

## Report Transmission Cover Page

Bill To: Vanderkemp Sales & Service Ltd.	Project ID:	Lot ID: <b>1470086</b>
7408 Hwy 101	Project Name: Brew Bay	Control Number:
Powell River, BC, Canada	Project Location:	Date Received: Jan 21, 2021
V8A 0R1	LSD:	Date Reported: Jan 25, 2021
Attn: John Vanderkemp	P.O.:	Report Number: 2589012
Sampled By:	Proj. Acct. code:	
Company:		

Contact	Company	Address
John Vanderkemp	Vanderkemp Sales & Service Ltd.	7408 Hwy 101 Powell River, BC V8A 0R1 Phone: (604) 485-9774 Fax: (604) 485-9717 Email: vanderkemps@shaw.ca

Delivery	Format	Deliverables
Email - Merge Reports	PDF	COC / Test Report
Email - Single Report	PDF	COR
Email - Single Report	PDF	Invoice

### Notes To Clients:

- Jan 25, 2021 - The Total Coliforms and Escherichia coli results in sample 1470086-1 exceeded the maximum acceptable concentration (MAC) as specified by the September 2020 Guidelines for Canadian Drinking Water Quality.

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## Analytical Report

Bill To: Vanderkemp Sales & Service Ltd.	Project ID:	Lot ID: <b>1470086</b>
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<b>Reference Number</b>	1470086-1
<b>Sample Date</b>	January 20, 2021
<b>Sample Time</b>	12:00
<b>Sample Location</b>	
<b>Sample Description</b>	Brew Bay / 6.1 °C
<b>Sample Matrix</b>	Drinking Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
<b>Metals Extractable</b>					
Aluminum	Extractable mg/L	0.064	0.001	0.1	Below OG
Antimony	Extractable mg/L	<0.00002	0.00002	0.006	Below MAC
Arsenic	Extractable mg/L	<0.0001	0.0001	0.010	Below MAC
Barium	Extractable mg/L	0.0022	0.0001	2.0	Below MAC
Boron	Extractable mg/L	0.004	0.002	5	Below MAC
Cadmium	Extractable mg/L	<0.00001	0.00001	0.007	Below MAC
Chromium	Extractable mg/L	<0.00005	0.00005	0.05	Below MAC
Copper	Extractable mg/L	0.0007	0.0005	1 AO; 2 MAC	Below AO
Lead	Extractable mg/L	0.00006	0.00001	0.005	Below MAC
Selenium	Extractable mg/L	<0.0002	0.0002	0.05	Below MAC
Strontium	Extractable mg/L	0.010	0.0001	7.0	Below MAC
Uranium	Extractable mg/L	0.00002	0.00001	0.02	Below MAC
Vanadium	Extractable mg/L	0.00029	0.00005		
Zinc	Extractable mg/L	0.0020	0.0005	5.0	Below AO
<b>Microbiological Analysis</b>					
Total Coliforms	Enzyme Substrate Test MPN/100 mL	133.3	1.0	0 per 100 mL	Above MAC
Escherichia coli	Enzyme Substrate Test MPN/100 mL	4.1	1.0	0 per 100 mL	Above MAC
<b>Physical and Aggregate Properties</b>					
Colour	True Colour units	17	5		
Turbidity	NTU	0.48	0.1	0.1	Above OG
<b>Routine Water</b>					
pH - Holding Time		Exceeded			
pH	at 25 °C	7.00	0.01	7.0-10.5	Below Range
Electrical Conductivity	µS/cm at 25 °C	26	1		
Calcium	Extractable mg/L	2.8	0.01		
Iron	Extractable mg/L	0.039	0.004	0.3	Below AO
Magnesium	Extractable mg/L	0.39	0.02		
Manganese	Extractable mg/L	0.001	0.001	0.02 AO; 0.12 MAC	Below AO
Potassium	Extractable mg/L	0.17	0.04		
Silicon	Extractable mg/L	2.5	0.005		
Sodium	Extractable mg/L	1.3	0.1	200	Below AO
T-Alkalinity	as CaCO3 mg/L	8	5		
Chloride	Dissolved mg/L	1.15	0.05	250	Below AO
Fluoride	Dissolved mg/L	<0.01	0.01	1.5	Below MAC
Nitrate - N	Dissolved mg/L	0.13	0.01	10	Below MAC
Nitrite - N	Dissolved mg/L	<0.01	0.01	1	Below MAC
Sulfate (SO4)	Dissolved mg/L	1.0	0.1	500	Below AO

**Analytical Report**

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<b>Reference Number</b>	1470086-1
<b>Sample Date</b>	January 20, 2021
<b>Sample Time</b>	12:00
<b>Sample Location</b>	
<b>Sample Description</b>	Brew Bay / 6.1 °C
<b>Sample Matrix</b>	Drinking Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
<b>Routine Water - Continued</b>					
Hardness	as CaCO3 (extractable)	mg/L	8.6	1	
Total Dissolved Solids	Extractable	mg/L	19	1	500 Below AO

Approved by:   
 Max Hewitt  
 Operations Manager

## Methodology and Notes

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## Method of Analysis

Method Name	Reference	Method	Date Analysis Started	Location
Alk, pH, EC, Turb in water (BC)	APHA	* Alkalinity - Titration Method, 2320 B	Jan 22, 2021	Element Vancouver
Alk, pH, EC, Turb in water (BC)	APHA	* Conductivity, 2510 B	Jan 22, 2021	Element Vancouver
Alk, pH, EC, Turb in water (BC)	APHA	* pH - Electrometric Method, 4500-H+ B	Jan 22, 2021	Element Vancouver
Anions by IEC in water (VAN)	APHA	* Ion Chromatography with Chemical Suppression of Eluent Cond., 4110 B	Jan 22, 2021	Element Vancouver
Metals SemiTrace (Extractable) in water (VAN)	US EPA	* Metals & Trace Elements by ICP-AES, 6010C	Jan 22, 2021	Element Vancouver
Total and E-Coli - Colilert - DW (VAN)	APHA	Enzyme Substrate Test, APHA 9223 B	Jan 21, 2021	Element Vancouver
Trace Metals (extractable) in Water (VAN)	US EPA	* Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	Jan 22, 2021	Element Vancouver
True Color in water (VAN)	APHA	* Spectrophotometric - Single Wavelength Method, 2120 C	Jan 22, 2021	Element Vancouver
Turbidity - Water (VAN)	APHA	* Turbidity - Nephelometric Method, 2130 B	Jan 21, 2021	Element Vancouver

\* Reference Method Modified

## References

APHA	Standard Methods for the Examination of Water and Wastewater
US EPA	US Environmental Protection Agency Test Methods

## Guidelines

Guideline Description	Health Canada GCDWQ
Guideline Source	Guidelines for Canadian Drinking Water Quality, Health Canada, Sept 2020
Guideline Comments	MAC = Maximum Acceptable Concentration AO = Aesthetic Objective OG = Operational Guideline for Water Treatment Plants (does not apply to private groundwater wells). Refer to Health Canada for complete guidelines at <a href="http://www.hc-sc.gc.ca">www.hc-sc.gc.ca</a>

## Comments:

- Jan 25, 2021 - The Total Coliforms and Escherichia coli results in sample 1470086-1 exceeded the maximum acceptable concentration (MAC) as specified by the September 2020 Guidelines for Canadian Drinking Water Quality.

The comparison of test results to guideline limits is provided for information purposes only. This is not to be taken as a statement of conformance / nonconformance to any guideline, regulation or limit. The data user is responsible for all conclusions drawn with respect to the data and is advised to consult official regulatory references when evaluating compliance.

Please direct any inquiries regarding this report to our Client Services group.  
Results relate only to samples as submitted.

The test report shall not be reproduced except in full, without the written approval of the laboratory.



Lot: 1470086 <sup>COC</sup>



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**DRINKING WATER TESTING**

Name: Vanderkemp Saks Phone: 604-485-9774  
Address: 7408 Hwy 101 Email: vanderkemps@shaw.ca  
Powell River, BC  
Postal code: V8A 0R1 Payment method: (choose one)

Note: Payment required before analysis is started.

Cheque enclosed: Yes  No  On acct.  
Call for credit card #: Yes  No

Do you want a copy of your water results to go to anyone else? Yes  No   
If so, please provide details:

Are you reporting to BC Public Health Authority? Yes  No   
If so, please provide contact info below:

The *Canadian Drinking Water Guidelines* are included on the test report to help you determine the safety of your drinking water.

**Water Chemistry (W99):** pH, EC, alkalinity, hardness, calculated total dissolved solids (TDS), color, turbidity, chloride, fluoride, nitrate, nitrite, sulfate, aluminum, antimony, arsenic, barium, boron, cadmium, calcium, chromium, copper, iron, lead, magnesium, manganese, potassium, selenium, silicon, sodium, uranium, zinc.

**Bacteriology (DW20):** Total coliforms and Escherichia coli (*E. coli*). (M99R): DW20 Repeat if original test fails

**IRB, SRB, Slime Bacteria Test (DWSIS):** Iron Related Bacteria, Sulfate Reducing Bacteria and Slime Forming Bacteria

Sample Description	Date Sampled	Time Sampled	Check off which tests you need:
Sample #1: <u>Brew Bay</u>	<u>20 Jan 21</u>	<u>12:00p.</u>	W99 <input checked="" type="checkbox"/> DW20 <input checked="" type="checkbox"/>

Optional tests: DWSIS  M99R  Arsenic only  Lead only  Other

Our service representative will supply you free of charge the clean and sterile bottles needed for your tests.  
**W99 Analysis:** Requires 500 mL of sample in the larger white plastic bottle and 100 mL in the smaller plastic bottle.  
**DW20 or DWSIS Analysis:** Requires 250 mL of sample in the smaller clear square plastic bottle (sterilized) – do not rinse out the powder. (if both tests are requested, only 1 bottle is required)

JAN 21 '21 10:38

**Sampling Instructions:**

1. If there is a screen on the tap, remove before sampling.
2. Wipe the tap with bleach on the outside only.
3. Run the cold water tap for five minutes.
4. Fill the small clear plastic bottle. Do not rinse or overfill the bottle (leave approximately 1-2" headspace); immediately replace the cap.
5. Be careful not to touch the inside of the bottle or cap with the tap or your fingers.
6. Rinse the large and small white plastic bottles three times with tap water before filling.
7. Record date & time sampled. If not provided, a nonconformance note will be recorded on the report.
8. Keep samples cool with ice and deliver to lab **within 30 hours of sampling**. The reference method specifies that samples for microbiology testing must arrive at lab **below 10 °C** unless within 1 hour after sampling. The samples must not be frozen or chlorinated. Non-conformances will be noted on the report.

6.1°C

Please deliver your samples any time before 4 pm Monday to Friday or between 10 am and 2 pm on Saturdays.