22.0	23.2	23.4	1.0	B088209
Total Boron (B)	ug/L	5000	-	-	96	<50	<50	<50	50	B088209
Total Cadmium (Cd)	ug/L	7	-	-	0.015	0.032	0.010	<0.010	0.010	B088209
Total Chromium (Cr)	ug/L	50	-	-	<1.0	<1.0	<1.0	<1.0	1.0	B088209
Total Cobalt (Co)	ug/L	-	-	-	<0.20	<0.20	<0.20	<0.20	0.20	B088209
Total Copper (Cu)	ug/L	2000	1000	-	1.23	9.93	4.13	9.44	0.20	B088209
Total Iron (Fe)	ug/L	-	300	-	35.0	19.3	10.9	15.3	5.0	B088209
Total Lead (Pb)	ug/L	5	-	-	<0.20	0.20	<0.20	<0.20	0.20	B088209
Total Manganese (Mn)	ug/L	120	20	-	**85.3**	**50.5**	5.4	11.1	1.0	B088209
Total Molybdenum (Mo)	ug/L	-	-	-	2.1	<1.0	<1.0	<1.0	1.0	B088209
Total Nickel (Ni)	ug/L	-	-	-	<1.0	<1.0	<1.0	<1.0	1.0	B088209
Total Selenium (Se)	ug/L	50	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B088209
Total Silver (Ag)	ug/L	-	-	-	<0.020	<0.020	<0.020	<0.020	0.020	B088209
Total Strontium (Sr)	ug/L	7000	-	-	147	70.2	78.3	79.3	1.0	B088209
Total Uranium (U)	ug/L	20	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B088209
Total Vanadium (V)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0	B088209
Total Zinc (Zn)	ug/L	-	5000	-	29.8	<5.0	7.9	<5.0	5.0	B088209
Total Calcium (Ca)	mg/L	-	-	-	23.3	12.7	13.9	14.1	0.050	B084814
Total Magnesium (Mg)	mg/L	-	-	-	1.53	0.759	0.826	0.832	0.050	B084814
Total Potassium (K)	mg/L	-	-	-	2.36	1.20	1.32	1.30	0.050	B084814
Total Sodium (Na)	mg/L	-	200	-	13.5	5.96	25.0	25.4	0.050	B084814
Total Sulphur (S)	mg/L	-	-	-	5.8	3.6	3.9	4.2	3.0	B084814

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C366247
Report Date: 2023/08/31

VILLAGE OF PEMBERTON
Client Project #: DRINKING WATER WITHOUT MICRO

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, September 2022.

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.
4. To ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of 1.0 NTU or less.
Measurement of Uncertainty has not been accounted for when stating conformity to the selected criteria, where applicable.

Results relate only to the items tested.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C366247
Report Date: 2023/08/31

QUALITY ASSURANCE REPORT

VILLAGE OF PEMBERTON
Client Project #: DRINKING WATER WITHOUT MICRO

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B085648	Turbidity	2023/08/26			99	80 - 120	<0.10	NTU	6.8	20
B085820	True Colour	2023/08/26			95	80 - 120	<5.0	Col. Unit	NC	20
B085881	Nitrate plus Nitrite (N)	2023/08/26	104	80 - 120	106	80 - 120	<0.020	mg/L	1.5	25
B085882	Nitrite (N)	2023/08/26	102	80 - 120	102	80 - 120	<0.0050	mg/L	NC	20
B086603	Total Dissolved Solids	2023/08/29	NC	80 - 120	100	80 - 120	<10	mg/L	1.9	20
B086775	Dissolved Fluoride (F)	2023/08/28	99	80 - 120	98	80 - 120	<0.050	mg/L	NC	20
B087037	pH	2023/08/28			100	97 - 103			2.1	N/A
B087049	Alkalinity (PP as CaCO3)	2023/08/28					<1.0	mg/L	NC	20
B087049	Alkalinity (Total as CaCO3)	2023/08/28			100	80 - 120	<1.0	mg/L	1.4	20
B087049	Bicarbonate (HCO3)	2023/08/28					<1.0	mg/L	1.4	20
B087049	Carbonate (CO3)	2023/08/28					<1.0	mg/L	NC	20
B087049	Hydroxide (OH)	2023/08/28					<1.0	mg/L	NC	20
B087051	Conductivity	2023/08/28			101	90 - 110	<2.0	uS/cm	0.74	10
B087785	Total Mercury (Hg)	2023/08/29	103	80 - 120	106	80 - 120	<0.0019	ug/L	NC	20
B087836	Total Dissolved Solids	2023/08/30	101	80 - 120	105	80 - 120	<10	mg/L	1.8	20
B087859	Total Dissolved Solids	2023/08/30	100	80 - 120	98	80 - 120	<10	mg/L	3.3	20
B088209	Total Aluminum (Al)	2023/08/29	97	80 - 120	96	80 - 120	<3.0	ug/L		
B088209	Total Antimony (Sb)	2023/08/30	107	80 - 120	103	80 - 120	<0.50	ug/L	NC	20
B088209	Total Arsenic (As)	2023/08/30	105	80 - 120	103	80 - 120	<0.10	ug/L	NC	20
B088209	Total Barium (Ba)	2023/08/29	103	80 - 120	101	80 - 120	<1.0	ug/L		
B088209	Total Boron (B)	2023/08/29	96	80 - 120	96	80 - 120	<50	ug/L		
B088209	Total Cadmium (Cd)	2023/08/30	104	80 - 120	101	80 - 120	<0.010	ug/L	NC	20
B088209	Total Chromium (Cr)	2023/08/30	100	80 - 120	97	80 - 120	<1.0	ug/L	NC	20
B088209	Total Cobalt (Co)	2023/08/29	100	80 - 120	98	80 - 120	<0.20	ug/L		
B088209	Total Copper (Cu)	2023/08/29	100	80 - 120	98	80 - 120	<0.20	ug/L		
B088209	Total Iron (Fe)	2023/08/30	100	80 - 120	99	80 - 120	<5.0	ug/L	NC	20
B088209	Total Lead (Pb)	2023/08/30	100	80 - 120	99	80 - 120	<0.20	ug/L	NC	20
B088209	Total Manganese (Mn)	2023/08/29	104	80 - 120	100	80 - 120	<1.0	ug/L		
B088209	Total Molybdenum (Mo)	2023/08/29	101	80 - 120	101	80 - 120	<1.0	ug/L		
B088209	Total Nickel (Ni)	2023/08/29	103	80 - 120	101	80 - 120	<1.0	ug/L		
B088209	Total Selenium (Se)	2023/08/29	109	80 - 120	104	80 - 120	<0.10	ug/L		
B088209	Total Silver (Ag)	2023/08/29	102	80 - 120	100	80 - 120	<0.020	ug/L		
B088209	Total Strontium (Sr)	2023/08/29	99	80 - 120	98	80 - 120	<1.0	ug/L		

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Bureau Veritas Job #: C366247
Report Date: 2023/08/31

QUALITY ASSURANCE REPORT(CONT'D)

VILLAGE OF PEMBERTON
Client Project #: DRINKING WATER WITHOUT MICRO

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B088209	Total Uranium (U)	2023/08/29	105	80 - 120	103	80 - 120	<0.10	ug/L		
B088209	Total Vanadium (V)	2023/08/29	98	80 - 120	96	80 - 120	<5.0	ug/L		
B088209	Total Zinc (Zn)	2023/08/29	107	80 - 120	105	80 - 120	<5.0	ug/L		
B089461	Chloride (Cl)	2023/08/30	106	80 - 120	103	80 - 120	<1.0	mg/L	0.59	20
B089461	Sulphate (SO4)	2023/08/30	96	80 - 120	99	80 - 120	<1.0	mg/L	NC	20
B089469	Chloride (Cl)	2023/08/30	108	80 - 120	102	80 - 120	<1.0	mg/L	7.9	20
B089469	Sulphate (SO4)	2023/08/30	98	80 - 120	99	80 - 120	<1.0	mg/L	NC	20

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.

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).

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Bureau Veritas
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.bvna.com

Page of

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#99020 VILLAGE OF PEMBERTON	Company Name	Village of Pemberton	Quotation #	C21923	Bureau Veritas Job #	Bottle Order #: 703502
Contact Name	Accounts Payable	Contact Name	Reece Clark	P.O. #			
Address	Box 100 7400 Prospect St Pemberton BC V0N 2L0	Address	7400 Prospect st Pemberton BC V0N 2L0	Project #	Drinking Water without Microbi	Chain Of Custody Record	Project Manager
Phone	(604) 894-6811 Fax: (604) 894-6855	Phone	(604) 353-5845 Fax:	Project Name		C#703502-01-01	Customer Solutions
Email	accountspayable@pemberton.ca	Email	rclark@pemberton.ca	Site #			
				Sampled By			

Regulatory Criteria:
- [ ] CSR
- [ ] CCME
- [x] BC Water Quality
- [ ] Other

Special Instructions: Please Plot Against AO & MAC

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
1 DAY [ ] 2 Day [ ] 3 Day [ ] Date Required: [ ]
Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Drinking Water Package w/o Microbiology	# of Bottles	Comments
1		Well #2	23/08/24	9:00 AM			✓		
2		Well #3	23/08/24	8:15 AM			✓		
3		Ridge	23/08/24	9:30 AM			✓		
4		Farm Rd.	23/08/24	8:45 AM			✓		
5									
6									
7									
8									
9									
10									

C366247_COC

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
T Clark Reece Clark	23/08/24	9:00 AM	EDELANE CAOILI	2023/08/25	0938		[ ]	10, 9, 11	[ ] Yes [x] No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

ice packs: yes, melted

Your Project #: Drinking Water wihtout Microbi
Your C.O.C. #: 706286-01-01

Attention: Reece Clark

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

Report Date: 2023/10/10
Report #: R3407613
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C379347
Received: 2023/10/03, 08:00

Sample Matrix: Drinking Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	4	N/A	2023/10/04	BBY6SOP-00026	SM 24 2320 B m
Chloride/Sulphate by Auto Colourimetry	3	N/A	2023/10/04	BBY6SOP-00011 / BBY6SOP-00017	SM24-4500-Cl/SO4-E m
Chloride/Sulphate by Auto Colourimetry	1	N/A	2023/10/05	BBY6SOP-00011 / BBY6SOP-00017	SM24-4500-Cl/SO4-E m
Color (True) by Automated Analyzer	4	N/A	2023/10/04	BBY6SOP-00057	SM 24 2120 C m
Conductivity @25C	4	N/A	2023/10/04	BBY6SOP-00026	SM 24 2510 B m
Fluoride	2	N/A	2023/10/05	BBY6SOP-00048	SM 24 4500-F C m
Fluoride	2	N/A	2023/10/06	BBY6SOP-00048	SM 24 4500-F C m
Hardness Total (calculated as CaCO3) (1)	4	N/A	2023/10/04	BBY WI-00033	Auto Calc
Mercury (Total) by CV	4	2023/10/06	2023/10/06	AB SOP-00084	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	4	N/A	2023/10/04	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total)	4	N/A	2023/10/04	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Nitrate + Nitrite (N)	4	N/A	2023/10/04	BBY6SOP-00010	SM 24 4500-NO3- H m
Nitrite (N) Regular Level Water	4	N/A	2023/10/04	BBY6SOP-00010	SM 24 4500-NO2- m
Nitrogen - Nitrate (as N)	4	N/A	2023/10/05	BBY WI-00033	Auto Calc
pH @25°C (2)	4	N/A	2023/10/04	BBY6SOP-00026	SM 24 4500-H+ B m
Total Dissolved Solids (Filt. Residue)	4	2023/10/04	2023/10/05	BBY6SOP-00033	SM 24 2540 C m
Turbidity	4	N/A	2023/10/03	BBY6SOP-00027	SM 24 2130 B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: Drinking Water wihtout Microbi
Your C.O.C. #: 706286-01-01

Attention: Reece Clark

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

Report Date: 2023/10/10
Report #: R3407613
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C379347
Received: 2023/10/03, 08:00

Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

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. When sampling is not conducted by Bureau Veritas, results relate to the supplied 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) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(2) The CCME method requires 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 CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
10 Oct 2023 11:41:30

Please direct all questions regarding this Certificate of Analysis to:
Customer Solutions, Western Canada Customer Experience Team
Email: customersolutionswest@bureauveritas.com
Phone# (604) 734 7276

==========

This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Raphael Kwan, Senior Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

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Bureau Veritas Job #: C379347
Report Date: 2023/10/10

VILLAGE OF PEMBERTON
Client Project #: Drinking Water wihtout Microbi

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					CAT683		CAT684	CAT685		
Sampling Date					2023/09/27 08:00		2023/09/27 08:15	2023/09/27 08:30		
COC Number					706286-01-01		706286-01-01	706286-01-01		
	UNITS	MAC	AO	OG	WELL #2	QC Batch	WELL #3	RIDGE	RDL	QC Batch
ANIONS										
Nitrite (N)	mg/L	1	-	-	<0.0050	B138393	<0.0050	<0.0050	0.0050	B138393
Calculated Parameters										
Total Hardness (CaCO3)	mg/L	-	-	-	66.6	B135966	39.3	40.0	0.50	B135966
Nitrate (N)	mg/L	10	-	-	0.067	B135813	0.099	0.100	0.020	B135813
Misc. Inorganics										
Conductivity	uS/cm	-	-	-	240	B136647	130	200	2.0	B136647
pH	pH	-	-	7.0:10.5	**6.55**	B136646	**6.44**	**6.90**	N/A	B136646
Total Dissolved Solids	mg/L	-	500	-	190	B138104	110	110	10	B138104
Anions										
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	B136640	<1.0	<1.0	1.0	B136640
Alkalinity (Total as CaCO3)	mg/L	-	-	-	34	B136640	22	53	1.0	B136640
Bicarbonate (HCO3)	mg/L	-	-	-	42	B136640	27	65	1.0	B136640
Carbonate (CO3)	mg/L	-	-	-	<1.0	B136640	<1.0	<1.0	1.0	B136640
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	B140223	<0.050	<0.050	0.050	B142802
Hydroxide (OH)	mg/L	-	-	-	<1.0	B136640	<1.0	<1.0	1.0	B136640
Chloride (Cl)	mg/L	-	250	-	35	B139216	16	17	1.0	B139196
Sulphate (SO4)	mg/L	-	500	-	17	B139216	12	13	1.0	B139196
MISCELLANEOUS										
True Colour	Col. Unit	-	15	-	<2.0	B138647	3.1	<2.0	2.0	B138647
Nutrients										
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.067	B138384	0.099	0.100	0.020	B138384
Physical Properties										
Turbidity	NTU	see remark	see remark	see remark	0.31	B136603	0.25	0.14	0.10	B136603

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

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Bureau Veritas Job #: C379347
Report Date: 2023/10/10

VILLAGE OF PEMBERTON
Client Project #: Drinking Water wihtout Microbi

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					CAT686		
Sampling Date					2023/09/27 08:45		
COC Number					706286-01-01		
	UNITS	MAC	AO	OG	FARM RD.	RDL	QC Batch
ANIONS							
Nitrite (N)	mg/L	1	-	-	<0.0050	0.0050	B138418
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	-	-	-	40.1	0.50	B135966
Nitrate (N)	mg/L	10	-	-	0.107	0.020	B135813
Misc. Inorganics							
Conductivity	uS/cm	-	-	-	190	2.0	B136647
pH	pH	-	-	7.0:10.5	7.09	N/A	B136646
Total Dissolved Solids	mg/L	-	500	-	100	10	B138104
Anions							
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	1.0	B136640
Alkalinity (Total as CaCO3)	mg/L	-	-	-	52	1.0	B136640
Bicarbonate (HCO3)	mg/L	-	-	-	63	1.0	B136640
Carbonate (CO3)	mg/L	-	-	-	<1.0	1.0	B136640
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	0.050	B140223
Hydroxide (OH)	mg/L	-	-	-	<1.0	1.0	B136640
Chloride (Cl)	mg/L	-	250	-	17	1.0	B139196
Sulphate (SO4)	mg/L	-	500	-	12	1.0	B139196
MISCELLANEOUS							
True Colour	Col. Unit	-	15	-	<2.0	2.0	B138647
Nutrients							
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.107	0.020	B138417
Physical Properties							
Turbidity	NTU	see remark	see remark	see remark	0.30	0.10	B136603

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

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VILLAGE OF PEMBERTON
Client Project #: Drinking Water wihtout Microbi

MERCURY BY COLD VAPOR (DRINKING WATER)

Bureau Veritas ID			CAT683	CAT684	CAT685	CAT686		
Sampling Date			2023/09/27 08:00	2023/09/27 08:15	2023/09/27 08:30	2023/09/27 08:45		
COC Number			706286-01-01	706286-01-01	706286-01-01	706286-01-01		
	UNITS	MAC	WELL #2	WELL #3	RIDGE	FARM RD.	RDL	QC Batch
Elements								
Total Mercury (Hg)	ug/L	1	<0.0019	<0.0019	<0.0019	<0.0019	0.0019	B142306

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

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VILLAGE OF PEMBERTON
Client Project #: Drinking Water wihtout Microbi

ELEMENTS BY ATOMIC SPECTROSCOPY (DRINKING WATER)

Bureau Veritas ID					CAT683		CAT684	CAT685	CAT686		
Sampling Date					2023/09/27 08:00		2023/09/27 08:15	2023/09/27 08:30	2023/09/27 08:45		
COC Number					706286-01-01		706286-01-01	706286-01-01	706286-01-01		
	UNITS	MAC	AO	OG	WELL #2	QC Batch	WELL #3	RIDGE	FARM RD.	RDL	QC Batch
Total Metals by ICPMS											
Total Aluminum (Al)	ug/L	2900	-	100	3.4	B136456	7.7	8.2	3.9	3.0	B136456
Total Antimony (Sb)	ug/L	6	-	-	<0.50	B136456	<0.50	<0.50	<0.50	0.50	B136456
Total Arsenic (As)	ug/L	10	-	-	<0.10	B136456	<0.10	<0.10	<0.10	0.10	B136456
Total Barium (Ba)	ug/L	2000	-	-	44.3	B136456	26.8	25.0	25.6	1.0	B136456
Total Boron (B)	ug/L	5000	-	-	88	B136456	<50	<50	<50	50	B136456
Total Cadmium (Cd)	ug/L	7	-	-	0.023	B136456	0.032	0.029	0.012	0.010	B136456
Total Chromium (Cr)	ug/L	50	-	-	<1.0	B136456	<1.0	<1.0	<1.0	1.0	B136456
Total Cobalt (Co)	ug/L	-	-	-	0.21	B136456	<0.20	<0.20	<0.20	0.20	B136456
Total Copper (Cu)	ug/L	2000	1000	-	1.21	B136456	1.48	5.78	8.40	0.20	B136456
Total Iron (Fe)	ug/L	-	300	-	85.6	B136456	16.7	18.4	31.7	5.0	B136456
Total Lead (Pb)	ug/L	5	-	-	<0.20	B136456	0.88	0.23	<0.20	0.20	B136456
Total Manganese (Mn)	ug/L	120	20	-	**93.5**	B136456	**61.1**	14.0	6.5	1.0	B136456
Total Molybdenum (Mo)	ug/L	-	-	-	2.1	B136456	<1.0	<1.0	<1.0	1.0	B136456
Total Nickel (Ni)	ug/L	-	-	-	<1.0	B136456	<1.0	<1.0	<1.0	1.0	B136456
Total Selenium (Se)	ug/L	50	-	-	<0.10	B136456	<0.10	<0.10	<0.10	0.10	B136456
Total Silver (Ag)	ug/L	-	-	-	<0.020	B136456	<0.020	<0.020	<0.020	0.020	B136456
Total Strontium (Sr)	ug/L	7000	-	-	147	B136456	80.8	83.3	83.4	1.0	B136456
Total Uranium (U)	ug/L	20	-	-	<0.10	B136456	<0.10	<0.10	<0.10	0.10	B136456
Total Vanadium (V)	ug/L	-	-	-	<5.0	B136456	<5.0	<5.0	<5.0	5.0	B136456
Total Zinc (Zn)	ug/L	-	5000	-	33.3	B136456	<5.0	9.1	<5.0	5.0	B136456
Total Calcium (Ca)	mg/L	-	-	-	24.0	B136286	14.2	14.5	14.5	0.050	B136287
Total Magnesium (Mg)	mg/L	-	-	-	1.62	B136286	0.924	0.942	0.945	0.050	B136287
Total Potassium (K)	mg/L	-	-	-	2.40	B136286	1.33	1.35	1.35	0.050	B136287
Total Sodium (Na)	mg/L	-	200	-	12.8	B136286	6.58	21.5	20.9	0.050	B136287
Total Sulphur (S)	mg/L	-	-	-	6.1	B136286	4.2	4.2	4.3	3.0	B136287

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

100

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Report Date: 2023/10/10

VILLAGE OF PEMBERTON
Client Project #: Drinking Water wihtout Microbi

GENERAL COMMENTS

Sample CAT683 [WELL #2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample received past method specified hold time for Nitrate + Nitrite (N). Sample received past method specified hold time for Nitrite (N) Regular Level Water. Sample received past method specified hold time for Color (True) by Automated Analyzer. Sample was analyzed past method specified hold time for Color (True) by Automated Analyzer. Sample was analyzed past method specified hold time for Nitrate + Nitrite (N). Sample was analyzed past method specified hold time for Nitrite (N) Regular Level Water.

Sample CAT684 [WELL #3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample received past method specified hold time for Nitrate + Nitrite (N). Sample received past method specified hold time for Nitrite (N) Regular Level Water. Sample received past method specified hold time for Color (True) by Automated Analyzer. Sample was analyzed past method specified hold time for Color (True) by Automated Analyzer. Sample was analyzed past method specified hold time for Nitrate + Nitrite (N). Sample was analyzed past method specified hold time for Nitrite (N) Regular Level Water.

Sample CAT685 [RIDGE] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample received past method specified hold time for Nitrate + Nitrite (N). Sample received past method specified hold time for Nitrite (N) Regular Level Water. Sample received past method specified hold time for Color (True) by Automated Analyzer. Sample was analyzed past method specified hold time for Color (True) by Automated Analyzer. Sample was analyzed past method specified hold time for Nitrate + Nitrite (N). Sample was analyzed past method specified hold time for Nitrite (N) Regular Level Water.

Sample CAT686 [FARM RD.] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised. Sample received past method specified hold time for Nitrate + Nitrite (N). Sample received past method specified hold time for Nitrite (N) Regular Level Water. Sample received past method specified hold time for Color (True) by Automated Analyzer. Sample was analyzed past method specified hold time for Color (True) by Automated Analyzer. Sample was analyzed past method specified hold time for Nitrate + Nitrite (N). Sample was analyzed past method specified hold time for Nitrite (N) Regular Level Water.
MAC,AO,OG: The guidelines that have been included in this report have been taken from the Canadian Drinking Water Quality Summary Table, September 2022.

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.
4. To ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of 1.0 NTU or less.
Measurement of Uncertainty has not been accounted for when stating conformity to the selected criteria, where applicable.

Results relate only to the items tested.

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Bureau Veritas Job #: C379347
Report Date: 2023/10/10

QUALITY ASSURANCE REPORT

VILLAGE OF PEMBERTON
Client Project #: Drinking Water wihtout Microbi

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B136456	Total Aluminum (Al)	2023/10/04	104	80 - 120	101	80 - 120	<3.0	ug/L	0.51	20
B136456	Total Antimony (Sb)	2023/10/04	104	80 - 120	100	80 - 120	<0.50	ug/L	NC	20
B136456	Total Arsenic (As)	2023/10/04	108	80 - 120	100	80 - 120	<0.10	ug/L	NC	20
B136456	Total Barium (Ba)	2023/10/04	103	80 - 120	99	80 - 120	<1.0	ug/L	0.34	20
B136456	Total Boron (B)	2023/10/04	98	80 - 120	95	80 - 120	<50	ug/L	NC	20
B136456	Total Cadmium (Cd)	2023/10/04	102	80 - 120	98	80 - 120	<0.010	ug/L	9.8	20
B136456	Total Chromium (Cr)	2023/10/04	97	80 - 120	93	80 - 120	<1.0	ug/L	NC	20
B136456	Total Cobalt (Co)	2023/10/04	102	80 - 120	100	80 - 120	<0.20	ug/L	NC	20
B136456	Total Copper (Cu)	2023/10/04	96	80 - 120	94	80 - 120	<0.20	ug/L	1.3	20
B136456	Total Iron (Fe)	2023/10/04	102	80 - 120	98	80 - 120	<5.0	ug/L	0.19	20
B136456	Total Lead (Pb)	2023/10/04	101	80 - 120	96	80 - 120	<0.20	ug/L	NC	20
B136456	Total Manganese (Mn)	2023/10/04	96	80 - 120	93	80 - 120	<1.0	ug/L	0.29	20
B136456	Total Molybdenum (Mo)	2023/10/04	105	80 - 120	98	80 - 120	<1.0	ug/L	NC	20
B136456	Total Nickel (Ni)	2023/10/04	100	80 - 120	97	80 - 120	<1.0	ug/L	NC	20
B136456	Total Selenium (Se)	2023/10/04	104	80 - 120	98	80 - 120	<0.10	ug/L	NC	20
B136456	Total Silver (Ag)	2023/10/04	101	80 - 120	97	80 - 120	<0.020	ug/L	NC	20
B136456	Total Strontium (Sr)	2023/10/04	NC	80 - 120	94	80 - 120	<1.0	ug/L	0.31	20
B136456	Total Uranium (U)	2023/10/04	104	80 - 120	98	80 - 120	<0.10	ug/L	NC	20
B136456	Total Vanadium (V)	2023/10/04	100	80 - 120	95	80 - 120	<5.0	ug/L	NC	20
B136456	Total Zinc (Zn)	2023/10/04	101	80 - 120	104	80 - 120	<5.0	ug/L	NC	20
B136603	Turbidity	2023/10/03			104	80 - 120	<0.10	NTU	17	20
B136640	Alkalinity (PP as CaCO3)	2023/10/04					<1.0	mg/L	NC	20
B136640	Alkalinity (Total as CaCO3)	2023/10/04			98	80 - 120	<1.0	mg/L	0.82	20
B136640	Bicarbonate (HCO3)	2023/10/04					<1.0	mg/L	0.82	20
B136640	Carbonate (CO3)	2023/10/04					<1.0	mg/L	NC	20
B136640	Hydroxide (OH)	2023/10/04					<1.0	mg/L	NC	20
B136646	pH	2023/10/04			100	97 - 103			0.72	N/A
B136647	Conductivity	2023/10/04			102	90 - 110	<2.0	uS/cm	0	10
B138104	Total Dissolved Solids	2023/10/05	103	80 - 120	99	80 - 120	<10	mg/L	1.3	20
B138384	Nitrate plus Nitrite (N)	2023/10/04	NC	80 - 120	109	80 - 120	<0.020	mg/L	0.48	25
B138393	Nitrite (N)	2023/10/04	105	80 - 120	104	80 - 120	<0.0050	mg/L	5.0	20
B138417	Nitrate plus Nitrite (N)	2023/10/04	112	80 - 120	116	80 - 120	0.033, RDL=0.020	mg/L	5.4	25

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QUALITY ASSURANCE REPORT(CONT'D)

VILLAGE OF PEMBERTON
Client Project #: Drinking Water wihtout Microbi

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B138418	Nitrite (N)	2023/10/04	107	80 - 120	105	80 - 120	<0.0050	mg/L	NC	20
B138647	True Colour	2023/10/04			108	80 - 120	<2.0	Col. Unit	12	20
B139196	Chloride (Cl)	2023/10/04	107	80 - 120	97	80 - 120	<1.0	mg/L		
B139196	Sulphate (SO4)	2023/10/04	NC	80 - 120	96	80 - 120	<1.0	mg/L	3.0	20
B139216	Chloride (Cl)	2023/10/05	102	80 - 120	99	80 - 120	<1.0	mg/L	1.8	20
B139216	Sulphate (SO4)	2023/10/05	104	80 - 120	96	80 - 120	<1.0	mg/L	0.022	20
B140223	Dissolved Fluoride (F)	2023/10/05	103	80 - 120	98	80 - 120	<0.050	mg/L	0	20
B142306	Total Mercury (Hg)	2023/10/06	92	80 - 120	105	80 - 120	<0.0019	ug/L	NC	20
B142802	Dissolved Fluoride (F)	2023/10/06	101	80 - 120	100	80 - 120	<0.050	mg/L	1.2	20

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.

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).

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C379347_COC

INVOICE TO:

Company Name	#99020 VILLAGE OF PEMBERTON
Contact Name	Accounts Payable
Address	Box 100 7400 Prospect St
	Pemberton BC V0N 2L0
Phone	(604) 894-6811 Fax: (604) 894-6855
Email	accountspayable@pemberton.ca

Report Information

Company Name	
Contact Name	Reece Clark
Address	
Phone	(604) 353-5845 Fax:
Email	rclark@pemberton.ca

Project Information

Quotation #	C21923
P.O. #	
Project #	Drinking Water wihtout Microbi
Project Name	
Site #	
Sampled By	

Use Only

Bottle Order #: 706286

Chain Of Custody Record: C#706286-01-01

Project Manager: Customer Solutions

Regulatory Criteria:
- [ ] CSR
- [ ] CCME
- [x] BC Water Quality
- [ ] Other

Special Instructions: Please plot against AO & MAC

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Drinking Water Package w/o Microbiology	# of Bottles	Comments
1		Well #2	23-09-27	8:00AM			✓		
2		Well #3	23-09-27	8:15 AM			✓		
3		RIDGE	23-09-27	8:30 AM			✓		
4		FARM Rd.	23-09-27	8:45 AM			✓		
5									
6									
7									
8									
9									
10									

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:

(will be applied if Rush TAT is not specified):

Standard TAT = 5-7 Working days for most tests.

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

1 DAY [ ] 2 Day [ ] 3 Day [ ] Date Required: _____

Rush Confirmation Number: _____ *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
R Clash Reece Clark	23/09/27	9:00AM	Stefane Caoili	23/10/03	0800	

Lab Use Only

Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
[ ]	8.7,6	[ ] Yes [x] No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

ice packs: yS

Bureau Veritas Canada (2019) Inc.

Your C.O.C. #: C#709138-01-01

Attention: Reece Clark

VILLAGE OF PEMBERTON
Shipping Address for Reece C.
7400 Prospect Street
Box 100
BC
Canada V0N 2L0

Report Date: 2023/11/02
Report #: R3420430
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C387665
Received: 2023/10/27, 11:45

Sample Matrix: Drinking Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	4	N/A	2023/10/27	BBY6SOP-00026	SM 24 2320 B m
Chloride/Sulphate by Auto Colourimetry	4	N/A	2023/10/30	BBY6SOP-00011 / BBY6SOP-00017	SM24-4500-Cl/SO4-E m
Color (True) by Automated Analyzer	4	N/A	2023/10/27	BBY6SOP-00057	SM 24 2120 C m
Conductivity @25C	4	N/A	2023/10/27	BBY6SOP-00026	SM 24 2510 B m
Fluoride	4	N/A	2023/11/02	BBY6SOP-00048	SM 24 4500-F C m
Hardness Total (calculated as CaCO3) (1)	4	N/A	2023/10/31	BBY WI-00033	Auto Calc
Mercury (Total) by CV	4	2023/11/02	2023/11/02	AB SOP-00084	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	4	N/A	2023/10/31	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total)	4	N/A	2023/10/30	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Nitrate + Nitrite (N)	4	N/A	2023/10/27	BBY6SOP-00010	SM 24 4500-NO3- H m
Nitrite (N) Regular Level Water	4	N/A	2023/10/27	BBY6SOP-00010	SM 24 4500-NO2- m
Nitrogen - Nitrate (as N)	4	N/A	2023/10/28	BBY WI-00033	Auto Calc
pH @25°C (2)	4	N/A	2023/10/27	BBY6SOP-00026	SM 24 4500-H+ B m
Total Dissolved Solids (Filt. Residue)	4	2023/10/30	2023/10/31	BBY6SOP-00033	SM 24 2540 C m
Turbidity	4	N/A	2023/10/28	BBY6SOP-00027	SM 24 2130 B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas 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 Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your C.O.C. #: C#709138-01-01

Attention: Reece Clark

VILLAGE OF PEMBERTON
Shipping Address for Reece C.
7400 Prospect Street
Box 100
BC
Canada V0N 2L0

Report Date: 2023/11/02
Report #: R3420430
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C387665
Received: 2023/10/27, 11:45
customer or their agent.

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. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

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) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(2) The CCME method requires 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 CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
02 Nov 2023 14:10:19

Please direct all questions regarding this Certificate of Analysis to:
Customer Solutions, Western Canada Customer Experience Team
Email: customersolutionswest@bureauveritas.com
Phone# (604) 734 7276
==========
This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Raphael Kwan, Senior Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

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Bureau Veritas Job #: C387665
Report Date: 2023/11/02

VILLAGE OF PEMBERTON

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					CDA161	CDA162		
Sampling Date					2023/10/26 08:30	2023/10/24 08:45		
COC Number					C#709138-01-01	C#709138-01-01		
	UNITS	MAC	AO	OG	WELL #2	WELL #3	RDL	QC Batch
ANIONS								
Nitrite (N)	mg/L	1	-	-	<0.0050	<0.0050	0.0050	B174411
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	-	-	-	77.1	42.5	0.50	B173149
Nitrate (N)	mg/L	10	-	-	<0.020	0.084	0.020	B173666
Misc. Inorganics								
Conductivity	uS/cm	-	-	-	260	130	2.0	B174271
pH	pH	-	-	7.0:10.5	**6.41**	**6.28**	N/A	B174270
Total Dissolved Solids	mg/L	-	500	-	160	76	10	B176328
Anions								
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	<1.0	1.0	B174259
Alkalinity (Total as CaCO3)	mg/L	-	-	-	34	23	1.0	B174259
Bicarbonate (HCO3)	mg/L	-	-	-	42	28	1.0	B174259
Carbonate (CO3)	mg/L	-	-	-	<1.0	<1.0	1.0	B174259
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	<0.050	0.050	B182230
Hydroxide (OH)	mg/L	-	-	-	<1.0	<1.0	1.0	B174259
Chloride (Cl)	mg/L	-	250	-	39	16	1.0	B176431
Sulphate (SO4)	mg/L	-	500	-	19	12	1.0	B176431
MISCELLANEOUS								
True Colour	Col. Unit	-	15	-	<2.0	<2.0	2.0	B173845
Nutrients								
Nitrate plus Nitrite (N)	mg/L	-	-	-	<0.020	0.084	0.020	B174404
Physical Properties								
Turbidity	NTU	see remark	see remark	see remark	0.29	<0.10	0.10	B175324

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

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Bureau Veritas Job #: C387665
Report Date: 2023/11/02

VILLAGE OF PEMBERTON

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					CDA163		CDA164		
Sampling Date					2023/10/24 09:00		2023/10/26 09:15		
COC Number					C#709138-01-01		C#709138-01-01		
	UNITS	MAC	AO	OG	RIDGE	QC Batch	FARM RD	RDL	QC Batch
ANIONS									
Nitrite (N)	mg/L	1	-	-	<0.0050	B174414	<0.0050	0.0050	B174411
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	43.3	B173149	43.0	0.50	B173149
Nitrate (N)	mg/L	10	-	-	0.083	B173666	0.078	0.020	B173666
Misc. Inorganics									
Conductivity	uS/cm	-	-	-	210	B174271	210	2.0	B174271
pH	pH	-	-	7.0:10.5	**6.75**	B174270	**6.87**	N/A	B174270
Total Dissolved Solids	mg/L	-	500	-	130	B176328	130	10	B176328
Anions									
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	B174259	<1.0	1.0	B174259
Alkalinity (Total as CaCO3)	mg/L	-	-	-	59	B174259	61	1.0	B174259
Bicarbonate (HCO3)	mg/L	-	-	-	72	B174259	74	1.0	B174259
Carbonate (CO3)	mg/L	-	-	-	<1.0	B174259	<1.0	1.0	B174259
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	B182230	<0.050	0.050	B182230
Hydroxide (OH)	mg/L	-	-	-	<1.0	B174259	<1.0	1.0	B174259
Chloride (Cl)	mg/L	-	250	-	17	B176431	17	1.0	B176431
Sulphate (SO4)	mg/L	-	500	-	12	B176431	12	1.0	B176431
MISCELLANEOUS									
True Colour	Col. Unit	-	15	-	<2.0	B173845	<2.0	2.0	B173845
Nutrients									
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.083	B174413	0.078	0.020	B174404
Physical Properties									
Turbidity	NTU	see remark	see remark	see remark	0.13	B175324	0.24	0.10	B175324

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

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Bureau Veritas Job #: C387665
Report Date: 2023/11/02

VILLAGE OF PEMBERTON

MERCURY BY COLD VAPOR (DRINKING WATER)

Bureau Veritas ID			CDA161		CDA162	CDA163	CDA164		
Sampling Date			2023/10/26 08:30		2023/10/24 08:45	2023/10/24 09:00	2023/10/26 09:15		
COC Number			C#709138-01-01		C#709138-01-01	C#709138-01-01	C#709138-01-01		
	UNITS	MAC	WELL #2	QC Batch	WELL #3	RIDGE	FARM RD	RDL	QC Batch
Elements									
Total Mercury (Hg)	ug/L	1	<0.0019	B181725	<0.0019	<0.0019	<0.0019	0.0019	B181737

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

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Bureau Veritas Job #: C387665
Report Date: 2023/11/02

VILLAGE OF PEMBERTON

ELEMENTS BY ATOMIC SPECTROSCOPY (DRINKING WATER)

Bureau Veritas ID					CDA161	CDA162	CDA163	CDA164		
Sampling Date					2023/10/26 08:30	2023/10/24 08:45	2023/10/24 09:00	2023/10/26 09:15		
COC Number					C#709138-01-01	C#709138-01-01	C#709138-01-01	C#709138-01-01		
	UNITS	MAC	AO	OG	WELL #2	WELL #3	RIDGE	FARM RD	RDL	QC Batch
Total Metals by ICPMS										
Total Aluminum (Al)	ug/L	2900	-	100	3.7	8.8	3.6	19.2	3.0	B174872
Total Antimony (Sb)	ug/L	6	-	-	<0.50	<0.50	<0.50	<0.50	0.50	B174872
Total Arsenic (As)	ug/L	10	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B174872
Total Barium (Ba)	ug/L	2000	-	-	49.0	27.4	24.4	25.2	1.0	B174872
Total Boron (B)	ug/L	5000	-	-	135	<50	<50	<50	50	B174872
Total Cadmium (Cd)	ug/L	7	-	-	0.026	0.035	0.010	0.082	0.010	B174872
Total Chromium (Cr)	ug/L	50	-	-	<1.0	<1.0	<1.0	<1.0	1.0	B174872
Total Cobalt (Co)	ug/L	-	-	-	0.25	0.21	<0.20	<0.20	0.20	B174872
Total Copper (Cu)	ug/L	2000	1000	-	1.42	1.45	4.34	8.92	0.20	B174872
Total Iron (Fe)	ug/L	-	300	-	97.8	22.0	40.0	56.5	5.0	B174872
Total Lead (Pb)	ug/L	5	-	-	<0.20	0.68	<0.20	<0.20	0.20	B174872
Total Manganese (Mn)	ug/L	120	20	-	**137**	**72.0**	5.6	**23.8**	1.0	B174872
Total Molybdenum (Mo)	ug/L	-	-	-	2.6	<1.0	<1.0	<1.0	1.0	B174872
Total Nickel (Ni)	ug/L	-	-	-	<1.0	<1.0	<1.0	<1.0	1.0	B174872
Total Selenium (Se)	ug/L	50	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B174872
Total Silver (Ag)	ug/L	-	-	-	<0.020	<0.020	<0.020	<0.020	0.020	B174872
Total Strontium (Sr)	ug/L	7000	-	-	165	85.8	87.2	88.3	1.0	B174872
Total Uranium (U)	ug/L	20	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B174872
Total Vanadium (V)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0	B174872
Total Zinc (Zn)	ug/L	-	5000	-	38.8	<5.0	12.1	<5.0	5.0	B174872
Total Calcium (Ca)	mg/L	-	-	-	27.9	15.4	15.7	15.6	0.050	B173782
Total Magnesium (Mg)	mg/L	-	-	-	1.84	0.975	1.00	0.979	0.050	B173782
Total Potassium (K)	mg/L	-	-	-	2.76	1.42	1.42	1.42	0.050	B173782
Total Sodium (Na)	mg/L	-	200	-	14.8	7.01	26.7	27.5	0.050	B173782
Total Sulphur (S)	mg/L	-	-	-	6.6	4.4	4.3	4.3	3.0	B173782

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

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Bureau Veritas Job #: C387665
Report Date: 2023/11/02

VILLAGE OF PEMBERTON

GENERAL COMMENTS

Sample CDA162 [WELL #3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample CDA163 [RIDGE] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.
MAC,AO,OG: The guidelines that have been included in this report have been taken from the Canadian Drinking Water Quality Summary Table, September 2022.

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.
4. To ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of 1.0 NTU or less.
Measurement of Uncertainty has not been accounted for when stating conformity to the selected criteria, where applicable.

Results relate only to the items tested.

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Bureau Veritas Job #: C387665
Report Date: 2023/11/02

QUALITY ASSURANCE REPORT

VILLAGE OF PEMBERTON

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B173845	True Colour	2023/10/27			100	80 - 120	<2.0	Col. Unit	NC	20
B174259	Alkalinity (PP as CaCO3)	2023/10/27					<1.0	mg/L	NC	20
B174259	Alkalinity (Total as CaCO3)	2023/10/27			96	80 - 120	<1.0	mg/L	0.55	20
B174259	Bicarbonate (HCO3)	2023/10/27					<1.0	mg/L	0.55	20
B174259	Carbonate (CO3)	2023/10/27					<1.0	mg/L	NC	20
B174259	Hydroxide (OH)	2023/10/27					<1.0	mg/L	NC	20
B174270	pH	2023/10/27			100	97 - 103			1.2	N/A
B174271	Conductivity	2023/10/27			99	90 - 110	<2.0	uS/cm	0	10
B174404	Nitrate plus Nitrite (N)	2023/10/27	107	80 - 120	109	80 - 120	<0.020	mg/L	NC	25
B174411	Nitrite (N)	2023/10/27	42	N/A	106	80 - 120	<0.0050	mg/L	NC	20
B174413	Nitrate plus Nitrite (N)	2023/10/27	114	80 - 120	107	80 - 120	<0.020	mg/L	22	25
B174414	Nitrite (N)	2023/10/27	106	80 - 120	108	80 - 120	<0.0050	mg/L	NC	20
B174872	Total Aluminum (Al)	2023/10/30			104	80 - 120	<3.0	ug/L		
B174872	Total Antimony (Sb)	2023/10/30			102	80 - 120	<0.50	ug/L		
B174872	Total Arsenic (As)	2023/10/30			105	80 - 120	<0.10	ug/L		
B174872	Total Barium (Ba)	2023/10/30			102	80 - 120	<1.0	ug/L		
B174872	Total Boron (B)	2023/10/30			108	80 - 120	<50	ug/L		
B174872	Total Cadmium (Cd)	2023/10/30			102	80 - 120	<0.010	ug/L		
B174872	Total Chromium (Cr)	2023/10/30			99	80 - 120	<1.0	ug/L		
B174872	Total Cobalt (Co)	2023/10/30			97	80 - 120	<0.20	ug/L		
B174872	Total Copper (Cu)	2023/10/30			96	80 - 120	<0.20	ug/L		
B174872	Total Iron (Fe)	2023/10/30			105	80 - 120	<5.0	ug/L		
B174872	Total Lead (Pb)	2023/10/30			100	80 - 120	<0.20	ug/L		
B174872	Total Manganese (Mn)	2023/10/30			103	80 - 120	<1.0	ug/L		
B174872	Total Molybdenum (Mo)	2023/10/30			105	80 - 120	<1.0	ug/L		
B174872	Total Nickel (Ni)	2023/10/30			102	80 - 120	<1.0	ug/L		
B174872	Total Selenium (Se)	2023/10/30			105	80 - 120	<0.10	ug/L		
B174872	Total Silver (Ag)	2023/10/30			100	80 - 120	<0.020	ug/L		
B174872	Total Strontium (Sr)	2023/10/30			99	80 - 120	<1.0	ug/L		
B174872	Total Uranium (U)	2023/10/30			103	80 - 120	<0.10	ug/L		
B174872	Total Vanadium (V)	2023/10/30			100	80 - 120	<5.0	ug/L		
B174872	Total Zinc (Zn)	2023/10/30			105	80 - 120	<5.0	ug/L		
B175324	Turbidity	2023/10/28			102	80 - 120	<0.10	NTU	1.9	20
B176328	Total Dissolved Solids	2023/10/31	104	80 - 120	96	80 - 120	<10	mg/L	6.8	20

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C387665
Report Date: 2023/11/02

VILLAGE OF PEMBERTON

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B176431	Chloride (Cl)	2023/10/30	103	80 - 120	101	80 - 120	<1.0	mg/L	NC	20
B176431	Sulphate (SO4)	2023/10/30	94	80 - 120	103	80 - 120	<1.0	mg/L	1.4	20
B181725	Total Mercury (Hg)	2023/11/02	104	80 - 120	98	80 - 120	<0.0019	ug/L	NC	20
B181737	Total Mercury (Hg)	2023/11/02	98	80 - 120	101	80 - 120	<0.0019	ug/L	NC	20
B182230	Dissolved Fluoride (F)	2023/11/02	106	80 - 120	104	80 - 120	<0.050	mg/L	3.8	20

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.

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).

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Bureau Veritas
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.bvna.com

Page of

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#99020 VILLAGE OF PEMBERTON	Company Name	Village of Pemberton	Quotation #	C21923	Bureau Veritas Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Reece Clark	P.O. #			709138
Address	Box 100 7400 Prospect St Pemberton BC V0N 2L0	Address	7400 prospect st Pemberton BC V0N 2L0	Project #		Chain Of Custody Record	Project Manager
Phone	(604) 894-6811 Fax: (604) 894-6855	Phone	(604) 353-5845 Fax:	Project Name		C#709138-01-01	Customer Solutions
Email	accountspayable@pemberton.ca	Email	rclark@pemberton.ca	Site #			
				Sampled By			

Regulatory Criteria:
- [ ] CSR
- [ ] CCME
- [x] BC Water Quality
- [ ] Other

Special Instructions: Please plot Against AO & MAC

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
1 DAY [ ] 2 Day [ ] 3 Day [ ] Date Required: [ ]
Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Drinking Water Package w/o Microbiology	# of Bottles	Comments
1		Well #2	23/10/26	8:30AM			✓		
2		Well #3	23/10/24	9:45AM			✓		
3		RIDGE	23/10/24	9:00AM			✓		
4		FARM Rd	23/10/26	9:15AM			✓		
5									
6									
7									
8									
9									
10									

C387665_COC

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
R. Clark Reece Clark	23/10/26	9:30 AM	MARTA ZAMORA	2023/10/27	11:45		[ ]	6, 5, 6	[ ] Yes [X] No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

ICE Frozen.

Your C.O.C. #: 711681-01-01

Attention: Reece Clark

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

Report Date: 2023/11/28
Report #: R3433205
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C395665
Received: 2023/11/23, 12:20

Sample Matrix: Drinking Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	4	N/A	2023/11/24	BBY6SOP-00026	SM 24 2320 B m
Chloride/Sulphate by Auto Colourimetry	4	N/A	2023/11/24	BBY6SOP-00011 / BBY6SOP-00017	SM24-4500-Cl/SO4-E m
Color (True) by Automated Analyzer	4	N/A	2023/11/23	BBY6SOP-00057	SM 24 2120 C m
Conductivity @25C	4	N/A	2023/11/24	BBY6SOP-00026	SM 24 2510 B m
Fluoride	4	N/A	2023/11/24	BBY6SOP-00048	SM 24 4500-F C m
Hardness Total (calculated as CaCO3) (1)	4	N/A	2023/11/28	BBY WI-00033	Auto Calc
Mercury (Total) by CV	4	2023/11/27	2023/11/27	AB SOP-00084	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	4	N/A	2023/11/28	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total)	4	N/A	2023/11/26	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Nitrate + Nitrite (N)	4	N/A	2023/11/23	BBY6SOP-00010	SM 24 4500-NO3- H m
Nitrite (N) Regular Level Water	4	N/A	2023/11/23	BBY6SOP-00010	SM 24 4500-NO2- m
Nitrogen - Nitrate (as N)	4	N/A	2023/11/23	BBY WI-00033	Auto Calc
pH @25°C (2)	4	N/A	2023/11/24	BBY6SOP-00026	SM 24 4500-H+ B m
Total Dissolved Solids (Filt. Residue)	4	2023/11/23	2023/11/24	BBY6SOP-00033	SM 24 2540 C m
Turbidity	4	N/A	2023/11/23	BBY6SOP-00027	SM 24 2130 B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas 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 Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your C.O.C. #: 711681-01-01

Attention: Reece Clark

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

Report Date: 2023/11/28
Report #: R3433205
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C395665
Received: 2023/11/23, 12:20

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. When sampling is not conducted by Bureau Veritas, results relate to the supplied 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) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(2) The CCME method requires 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 CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
28 Nov 2023 12:45:13

Please direct all questions regarding this Certificate of Analysis to:
Customer Solutions, Western Canada Customer Experience Team
Email: customersolutionswest@bureauveritas.com
Phone# (604) 734 7276

==========

This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Raphael Kwan, Senior Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C395665
Report Date: 2023/11/28

VILLAGE OF PEMBERTON

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					CFE469	CFE470	CFE471		
Sampling Date					2023/11/22 08:00	2023/11/22 08:15	2023/11/22 08:30		
COC Number					711681-01-01	711681-01-01	711681-01-01		
	UNITS	MAC	AO	OG	WELL #2	WELL #3	RIDGE	RDL	QC Batch
ANIONS									
Nitrite (N)	mg/L	1	-	-	<0.0050	<0.0050	<0.0050	0.0050	B210711
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	77.7	38.8	39.9	0.50	B209777
Nitrate (N)	mg/L	10	-	-	0.083	0.118	0.112	0.020	B210079
Misc. Inorganics									
Conductivity	uS/cm	-	-	-	270	130	220	2.0	B210800
pH	pH	-	-	7.0:10.5	7.17	**6.25**	**6.84**	N/A	B210798
Total Dissolved Solids	mg/L	-	500	-	180	94	110	10	B209873
Anions									
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	<1.0	<1.0	1.0	B210799
Alkalinity (Total as CaCO3)	mg/L	-	-	-	37	22	63	1.0	B210799
Bicarbonate (HCO3)	mg/L	-	-	-	45	26	77	1.0	B210799
Carbonate (CO3)	mg/L	-	-	-	<1.0	<1.0	<1.0	1.0	B210799
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	<0.050	<0.050	0.050	B211578
Hydroxide (OH)	mg/L	-	-	-	<1.0	<1.0	<1.0	1.0	B210799
Chloride (Cl)	mg/L	-	250	-	41	14	16	1.0	B211453
Sulphate (SO4)	mg/L	-	500	-	20	11	12	1.0	B211453
MISCELLANEOUS									
True Colour	Col. Unit	-	15	-	<2.0	<2.0	<2.0	2.0	B210756
Nutrients									
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.083	0.118	0.112	0.020	B210705
Physical Properties									
Turbidity	NTU	see remark	see remark	see remark	0.46	0.21	0.73	0.10	B210803

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C395665
Report Date: 2023/11/28

VILLAGE OF PEMBERTON

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					CFE472		
Sampling Date					2023/11/22 08:45		
COC Number					711681-01-01		
	UNITS	MAC	AO	OG	FARM RD	RDL	QC Batch
ANIONS							
Nitrite (N)	mg/L	1	-	-	<0.0050	0.0050	B210711
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	-	-	-	40.2	0.50	B209777
Nitrate (N)	mg/L	10	-	-	0.118	0.020	B210079
Misc. Inorganics							
Conductivity	uS/cm	-	-	-	220	2.0	B210800
pH	pH	-	-	7.0:10.5	**6.91**	N/A	B210798
Total Dissolved Solids	mg/L	-	500	-	120	10	B209873
Anions							
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	1.0	B210799
Alkalinity (Total as CaCO3)	mg/L	-	-	-	65	1.0	B210799
Bicarbonate (HCO3)	mg/L	-	-	-	80	1.0	B210799
Carbonate (CO3)	mg/L	-	-	-	<1.0	1.0	B210799
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	0.050	B211578
Hydroxide (OH)	mg/L	-	-	-	<1.0	1.0	B210799
Chloride (Cl)	mg/L	-	250	-	16	1.0	B211453
Sulphate (SO4)	mg/L	-	500	-	12	1.0	B211453
MISCELLANEOUS							
True Colour	Col. Unit	-	15	-	**32.3**	2.0	B210756
Nutrients							
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.118	0.020	B210705
Physical Properties							
Turbidity	NTU	see remark	see remark	see remark	0.26	0.10	B210803

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C395665
Report Date: 2023/11/28

VILLAGE OF PEMBERTON

MERCURY BY COLD VAPOR (DRINKING WATER)

Bureau Veritas ID			CFE469	CFE470	CFE471	CFE472		
Sampling Date			2023/11/22 08:00	2023/11/22 08:15	2023/11/22 08:30	2023/11/22 08:45		
COC Number			711681-01-01	711681-01-01	711681-01-01	711681-01-01		
	UNITS	MAC	WELL #2	WELL #3	RIDGE	FARM RD	RDL	QC Batch
Elements								
Total Mercury (Hg)	ug/L	1	<0.0019	<0.0019	<0.0019	<0.0019	0.0019	B214390

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C395665
Report Date: 2023/11/28

VILLAGE OF PEMBERTON

ELEMENTS BY ATOMIC SPECTROSCOPY (DRINKING WATER)

Bureau Veritas ID					CFE469	CFE470	CFE471	CFE472		
Sampling Date					2023/11/22 08:00	2023/11/22 08:15	2023/11/22 08:30	2023/11/22 08:45		
COC Number					711681-01-01	711681-01-01	711681-01-01	711681-01-01		
	UNITS	MAC	AO	OG	WELL #2	WELL #3	RIDGE	FARM RD	RDL	QC Batch
Total Metals by ICPMS										
Total Aluminum (Al)	ug/L	2900	-	100	5.3	8.3	3.5	7.4	3.0	B212593
Total Antimony (Sb)	ug/L	6	-	-	<0.50	<0.50	<0.50	<0.50	0.50	B212593
Total Arsenic (As)	ug/L	10	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B212593
Total Barium (Ba)	ug/L	2000	-	-	46.5	23.4	21.7	21.8	1.0	B212593
Total Boron (B)	ug/L	5000	-	-	132	<50	<50	<50	50	B212593
Total Cadmium (Cd)	ug/L	7	-	-	0.029	0.031	<0.010	0.019	0.010	B212593
Total Chromium (Cr)	ug/L	50	-	-	<1.0	<1.0	4.6	<1.0	1.0	B212593
Total Cobalt (Co)	ug/L	-	-	-	0.24	0.21	<0.20	<0.20	0.20	B212593
Total Copper (Cu)	ug/L	2000	1000	-	2.43	2.33	4.66	7.37	0.20	B212593
Total Iron (Fe)	ug/L	-	300	-	110	26.0	70.9	43.4	5.0	B212593
Total Lead (Pb)	ug/L	5	-	-	0.22	0.89	<0.20	<0.20	0.20	B212593
Total Manganese (Mn)	ug/L	120	20	-	**130**	**67.9**	5.3	12.8	1.0	B212593
Total Molybdenum (Mo)	ug/L	-	-	-	2.6	<1.0	<1.0	<1.0	1.0	B212593
Total Nickel (Ni)	ug/L	-	-	-	<1.0	<1.0	3.8	<1.0	1.0	B212593
Total Selenium (Se)	ug/L	50	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B212593
Total Silver (Ag)	ug/L	-	-	-	<0.020	<0.020	<0.020	<0.020	0.020	B212593
Total Strontium (Sr)	ug/L	7000	-	-	157	73.3	73.9	75.2	1.0	B212593
Total Uranium (U)	ug/L	20	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B212593
Total Vanadium (V)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0	B212593
Total Zinc (Zn)	ug/L	-	5000	-	29.9	<5.0	16.1	<5.0	5.0	B212593
Total Calcium (Ca)	mg/L	-	-	-	28.2	14.1	14.5	14.7	0.050	B210078
Total Magnesium (Mg)	mg/L	-	-	-	1.74	0.846	0.890	0.861	0.050	B210078
Total Potassium (K)	mg/L	-	-	-	2.68	1.27	1.28	1.30	0.050	B210078
Total Sodium (Na)	mg/L	-	200	-	15.4	6.21	28.2	28.1	0.050	B210078
Total Sulphur (S)	mg/L	-	-	-	6.6	4.1	3.7	4.0	3.0	B210078

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C395665
Report Date: 2023/11/28

VILLAGE OF PEMBERTON

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, September 2022.

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.
4. To ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of 1.0 NTU or less.
Measurement of Uncertainty has not been accounted for when stating conformity to the selected criteria, where applicable.

Results relate only to the items tested.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C395665
Report Date: 2023/11/28

QUALITY ASSURANCE REPORT

VILLAGE OF PEMBERTON

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B209873	Total Dissolved Solids	2023/11/24	NC	80 - 120	105	80 - 120	<10	mg/L	12	20
B210705	Nitrate plus Nitrite (N)	2023/11/23	106	80 - 120	110	80 - 120	<0.020	mg/L	5.6	25
B210711	Nitrite (N)	2023/11/23	102	80 - 120	105	80 - 120	<0.0050	mg/L	12	20
B210756	True Colour	2023/11/23			109	80 - 120	<2.0	Col. Unit	NC	20
B210798	pH	2023/11/24			100	97 - 103			0.80	N/A
B210799	Alkalinity (PP as CaCO3)	2023/11/24					<1.0	mg/L	NC	20
B210799	Alkalinity (Total as CaCO3)	2023/11/24			95	80 - 120	<1.0	mg/L	4.2	20
B210799	Bicarbonate (HCO3)	2023/11/24					<1.0	mg/L	4.2	20
B210799	Carbonate (CO3)	2023/11/24					<1.0	mg/L	NC	20
B210799	Hydroxide (OH)	2023/11/24					<1.0	mg/L	NC	20
B210800	Conductivity	2023/11/24			103	90 - 110	<2.0	uS/cm	0.31	10
B210803	Turbidity	2023/11/23			102	80 - 120	<0.10	NTU	1.7	20
B211453	Chloride (Cl)	2023/11/24	101	80 - 120	101	80 - 120	<1.0	mg/L	NC	20
B211453	Sulphate (SO4)	2023/11/24	94	80 - 120	98	80 - 120	<1.0	mg/L		
B211578	Dissolved Fluoride (F)	2023/11/24	107	80 - 120	104	80 - 120	<0.050	mg/L	NC	20
B212593	Total Aluminum (Al)	2023/11/26	103	80 - 120	101	80 - 120	<3.0	ug/L	1.0	20
B212593	Total Antimony (Sb)	2023/11/26	103	80 - 120	100	80 - 120	<0.50	ug/L	NC	20
B212593	Total Arsenic (As)	2023/11/26	103	80 - 120	100	80 - 120	<0.10	ug/L	NC	20
B212593	Total Barium (Ba)	2023/11/26	99	80 - 120	99	80 - 120	<1.0	ug/L	1.7	20
B212593	Total Boron (B)	2023/11/26	97	80 - 120	95	80 - 120	<50	ug/L	NC	20
B212593	Total Cadmium (Cd)	2023/11/26	102	80 - 120	100	80 - 120	<0.010	ug/L	6.1	20
B212593	Total Chromium (Cr)	2023/11/26	99	80 - 120	97	80 - 120	<1.0	ug/L	NC	20
B212593	Total Cobalt (Co)	2023/11/26	98	80 - 120	96	80 - 120	<0.20	ug/L	NC	20
B212593	Total Copper (Cu)	2023/11/26	96	80 - 120	95	80 - 120	<0.20	ug/L	0.17	20
B212593	Total Iron (Fe)	2023/11/26	105	80 - 120	103	80 - 120	<5.0	ug/L	6.4	20
B212593	Total Lead (Pb)	2023/11/26	98	80 - 120	98	80 - 120	<0.20	ug/L	NC	20
B212593	Total Manganese (Mn)	2023/11/26	106	80 - 120	96	80 - 120	<1.0	ug/L	5.3	20
B212593	Total Molybdenum (Mo)	2023/11/26	103	80 - 120	99	80 - 120	<1.0	ug/L	NC	20
B212593	Total Nickel (Ni)	2023/11/26	99	80 - 120	96	80 - 120	<1.0	ug/L	NC	20
B212593	Total Selenium (Se)	2023/11/26	105	80 - 120	101	80 - 120	<0.10	ug/L	NC	20
B212593	Total Silver (Ag)	2023/11/26	101	80 - 120	99	80 - 120	<0.020	ug/L	NC	20
B212593	Total Strontium (Sr)	2023/11/26	NC	80 - 120	99	80 - 120	<1.0	ug/L	0.67	20
B212593	Total Uranium (U)	2023/11/26	102	80 - 120	100	80 - 120	<0.10	ug/L	NC	20
B212593	Total Vanadium (V)	2023/11/26	101	80 - 120	97	80 - 120	<5.0	ug/L	NC	20

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Bureau Veritas Job #: C395665
Report Date: 2023/11/28

VILLAGE OF PEMBERTON

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B212593	Total Zinc (Zn)	2023/11/26	101	80 - 120	97	80 - 120	<5.0	ug/L	NC	20
B214390	Total Mercury (Hg)	2023/11/27	110	80 - 120	101	80 - 120	<0.0019	ug/L	NC	20

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.

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).

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Bureau Veritas
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.bvna.com

C395665_COC

Page of

INVOICE TO:		Report Information		Project Information	
Company Name	#99020 VILLAGE OF PEMBERTON	Company Name		Quotation #	C21923
Contact Name	Accounts Payable	Contact Name	Reece Clark	P.O. #	
Address	Box 100 7400 Prospect St Pemberton BC V0N 2L0	Address		Project #	
Phone	(604) 894-6811 Fax: (604) 894-6855	Phone	(604) 353-5845 Fax:	Project Name	
Email	accountspayable@pemberton.ca	Email	rclark@pemberton.ca	Site #	
				Sampled By	

For Lab Use Only
Bottle Order #: 711681
Chain Of Custody Record: C#711681-01-01
Project Manager: Customer Solutions

Regulatory Criteria:
- [ ] CSR
- [ ] CCME
- [x] BC Water Quality
- [ ] Other: _____

Special Instructions: Please plot Against AO & MAC

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
1 DAY [ ] 2 Day [ ] 3 Day [ ] Date Required: _____
Rush Confirmation Number: _____ (call lab for #)

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Drinking Water Package w/o Microbiology	# of Bottles	Comments
1		Well #2	23/11/22	8:00AM			✓		
2		Well #3	23/11/22	8:15 AM			✓		
3		RIDGE	23/11/22	8:30 AM			✓		
4		FARM Rd	23/11/22	8:45AM			✓		
5									
6									
7									
8									
9									
10									

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
RClark Reece Clark	23/11/22	9:15 AM	[illegible] MARTA ZAMORA	2023/11/23	12:20		[ ]	7.7.7	[ ] Yes [x] No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

ICE FROZEN

Bureau Veritas Canada (2019) Inc.

Your Project #: Drinking Water without Microbi
Your C.O.C. #: 713295-04-01

Attention: Reece Clark

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

Report Date: 2023/12/20
Report #: R3443634
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3A2149
Received: 2023/12/15, 08:35

Sample Matrix: Drinking Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	4	N/A	2023/12/15	BBY6SOP-00026	SM 24 2320 B m
Chloride/Sulphate by Auto Colourimetry	4	N/A	2023/12/15	BBY6SOP-00011 / BBY6SOP-00017	SM24-4500-Cl/SO4-E m
Color (True) by Automated Analyzer	4	N/A	2023/12/15	BBY6SOP-00057	SM 24 2120 C m
Conductivity @25C	4	N/A	2023/12/15	BBY6SOP-00026	SM 24 2510 B m
Fluoride	4	N/A	2023/12/15	BBY6SOP-00048	SM 24 4500-F C m
Hardness Total (calculated as CaCO3) (1)	4	N/A	2023/12/18	BBY WI-00033	Auto Calc
Mercury (Total) by CV	4	2023/12/20	2023/12/20	AB SOP-00084	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	4	N/A	2023/12/18	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total)	4	N/A	2023/12/16	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Nitrate + Nitrite (N)	4	N/A	2023/12/15	BBY6SOP-00010	SM 24 4500-NO3- H m
Nitrite (N) Regular Level Water	4	N/A	2023/12/15	BBY6SOP-00010	SM 24 4500-NO2- m
Nitrogen - Nitrate (as N)	4	N/A	2023/12/18	BBY WI-00033	Auto Calc
pH @25°C (2)	4	N/A	2023/12/15	BBY6SOP-00026	SM 24 4500-H+ B m
Total Dissolved Solids (Filt. Residue)	4	2023/12/19	2023/12/20	BBY6SOP-00033	SM 24 2540 C m
Turbidity	4	N/A	2023/12/15	BBY6SOP-00027	SM 24 2130 B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas 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 Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

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Your Project #: Drinking Water without Microbi
Your C.O.C. #: 713295-04-01

Attention: Reece Clark

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

Report Date: 2023/12/20
Report #: R3443634
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3A2149
Received: 2023/12/15, 08:35

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. When sampling is not conducted by Bureau Veritas, results relate to the supplied 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) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(2) The CCME method requires 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 CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
20 Dec 2023 14:35:13

Please direct all questions regarding this Certificate of Analysis to:
Customer Solutions, Western Canada Customer Experience Team
Email: customersolutionswest@bureauveritas.com
Phone# (604) 734 7276

==========

This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Raphael Kwan, Senior Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C3A2149
Report Date: 2023/12/20

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					CGP705	CGP706	CGP707		
Sampling Date					2023/12/14 08:00	2023/12/14 08:15	2023/12/14 08:30		
COC Number					713295-04-01	713295-04-01	713295-04-01		
	UNITS	MAC	AO	OG	WELL #2	WELL #3	RIDGE	RDL	QC Batch
ANIONS									
Nitrite (N)	mg/L	1	-	-	<0.0050	<0.0050	<0.0050	0.0050	B234822
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	76.0	36.3	37.0	0.50	B234590
Nitrate (N)	mg/L	10	-	-	0.173	0.144	0.141	0.020	B234592
Misc. Inorganics									
Conductivity	uS/cm	-	-	-	280	120	200	2.0	B234729
pH	pH	-	-	7.0:10.5	**6.40**	**6.23**	**6.91**	N/A	B234720
Total Dissolved Solids	mg/L	-	500	-	180	84	110	10	B237799
Anions									
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	<1.0	<1.0	1.0	B234728
Alkalinity (Total as CaCO3)	mg/L	-	-	-	36	21	57	1.0	B234728
Bicarbonate (HCO3)	mg/L	-	-	-	43	25	69	1.0	B234728
Carbonate (CO3)	mg/L	-	-	-	<1.0	<1.0	<1.0	1.0	B234728
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	<0.050	<0.050	0.050	B234765
Hydroxide (OH)	mg/L	-	-	-	<1.0	<1.0	<1.0	1.0	B234728
Chloride (Cl)	mg/L	-	250	-	40	12	14	1.0	B234772
Sulphate (SO4)	mg/L	-	500	-	21	10	11	1.0	B234772
MISCELLANEOUS									
True Colour	Col. Unit	-	15	-	<2.0	<2.0	<2.0	2.0	B234535
Nutrients									
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.173	0.144	0.141	0.020	B234814
Physical Properties									
Turbidity	NTU	see remark	see remark	see remark	1.4	0.56	0.34	0.10	B234716

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

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Bureau Veritas Job #: C3A2149
Report Date: 2023/12/20

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Bureau Veritas ID					CGP708		
Sampling Date					2023/12/14 08:45		
COC Number					713295-04-01		
	UNITS	MAC	AO	OG	FARM RD	RDL	QC Batch
ANIONS							
Nitrite (N)	mg/L	1	-	-	<0.0050	0.0050	B234822
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	-	-	-	37.0	0.50	B234590
Nitrate (N)	mg/L	10	-	-	0.141	0.020	B234592
Misc. Inorganics							
Conductivity	uS/cm	-	-	-	200	2.0	B234729
pH	pH	-	-	7.0:10.5	**6.85**	N/A	B234720
Total Dissolved Solids	mg/L	-	500	-	120	10	B237799
Anions							
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	1.0	B234728
Alkalinity (Total as CaCO3)	mg/L	-	-	-	58	1.0	B234728
Bicarbonate (HCO3)	mg/L	-	-	-	71	1.0	B234728
Carbonate (CO3)	mg/L	-	-	-	<1.0	1.0	B234728
Dissolved Fluoride (F)	mg/L	1.5	-	-	<0.050	0.050	B234765
Hydroxide (OH)	mg/L	-	-	-	<1.0	1.0	B234728
Chloride (Cl)	mg/L	-	250	-	14	1.0	B234772
Sulphate (SO4)	mg/L	-	500	-	11	1.0	B234772
MISCELLANEOUS							
True Colour	Col. Unit	-	15	-	<2.0	2.0	B234535
Nutrients							
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.141	0.020	B234814
Physical Properties							
Turbidity	NTU	see remark	see remark	see remark	0.96	0.10	B234716

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
N/A = Not Applicable

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Report Date: 2023/12/20

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

MERCURY BY COLD VAPOR (DRINKING WATER)

Bureau Veritas ID			CGP705	CGP706	CGP707	CGP708		
Sampling Date			2023/12/14 08:00	2023/12/14 08:15	2023/12/14 08:30	2023/12/14 08:45		
COC Number			713295-04-01	713295-04-01	713295-04-01	713295-04-01		
	UNITS	MAC	WELL #2	WELL #3	RIDGE	FARM RD	RDL	QC Batch
Elements								
Total Mercury (Hg)	ug/L	1	0.0166	0.0162	0.0186	0.0130	0.0019	B239139

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

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Bureau Veritas Job #: C3A2149
Report Date: 2023/12/20

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

ELEMENTS BY ATOMIC SPECTROSCOPY (DRINKING WATER)

Bureau Veritas ID					CGP705	CGP706	CGP707	CGP708		
Sampling Date					2023/12/14 08:00	2023/12/14 08:15	2023/12/14 08:30	2023/12/14 08:45		
COC Number					713295-04-01	713295-04-01	713295-04-01	713295-04-01		
	UNITS	MAC	AO	OG	WELL #2	WELL #3	RIDGE	FARM RD	RDL	QC Batch
Total Metals by ICPMS										
Total Aluminum (Al)	ug/L	2900	-	100	5.0	11.6	4.1	4.9	3.0	B234815
Total Antimony (Sb)	ug/L	6	-	-	<0.50	<0.50	<0.50	<0.50	0.50	B234815
Total Arsenic (As)	ug/L	10	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B234815
Total Barium (Ba)	ug/L	2000	-	-	48.7	22.9	21.9	22.3	1.0	B234815
Total Boron (B)	ug/L	5000	-	-	151	<50	<50	<50	50	B234815
Total Cadmium (Cd)	ug/L	7	-	-	0.021	0.028	<0.010	<0.010	0.010	B234815
Total Chromium (Cr)	ug/L	50	-	-	<1.0	<1.0	<1.0	<1.0	1.0	B234815
Total Cobalt (Co)	ug/L	-	-	-	0.23	0.21	<0.20	<0.20	0.20	B234815
Total Copper (Cu)	ug/L	2000	1000	-	1.05	1.95	4.39	7.41	0.20	B234815
Total Iron (Fe)	ug/L	-	300	-	166	27.8	29.7	35.1	5.0	B234815
Total Lead (Pb)	ug/L	5	-	-	<0.20	0.75	<0.20	<0.20	0.20	B234815
Total Manganese (Mn)	ug/L	120	20	-	**123**	**65.1**	6.5	7.4	1.0	B234815
Total Molybdenum (Mo)	ug/L	-	-	-	2.9	<1.0	<1.0	<1.0	1.0	B234815
Total Nickel (Ni)	ug/L	-	-	-	<1.0	<1.0	<1.0	<1.0	1.0	B234815
Total Selenium (Se)	ug/L	50	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B234815
Total Silver (Ag)	ug/L	-	-	-	<0.020	<0.020	<0.020	<0.020	0.020	B234815
Total Strontium (Sr)	ug/L	7000	-	-	169	68.8	74.5	72.1	1.0	B234815
Total Uranium (U)	ug/L	20	-	-	<0.10	<0.10	<0.10	<0.10	0.10	B234815
Total Vanadium (V)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0	B234815
Total Zinc (Zn)	ug/L	-	5000	-	18.1	<5.0	8.4	<5.0	5.0	B234815
Total Calcium (Ca)	mg/L	-	-	-	27.4	13.0	13.3	13.3	0.050	B234591
Total Magnesium (Mg)	mg/L	-	-	-	1.85	0.902	0.941	0.914	0.050	B234591
Total Potassium (K)	mg/L	-	-	-	2.72	1.22	1.24	1.26	0.050	B234591
Total Sodium (Na)	mg/L	-	200	-	15.7	5.69	24.5	24.0	0.050	B234591
Total Sulphur (S)	mg/L	-	-	-	7.1	3.7	3.9	3.8	3.0	B234591

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C3A2149
Report Date: 2023/12/20

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

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, September 2022.

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.
4. To ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of 1.0 NTU or less.
Measurement of Uncertainty has not been accounted for when stating conformity to the selected criteria, where applicable.

Results relate only to the items tested.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Bureau Veritas Job #: C3A2149
Report Date: 2023/12/20

QUALITY ASSURANCE REPORT

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B234535	True Colour	2023/12/15			97	80 - 120	<2.0	Col. Unit	6.7	20
B234716	Turbidity	2023/12/15			101	80 - 120	<0.10	NTU	0.89	20
B234720	pH	2023/12/15			100	97 - 103			0.39	N/A
B234728	Alkalinity (PP as CaCO3)	2023/12/15					<1.0	mg/L	NC	20
B234728	Alkalinity (Total as CaCO3)	2023/12/15			101	80 - 120	<1.0	mg/L	2.6	20
B234728	Bicarbonate (HCO3)	2023/12/15					<1.0	mg/L	2.6	20
B234728	Carbonate (CO3)	2023/12/15					<1.0	mg/L	NC	20
B234728	Hydroxide (OH)	2023/12/15					<1.0	mg/L	NC	20
B234729	Conductivity	2023/12/15			102	90 - 110	<2.0	uS/cm	0.60	10
B234765	Dissolved Fluoride (F)	2023/12/15	90	80 - 120	101	80 - 120	<0.050	mg/L	NC	20
B234772	Chloride (Cl)	2023/12/15	95	80 - 120	104	80 - 120	<1.0	mg/L	3.7	20
B234772	Sulphate (SO4)	2023/12/15	102	80 - 120	105	80 - 120	<1.0	mg/L	3.0	20
B234814	Nitrate plus Nitrite (N)	2023/12/15	116	80 - 120	109	80 - 120	<0.020	mg/L	NC	25
B234815	Total Aluminum (Al)	2023/12/16	105	80 - 120	102	80 - 120	<3.0	ug/L	0.071	20
B234815	Total Antimony (Sb)	2023/12/16	102	80 - 120	101	80 - 120	<0.50	ug/L	NC	20
B234815	Total Arsenic (As)	2023/12/16	110	80 - 120	106	80 - 120	<0.10	ug/L	0.62	20
B234815	Total Barium (Ba)	2023/12/16	101	80 - 120	101	80 - 120	<1.0	ug/L	NC	20
B234815	Total Boron (B)	2023/12/16	102	80 - 120	99	80 - 120	<50	ug/L	1.9	20
B234815	Total Cadmium (Cd)	2023/12/16	98	80 - 120	99	80 - 120	<0.010	ug/L	NC	20
B234815	Total Chromium (Cr)	2023/12/16	93	80 - 120	94	80 - 120	<1.0	ug/L	NC	20
B234815	Total Cobalt (Co)	2023/12/16	100	80 - 120	100	80 - 120	<0.20	ug/L	NC	20
B234815	Total Copper (Cu)	2023/12/16	93	80 - 120	96	80 - 120	<0.20	ug/L	7.3	20
B234815	Total Iron (Fe)	2023/12/16	104	80 - 120	99	80 - 120	<5.0	ug/L	4.6	20
B234815	Total Lead (Pb)	2023/12/16	100	80 - 120	100	80 - 120	<0.20	ug/L	NC	20
B234815	Total Manganese (Mn)	2023/12/16	94	80 - 120	94	80 - 120	<1.0	ug/L	5.2	20
B234815	Total Molybdenum (Mo)	2023/12/16	104	80 - 120	100	80 - 120	<1.0	ug/L	3.6	20
B234815	Total Nickel (Ni)	2023/12/16	95	80 - 120	98	80 - 120	<1.0	ug/L	NC	20
B234815	Total Selenium (Se)	2023/12/16	102	80 - 120	101	80 - 120	<0.10	ug/L	NC	20
B234815	Total Silver (Ag)	2023/12/16	98	80 - 120	99	80 - 120	<0.020	ug/L	NC	20
B234815	Total Strontium (Sr)	2023/12/16	106	80 - 120	96	80 - 120	<1.0	ug/L	0.27	20
B234815	Total Uranium (U)	2023/12/16	104	80 - 120	102	80 - 120	<0.10	ug/L	NC	20
B234815	Total Vanadium (V)	2023/12/16	98	80 - 120	96	80 - 120	<5.0	ug/L	NC	20
B234815	Total Zinc (Zn)	2023/12/16	96	80 - 120	103	80 - 120	<5.0	ug/L	NC	20

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Bureau Veritas Job #: C3A2149
Report Date: 2023/12/20

QUALITY ASSURANCE REPORT(CONT'D)

VILLAGE OF PEMBERTON
Client Project #: Drinking Water without Microbi

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
B234822	Nitrite (N)	2023/12/15	109	80 - 120	107	80 - 120	<0.0050	mg/L	NC	20
B237799	Total Dissolved Solids	2023/12/20	101	80 - 120	99	80 - 120	<10	mg/L	0	20
B239139	Total Mercury (Hg)	2023/12/20	90	80 - 120	94	80 - 120	<0.0019	ug/L	5.8	20

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.

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).

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Bureau Veritas
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.bvna.com

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C3A2149_COC

Bottle Order #: 713295

Chain Of Custody Record: C#713295-04-01

Project Manager: Customer Solutions

INVOICE TO:		Report Information		Project Information	
Company Name	#99020 VILLAGE OF PEMBERTON	Company Name		Quotation #	C21923
Contact Name	Accounts Payable	Contact Name		P.O. #	
Address	Box 100 7400 Prospect St Pemberton BC V0N 2L0	Address		Project #	Drinking Water without Microbi
Phone	(604) 894-6811 Fax: (604) 894-6855	Phone	Fax:	Project Name	
Email	accountspayable@pemberton.ca	Email	RClark@pemberton.ca	Site #	
				Sampled By	

Regulatory Criteria:
- [ ] CSR
- [ ] CCME
- [x] BC Water Quality
- [ ] Other

Special Instructions: Please plot against AO & MAC

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
1 DAY [ ] 2 Day [ ] 3 Day [ ] Date Required: _____
Rush Confirmation Number: _____ (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Drinking Water Package w/o Microbiology	# of Bottles	Comments
1		Well #2	23/12/14	8:00am			✓		
2		Well #3	23/12/14	8:15m			✓		
3		RIDGE	23/12/14	8:30AM			✓		
4		FARM Rd	23/12/14	8:45AM			✓		
5									
6									
7									
8									
9									
10									

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
R Clark Reece Clark	23/12/14	9:00AM	DAMYAN GILL	2023/12/15	08:35		[ ]	6/9/14	[ ] Yes [x] No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

ICE: YES

Bureau Veritas Canada (2019) Inc.

Appendix III

2023 Weekly Water Quality Sampling Results

Source	Chlorine Residual	pH	Temperature (C)	Sum of Alkalinity
3-Jan-23				
Pemberton				
Health Centre	0.34	7.13	8.30	63
Oak St	0.35	7.16	9.40	65
Plateau/Ridge	0.51	7.14	8.60	66
Village Office	0.25	7.14	8.80	66
WWTP	0.16	7.13	10.70	67
PNWS - Meadows Rd *				
PNWS - Farm Rd *				
Pemberton Total	**0.32**	**7.14**	**9.16**	**327**
Industrial Park **	0.10	7.12	8.40	18
9-Jan-23				
Pemberton				
Health Centre	0.28	7.06	10.10	69
Oak St	0.28	7.14	8.50	64
Plateau/Ridge	0.41	7.06	7.60	64
Village Office	0.25	7.07	7.40	66
WWTP	0.28	7.07	7.70	65
PNWS - Meadows Rd *				
PNWS - Farm Rd *				
Pemberton Total	**0.30**	**7.08**	**8.26**	**328**
Industrial Park **	0.17	7.03	6.30	21
16-Jan-23				
Pemberton				
Health Centre	0.34	7.21	10.30	62
Oak St	0.31	7.17	9.00	72
Plateau/Ridge	0.56	7.20	7.40	57
Village Office	0.28	7.20	8.00	72
WWTP	0.16	7.21	7.50	69
PNWS - Meadows Rd *				
PNWS - Farm Rd *	0.26	7.14	8.70	58
Pemberton Total	**0.32**	**7.19**	**8.48**	**390**
Industrial Park **	0.19	7.13	6.60	18
23-Jan-23				
Pemberton				
Health Centre	0.28	7.20	8.00	67
Oak St	0.28	7.17	8.20	61
Plateau/Ridge	0.45	7.18	8.20	67
Village Office	0.28	7.23	7.90	60
WWTP	0.26	7.23	7.30	70

* Pemberton North Water Service is a continuation of the Pemberton Water distribution system within Squamish Lilloeet Regional District Area C

** Pemberton Industrial Park is supplied by Lil'wat Nation through a water use agreement

Source	Chlorine Residual	pH	Temperature (C)	Sum of Alkalinity
PNWS - Meadows Rd *				
PNWS - Farm Rd *	0.19	7.13	7.60	64
Pemberton Total	**0.29**	**7.19**	**7.87**	**389**
Industrial Park **	0.18	7.23	6.30	23
30-Jan-23				
Pemberton				
Health Centre	0.25	7.11	8.60	63
Oak St	0.29	7.00	7.50	67
Plateau/Ridge	0.28	7.14	7.10	57
Village Office	0.32	7.13	5.70	65
WWTP	0.24	7.16	6.40	76
PNWS - Meadows Rd *				
PNWS - Farm Rd *				
Pemberton Total	**0.28**	**7.11**	**7.06**	**328**
Industrial Park **	0.30	7.10	4.20	20
6-Feb-23				
Pemberton				
Health Centre	0.33	7.09	8.20	60
Oak St	0.37	7.00	9.80	60
Plateau/Ridge	0.24	7.07	9.20	62
Village Office	0.28	7.09	7.90	52
WWTP	0.26	7.08	7.60	66
PNWS - Meadows Rd *				
PNWS - Farm Rd *	0.35	7.08	8.20	62
Pemberton Total	**0.31**	**7.07**	**8.48**	**362**
Industrial Park **	0.10	7.07	7.60	17
14-Feb-23				
Pemberton				
Health Centre	0.37	7.14	11.80	48
Oak St	0.37	7.16	9.80	63
Plateau/Ridge	0.31	7.14	9.00	59
Village Office	0.31	7.19	8.30	51
WWTP	0.25	7.16	9.00	67
PNWS - Meadows Rd *	0.31	7.14	7.30	59
PNWS - Farm Rd *	0.29	7.19	8.80	63
Pemberton Total	**0.32**	**7.16**	**9.14**	**410**
Industrial Park **	0.18	7.07	6.90	21
22-Feb-23				
Pemberton				
Health Centre	0.37	7.08	8.50	73
Oak St	0.45	7.04	7.60	74
Plateau/Ridge	0.21	7.09	7.30	72

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Source	Chlorine Residual	pH	Temperature (C)	Sum of Alkalinity
Village Office	0.40	7.11	6.40	73
WWTP	0.15	7.11	6.80	63
PNWS - Meadows Rd *				
PNWS - Farm Rd *				
Pemberton Total	**0.32**	**7.09**	**7.32**	**355**
Industrial Park **	0.23	7.12	6.20	24
27-Feb-23				
Pemberton				
Health Centre	0.37	7.08	8.50	73
Oak St	0.45	7.04	7.60	74
Plateau/Ridge	0.21	7.09	7.30	72
Village Office	0.40	7.11	6.40	73
WWTP	0.15	7.11	6.80	63
PNWS - Meadows Rd *				
PNWS - Farm Rd *				
Pemberton Total	**0.32**	**7.09**	**7.32**	**355**
Industrial Park **	0.23	7.12	6.20	24
6-Mar-23				
Pemberton				
Health Centre	0.46	7.07	8.80	60
Oak St	0.48	7.00	10.10	67
Plateau/Ridge	0.42	7.05	9.40	52
Village Office	0.45	7.07	8.00	66
WWTP	0.30	7.09	7.90	70
PNWS - Meadows Rd *				
PNWS - Farm Rd *	0.44	7.02	9.10	63
Pemberton Total	**0.43**	**7.05**	**8.88**	**378**
Industrial Park **	0.21	7.09	7.50	22
13-Mar-23				
Pemberton				
Health Centre	0.37	7.16	11.70	59
Oak St	0.33	7.16	12.40	69
Plateau/Ridge	0.44	7.18	9.50	60
Village Office	0.40	7.16	8.80	70
WWTP	0.32	7.18	8.20	65
PNWS - Meadows Rd *	0.41	7.16	8.10	69
PNWS - Farm Rd *	0.42	7.16	8.40	67
Pemberton Total	**0.38**	**7.17**	**9.59**	**459**
Industrial Park **	0.17	7.17	6.70	25
21-Mar-23				
Pemberton				
Health Centre	0.42	7.07	8.50	54

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** Pemberton Industrial Park is supplied by Lil'wat Nation through a water use agreement

Source	Chlorine Residual	pH	Temperature (C)	Sum of Alkalinity
Oak St	0.27	7.05	8.60	56
Plateau/Ridge	0.28	7.04	8.60	59
Village Office	0.29	7.05	7.50	62
WWTP	0.03	7.01	11.60	70
PNWS - Meadows Rd *	0.27	7.03	8.60	60
PNWS - Farm Rd *	0.26	7.04	8.20	70
Pemberton Total	**0.26**	**7.04**	**8.80**	**431**
Industrial Park **	0.21	6.93	8.30	21
27-Mar-23				
Pemberton				
Health Centre	0.30	6.98	13.20	50
Oak St	0.34	7.01	13.20	50
Plateau/Ridge	0.25	7.01	13.10	52
Village Office	0.31	7.03	13.10	58
WWTP	0.12	7.01	13.10	52
PNWS - Meadows Rd *	0.30	7.04	13.20	55
PNWS - Farm Rd *	0.33	7.02	13.00	56
Pemberton Total	**0.28**	**7.01**	**13.13**	**373**
Industrial Park **	0.08	7.00	13.10	22
3-Apr-23				
Pemberton				
Health Centre	0.35	7.04	7.80	61
Oak St	0.36	7.04	7.50	62
Plateau/Ridge	0.34	7.05	7.50	65
Village Office	0.32	7.06	8.00	66
WWTP	0.12	7.03	8.60	68
PNWS - Meadows Rd *	0.32	7.04	7.90	66
PNWS - Farm Rd *	0.28	7.02	8.20	58
Pemberton Total	**0.30**	**7.04**	**7.93**	**446**
Industrial Park **	0.14	7.01	7.60	18
10-Apr-23				
Pemberton				
Health Centre	0.40	7.14	11.40	61
Oak St	0.38	7.18	10.50	67
Plateau/Ridge	0.38	7.13	8.50	60
Village Office	0.37	7.15	9.20	60
WWTP	0.23	7.17	8.90	58
PNWS - Meadows Rd *	0.35	7.13	8.80	60
PNWS - Farm Rd *	0.33	7.13	9.40	67
Pemberton Total	**0.35**	**7.15**	**9.53**	**433**
Industrial Park **	0.16	7.15	7.90	19
17-Apr-23				

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Source	Chlorine Residual	pH	Temperature (C)	Sum of Alkalinity
Pemberton				
Health Centre	0.45	7.17	9.00	60
Oak St	0.32	7.13	8.40	59
Plateau/Ridge	0.36	7.14	8.60	63
Village Office	0.38	7.08	8.10	60
WWTP	0.12	7.13	7.40	65
PNWS - Meadows Rd *	0.37	7.12	8.00	66
PNWS - Farm Rd *	0.35	7.16	7.70	64
Pemberton Total	**0.34**	**7.13**	**8.17**	**437**
Industrial Park **	0.18	7.05	8.90	23
24-Apr-23				
Pemberton				
Health Centre	0.41	7.18	8.00	60
Oak St	0.41	7.00	8.00	62
Plateau/Ridge	0.52	7.00	9.20	66
Village Office	0.34	7.12	8.00	68
WWTP	0.16	7.22	8.70	68
PNWS - Meadows Rd *	0.38	7.15	7.30	61
PNWS - Farm Rd *	0.36	7.17	8.70	63
Pemberton Total	**0.37**	**7.12**	**8.27**	**448**
Industrial Park **	0.14		10.20	18
3-May-23				
Pemberton				
Health Centre	0.50	7.05	9.80	58
Oak St	0.44	6.99	8.70	60
Plateau/Ridge	0.62	6.93	8.40	64
Village Office	0.39	6.98	10.30	60
WWTP	0.30	6.94	9.10	61
PNWS - Meadows Rd *	0.35	6.95	8.10	62
PNWS - Farm Rd *	0.39	6.95	10.00	65
Pemberton Total	**0.43**	**6.97**	**9.20**	**430**
Industrial Park **	0.07	6.87	10.20	21
8-May-23				
Pemberton				
Health Centre	0.49	7.04	12.70	60
Oak St	0.45	7.06	9.90	62
Plateau/Ridge	0.45	7.03	9.80	62
Village Office	0.43	7.05	12.70	59
WWTP	0.29	7.00	13.20	63
PNWS - Meadows Rd *	0.38	7.03	9.40	63
PNWS - Farm Rd *	0.39	7.05	9.50	66
Pemberton Total	**0.41**	**7.04**	**11.03**	**435**

* Pemberton North Water Service is a continuation of the Pemberton Water distribution system within Squamish Lilloeet Regional District Area C

** Pemberton Industrial Park is supplied by Lil'wat Nation through a water use agreement

Source	Chlorine Residual	pH	Temperature (C)	Sum of Alkalinity
Industrial Park **	0.11	7.02	11.60	15
16-May-23				
Pemberton				
Health Centre	0.40	6.95	10.10	60
Oak St	0.44	6.93	9.10	60
Plateau/Ridge	0.42	6.90	10.30	60
Village Office	0.45	6.93	10.90	61
WWTP	0.21	7.00	14.30	58
PNWS - Meadows Rd *	0.38	6.99	10.20	51
PNWS - Farm Rd *	0.46	6.90	10.60	59
Pemberton Total	**0.39**	**6.94**	**10.79**	**409**
Industrial Park **	0.03	6.89	10.20	19
23-May-23				
Pemberton				
Health Centre	0.41	6.82	11.20	46
Oak St	0.45	6.70	6.70	50
Plateau/Ridge	0.47	6.54	10.20	36
Village Office	0.43	6.79	8.90	49
WWTP	0.28	6.86	10.80	60
PNWS - Meadows Rd *	0.47	6.37	8.80	27
PNWS - Farm Rd *	0.42	6.46	7.80	37
Pemberton Total	**0.42**	**6.65**	**9.20**	**305**
Industrial Park **	0.09	6.66	9.70	22
30-May-23				
Pemberton				
Health Centre	0.39	6.96	10.00	64
Oak St	0.48	6.97	9.90	64
Plateau/Ridge	0.67	6.94	8.10	62
Village Office	0.40	6.96	10.10	63
WWTP	0.26	6.87	12.80	53
PNWS - Meadows Rd *	0.43	6.91	9.60	64
PNWS - Farm Rd *	0.47	6.93	8.40	64
Pemberton Total	**0.44**	**6.93**	**9.84**	**434**
Industrial Park **	0.14	6.90	9.60	18
5-Jun-23				
Pemberton				
Health Centre	0.40	6.79	11.50	37
Oak St	0.45	6.56	8.90	46
Plateau/Ridge	0.43	6.59	8.60	50
Village Office	0.39	6.68	10.10	39
WWTP	0.22	6.92	14.40	66
PNWS - Meadows Rd *	0.46	6.53	9.10	47

* Pemberton North Water Service is a continuation of the Pemberton Water distribution system within Squamish Lilloeet Regional District Area C

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Source	Chlorine Residual	pH	Temperature (C)	Sum of Alkalinity
PNWS - Farm Rd *	0.42	6.53	9.90	47
Pemberton Total	**0.40**	**6.66**	**10.36**	**332**
Industrial Park **	0.07	6.77	9.10	17
13-Jun-23				
Pemberton				
Health Centre	0.33	6.77	11.10	61
Oak St	0.45	6.73	9.10	63
Plateau/Ridge	0.37	6.71	8.80	63
Village Office	0.32	6.71	9.90	59
WWTP	0.22	6.79	14.90	62
PNWS - Meadows Rd *	0.40	6.68	9.50	63
PNWS - Farm Rd *	0.45	6.69	10.20	60
Pemberton Total	**0.36**	**6.73**	**10.50**	**431**
Industrial Park **	0.24	6.80	9.30	12
19-Jun-23				
Pemberton				
Health Centre	0.28	6.95	8.30	68
Oak St	0.36	6.86	9.60	63
Plateau/Ridge	0.48	6.88	6.90	64
Village Office	0.29	6.90	9.30	67
WWTP	0.16	6.79	14.00	67
PNWS - Meadows Rd *	0.24	6.82	8.60	69
PNWS - Farm Rd *	0.32	6.84	7.90	72
Pemberton Total	**0.30**	**6.86**	**9.23**	**470**
Industrial Park **	0.26	6.89	7.50	16
27-Jun-23				
Pemberton				
Health Centre	0.34	6.81	12.90	66
Oak St	0.41	6.85	11.90	66
Plateau/Ridge	0.41	6.87	10.50	65
Village Office	0.35	6.84	12.80	65
WWTP	0.20	6.82	15.90	70
PNWS - Meadows Rd *	0.42	6.76	12.70	62
PNWS - Farm Rd *	0.41	6.78	11.90	66
Pemberton Total	**0.36**	**6.82**	**12.66**	**460**
Industrial Park **	0.18	6.89	10.20	17
4-Jul-23				
Pemberton				
Health Centre	0.30	6.80	12.30	51
Oak St	0.32	6.65	10.90	58
Plateau/Ridge	0.46	6.68	12.90	55
Village Office	0.33	6.70	10.50	53

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Source	Chlorine Residual	pH	Temperature (C)	Sum of Alkalinity
WWTP	0.17	6.89	14.10	61
PNWS - Meadows Rd *	0.43	6.60	12.70	54
PNWS - Farm Rd *	0.39	6.52	11.30	58
Pemberton Total	**0.34**	**6.69**	**12.10**	**390**
Industrial Park **	0.09	6.73	13.10	15
11-Jul-23				
Pemberton				
Health Centre	0.30	6.52	11.40	56
Oak St	0.41	6.43	10.80	55
Plateau/Ridge	0.43	6.43	12.30	54
Village Office	0.34	6.48	11.90	55
WWTP	0.21	6.49	15.50	54
PNWS - Meadows Rd *	0.37	6.40	10.60	50
PNWS - Farm Rd *	0.39	6.43	9.30	50
Pemberton Total	**0.35**	**6.45**	**11.69**	**374**
Industrial Park **	0.09	6.56	11.90	12
17-Jul-23				
Pemberton				
Health Centre	0.26	6.84	15.30	50
Oak St	0.32	6.72	11.00	53
Plateau/Ridge	0.34	6.77	11.20	58
Village Office	0.30	6.78	10.90	58
WWTP	0.16	6.86	14.00	56
PNWS - Meadows Rd *	0.33	6.67	13.00	56
PNWS - Farm Rd *	0.37	6.72	13.10	55
Pemberton Total	**0.30**	**6.77**	**12.64**	**386**
Industrial Park **	0.15	6.80	12.60	17
25-Jul-23				
Pemberton				
Health Centre	0.27	6.88	13.50	55
Oak St	0.34	6.82	8.30	60
Plateau/Ridge	0.30	6.79	10.90	64
Village Office	0.32	6.81	12.90	62
WWTP	0.10	6.90	11.90	60
PNWS - Meadows Rd *	0.38	6.74	11.60	61
PNWS - Farm Rd *	0.34	6.76	12.50	58
Pemberton Total	**0.29**	**6.81**	**11.66**	**420**
Industrial Park **	0.17	6.84	12.30	16
1-Aug-23				
Pemberton				
Health Centre	0.26	6.87	12.00	65
Oak St	0.33	6.80	10.60	65

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Source	Chlorine Residual	pH	Temperature (C)	Sum of Alkalinity
Plateau/Ridge	0.30	6.78	12.00	64
Village Office	0.29	6.80	12.20	63
WWTP	0.18	6.92	13.20	63
PNWS - Meadows Rd *	0.28	6.74	13.10	67
PNWS - Farm Rd *	0.33	6.77	12.20	62
Pemberton Total	**0.28**	**6.81**	**12.19**	**449**
Industrial Park **	0.19	6.88	10.70	14
9-Aug-23				
Pemberton				
Health Centre	0.24	6.97	15.00	57
Oak St	0.28	6.85	10.80	60
Plateau/Ridge	0.34	6.84	11.00	60
Village Office	0.26	6.85	10.10	64
WWTP	0.07	6.92	13.80	65
PNWS - Meadows Rd *	0.27	6.79	12.90	64
PNWS - Farm Rd *	0.25	6.82	12.20	62
Pemberton Total	**0.24**	**6.86**	**12.26**	**432**
Industrial Park **	0.10	6.91	13.40	15
16-Aug-23				
Pemberton				
Health Centre	0.23	6.95	15.50	54
Oak St	0.32	6.88	10.20	66
Plateau/Ridge	0.33	6.91	11.50	66
Village Office	0.30	6.83	14.90	63
WWTP	0.31	6.39	12.80	41
PNWS - Meadows Rd *	0.34	6.85	11.50	65
PNWS - Farm Rd *	0.34	6.87	11.60	69
Pemberton Total	**0.31**	**6.81**	**12.57**	**424**
Industrial Park **	0.11	6.94	11.90	16
22-Aug-23				
Pemberton				
Health Centre	0.33	6.99	14.20	64
Oak St	0.39	6.91	8.80	75
Plateau/Ridge	0.41	6.92	12.70	69
Village Office	0.36	6.93	13.70	72
WWTP	0.24	7.01	14.00	73
PNWS - Meadows Rd *	0.36	6.87	11.70	74
PNWS - Farm Rd *	0.40	6.88	12.60	70
Pemberton Total	**0.36**	**6.93**	**12.53**	**497**
Industrial Park **	0.09	6.98	12.10	18
28-Aug-23				
Pemberton				

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Source	Chlorine Residual	pH	Temperature (C)	Sum of Alkalinity
Health Centre	0.27	7.02	14.40	67
Oak St	0.42	6.88	9.30	72
Plateau/Ridge	0.38	6.93	12.60	64
Village Office	0.36	6.85	13.70	68
WWTP	0.24	6.99	12.90	68
PNWS - Meadows Rd *	0.39	6.87	10.80	70
PNWS - Farm Rd *	37.00	6.90	12.40	75
Pemberton Total	**5.58**	**6.92**	**12.30**	**484**
Industrial Park **	0.03	6.87	10.80	14
6-Sep-23				
Pemberton				
Health Centre	0.36	6.84	14.60	61
Oak St	0.46	6.85	9.90	65
Plateau/Ridge	34.00	6.84	12.20	62
Village Office	0.38	6.80	12.70	64
WWTP	0.15	7.03	12.30	70
PNWS - Meadows Rd *	0.35	6.78	11.80	64
PNWS - Farm Rd *	0.33	6.80	13.20	59
Pemberton Total	**5.15**	**6.85**	**12.39**	**445**
Industrial Park **	0.07	6.85	14.00	16
12-Sep-23				
Pemberton				
Health Centre	0.37	6.71	16.00	55
Oak St	0.36	6.76	9.40	65
Plateau/Ridge	0.29	6.79	13.00	47
Village Office	0.26	6.73	12.90	51
WWTP	0.16	6.83	15.60	61
PNWS - Meadows Rd *	0.28	6.73	13.10	55
PNWS - Farm Rd *	0.28	6.72	14.70	54
Pemberton Total	**0.29**	**6.75**	**13.53**	**388**
Industrial Park **	0.10	6.83	17.10	16
19-Sep-23				
Pemberton				
Health Centre	0.22	6.93	15.10	61
Oak St	0.26	6.77	9.80	59
Plateau/Ridge	0.31	6.81	10.30	58
Village Office	0.26	6.74	12.20	66
WWTP	0.06	6.98	13.30	57
PNWS - Meadows Rd *	0.32	6.74	12.10	59
PNWS - Farm Rd *	0.26	6.77	13.00	58
Pemberton Total	**0.24**	**6.82**	**12.26**	**418**
Industrial Park **	0.10	6.85	10.70	12

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Source	Chlorine Residual	pH	Temperature (C)	Sum of Alkalinity
25-Sep-23				
Pemberton				
Health Centre	0.34	6.80	12.90	60
Oak St	0.40	6.79	10.50	56
Plateau/Ridge	0.39	6.81	10.30	64
Village Office	0.23	6.81	10.60	61
WWTP	0.05	6.88	14.30	62
PNWS - Meadows Rd *	0.34	6.75	11.10	64
PNWS - Farm Rd *	0.35	6.75	12.60	60
Pemberton Total	**0.30**	**6.80**	**11.76**	**427**
Industrial Park **	0.10	6.82	13.60	22
4-Oct-23				
Pemberton				
Health Centre	0.22	6.83	14.10	58
Oak St	0.32	6.68	9.90	61
Plateau/Ridge	0.26	6.72	13.40	54
Village Office	0.31	6.74	10.90	52
WWTP	0.16	6.85	12.70	56
PNWS - Meadows Rd *	0.27	6.65	12.30	62
PNWS - Farm Rd *	0.25	6.66	13.90	57
Pemberton Total	**0.26**	**6.73**	**12.46**	**400**
Industrial Park **	0.10	6.77	10.90	18
10-Oct-23				
Pemberton				
Health Centre	0.30	6.81	13.10	50
Oak St	0.35	6.67	9.80	60
Plateau/Ridge	0.24	6.79	13.30	61
Village Office	0.36	6.73	11.20	56
WWTP	0.05	6.83	12.70	55
PNWS - Meadows Rd *	0.32	6.72	12.00	64
PNWS - Farm Rd *	0.35	6.75	12.50	60
Pemberton Total	**0.28**	**6.76**	**12.09**	**406**
Industrial Park **	0.05	6.84	12.50	22
17-Oct-23				
Pemberton				
Health Centre	0.28	6.65	13.70	40
Oak St	0.34	6.51	11.00	50
Plateau/Ridge	0.33	6.38	10.60	29
Village Office	0.38	6.51	11.30	53
WWTP	0.19	6.64	11.50	43
PNWS - Meadows Rd *	0.36	6.25	10.40	33
PNWS - Farm Rd *	0.32	6.27	11.90	30

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Source	Chlorine Residual	pH	Temperature (C)	Sum of Alkalinity
Pemberton Total	**0.31**	**6.46**	**11.49**	**278**
Industrial Park **	0.14	6.75	12.20	16
23-Oct-23				
Pemberton				
Health Centre	0.31	6.90	14.50	63
Oak St	0.36	6.84	9.20	62
Plateau/Ridge	0.22	6.77	9.40	52
Village Office	0.33	6.88	9.40	66
WWTP	0.23	6.45	13.60	33
PNWS - Meadows Rd *	0.29	6.77	10.70	63
PNWS - Farm Rd *	0.23	6.78	12.70	61
Pemberton Total	**0.28**	**6.77**	**11.36**	**400**
Industrial Park **	0.18	6.86	8.80	12
31-Oct-23				
Pemberton				
Health Centre	0.32	6.97	12.90	71
Oak St	0.39	6.91	11.10	63
Plateau/Ridge	0.28	6.89	10.70	70
Village Office	0.36	6.88	9.20	69
WWTP	0.14	6.86	13.10	63
PNWS - Meadows Rd *				
PNWS - Farm Rd *	0.31	6.86	12.50	65
Pemberton Total	**0.30**	**6.90**	**11.58**	**401**
Industrial Park **	0.15	6.82	11.90	12
8-Nov-23				
Pemberton				
Health Centre	0.34	6.97	12.90	76
Oak St	0.40	6.84	9.30	73
Plateau/Ridge	0.33	6.89	9.90	77
Village Office	0.40	6.84	9.00	71
WWTP	0.28	6.95	11.60	78
PNWS - Meadows Rd *	0.35	6.83	9.10	75
PNWS - Farm Rd *	0.33	6.83	9.50	74
Pemberton Total	**0.35**	**6.88**	**10.19**	**524**
Industrial Park **	0.11	6.82	9.00	18
15-Nov-23				
Pemberton				
Health Centre	0.32	7.01	11.50	75
Oak St	0.38	6.94	10.30	77
Plateau/Ridge	0.35	6.92	10.30	76
Village Office	0.34	6.94	8.90	75
WWTP	0.12	6.97	12.00	80

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Source	Chlorine Residual	pH	Temperature (C)	Sum of Alkalinity
PNWS - Meadows Rd *	0.31	6.92	9.70	62
PNWS - Farm Rd *	0.32	6.92	10.50	74
Pemberton Total	**0.31**	**6.95**	**10.46**	**519**
Industrial Park **	0.32	6.84	9.40	16
20-Nov-23				
Pemberton				
Health Centre	0.29	7.00	10.60	71
Oak St	0.33	6.95	8.40	69
Plateau/Ridge	0.27	6.97	10.30	73
Village Office	0.32	6.94	9.00	75
WWTP	0.12	6.99	9.60	74
PNWS - Meadows Rd *	0.31	6.93	9.50	74
PNWS - Farm Rd *	0.31	6.93	10.30	70
Pemberton Total	**0.28**	**6.96**	**9.67**	**506**
Industrial Park **	0.02	6.89	9.00	17
28-Nov-23				
Pemberton				
Health Centre	0.34	7.02	9.90	73
Oak St	0.37	6.95	7.30	71
Plateau/Ridge	0.31	6.99	8.90	76
Village Office	0.37	6.92	8.20	75
WWTP	0.10	6.99	9.00	77
PNWS - Meadows Rd *				
PNWS - Farm Rd *				
Pemberton Total	**0.30**	**6.97**	**8.66**	**372**
Industrial Park **	0.21	6.91	7.30	18
4-Dec-23				
Pemberton				
Health Centre	0.38	6.90	10.40	70
Oak St	0.42	6.86	6.80	67
Plateau/Ridge	0.35	6.94	8.20	69
Village Office	0.36	6.84	8.20	70
WWTP	0.32	6.97	8.90	76
PNWS - Meadows Rd *	0.31	6.89	7.10	70
PNWS - Farm Rd *	0.32	6.90	7.40	70
Pemberton Total	**0.35**	**6.90**	**8.14**	**492**
Industrial Park **	0.20	6.86	7.10	18
12-Dec-23				
Pemberton				
Health Centre	0.37	6.97	9.30	60
Oak St	0.39	6.89	7.80	68
Plateau/Ridge	0.33	6.86	7.60	62

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Source	Chlorine Residual	pH	Temperature (C)	Sum of Alkalinity
Village Office	0.34	6.88	8.00	69
WWTP	0.14	6.87	9.20	69
PNWS - Meadows Rd *	0.32	6.87	7.60	67
PNWS - Farm Rd *	0.30	6.89	7.10	62
Pemberton Total	**0.31**	**6.89**	**8.09**	**457**
Industrial Park **	0.43	6.85	8.00	17
19-Dec-23				
Pemberton				
Health Centre	0.33	7.00	9.70	71
Oak St	0.36	7.02	6.60	77
Plateau/Ridge	0.41	7.05	7.40	59
Village Office	0.38	7.05	8.30	72
WWTP	0.09	7.01	8.30	67
PNWS - Meadows Rd *	0.34	7.00	7.10	68
PNWS - Farm Rd *	0.32	7.00	7.10	68
Pemberton Total	**0.32**	**7.02**	**7.79**	**482**
Industrial Park **	0.26	6.96	8.10	15

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Appendix IV

2023 Weekly VCH Bacteriological Results

Sample Range Report

Vancouver Coastal Health

Facility Name: Pemberton North Water System
Date Range: Jan 1 2023 to Dec 31 2023

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

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
1428 Pemberton Farm Road, Adjacent to 1428 Pemberton Farm Road				
	1/16/2023 9:30:00 AM	LT1	LT1	
	1/23/2023 7:30:00 AM	LT1	LT1	
	2/6/2023 9:30:00 AM	LT1	LT1	
	2/13/2023 9:40:00 AM	LT1	LT1	
	3/6/2023 9:30:00 AM	LT1	LT1	
	3/13/2023 9:40:00 AM	LT1	LT1	
	3/21/2023 8:40:00 AM	LT1	LT1	
	3/27/2023 9:30:00 AM	LT1	LT1	
	4/3/2023 9:40:00 AM	LT1	LT1	
	4/11/2023 9:40:00 AM	LT1	LT1	
	4/17/2023 9:40:00 AM	LT1	LT1	
	4/24/2023 9:40:00 AM	LT1	LT1	
	5/3/2023 8:40:00 AM	LT1	LT1	
	5/8/2023 8:00:00 AM	LT1	LT1	
	5/16/2023 8:00:00 AM	LT1	LT1	
	5/23/2023 7:40:00 AM	LT1	LT1	
	5/30/2023 8:10:00 AM	LT1	LT1	
	6/5/2023 8:40:00 AM	LT1	LT1	
	6/13/2023 8:10:00 AM	LT1	LT1	
	6/19/2023 8:10:00 AM	LT1	LT1	
	6/27/2023 8:40:00 AM	LT1	LT1	

7/4/2023 8:30:00 AM	LT1	LT1
7/11/2023 8:10:00 AM	LT1	LT1
7/17/2023 8:40:00 AM	LT1	LT1
7/25/2023 8:10:00 AM	LT1	LT1
8/1/2023 8:10:00 AM	LT1	LT1
8/9/2023 8:40:00 AM	LT1	LT1
8/16/2023 8:10:00 AM	LT1	LT1
8/22/2023 8:10:00 AM	LT1	LT1
8/28/2023 8:40:00 AM	LT1	LT1
9/6/2023 8:40:00 AM	LT1	LT1
9/12/2023 8:10:00 AM	LT1	LT1
9/19/2023 8:10:00 AM	LT1	LT1
9/25/2023 8:10:00 AM	LT1	LT1
10/4/2023 8:10:00 AM	LT1	LT1
10/10/2023 8:10:00 AM	LT1	LT1
10/17/2023 8:10:00 AM	LT1	LT1
10/23/2023 8:40:00 AM	LT1	LT1
10/31/2023 8:00:00 AM	LT1	LT1
11/8/2023 8:10:00 AM	LT1	LT1
11/15/2023 8:10:00 AM	LT1	LT1
11/20/2023 8:10:00 AM	LT1	LT1
12/4/2023 8:10:00 AM	LT1	LT1
12/12/2023 8:30:00 AM	LT1	LT1
12/19/2023 8:00:00 AM	LT1	LT1
Total Positive:	**0**	**0**

7620 Pemberton Meadows Rd, Opposite 7620 Pemberton Meadows Rd		
2/13/2023 9:30:00 AM	LT1	LT1
3/13/2023 5:30:00	LT1	LT1

AM		
3/21/2023 8:30:00 AM	LT1	LT1
3/27/2023 9:40:00 AM	LT1	LT1
4/3/2023 9:30:00 AM	LT1	LT1
4/11/2023 9:30:00 AM	LT1	LT1
4/17/2023 9:30:00 AM	LT1	LT1
4/24/2023 9:30:00 AM	LT1	LT1
5/3/2023 8:30:00 AM	LT1	LT1
5/8/2023 7:50:00 AM	LT1	LT1
5/16/2023 7:50:00 AM	LT1	LT1
5/23/2023 7:30:00 AM	LT1	LT1
5/30/2023 8:00:00 AM	LT1	LT1
6/5/2023 8:30:00 AM	LT1	LT1
6/13/2023 8:00:00 AM	LT1	LT1
6/19/2023 8:00:00 AM	LT1	LT1
6/27/2023 8:30:00 AM	LT1	LT1
7/4/2023 8:20:00 AM	LT1	LT1
7/11/2023 8:00:00 AM	LT1	LT1
7/17/2023 8:30:00 AM	LT1	LT1
7/25/2023 8:00:00 AM	LT1	LT1
8/1/2023 8:00:00 AM	LT1	LT1
8/9/2023 8:30:00 AM	LT1	LT1
8/16/2023 8:00:00 AM	LT1	LT1
8/22/2023 8:00:00 AM	LT1	LT1
8/28/2023 8:30:00 AM	LT1	LT1
9/6/2023 8:30:00 AM	LT1	LT1
9/12/2023 8:00:00 AM	LT1	LT1
9/19/2023 8:00:00 AM	LT1	LT1
9/25/2023 8:00:00 AM	LT1	LT1
10/4/2023 8:00:00 AM	LT1	LT1
10/10/2023 8:00:00 AM	LT1	LT1
10/17/2023 8:00:00 AM	LT1	LT1

10/23/2023 8:30:00 AM	LT1	LT1
11/8/2023 8:00:00 AM	LT1	LT1
11/15/2023 8:00:00 AM	LT1	LT1
11/20/2023 8:00:00 AM	LT1	LT1
12/4/2023 8:00:00 AM	LT1	LT1
12/12/2023 8:20:00 AM	LT1	LT1
12/19/2023 7:50:00 AM	LT1	LT1
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:	0/4	
Total number of samples:	85	

Comments:

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Environmental Health Officer
Jan 5 2024

FOR FURTHER INFORMATION PLEASE CALL: Dan Glover (604) 892-2293

Sample Range Report

Vancouver Coastal Health

Facility Name: Pemberton Industrial Park Water System
Date Range: Jan 1 2023 to Dec 31 2023

Operator Reece Clark
Box 100
Pemberton, BC V0N 2L0

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
Yard Hydrant, Pemberton Industrial Park	1/3/2023 8:40:00 AM	LT1	LT1	
	1/9/2023 8:40:00 AM	LT1	LT1	
	1/16/2023 8:40:00 AM	LT1	LT1	
	1/23/2023 8:40:00 AM	LT1	LT1	
	1/30/2023 8:40:00 AM	LT1	LT1	
	2/6/2023 8:40:00 AM	LT1	LT1	
	2/13/2023 8:40:00 AM	LT1	LT1	
	2/22/2023 8:10:00 AM	LT1	LT1	
	2/27/2023 8:40:00 AM	LT1	LT1	
	3/6/2023 8:40:00 AM	LT1	LT1	
	3/13/2023 8:40:00 AM	LT1	LT1	
	3/27/2023 8:40:00 AM	LT1	LT1	
	4/3/2023 8:40:00 AM	LT1	LT1	
	4/11/2023 8:40:00 AM	LT1	LT1	
	4/17/2023 8:40:00 AM	LT1	LT1	
	4/24/2023 8:40:00 AM	LT1	LT1	
	5/3/2023 8:10:00 AM	LT1	LT1	
	5/8/2023 7:10:00 AM	LT1	LT1	
	5/16/2023 7:10:00 AM	LT1	LT1	
	5/23/2023 7:10:00 AM	LT1	LT1	
	5/30/2023 7:10:00 AM	LT1	LT1	
	6/5/2023 7:40:00 AM	LT1	LT1	
	6/13/2023 7:40:00 AM	LT1	LT1	

6/19/2023 7:40:00 AM	LT1	LT1
6/27/2023 7:40:00 AM	LT1	LT1
7/4/2023 7:40:00 AM	LT1	LT1
7/11/2023 7:40:00 AM	LT1	LT1
7/17/2023 7:40:00 AM	LT1	LT1
7/25/2023 7:40:00 AM	LT1	LT1
8/1/2023 7:40:00 AM	LT1	LT1
8/9/2023 7:40:00 AM	LT1	LT1
8/16/2023 7:40:00 AM	LT1	LT1
8/22/2023 7:40:00 AM	LT1	LT1
8/28/2023 7:40:00 AM	LT1	LT1
9/6/2023 7:40:00 AM	LT1	LT1
9/12/2023 7:40:00 AM	LT1	LT1
9/19/2023 7:40:00 AM	LT1	LT1
9/25/2023 7:40:00 AM	LT1	LT1
10/4/2023 7:40:00 AM	LT1	LT1
10/10/2023 7:40:00 AM	LT1	LT1
10/17/2023 7:50:00 AM	LT1	LT1
10/23/2023 7:40:00 AM	LT1	LT1
10/31/2023 7:40:00 AM	LT1	LT1
11/8/2023 7:40:00 AM	LT1	LT1
11/15/2023 7:40:00 AM	LT1	LT1
11/20/2023 7:40:00 AM	LT1	LT1
11/28/2023 7:40:00 AM	LT1	LT1
12/4/2023 7:40:00 AM	LT1	LT1
12/12/2023 7:40:00 AM	LT1	LT1
12/19/2023 7:40:00 AM	LT1	LT1
Total Positive:	**0**	**0**

Sample Station at Meter Chamber,

Pemberton Industrial Park			
	3/21/2023 8:10:00 AM	LT1	LT1
	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:	0/2	
Total number of samples:	51	

Comments:

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Environmental Health Officer
Jan 9 2024

FOR FURTHER INFORMATION PLEASE CALL: Dan Glover (604) 892-2293

Sample Range Report

Vancouver Coastal Health

Facility Name: Village of Pemberton
Date Range: Jan 1 2023 to Dec 31 2023

Operator Reece Clark
P.O. Box 100
Pemberton, BC V0N 2L0

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
Treatment Plant/Airport Rd., Pemberton	1/3/2023 8:30:00 AM	LT1	LT1	
	1/9/2023 8:30:00 AM	LT1	LT1	
	1/16/2023 8:30:00 AM	LT1	LT1	
	1/23/2023 8:30:00 AM	LT1	LT1	
	1/30/2023 8:30:00 AM	LT1	LT1	
	2/6/2023 8:30:00 AM	LT1	LT1	
	2/13/2023 8:30:00 AM	LT1	LT1	
	2/22/2023 8:00:00 AM	LT1	LT1	
	2/27/2023 8:30:00 AM	LT1	LT1	
	3/6/2023 8:30:00 AM	LT1	LT1	
	3/13/2023 8:30:00 AM	LT1	LT1	
	3/21/2023 8:00:00 AM	LT1	LT1	
	3/27/2023 5:30:00 PM	LT1	LT1	
	4/3/2023 8:30:00 AM	LT1	LT1	
	4/11/2023 8:30:00 AM	LT1	LT1	
	4/17/2023 8:30:00 AM	LT1	LT1	
	4/24/2023 8:30:00 AM	LT1	LT1	
	5/3/2023 8:00:00 AM	LT1	LT1	
	5/8/2023 7:00:00 AM	LT1	LT1	
	5/16/2023 7:00:00 AM	LT1	LT1	
	5/23/2023 7:00:00 AM	LT1	LT1	
	5/30/2023 7:00:00 AM	LT1	LT1	
	6/5/2023 7:30:00 AM	LT1	LT1	

6/13/2023 7:30:00 AM	LT1	LT1
6/19/2023 7:30:00 AM	LT1	LT1
6/27/2023 7:30:00 AM	LT1	LT1
7/4/2023 7:30:00 AM	LT1	LT1
7/11/2023 7:30:00 AM	LT1	LT1
7/17/2023 7:30:00 AM	LT1	LT1
7/25/2023 7:30:00 AM	LT1	LT1
8/1/2023 7:30:00 AM	LT1	LT1
8/9/2023 7:30:00 AM	LT1	LT1
8/16/2023 7:30:00 AM	LT1	LT1
8/22/2023 7:30:00 AM	LT1	LT1
8/28/2023 7:30:00 AM	LT1	LT1
9/6/2023 7:30:00 AM	LT1	LT1
9/12/2023 7:30:00 AM	LT1	LT1
9/19/2023 7:30:00 AM	LT1	LT1
9/25/2023 7:30:00 AM	LT1	LT1
10/4/2023 7:30:00 AM	LT1	LT1
10/10/2023 7:30:00 AM	LT1	LT1
10/17/2023 7:30:00 AM	LT1	LT1
10/23/2023 7:30:00 AM	LT1	LT1
10/31/2023 7:30:00 AM	LT1	LT1
11/8/2023 7:30:00 AM	LT1	LT1
11/15/2023 7:30:00 AM	LT1	LT1
11/20/2023 7:30:00 AM	LT1	LT1
11/28/2023 7:30:00 AM	LT1	LT1
12/4/2023 7:30:00 AM	LT1	LT1
12/12/2023 7:30:00 AM	LT1	LT1
12/19/2023 7:30:00 AM	LT1	LT1
Total Positive:	**0**	**0**

Oak Street At High School, Pemberton			
	1/3/2023 9:30:00 AM	LT1	LT1
	1/9/2023 9:30:00 AM	LT1	LT1
	1/16/2023 9:40:00 AM	LT1	LT1
	1/23/2023 9:40:00 AM	LT1	LT1
	1/30/2023 9:30:00 AM	LT1	LT1
	2/6/2023 9:40:00 AM	LT1	LT1
	2/13/2023 9:50:00 AM	LT1	LT1
	2/22/2023 9:00:00 AM	LT1	LT1
	2/27/2023 9:30:00 AM	LT1	LT1
	3/6/2023 9:40:00 AM	LT1	LT1
	3/13/2023 9:50:00 AM	LT1	LT1
	3/21/2023 8:50:00 AM	LT1	LT1
	3/27/2023 9:50:00 AM	LT1	LT1
	4/3/2023 9:50:00 AM	LT1	LT1
	4/11/2023 9:50:00 AM	LT1	LT1
	4/17/2023 9:00:00 AM	LT1	LT1
	4/24/2023 9:50:00 AM	LT1	LT1
	5/3/2023 8:50:00 AM	LT1	LT1
	5/8/2023 8:10:00 AM	LT1	LT1
	5/16/2023 8:10:00 AM	LT1	LT1
	5/23/2023 7:50:00 AM	LT1	LT1
	5/30/2023 8:20:00 AM	LT1	LT1
	6/5/2023 8:50:00 AM	LT1	LT1
	6/13/2023 8:20:00 AM	LT1	LT1
	6/19/2023 8:20:00 AM	LT1	LT1
	6/27/2023 8:50:00 AM	LT1	LT1
	7/4/2023 8:40:00 AM	LT1	LT1
	7/11/2023 8:20:00 AM	LT1	LT1
	7/17/2023 8:50:00 AM	LT1	LT1
	8/9/2023 8:50:00 AM	LT1	LT1
	8/16/2023 8:20:00 AM	LT1	LT1
	8/22/2023 8:20:00	LT1	LT1

AM		
8/28/2023 8:30:00 AM	LT1	LT1
9/6/2023 8:50:00 AM	LT1	LT1
9/12/2023 8:20:00 AM	LT1	LT1
9/19/2023 8:20:00 AM	LT1	LT1
9/25/2023 8:20:00 AM	LT1	LT1
10/4/2023 8:20:00 AM	LT1	LT1
10/10/2023 8:20:00 AM	LT1	LT1
10/17/2023 8:20:00 AM	LT1	LT1
10/23/2023 8:50:00 AM	LT1	LT1
10/31/2023 8:10:00 AM	LT1	LT1
11/8/2023 8:20:00 AM	LT1	LT1
11/15/2023 8:20:00 AM	LT1	LT1
11/20/2023 8:20:00 AM	LT1	LT1
11/28/2023 8:00:00 AM	LT1	LT1
12/4/2023 8:20:00 AM	LT1	LT1
12/12/2023 8:40:00 AM	LT1	LT1
12/19/2023 8:20:00 AM	LT1	LT1
Total Positive:	**0**	**0**

Pemberton Health Center, 1403 Portage Road, Pemberton, B.C.			
	1/3/2023 9:40:00 AM	LT1	LT1
	1/9/2023 9:40:00 AM	LT1	LT1
	1/16/2023 9:00:00 AM	LT1	LT1
	1/23/2023 9:50:00 AM	LT1	LT1
	1/30/2023 9:40:00 AM	LT1	LT1
	2/6/2023 9:50:00 AM	LT1	LT1
	2/13/2023 10:00:00 AM	LT1	LT1
	2/22/2023 9:10:00 AM	LT1	LT1
	2/27/2023 9:40:00	LT1	LT1

AM		
3/6/2023 9:50:00 AM	LT1	LT1
3/13/2023 10:00:00 AM	LT1	LT1
3/21/2023 9:30:00 AM	LT1	LT1
3/27/2023 10:00:00 AM	LT1	LT1
4/3/2023 10:00:00 AM	LT1	LT1
4/11/2023 10:00:00 AM	LT1	LT1
4/17/2023 10:00:00 AM	LT1	LT1
4/24/2023 10:00:00 AM	LT1	LT1
5/3/2023 9:30:00 AM	LT1	LT1
5/8/2023 8:30:00 AM	LT1	LT1
5/16/2023 8:30:00 AM	LT1	LT1
5/23/2023 8:40:00 AM	LT1	LT1
5/30/2023 8:40:00 AM	LT1	LT1
6/5/2023 9:00:00 AM	LT1	LT1
6/13/2023 9:00:00 AM	LT1	LT1
6/19/2023 9:10:00 AM	LT1	LT1
6/27/2023 9:10:00 AM	LT1	LT1
7/4/2023 9:10:00 AM	LT1	LT1
7/11/2023 9:10:00 AM	LT1	LT1
7/17/2023 9:10:00 AM	LT1	LT1
8/1/2023 9:10:00 AM	LT1	LT1
8/9/2023 9:10:00 AM	LT1	LT1
8/16/2023 9:10:00 AM	LT1	LT1
8/22/2023 9:10:00 AM	LT1	LT1
8/28/2023 9:10:00 AM	LT1	LT1
9/6/2023 9:10:00 AM	LT1	LT1
9/12/2023 9:10:00 AM	LT1	LT1
9/19/2023 9:10:00 AM	LT1	LT1
9/25/2023 9:10:00 AM	LT1	LT1
10/4/2023 9:10:00 AM	LT1	LT1
10/10/2023 9:00:00 AM	LT1	LT1

10/17/2023 9:00:00 AM	LT1	LT1
10/23/2023 9:00:00 AM	LT1	LT1
10/31/2023 8:50:00 AM	LT1	LT1
11/8/2023 9:00:00 AM	LT1	LT1
11/15/2023 9:00:00 AM	LT1	LT1
11/20/2023 9:00:00 AM	LT1	LT1
11/28/2023 8:40:00 AM	LT1	LT1
12/4/2023 9:00:00 AM	LT1	LT1
12/12/2023 9:00:00 AM	LT1	LT1
12/19/2023 9:00:00 AM	LT1	LT1
Total Positive:	**0**	**0**

Village Office, 7410 Prospect

1/3/2023 9:00:00 AM	LT1	LT1
1/9/2023 9:00:00 AM	LT1	LT1
1/16/2023 9:00:00 AM	LT1	LT1
1/23/2023 9:00:00 AM	LT1	LT1
1/30/2023 9:00:00 AM	LT1	LT1
2/6/2023 9:00:00 AM	LT1	LT1
2/13/2023 9:00:00 AM	LT1	LT1
2/22/2023 8:50:00 AM	LT1	LT1
2/27/2023 9:00:00 AM	LT1	LT1
3/6/2023 9:00:00 AM	LT1	LT1
3/13/2023 9:00:00 AM	LT1	LT1
3/21/2023 9:20:00 AM	LT1	LT1
3/27/2023 9:00:00 AM	LT1	LT1
4/3/2023 9:00:00 AM	LT1	LT1
4/11/2023 9:50:00 AM	LT1	LT1
4/17/2023 9:00:00 AM	LT1	LT1
4/24/2023 9:00:00 AM	LT1	LT1
5/3/2023 9:00:00 AM	LT1	LT1

5/8/2023 8:20:00 AM	LT1	LT1
5/16/2023 8:20:00 AM	LT1	LT1
5/23/2023 8:00:00 AM	LT1	LT1
5/30/2023 7:30:00 AM	LT1	LT1
6/5/2023 8:20:00 AM	LT1	LT1
6/13/2023 9:50:00 AM	LT1	LT1
6/19/2023 8:30:00 AM	LT1	LT1
6/27/2023 8:20:00 AM	LT1	LT1
7/4/2023 8:50:00 AM	LT1	LT1
7/11/2023 8:50:00 AM	LT1	LT1
7/17/2023 8:20:00 AM	LT1	LT1
7/25/2023 8:30:00 AM	LT1	LT1
8/1/2023 8:30:00 AM	LT1	LT1
8/9/2023 8:20:00 AM	LT1	LT1
8/16/2023 8:30:00 AM	LT1	LT1
8/22/2023 8:30:00 AM	LT1	LT1
8/28/2023 8:20:00 AM	LT1	LT1
9/6/2023 8:20:00 AM	LT1	LT1
9/12/2023 8:30:00 AM	LT1	LT1
9/19/2023 8:30:00 AM	LT1	LT1
9/25/2023 8:50:00 AM	LT1	LT1
10/4/2023 8:30:00 AM	LT1	LT1
10/10/2023 8:30:00 AM	LT1	LT1
10/17/2023 8:30:00 AM	LT1	LT1
10/23/2023 8:20:00 AM	LT1	LT1
10/31/2023 8:20:00 AM	LT1	LT1
11/8/2023 8:50:00 AM	LT1	LT1
11/15/2023 8:30:00 AM	LT1	LT1
11/20/2023 8:30:00 AM	LT1	LT1
11/28/2023 8:10:00 AM	LT1	LT1
12/4/2023 8:30:00	LT1	LT1

	AM		
	12/12/2023 8:50:00 AM	LT1	LT1
	12/19/2023 8:30:00 AM	LT1	LT1
	Total Positive:	**0**	**0**
Pemberton Ridge Pumphouse, Pemberton			
	1/3/2023 8:50:00 AM	LT1	LT1
	1/9/2023 8:50:00 AM	LT1	LT1
	1/16/2023 8:50:00 AM	LT1	LT1
	1/23/2023 8:50:00 AM	LT1	LT1
	1/30/2023 8:50:00 AM	LT1	LT1
	2/6/2023 8:50:00 AM	LT1	LT1
	2/13/2023 8:50:00 AM	LT1	LT1
	2/22/2023 8:20:00 AM	LT1	LT1
	2/27/2023 8:50:00 AM	LT1	LT1
	3/6/2023 8:50:00 AM	LT1	LT1
	3/13/2023 8:50:00 AM	LT1	LT1
	3/21/2023 8:20:00 AM	LT1	LT1
	3/27/2023 8:50:00 AM	LT1	LT1
	4/3/2023 8:50:00 AM	LT1	LT1
	4/11/2023 8:50:00 AM	LT1	LT1
	4/17/2023 8:50:00 AM	LT1	LT1
	4/24/2023 8:50:00 AM	LT1	LT1
	5/3/2023 8:20:00 AM	LT1	LT1
	5/8/2023 7:20:00 AM	LT1	LT1
	5/16/2023 7:20:00 AM	LT1	LT1
	5/23/2023 7:20:00 AM	LT1	LT1
	5/30/2023 7:20:00 AM	LT1	LT1
	6/5/2023 7:50:00 AM	LT1	LT1
	6/13/2023 7:50:00 AM	LT1	LT1
	6/19/2023 7:50:00 AM	LT1	LT1
	6/27/2023 7:50:00 AM	LT1	LT1

7/4/2023 7:50:00 AM	LT1	LT1
7/11/2023 7:30:00 AM	LT1	LT1
7/17/2023 7:50:00 AM	LT1	LT1
7/25/2023 7:50:00 AM	LT1	LT1
8/1/2023 7:50:00 AM	LT1	LT1
8/9/2023 7:30:00 AM	LT1	LT1
8/16/2023 7:50:00 AM	LT1	LT1
8/22/2023 7:50:00 AM	LT1	LT1
8/28/2023 7:30:00 AM	LT1	LT1
9/6/2023 7:50:00 AM	LT1	LT1
9/12/2023 7:50:00 AM	LT1	LT1
9/19/2023 7:50:00 AM	LT1	LT1
9/25/2023 7:50:00 AM	LT1	LT1
10/4/2023 7:50:00 AM	LT1	LT1
10/10/2023 7:50:00 AM	LT1	LT1
10/17/2023 7:40:00 AM	LT1	LT1
10/23/2023 7:50:00 AM	LT1	LT1
10/31/2023 7:50:00 AM	LT1	LT1
11/8/2023 7:50:00 AM	LT1	LT1
11/15/2023 7:50:00 AM	LT1	LT1
11/20/2023 7:50:00 AM	LT1	LT1
11/28/2023 7:50:00 AM	LT1	LT1
12/4/2023 7:50:00 AM	LT1	LT1
12/12/2023 7:50:00 AM	LT1	LT1
12/19/2023 8:10:00 AM	LT1	LT1
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: Total number of samples:	0/10 252	

Comments:

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Environmental Health Officer
Jan 5 2024

FOR FURTHER INFORMATION PLEASE CALL: Dan Glover (604) 892-2293

Sample Range Report

Vancouver Coastal Health

Facility Name: Well # 2
Date Range: Jan 1 2023 to Dec 31 2023

Operator

,

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
Well Site #2, Pemberton Village Water Works, Pemberton	1/3/2023 7:10:00 AM	LT1	LT1	
	1/9/2023 9:10:00 AM	LT1	LT1	
	1/16/2023 9:10:00 AM	1.0	LT1	
	1/23/2023 9:10:00 AM	LT1	LT1	
	1/30/2023 9:10:00 AM	LT1	LT1	
	2/6/2023 9:10:00 AM	LT1	LT1	
	2/13/2023 9:10:00 AM	LT1	LT1	
	2/13/2023 9:10:00 AM	1.0	LT1	
	2/22/2023 8:30:00 AM	LT1	LT1	
	2/27/2023 9:10:00 AM	LT1	LT1	
	3/6/2023 9:10:00 AM	LT1	LT1	
	3/21/2023 9:00:00 AM	LT1	LT1	
	3/27/2023 9:10:00 AM	LT1	LT1	
	4/3/2023 9:10:00 AM	LT1	LT1	
	4/11/2023 9:10:00 AM	LT1	LT1	
	4/17/2023 9:10:00 AM	LT1	LT1	
	4/24/2023 9:10:00 AM	LT1	LT1	
	5/3/2023 9:10:00 AM	LT1	LT1	
	5/8/2023 7:30:00 AM	LT1	LT1	
	5/16/2023 7:30:00 AM	LT1	LT1	
	5/23/2023 8:10:00 AM	2.0	LT1	
	5/30/2023 7:30:00 AM	LT1	LT1	

6/5/2023 8:00:00 AM	LT1	LT1
6/13/2023 8:29:00 AM	LT1	LT1
6/19/2023 8:40:00 AM	LT1	LT1
6/27/2023 8:00:00 AM	LT1	LT1
7/4/2023 8:00:00 AM	LT1	LT1
7/11/2023 8:30:00 AM	LT1	LT1
7/17/2023 8:00:00 AM	LT1	LT1
7/25/2023 8:40:00 AM	LT1	LT1
8/1/2023 8:40:00 AM	LT1	LT1
8/9/2023 8:00:00 AM	LT1	LT1
8/16/2023 8:40:00 AM	LT1	LT1
8/22/2023 8:40:00 AM	LT1	LT1
8/28/2023 8:00:00 AM	LT1	LT1
9/6/2023 8:00:00 AM	LT1	LT1
9/12/2023 8:40:00 AM	LT1	LT1
9/19/2023 8:40:00 AM	LT1	LT1
9/25/2023 8:29:00 AM	LT1	LT1
10/4/2023 8:40:00 AM	LT1	LT1
10/10/2023 8:40:00 AM	LT1	LT1
10/17/2023 8:40:00 AM	LT1	LT1
10/23/2023 8:00:00 AM	LT1	LT1
10/31/2023 8:29:00 AM	LT1	LT1
11/8/2023 8:30:00 AM	LT1	LT1
11/15/2023 8:40:00 AM	LT1	LT1
11/20/2023 8:40:00 AM	LT1	LT1
11/28/2023 8:20:00 AM	LT1	LT1
12/4/2023 8:40:00 AM	LT1	LT1
12/12/2023 8:00:00 AM	LT1	LT1
12/19/2023 8:40:00 AM	LT1	LT1
Total Positive:	**3**	**0**

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

Samples that contain total coliform:	3	5.88% 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:	0/2	
Total number of samples:	51	

Comments:

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Environmental Health Officer
Jan 9 2024

FOR FURTHER INFORMATION PLEASE CALL: Dan Glover (604) 892-2293

Sample Range Report

Vancouver Coastal Health

Facility Name: Well #3
Date Range: Jan 1 2023 to Dec 31 2023

Operator

,

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
Well Site #3, Pemberton				
	1/3/2023 9:20:00 AM	LT1	LT1	
	1/9/2023 9:20:00 AM	LT1	LT1	
	1/16/2023 9:20:00 AM	LT1	LT1	
	1/23/2023 9:20:00 AM	LT1	LT1	
	1/30/2023 9:20:00 AM	LT1	LT1	
	2/6/2023 9:20:00 AM	LT1	LT1	
	2/13/2023 9:20:00 AM	LT1	LT1	
	2/13/2023 9:20:00 AM	LT1	LT1	
	2/22/2023 8:40:00 AM	LT1	LT1	
	2/27/2023 9:20:00 AM	LT1	LT1	
	3/6/2023 9:20:00 AM	LT1	LT1	
	3/21/2023 9:10:00 AM	LT1	LT1	
	3/27/2023 9:20:00 AM	LT1	LT1	
	4/3/2023 9:20:00 AM	LT1	LT1	
	4/11/2023 9:20:00 AM	LT1	LT1	
	4/17/2023 4:20:00 PM	LT1	LT1	
	4/24/2023 9:20:00 AM	LT1	LT1	
	5/3/2023 9:20:00 AM	LT1	LT1	
	5/8/2023 7:40:00 AM	LT1	LT1	
	5/16/2023 7:40:00 AM	LT1	LT1	
	5/23/2023 8:20:00 AM	LT1	LT1	
	5/30/2023 7:40:00 AM	LT1	LT1	
	6/5/2023 8:10:00 AM	LT1	LT1	
	6/13/2023 8:40:00	LT1	LT1	

AM		
6/19/2023 8:50:00 AM	LT1	LT1
6/27/2023 8:10:00 AM	LT1	LT1
7/4/2023 8:10:00 AM	LT1	LT1
7/11/2023 8:40:00 AM	LT1	LT1
7/17/2023 8:10:00 AM	LT1	LT1
7/25/2023 8:50:00 AM	LT1	LT1
8/1/2023 8:29:00 AM	LT1	LT1
8/9/2023 8:10:00 AM	LT1	LT1
8/16/2023 8:50:00 AM	LT1	LT1
8/22/2023 8:50:00 AM	LT1	LT1
8/28/2023 8:10:00 AM	LT1	LT1
9/6/2023 8:10:00 AM	LT1	LT1
9/12/2023 8:50:00 AM	LT1	LT1
9/19/2023 8:50:00 AM	LT1	LT1
9/25/2023 8:40:00 AM	LT1	LT1
10/4/2023 8:50:00 AM	LT1	LT1
10/10/2023 8:50:00 AM	LT1	LT1
10/17/2023 8:50:00 AM	LT1	LT1
10/23/2023 8:10:00 AM	LT1	LT1
10/31/2023 8:40:00 AM	LT1	LT1
11/8/2023 8:10:00 AM	LT1	LT1
11/15/2023 8:50:00 AM	LT1	LT1
11/20/2023 8:50:00 AM	LT1	LT1
11/28/2023 8:30:00 AM	LT1	LT1
12/4/2023 8:30:00 AM	LT1	LT1
12/12/2023 8:10:00 AM	LT1	LT1
12/19/2023 8:50:00 AM	LT1	LT1
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:	0/2	
Total number of samples:	51	

Comments:

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Environmental Health Officer
Jan 5 2024

FOR FURTHER INFORMATION PLEASE CALL: Dan Glover (604) 892-2293

Appendix V

2023 Water System Evaluation Reports

Vancouver CoastalHealth
Promoting wellness. Ensuring care.

Water System Report

Inspection Information	
Facility Name:	**Village of Pemberton**
Facility Number:	1110292
Officer:	Dan Glover
Inspection type:	Routine
Inspection date:	March 19, 2024
Follow-up Inspection Required:	**No**
Hazard Rating:	**Low**

Comments

Annual assessment of the Village of Pemberton waterworks system conducted with operator March 19, 2024.

Water Quality and Quantity

Excellent bacteriological water sampling frequency and water quality in 2023 with 252 treated water samples submitted and 0 with presence of coliform bacteria. Good ongoing operation and maintenance of the water system including regular monitoring of free chlorine residual in the distribution system and regular water main flushing. A free chlorine residual of 0.30 mg/L was measured at the booster station during the inspection.

An additional 102 raw (untreated) water samples were collected from well #2 and well #3 with a total of 3 samples positive for total coliforms.

A series of full chemical drinking water analyses were undertaken for both wells and the treated water throughout 2023. Results indicate frequent fluctuations in pH, manganese and iron levels. Generally speaking, manganese levels routinely exceeded the Aesthetic Objective (AO) levels in the source water, and exceeded the Maximum Acceptable Concentration (MAC) levels in well #2 three times in the samples collected. Manganese levels in the treated water also exceeded the AO of 0.020 mg/L in 2 of the samples. The data currently being compiled should be useful in determining treatment needs to address these issues and optimize source water currently available from Wells #2 and #3. Low levels of organics in the source water result in very low levels of THM's in the treated water within the distribution system as is desired.

Increasing water demand has been noted, likely as a result of continuing development particularly in Sunstone Ridge. Options for additional water sources should continue to be investigated; also water conservation planning to help ensure water demands are met into the future.

Operation of the soda ash plant continues to be successful, with chemically stable water being produced on an ongoing basis, although increasing water demand may put pressure on system capacity in summer months. VCH is comfortable with the approach taken by the VOP in continuing to advise the public to flush taps before water consumption to further minimize lead levels in drinking water.

Infrastructure
Regular exercising of the back-up generator is being implemented.
Implementation of the cross connection control bylaw continues to provide an increased level of protection as part of the multi-barrier approach in place.

Administration
A water system Emergency Response and Contingency Plan (ERCP) is in place; please review periodically to ensure the contact information is accurate.
Thank you for submitting your Annual Report for the 2022 year. The Annual Report for the 2023 year is due June 30, 2024.

Dan Glover, DWO

Vancouver Coastal Health
Promoting wellness. Ensuring care.

Water System Report

Inspection Information	
Facility Name:	**Pemberton Industrial Park Water System**
Facility Number:	
Officer:	Dan Glover
Inspection type:	Evaluation
Inspection date:	March 19, 2024
Follow-up Inspection Required:	**No**
Hazard Rating:	**Low**

Comments

This is an annual evaluation of the water supply within the Pemberton Industrial Park.

The water is supplied from a ground water source located in Mount Currie on Lil'wat lands.
A total of 51 bacteriological samples were submitted in 2023 which meets the minimum frequency standard. No samples were positive for total coliforms or e. coli.
Regular monitoring of free chlorine residuals in the supplied water in 2023.

A full water analysis was completed in 2023 with no parameters exceeding the standards in the Guidelines for Canadian Drinking Water Quality with the exception of a pH level slightly below the minimum (as has historically been the case).
General advice is that water users should be advised to run the water until cold before consumption.

A water system Annual Report for 2022 was submitted in 2023. Thank you. The Annual Report for 2023 is due by June 30, 2024.
Please review and update your Emergency Response and Contingency Plan as needed to ensure the contacts remain accurate.

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Dan Glover
DWO