



Town of The Pas - Water Plant  
ATTN: RYAN LAGACE  
Town of The Pas  
Box 870  
The Pas MB R9A 1K8

Date Received: 07-JAN-20  
Report Date: 14-JAN-20 13:04 (MT)  
Version: FINAL

Client Phone: 204-620-0426

## Certificate of Analysis

Lab Work Order #: L2402808  
Project P.O. #: NOT SUBMITTED  
Job Reference: THE PAS - PWS 226.00  
C of C Numbers:  
Legal Site Desc: 11490

Comments: NOTE: For frac -2 The Pas - Distribution - Did not receive a 60 ml Metals bottle (HNO<sub>3</sub> preserved) for MET-T-L-MS-WP

Hua Wo  
Chemistry Laboratory Manager

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# ANALYTICAL REPORT

## Physical Tests (WATER)

		ALS ID		L2402808-1	L2402808-3
		Sampled Date		06-JAN-20	06-JAN-20
		Sampled Time		16:00	16:00
		Sample ID		<b>THE PAS 1 - RAW</b>	<b>THE PAS 2 - TREATED</b>
Analyte	Unit	Guide Limit #1	Guide Limit #2		
Colour, True	CU	15	-	7.8	<5.0
Conductivity	umhos/cm	-	-	466	472
Hardness (as CaCO3)	mg/L	-	-	226 <sup>HTC</sup>	215 <sup>HTC</sup>
Langelier Index (4 C)	No Unit	-	-	0.35	-0.21
Langelier Index (60 C)	No Unit	-	-	1.1	0.56
pH	pH units	7.00-10.5	-	8.07	7.58
Total Dissolved Solids	mg/L	500	-	283	286
Transmittance, UV (254 nm)	%T/cm	-	-	71.3	88.3
Turbidity	NTU	-	-	7.15	<0.10

### Federal Guidelines for Canadian Drinking Water Quality (MAR, 2019)

#1: GCDWQ - Aesthetic Objective/Other Value

#2: GCDWQ - Maximum Acceptable Concentrations (MACs)

## Physical Tests (MISC.)

		ALS ID		L2402808-2
		Sampled Date		06-JAN-20
		Sampled Time		16:00
		Sample ID		<b>THE PAS 3 - DISTRIBUTION</b>
Analyte	Unit	Guide Limit #1	Guide Limit #2	
Sample Comment	No Unit	-	-	Sample Not

### Federal Guidelines for Canadian Drinking Water Quality (MAR, 2019)

#1: GCDWQ - Aesthetic Objective/Other Value

#2: GCDWQ - Maximum Acceptable Concentrations (MACs)

## Anions and Nutrients (WATER)

		ALS ID		L2402808-1	L2402808-3
		Sampled Date		06-JAN-20	06-JAN-20
		Sampled Time		16:00	16:00
		Sample ID		<b>THE PAS 1 - RAW</b>	<b>THE PAS 2 - TREATED</b>
Analyte	Unit	Guide Limit #1	Guide Limit #2		
Alkalinity, Total (as CaCO3)	mg/L	-	-	172	153
Ammonia, Total (as N)	mg/L	-	-	0.032	<0.010
Bicarbonate (HCO3)	mg/L	-	-	210	186
Bromide (Br)	mg/L	-	-	0.015	<0.010
Carbonate (CO3)	mg/L	-	-	<0.60	<0.60
Chloride (Cl)	mg/L	250	-	11.0	14.3
Fluoride (F)	mg/L	-	1.5	0.149	0.119
Hydroxide (OH)	mg/L	-	-	<0.34	<0.34
Nitrate (as N)	mg/L	-	10	0.133	0.135
Nitrite (as N)	mg/L	-	1	0.0011	<0.0010
Sulfate (SO4)	mg/L	500	-	65.4	79.6

### Federal Guidelines for Canadian Drinking Water Quality (MAR, 2019)

#1: GCDWQ - Aesthetic Objective/Other Value

#2: GCDWQ - Maximum Acceptable Concentrations (MACs)

Detection Limit for result exceeds Guide Limit. Assessment against Guide Limit cannot be made.  
 Analytical result for this parameter exceeds Guide Limit listed on this report.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

**Organic / Inorganic Carbon (WATER)**

		ALS ID		L2402808-1	L2402808-3
		Sampled Date		06-JAN-20	06-JAN-20
		Sampled Time		16:00	16:00
		Sample ID		<b>THE PAS 1 - RAW</b>	<b>THE PAS 2 - TREATED</b>
Analyte	Unit	Guide Limit #1	Guide Limit #2		
Dissolved Organic Carbon	mg/L	-	-	5.63	3.86
Total Organic Carbon	mg/L	-	-	5.65	3.51

**Federal Guidelines for Canadian Drinking Water Quality (MAR, 2019)**

**#1: GCDWQ - Aesthetic Objective/Other Value**

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Analytical result for this parameter exceeds Guide Limit listed on this report.

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# ANALYTICAL REPORT

## Total Metals (WATER)

Analyte	Unit	ALS ID		L2402808-1	L2402808-3
		Guide Limit #1	Guide Limit #2	Sampled Date Sampled Time Sample ID	Sampled Date Sampled Time Sample ID
Aluminum (Al)-Total	mg/L	0.1	-	06-JAN-20 16:00 THE PAS 1 - RAW	06-JAN-20 16:00 THE PAS 2 - TREATED
Antimony (Sb)-Total	mg/L	-	0.006	0.171	0.0334
Arsenic (As)-Total	mg/L	-	0.01	0.00014	0.00012
Barium (Ba)-Total	mg/L	-	1	0.00083	0.00029
Beryllium (Be)-Total	mg/L	-	-	0.0831	0.0635
Bismuth (Bi)-Total	mg/L	-	-	<0.00010	<0.00010
Boron (B)-Total	mg/L	-	5	<0.000050	<0.000050
Cadmium (Cd)-Total	mg/L	-	0.005	0.021	0.020
Calcium (Ca)-Total	mg/L	-	-	0.0000163	0.0000066
Cesium (Cs)-Total	mg/L	-	-	53.5	50.6
Chromium (Cr)-Total	mg/L	-	0.05	0.000026	<0.000010
Cobalt (Co)-Total	mg/L	-	-	0.00032	<0.00010
Copper (Cu)-Total	mg/L	1	2	0.00021	<0.00010
Iron (Fe)-Total	mg/L	0.3	-	0.00167	0.00149
Lead (Pb)-Total	mg/L	-	0.005	0.282	<0.010
Lithium (Li)-Total	mg/L	-	-	0.000195	<0.000050
Magnesium (Mg)-Total	mg/L	-	-	0.0120	0.0117
Manganese (Mn)-Total	mg/L	0.02	0.12	22.4	21.5
Molybdenum (Mo)-Total	mg/L	-	-	0.0239	0.00614
Nickel (Ni)-Total	mg/L	-	-	0.00123	0.00117
Phosphorus (P)-Total	mg/L	-	-	0.00171	0.00134
Potassium (K)-Total	mg/L	-	-	<0.030	<0.050
Rubidium (Rb)-Total	mg/L	-	-	3.02	2.99
Selenium (Se)-Total	mg/L	-	0.05	0.00121	0.00097
Silicon (Si)-Total	mg/L	-	-	0.000235	0.000234
Silver (Ag)-Total	mg/L	-	-	1.29	0.91
Sodium (Na)-Total	mg/L	200	-	<0.000010	<0.000010
Strontium (Sr)-Total	mg/L	-	7	20.1	19.9
Sulfur (S)-Total	mg/L	-	-	0.373	0.345
Tellurium (Te)-Total	mg/L	-	-	22.7	
Thallium (Tl)-Total	mg/L	-	-	<0.00020	<0.00020
Thorium (Th)-Total	mg/L	-	-	<0.000010	<0.000010
Tin (Sn)-Total	mg/L	-	-	<0.00010	<0.00010
				<0.00010	0.00013

**Federal Guidelines for Canadian Drinking Water Quality (MAR, 2019)**

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  Detection Limit for result exceeds Guide Limit. Assessment against Guide Limit cannot be made.

  Analytical result for this parameter exceeds Guide Limit listed on this report.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

**Total Metals (WATER)**

		ALS ID		L2402808-1	L2402808-3
		Sampled Date		06-JAN-20	06-JAN-20
		Sampled Time		16:00	16:00
		Sample ID		<b>THE PAS 1 - RAW</b>	<b>THE PAS 2 - TREATED</b>
Analyte	Unit	Guide Limit #1	Guide Limit #2		
Titanium (Ti)-Total	mg/L	-	-	0.00507	<0.00030
Tungsten (W)-Total	mg/L	-	-	<0.00010	<0.00010
Uranium (U)-Total	mg/L	-	0.02	0.000999	0.000336
Vanadium (V)-Total	mg/L	-	-	0.00081	<0.00050
Zinc (Zn)-Total	mg/L	5	-	<0.0030	<0.0030
Zirconium (Zr)-Total	mg/L	-	-	0.00029	<0.00020

**Federal Guidelines for Canadian Drinking Water Quality (MAR, 2019)**

**#1: GCDWQ - Aesthetic Objective/Other Value**

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Detection Limit for result exceeds Guide Limit. Assessment against Guide Limit cannot be made.

Analytical result for this parameter exceeds Guide Limit listed on this report.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Reference Information

## Qualifiers for Individual Parameters Listed:

Qualifier	Description
HTC	Hardness was calculated from Total Ca and/or Mg concentrations and may be biased high (dissolved Ca/Mg results unavailable).

## Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
<b>ALK-CO3CO3-CALC-WP</b>	Water	Alkalinity, Carbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by carbonate is calculated and reported as mg CO <sub>3</sub> 2-/L.			
<b>ALK-HCO3HCO3-CALC-WP</b>	Water	Alkalinity, Bicarbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by bicarbonate is calculated and reported as mg HCO <sub>3</sub> -/L.			
<b>ALK-OHOH-CALC-WP</b>	Water	Alkalinity, Hydroxide	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by hydroxide is calculated and reported as mg OH-/L.			
<b>ALK-TITR-WP</b>	Water	Alkalinity, Total (as CaCO <sub>3</sub> )	APHA 2320B
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. Total alkalinity is determined by titration with a strong standard mineral acid to the successive HCO <sub>3</sub> - and H <sub>2</sub> CO <sub>3</sub> endpoints indicated electrometrically.			
<b>BR-L-IC-N-WP</b>	Water	Bromide in Water by IC (Low Level)	EPA 300.1 (mod)-LR
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
<b>C-DOC-HTC-WP</b>	Water	Dissolved Organic Carbon by Combustion	APHA 5310 B-WP
Filtered (0.45 um) sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO <sub>2</sub> which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.			
<b>C-TOC-HTC-WP</b>	Water	Total Organic Carbon by Combustion	APHA 5310 B-WP
Sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO <sub>2</sub> which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.			
<b>CL-L-IC-N-WP</b>	Water	Chloride in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
<b>COLOUR-TRUE-WP</b>	Water	Colour, True	APHA 2120C
True Colour is measured spectrophotometrically by comparison to platinum-cobalt standards using the single wavelength method (450 - 465 nm) after filtration of sample through a 0.45 um filter. Colour measurements can be highly pH dependent, and apply to the pH of the sample as received (at time of testing), without pH adjustment. Concurrent measurement of sample pH is recommended.			
<b>EC-SCREEN-WP</b>	Water	Conductivity Screen (Internal Use Only)	APHA 2510
Qualitative analysis of conductivity where required during preparation of other test eg. IC, TDS, TSS, etc			
<b>EC-WP</b>	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
<b>ETL-LANGELIER-4-WP</b>	Water	Langelier Index 4C	Calculated
<b>ETL-LANGELIER-60-WP</b>	Water	Langelier Index 60C	Calculated
<b>F-IC-N-WP</b>	Water	Fluoride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
<b>HARDNESS-CALC-WP</b>	Water	Hardness Calculated	APHA 2340B
Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO <sub>3</sub> equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.			
<b>IONBALANCE-CALC-WP</b>	Water	Ion Balance Calculation	APHA 1030E

## Reference Information

## Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
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Cation Sum, Anion Sum, and Ion Balance (as % difference) are calculated based on guidance from APHA Standard Methods (1030E Checking Correctness of Analysis). Because all aqueous solutions are electrically neutral, the calculated ion balance (% difference of cations minus anions) should be near-zero.

Cation and Anion Sums are the total meq/L concentration of major cations and anions. Dissolved species are used where available. Minor ions are included where data is present. Ion Balance (as % difference) cannot be calculated accurately for waters with very low electrical conductivity (EC), and is reported as "Low EC" where EC < 100 uS/cm (umhos/cm). Ion Balance is calculated as:

$$\text{Ion Balance (\%)} = [\text{Cation Sum} - \text{Anion Sum}] / [\text{Cation Sum} + \text{Anion Sum}]$$

**MET-T-CCMS-WP** Water Total Metals in Water by CRC ICPMS EPA 200.2/6020B (mod.)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

**NH3-COL-WP** Water Ammonia by colour APHA 4500 NH3 F

Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.

**NO2-L-IC-N-WP** Water Nitrite in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

**NO3-L-IC-N-WP** Water Nitrate in Water by IC (Low Level) EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

**PH-WP** Water pH APHA 4500H

The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.

**SAMPNOTRECD-ONREP-WP** Misc. Sample not received SAMPLE NOT RECEIVED

**SO4-IC-N-WP** Water Sulfate in Water by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

**TDS-WP** Water Total Dissolved Solids (TDS) APHA 2540 SOLIDS C,E

A well-mixed sample is filtered through a glass fiber filter paper. The filtrate is then evaporated to dryness in a pre-weighed vial and dried at 180 – 2C. The increase in vial weight represents the total dissolved solids.

**TURBIDITY-WP** Water Turbidity APHA 2130B (modified)

Turbidity in aqueous matrices is determined by the nephelometric method.

**UV-%TRANS-WP** Water UV Transmittance (Calculated) APHA 5910B

Test method is adapted from APHA Method 5910B. A sample is filtered through a 0.45 um polyethersulfone (PES) filter and its UV Absorbance is measured in a quartz cell at 254 nm. UV Transmittance is calculated from the UV Absorbance result and reported as UV Transmittance per cm. The analysis is carried out without pH adjustment.

\*\*ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody Numbers:

*The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:*

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

## Reference Information

### GLOSSARY OF REPORT TERMS

*Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.*

*mg/kg - milligrams per kilogram based on dry weight of sample*

*mg/kg wwt - milligrams per kilogram based on wet weight of sample*

*mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight*

*mg/L - unit of concentration based on volume, parts per million.*

*< - Less than.*

*D.L. - The reporting limit.*

*N/A - Result not available. Refer to qualifier code and definition for explanation.*

*Test results reported relate only to the samples as received by the laboratory.*

*UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.*

*Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.*

*Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.*





### Quality Control Report

Workorder: L2402808

Report Date: 14-JAN-20

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Client: Town of The Pas - Water Plant  
Town of The Pas Box 870  
The Pas MB R9A 1K8

Contact: RYAN LAGACE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>ALK-TITR-WP</b>								
	Water							
<b>Batch</b>	<b>R4965553</b>							
<b>WG3254996-15</b>	<b>DUP</b>	<b>L2402808-1</b>						
Alkalinity, Total (as CaCO3)		172	172		mg/L	0.2	20	08-JAN-20
<b>WG3254996-14</b>	<b>LCS</b>							
Alkalinity, Total (as CaCO3)			105.6		%		85-115	08-JAN-20
<b>WG3254996-11</b>	<b>MB</b>							
Alkalinity, Total (as CaCO3)			<1.0		mg/L		1	08-JAN-20
<b>BR-L-IC-N-WP</b>								
	Water							
<b>Batch</b>	<b>R4965763</b>							
<b>WG3254447-7</b>	<b>DUP</b>	<b>L2402808-1</b>						
Bromide (Br)		0.015	0.011	J	mg/L	0.004	0.02	08-JAN-20
<b>WG3254447-6</b>	<b>LCS</b>							
Bromide (Br)			104.5		%		85-115	08-JAN-20
<b>WG3254447-5</b>	<b>MB</b>							
Bromide (Br)			<0.010		mg/L		0.01	08-JAN-20
<b>WG3254447-8</b>	<b>MS</b>	<b>L2402808-1</b>						
Bromide (Br)			108.6		%		75-125	08-JAN-20
<b>C-DOC-HTC-WP</b>								
	Water							
<b>Batch</b>	<b>R4965527</b>							
<b>WG3254972-3</b>	<b>DUP</b>	<b>L2401995-1</b>						
Dissolved Organic Carbon		9.63	9.45		mg/L	1.9	20	08-JAN-20
<b>WG3254972-2</b>	<b>LCS</b>							
Dissolved Organic Carbon			97.8		%		80-120	08-JAN-20
<b>WG3254972-1</b>	<b>MB</b>							
Dissolved Organic Carbon			<0.50		mg/L		0.5	08-JAN-20
<b>WG3254972-4</b>	<b>MS</b>	<b>L2402632-1</b>						
Dissolved Organic Carbon			99.9		%		70-130	08-JAN-20
<b>C-TOC-HTC-WP</b>								
	Water							
<b>Batch</b>	<b>R4965548</b>							
<b>WG3254984-3</b>	<b>DUP</b>	<b>L2401995-1</b>						
Total Organic Carbon		9.25	10.7		mg/L	15	20	08-JAN-20
<b>WG3254984-7</b>	<b>DUP</b>	<b>L2403220-1</b>						
Total Organic Carbon		8.93	8.65		mg/L	3.2	20	08-JAN-20
<b>WG3254984-2</b>	<b>LCS</b>							
Total Organic Carbon			98.7		%		80-120	08-JAN-20
<b>WG3254984-6</b>	<b>LCS</b>							
Total Organic Carbon			104.7		%		80-120	08-JAN-20
<b>WG3254984-1</b>	<b>MB</b>							



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Client: Town of The Pas - Water Plant  
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Contact: RYAN LAGACE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>C-TOC-HTC-WP</b>								
	Water							
Batch	R4965548							
<b>WG3254984-1</b>	<b>MB</b>							
Total Organic Carbon			<0.50		mg/L		0.5	08-JAN-20
<b>WG3254984-5</b>	<b>MB</b>							
Total Organic Carbon			<0.50		mg/L		0.5	08-JAN-20
<b>WG3254984-4</b>	<b>MS</b>	<b>L2402220-2</b>						
Total Organic Carbon			103.1		%		70-130	08-JAN-20
<b>CL-L-IC-N-WP</b>								
	Water							
Batch	R4965763							
<b>WG3254447-7</b>	<b>DUP</b>	<b>L2402808-1</b>						
Chloride (Cl)		11.0	11.0		mg/L	0.2	20	08-JAN-20
<b>WG3254447-6</b>	<b>LCS</b>							
Chloride (Cl)			102.7		%		90-110	08-JAN-20
<b>WG3254447-5</b>	<b>MB</b>							
Chloride (Cl)			<0.10		mg/L		0.1	08-JAN-20
<b>WG3254447-8</b>	<b>MS</b>	<b>L2402808-1</b>						
Chloride (Cl)			106.0		%		75-125	08-JAN-20
<b>COLOUR-TRUE-WP</b>								
	Water							
Batch	R4966287							
<b>WG3255786-3</b>	<b>DUP</b>	<b>L2402808-3</b>						
Colour, True		<5.0	<5.0	RPD-NA	CU	N/A	20	08-JAN-20
<b>WG3255786-2</b>	<b>LCS</b>							
Colour, True			96.4		%		85-115	08-JAN-20
<b>WG3255786-1</b>	<b>MB</b>							
Colour, True			<5.0		CU		5	08-JAN-20
<b>EC-WP</b>								
	Water							
Batch	R4965553							
<b>WG3254996-15</b>	<b>DUP</b>	<b>L2402808-1</b>						
Conductivity		466	470		umhos/cm	0.9	10	08-JAN-20
<b>WG3254996-13</b>	<b>LCS</b>							
Conductivity			99.7		%		90-110	08-JAN-20
<b>WG3254996-11</b>	<b>MB</b>							
Conductivity			<1.0		umhos/cm		1	08-JAN-20
<b>F-IC-N-WP</b>								
	Water							
Batch	R4965763							
<b>WG3254447-7</b>	<b>DUP</b>	<b>L2402808-1</b>						
Fluoride (F)		0.149	0.149		mg/L	0.1	20	08-JAN-20
<b>WG3254447-6</b>	<b>LCS</b>							



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Client: Town of The Pas - Water Plant  
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Contact: RYAN LAGACE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>F-IC-N-WP</b>		<b>Water</b>						
<b>Batch</b>	<b>R4965763</b>							
<b>WG3254447-6</b>	<b>LCS</b>							
Fluoride (F)			105.7		%		90-110	08-JAN-20
<b>WG3254447-5</b>	<b>MB</b>							
Fluoride (F)			<0.020		mg/L		0.02	08-JAN-20
<b>WG3254447-8</b>	<b>MS</b>	<b>L2402808-1</b>						
Fluoride (F)			108.6		%		75-125	08-JAN-20
<b>MET-T-CCMS-WP</b>		<b>Water</b>						
<b>Batch</b>	<b>R4966978</b>							
<b>WG3255624-4</b>	<b>DUP</b>	<b>WG3255624-3</b>						
Aluminum (Al)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	10-JAN-20
Antimony (Sb)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	10-JAN-20
Arsenic (As)-Total		0.00018	0.00017		mg/L	7.0	20	10-JAN-20
Barium (Ba)-Total		0.00456	0.00447		mg/L	1.9	20	10-JAN-20
Beryllium (Be)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	10-JAN-20
Bismuth (Bi)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	10-JAN-20
Boron (B)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	10-JAN-20
Cadmium (Cd)-Total		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	10-JAN-20
Calcium (Ca)-Total		7.46	7.56		mg/L	1.4	20	10-JAN-20
Cesium (Cs)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	10-JAN-20
Chromium (Cr)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	10-JAN-20
Cobalt (Co)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	10-JAN-20
Copper (Cu)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	10-JAN-20
Iron (Fe)-Total		0.049	0.051		mg/L	3.5	20	10-JAN-20
Lead (Pb)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	10-JAN-20
Lithium (Li)-Total		0.0028	0.0030		mg/L	5.5	20	10-JAN-20
Magnesium (Mg)-Total		4.99	4.93		mg/L	1.2	20	10-JAN-20
Manganese (Mn)-Total		0.00198	0.00201		mg/L	1.8	20	10-JAN-20
Molybdenum (Mo)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	10-JAN-20
Nickel (Ni)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	10-JAN-20
Potassium (K)-Total		0.457	0.452		mg/L	1.0	20	10-JAN-20
Phosphorus (P)-Total		<0.030	<0.030	RPD-NA	mg/L	N/A	20	10-JAN-20
Rubidium (Rb)-Total		0.00021	<0.00020	RPD-NA	mg/L	N/A	20	10-JAN-20
Selenium (Se)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	10-JAN-20
Silicon (Si)-Total		0.62	0.69		mg/L	9.9	20	10-JAN-20



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Client: Town of The Pas - Water Plant  
Town of The Pas Box 870  
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Contact: RYAN LAGACE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-T-CCMS-WP</b>								
	<b>Water</b>							
<b>Batch</b>	<b>R4966978</b>							
<b>WG3255624-4</b>	<b>DUP</b>	<b>WG3255624-3</b>						
Silver (Ag)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	10-JAN-20
Sodium (Na)-Total		1.04	1.01		mg/L	3.5	20	10-JAN-20
Strontium (Sr)-Total		0.0345	0.0348		mg/L	0.9	20	10-JAN-20
Sulfur (S)-Total		1.05	1.07		mg/L	2.2	20	10-JAN-20
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	10-JAN-20
Thallium (Tl)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	10-JAN-20
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	10-JAN-20
Tin (Sn)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	10-JAN-20
Titanium (Ti)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	10-JAN-20
Tungsten (W)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	10-JAN-20
Uranium (U)-Total		0.000018	0.000018		mg/L	3.4	20	10-JAN-20
Vanadium (V)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	10-JAN-20
Zinc (Zn)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	10-JAN-20
Zirconium (Zr)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	20	10-JAN-20
<b>WG3255624-2</b>	<b>LCS</b>							
Aluminum (Al)-Total			104.0		%		80-120	10-JAN-20
Antimony (Sb)-Total			104.2		%		80-120	10-JAN-20
Arsenic (As)-Total			98.2		%		80-120	10-JAN-20
Barium (Ba)-Total			99.8		%		80-120	10-JAN-20
Beryllium (Be)-Total			103.6		%		80-120	10-JAN-20
Bismuth (Bi)-Total			104.6		%		80-120	10-JAN-20
Boron (B)-Total			99.2		%		80-120	10-JAN-20
Cadmium (Cd)-Total			100.2		%		80-120	10-JAN-20
Calcium (Ca)-Total			101.5		%		80-120	10-JAN-20
Cesium (Cs)-Total			103.9		%		80-120	10-JAN-20
Chromium (Cr)-Total			102.3		%		80-120	10-JAN-20
Cobalt (Co)-Total			99.2		%		80-120	10-JAN-20
Copper (Cu)-Total			101.0		%		80-120	10-JAN-20
Iron (Fe)-Total			90.8		%		80-120	10-JAN-20
Lead (Pb)-Total			104.4		%		80-120	10-JAN-20
Lithium (Li)-Total			106.2		%		80-120	10-JAN-20
Magnesium (Mg)-Total			104.6		%		80-120	10-JAN-20
Manganese (Mn)-Total			100.1		%		80-120	10-JAN-20



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Client: Town of The Pas - Water Plant  
Town of The Pas Box 870  
The Pas MB R9A 1K8

Contact: RYAN LAGACE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-T-CCMS-WP</b>								
	<b>Water</b>							
<b>Batch</b>	<b>R4966978</b>							
<b>WG3255624-2</b>	<b>LCS</b>							
Molybdenum (Mo)-Total			107.0		%		80-120	10-JAN-20
Nickel (Ni)-Total			97.5		%		80-120	10-JAN-20
Potassium (K)-Total			97.1		%		80-120	10-JAN-20
Phosphorus (P)-Total			104.4		%		80-120	10-JAN-20
Rubidium (Rb)-Total			98.0		%		80-120	10-JAN-20
Selenium (Se)-Total			100.1		%		80-120	10-JAN-20
Silicon (Si)-Total			107.2		%		80-120	10-JAN-20
Silver (Ag)-Total			104.1		%		80-120	10-JAN-20
Sodium (Na)-Total			97.7		%		80-120	10-JAN-20
Strontium (Sr)-Total			105.4		%		80-120	10-JAN-20
Sulfur (S)-Total			114.4		%		80-120	10-JAN-20
Tellurium (Te)-Total			101.5		%		80-120	10-JAN-20
Thallium (Tl)-Total			103.1		%		80-120	10-JAN-20
Thorium (Th)-Total			101.4		%		80-120	10-JAN-20
Tin (Sn)-Total			100.3		%		80-120	10-JAN-20
Titanium (Ti)-Total			98.2		%		80-120	10-JAN-20
Tungsten (W)-Total			103.2		%		80-120	10-JAN-20
Uranium (U)-Total			103.4		%		80-120	10-JAN-20
Vanadium (V)-Total			100.3		%		80-120	10-JAN-20
Zinc (Zn)-Total			101.3		%		80-120	10-JAN-20
Zirconium (Zr)-Total			100.6		%		80-120	10-JAN-20
<b>WG3255624-1</b>	<b>MB</b>							
Aluminum (Al)-Total			<0.0030		mg/L		0.003	10-JAN-20
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	10-JAN-20
Arsenic (As)-Total			<0.00010		mg/L		0.0001	10-JAN-20
Barium (Ba)-Total			<0.00010		mg/L		0.0001	10-JAN-20
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	10-JAN-20
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	10-JAN-20
Boron (B)-Total			<0.010		mg/L		0.01	10-JAN-20
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	10-JAN-20
Calcium (Ca)-Total			<0.050		mg/L		0.05	10-JAN-20
Cesium (Cs)-Total			<0.000010		mg/L		0.00001	10-JAN-20
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	10-JAN-20
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	10-JAN-20



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Client: Town of The Pas - Water Plant  
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Contact: RYAN LAGACE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-T-CCMS-WP</b>								
	<b>Water</b>							
<b>Batch</b>	<b>R4966978</b>							
<b>WG3255624-1 MB</b>								
Copper (Cu)-Total			<0.00050		mg/L		0.0005	10-JAN-20
Iron (Fe)-Total			<0.010		mg/L		0.01	10-JAN-20
Lead (Pb)-Total			<0.000050		mg/L		0.00005	10-JAN-20
Lithium (Li)-Total			<0.0010		mg/L		0.001	10-JAN-20
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	10-JAN-20
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	10-JAN-20
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	10-JAN-20
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	10-JAN-20
Potassium (K)-Total			<0.050		mg/L		0.05	10-JAN-20
Phosphorus (P)-Total			<0.030		mg/L		0.03	10-JAN-20
Rubidium (Rb)-Total			<0.00020		mg/L		0.0002	10-JAN-20
Selenium (Se)-Total			<0.000050		mg/L		0.00005	10-JAN-20
Silicon (Si)-Total			<0.10		mg/L		0.1	10-JAN-20
Silver (Ag)-Total			<0.000010		mg/L		0.00001	10-JAN-20
Sodium (Na)-Total			<0.050		mg/L		0.05	10-JAN-20
Strontium (Sr)-Total			<0.00020		mg/L		0.0002	10-JAN-20
Sulfur (S)-Total			<0.50		mg/L		0.5	10-JAN-20
Tellurium (Te)-Total			<0.00020		mg/L		0.0002	10-JAN-20
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	10-JAN-20
Thorium (Th)-Total			<0.00010		mg/L		0.0001	10-JAN-20
Tin (Sn)-Total			<0.00010		mg/L		0.0001	10-JAN-20
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	10-JAN-20
Tungsten (W)-Total			<0.00010		mg/L		0.0001	10-JAN-20
Uranium (U)-Total			<0.000010		mg/L		0.00001	10-JAN-20
Vanadium (V)-Total			<0.00050		mg/L		0.0005	10-JAN-20
Zinc (Zn)-Total			<0.0030		mg/L		0.003	10-JAN-20
Zirconium (Zr)-Total			<0.00020		mg/L		0.0002	10-JAN-20
<b>WG3255624-5 MS</b>		<b>WG3255624-3</b>						
Aluminum (Al)-Total			102.5		%		70-130	10-JAN-20
Antimony (Sb)-Total			108.3		%		70-130	10-JAN-20
Arsenic (As)-Total			99.4		%		70-130	10-JAN-20
Barium (Ba)-Total			99.0		%		70-130	10-JAN-20
Beryllium (Be)-Total			102.9		%		70-130	10-JAN-20
Bismuth (Bi)-Total			104.5		%		70-130	10-JAN-20



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Client: Town of The Pas - Water Plant  
Town of The Pas Box 870  
The Pas MB R9A 1K8

Contact: RYAN LAGACE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-T-CCMS-WP</b>								
	<b>Water</b>							
<b>Batch</b>	<b>R4966978</b>							
<b>WG3255624-5 MS</b>		<b>WG3255624-3</b>						
Boron (B)-Total			106.0		%		70-130	10-JAN-20
Cadmium (Cd)-Total			98.9		%		70-130	10-JAN-20
Calcium (Ca)-Total			N/A	MS-B	%		-	10-JAN-20
Cesium (Cs)-Total			106.6		%		70-130	10-JAN-20
Chromium (Cr)-Total			99.6		%		70-130	10-JAN-20
Cobalt (Co)-Total			98.9		%		70-130	10-JAN-20
Copper (Cu)-Total			97.0		%		70-130	10-JAN-20
Iron (Fe)-Total			99.5		%		70-130	10-JAN-20
Lead (Pb)-Total			105.8		%		70-130	10-JAN-20
Lithium (Li)-Total			104.8		%		70-130	10-JAN-20
Magnesium (Mg)-Total			N/A	MS-B	%		-	10-JAN-20
Manganese (Mn)-Total			99.2		%		70-130	10-JAN-20
Molybdenum (Mo)-Total			111.0		%		70-130	10-JAN-20
Nickel (Ni)-Total			98.6		%		70-130	10-JAN-20
Potassium (K)-Total			96.8		%		70-130	10-JAN-20
Phosphorus (P)-Total			96.9		%		70-130	10-JAN-20
Rubidium (Rb)-Total			98.5		%		70-130	10-JAN-20
Selenium (Se)-Total			97.3		%		70-130	10-JAN-20
Silicon (Si)-Total			96.7		%		70-130	10-JAN-20
Silver (Ag)-Total			106.4		%		70-130	10-JAN-20
Sodium (Na)-Total			98.5		%		70-130	10-JAN-20
Strontium (Sr)-Total			N/A	MS-B	%		-	10-JAN-20
Sulfur (S)-Total			99.8		%		70-130	10-JAN-20
Tellurium (Te)-Total			105.9		%		70-130	10-JAN-20
Thallium (Tl)-Total			105.3		%		70-130	10-JAN-20
Thorium (Th)-Total			105.6		%		70-130	10-JAN-20
Tin (Sn)-Total			98.5		%		70-130	10-JAN-20
Titanium (Ti)-Total			98.5		%		70-130	10-JAN-20
Tungsten (W)-Total			105.3		%		70-130	10-JAN-20
Uranium (U)-Total			106.2		%		70-130	10-JAN-20
Vanadium (V)-Total			97.8		%		70-130	10-JAN-20
Zinc (Zn)-Total			101.7		%		70-130	10-JAN-20
Zirconium (Zr)-Total			106.5		%		70-130	10-JAN-20



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Client: Town of The Pas - Water Plant  
Town of The Pas Box 870  
The Pas MB R9A 1K8

Contact: RYAN LAGACE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>NH3-COL-WP</b>								
	Water							
Batch	R4965993							
<b>WG3254923-27</b>	<b>DUP</b>	<b>L2402634-1</b>						
Ammonia, Total (as N)		0.300	0.310		mg/L	3.3	20	08-JAN-20
<b>WG3254923-26</b>	<b>LCS</b>							
Ammonia, Total (as N)			91.3		%		85-115	08-JAN-20
<b>WG3254923-25</b>	<b>MB</b>							
Ammonia, Total (as N)			<0.010		mg/L		0.01	08-JAN-20
<b>WG3254923-28</b>	<b>MS</b>	<b>L2402634-2</b>						
Ammonia, Total (as N)			91.6		%		75-125	08-JAN-20
<b>NO2-L-IC-N-WP</b>								
	Water							
Batch	R4965763							
<b>WG3254447-7</b>	<b>DUP</b>	<b>L2402808-1</b>						
Nitrite (as N)		0.0011	<0.0010	RPD-NA	mg/L	N/A	20	08-JAN-20
<b>WG3254447-6</b>	<b>LCS</b>							
Nitrite (as N)			103.1		%		90-110	08-JAN-20
<b>WG3254447-5</b>	<b>MB</b>							
Nitrite (as N)			<0.0010		mg/L		0.001	08-JAN-20
<b>WG3254447-8</b>	<b>MS</b>	<b>L2402808-1</b>						
Nitrite (as N)			104.2		%		75-125	08-JAN-20
<b>NO3-L-IC-N-WP</b>								
	Water							
Batch	R4965763							
<b>WG3254447-7</b>	<b>DUP</b>	<b>L2402808-1</b>						
Nitrate (as N)		0.133	0.133		mg/L	0.4	20	08-JAN-20
<b>WG3254447-6</b>	<b>LCS</b>							
Nitrate (as N)			102.6		%		90-110	08-JAN-20
<b>WG3254447-5</b>	<b>MB</b>							
Nitrate (as N)			<0.0050		mg/L		0.005	08-JAN-20
<b>WG3254447-8</b>	<b>MS</b>	<b>L2402808-1</b>						
Nitrate (as N)			106.2		%		75-125	08-JAN-20
<b>PH-WP</b>								
	Water							
Batch	R4965553							
<b>WG3254996-15</b>	<b>DUP</b>	<b>L2402808-1</b>						
pH		8.07	8.10	J	pH units	0.03	0.2	08-JAN-20
<b>WG3254996-12</b>	<b>LCS</b>							
pH			7.36		pH units		7.3-7.5	08-JAN-20
<b>SO4-IC-N-WP</b>								
	Water							





## Quality Control Report

Workorder: L2402808

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Client: Town of The Pas - Water Plant  
 Town of The Pas Box 870  
 The Pas MB R9A 1K8

Contact: RYAN LAGACE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>SO4-IC-N-WP</b>		<b>Water</b>						
<b>Batch</b>	<b>R4965763</b>							
<b>WG3254447-7</b>	<b>DUP</b>	<b>L2402808-1</b>						
Sulfate (SO4)		65.4	65.6		mg/L	0.3	20	08-JAN-20
<b>WG3254447-6</b>	<b>LCS</b>							
Sulfate (SO4)			103.4		%		90-110	08-JAN-20
<b>WG3254447-5</b>	<b>MB</b>							
Sulfate (SO4)			<0.30		mg/L		0.3	08-JAN-20
<b>WG3254447-8</b>	<b>MS</b>	<b>L2402808-1</b>						
Sulfate (SO4)			104.2		%		75-125	08-JAN-20
<b>TDS-WP</b>		<b>Water</b>						
<b>Batch</b>	<b>R4967379</b>							
<b>WG3254301-3</b>	<b>DUP</b>	<b>L2402181-3</b>						
Total Dissolved Solids		1040	1030		mg/L	0.6	20	08-JAN-20
<b>WG3254301-2</b>	<b>LCS</b>							
Total Dissolved Solids			101.8		%		85-115	08-JAN-20
<b>WG3254301-1</b>	<b>MB</b>							
Total Dissolved Solids			<4.0		mg/L		4	08-JAN-20
<b>TURBIDITY-WP</b>		<b>Water</b>						
<b>Batch</b>	<b>R4965547</b>							
<b>WG3254960-3</b>	<b>DUP</b>	<b>L2402447-1</b>						
Turbidity		<0.10	<0.10	RPD-NA	NTU	N/A	15	08-JAN-20
<b>WG3254960-2</b>	<b>LCS</b>							
Turbidity			104.0		%		85-115	08-JAN-20
<b>WG3254960-1</b>	<b>MB</b>							
Turbidity			<0.10		NTU		0.1	08-JAN-20
<b>UV-%TRANS-WP</b>		<b>Water</b>						
<b>Batch</b>	<b>R4967014</b>							
<b>WG3255872-3</b>	<b>DUP</b>	<b>L2403220-2</b>						
Transmittance, UV (254 nm)		85.5	86.1		%T/cm	0.7	20	08-JAN-20
<b>WG3255872-1</b>	<b>IRM</b>	<b>BLANK</b>						
Transmittance, UV (254 nm)			100.0		%		99.5-100.5	08-JAN-20
<b>WG3255872-2</b>	<b>LCS</b>							
Transmittance, UV (254 nm)			95.9		%		85-115	08-JAN-20

# Quality Control Report

Workorder: L2402808

Report Date: 14-JAN-20

Client: Town of The Pas - Water Plant  
Town of The Pas Box 870  
The Pas MB R9A 1K8  
Contact: RYAN LAGACE

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## Legend:

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Limit ALS Control Limit (Data Quality Objectives)  
DUP Duplicate  
RPD Relative Percent Difference  
N/A Not Available  
LCS Laboratory Control Sample  
SRM Standard Reference Material  
MS Matrix Spike  
MSD Matrix Spike Duplicate  
ADE Average Desorption Efficiency  
MB Method Blank  
IRM Internal Reference Material  
CRM Certified Reference Material  
CCV Continuing Calibration Verification  
CVS Calibration Verification Standard  
LCSD Laboratory Control Sample Duplicate

## Sample Parameter Qualifier Definitions:

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Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

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# Quality Control Report

Workorder: L2402808

Report Date: 14-JAN-20

Client: Town of The Pas - Water Plant  
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## Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
<b>Physical Tests</b>							
pH							
	1	06-JAN-20 16:00	08-JAN-20 12:00	0.25	44	hours	EHTR-FM
	3	06-JAN-20 16:00	08-JAN-20 12:00	0.25	44	hours	EHTR-FM

## Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.  
EHTR: Exceeded ALS recommended hold time prior to sample receipt.  
EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.  
EHT: Exceeded ALS recommended hold time prior to analysis.  
Rec. HT: ALS recommended hold time (see units).

Notes\*:  
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.  
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2402808 were received on 07-JAN-20 11:50.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

**Manitoba**Sustainable Development  
Office of Drinking Water  
1007 Century Street, Winnipeg,  
Canada R3H 0W4

L2402808-COFC

in of Custody (COC)  
Manitoba Drinking Water Systems

Regular Service (default):

 Regular Service  
(is 5-7 Days):

Unless otherwise requested

 1 Day, rush / priority  
 2 Day, rush / priority  
 3 Day, rush / priority**Report to Operator (email)**Contact: Ryan Lagace  
Address: Box 870, The Pas, MB R9A1K8  
Phone: (204) 627-1142  
Email: wtp@townofthepas.ca**Report to Owner (email PDF):**Contact: Sam Mirza  
Address: Box 870, The Pas, MB R9A1K8  
Phone: (204) 627-1124  
Email: sam@townofthepas.ca**Email PDF copy to:**DWO: Brian Lundmark  
DWO Address: Box 28 - 59 Elizabeth Dr., Thompson, MB R8  
DWO Phone: (204) 677-6704  
DWO Email: brian.lundmark@gov.mb.ca  
Additional Email: Joern.Muenster@gov.mb.ca**If an update in Owner or Operator contact information is required, please contact your Drinking Water Officer**

<b>Client / Project Information:</b>	<b>Lab:</b>	<b>Account:</b>	<b>Agency Code:</b> 382	<b>Report Type:</b> EMS (Lab-MWS)	<b>Project:</b> DWQ-C
Operation Name:	THE PAS - PWS		Expected Sample Time:	<b>December-2019</b>	
Operation Code:	226.00				
Operation ID:	11490				
Sampled by:	<i>Allen Lusk</i>				

Please record Free &amp; Total Chlorine residuals for Distribution By-product Sampling

**DO NOT COPY or RE-USE this form. Sample Number are unique to the Office of Drinking Water and provided by Drinking Water Officer.**

Sample Number	Station Number	Sample Identification	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Sample Date dd-mmm-yyyy	Sample Time hh:mm	Sample Matrix	Sample Type	MB-CH-PWS-V2013	MB-MET-T-L-MS-WP	# of Containers
1912BL0008	MB05KLD071	The Pas 1 - Raw	/	/	06/01/2020	4:00	6	1	X		4
1912BL0010	MB05KLD073	The Pas 3 - Distribution			11	11	9	1		X	1
1912BL0014	MB05KLD072	The Pas 2 - Treated	3.60	3.80	11	11	10	1	X		4

Failure to complete all portions of this form may delay analysis.

Please fill in this form LEGIBLY.

Sample Matrix: 6-Raw Water, 9-Distributed Water, 10-Treated Water

Sample Type: 1-Grab Sample

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified by the Laboratory.

For ALL other testing, please use Laboratory specific forms.

Relinquished By:	<i>Allen Lusk</i>	Date & Time:	Jan 6 / 2020 4:30 PM	Validated By (lab use only):	Date & Time:
Received By: (lab use only)	<i>CD</i>	Date & Time: (lab use only)	JAN 7 / 2020 11:50	Temperature	Samples Received in Good Condition?
				10.6	Y/N