

Water Treatment Plant Permit to Operate Laboratory Report

2025 - YEAR-END SUMMARY REPORT

Procedures used are based upon recognized Provincial, Federal or U.S. method compendia such as CCME, APHA, EPA. The results relate only to the items tested or sampled. Unless qualified otherwise, all samples were received in acceptable condition. Estimated uncertainties and additional information provided upon request.

Test methods and data are validated by the laboratory's Quality Assurance Program. Analyses are conducted by ISO/IEC 17025 accredited laboratories for parameters listed on their respective scope. Parameters reported herein were analyzed by Sub-Contracted laboratories, except where indicated as analyzed by the City of Saskatoon Water Lab (*COS-WL parameter*).

Interpretation and use of test results are the sole responsibility of the Client/Customer. The retained laboratory is not responsible for the accuracy or any data impacts that result from the information provided by the Client/Customer or their agent.

Results authorized by:

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PHYSICAL CHARACTERISTICS		Drinking Water LIMIT*	Drinking Water	Main Raw Water Intake
Colour, True	CU	15	<5.0	<5.0
Conductivity	µS/cm	none applied	476	492
pH	pH	7.0 to 10.5	8.20	8.31
Solids, Total Dissolved (TDS), calculated	mg/L	500	277	290
Solids, Total Suspended (TSS)	mg/L	none applied	<3.0	4.63
Turbidity	NTU	3	<0.10	2.33

CHEMICAL - General (Major Ions)		Drinking Water LIMIT*	Drinking Water	Main Raw Water Intake
Alkalinity, Total (as CaCO ₃)	mg/L	500	115	156
Alkalinity, Bicarbonate (HCO ₃)	mg/L	none applied	140	187
Alkalinity, Carbonate (CO ₃)	mg/L	none applied	<1.2	4
Chloride (Cl)	mg/L	250	17.0	14.7
Chlorine (Cl ₂), Total (<i>COS-WL parameter</i>)	mg/L	0.5 - 3.0	1.8	
Fluoride (F)	mg/L	1.5	0.69	0.14
Hardness (Total as CaCO ₃), dissolved	mg/L	800	171	196
Calcium (Ca) - Dissolved	mg/L	none applied	37	47
Magnesium (Mg) - Dissolved	mg/L	200	19	19
Potassium (K) - Dissolved	mg/L	none applied	3.4	3.4
Sodium (Na) - Dissolved	mg/L	200	28	28
Sulfate (SO ₄)	mg/L	500	98	79

CHEMICAL - Health and Toxicity		Drinking Water LIMIT*	Drinking Water	Main Raw Water Intake
Aluminum (Al) - Total	mg/L	0.1	0.0265	0.0791
Antimony (Sb) - Total	mg/L	0.006	0.00014	0.00015
Arsenic (As) - Total	mg/L	0.01	0.00052	0.00126
Barium (Ba) - Total	mg/L	1	0.0513	0.0949
Boron (B) - Total	mg/L	5	0.0305	0.029
Cadmium (Cd) - Total	mg/L	0.005	<0.0000050	0.0000111
Chromium (Cr) - Total	mg/L	0.05	<0.00050	<0.00050
Copper (Cu) - Total	mg/L	1	0.0014	0.00092
Cyanide (CN) - Total	mg/L	0.2	<0.0050	<0.0050
Iron (Fe) - Total	mg/L	0.3	<0.010	0.11825
Lead (Pb) - Total	mg/L	0.005	<0.000050	0.0000955
Manganese (Mn) - Total	mg/L	0.05	0.00014	0.016
Mercury (Hg) - Total	mg/L	0.001	<0.0000050	<0.0000050
Selenium (Se) - Total	mg/L	0.01	0.00033	0.00039
Silver (Ag) - Total	mg/L	none applied	<0.000010	<0.000010
Uranium (U) - Total	mg/L	0.02	0.0011	0.0013
Zinc (Zn) - Total	mg/L	5	<0.0030	0.0034

OTHER		Drinking Water LIMIT*	Drinking Water	Main Raw Water Intake
Ammonia, Total (as N)	mg/L	none applied	0.356	0.0200
Nitrate (as N)	mg/L	10	0.0365	0.0417
Nitrate + Nitrite (as N)	mg/L	none applied	<0.0500	<0.0500
Nitrite (as N)	mg/L	1	<0.010	<0.020
Total Kjeldahl Nitrogen (N)	mg/L	none applied	0.557	0.284
Nitrogen, Total	mg/L	none applied	0.593	0.316
Biochemical Oxygen Demand (5-day)	mg/L	none applied		<2.0
Carbon (TOC) - Total Organic	mg/L	none applied	2.50	3.34
Phenols	mg/L	none applied	<0.0010	<0.0010
Phosphate, Ortho-, Dissolved (as P)	mg/L	none applied	<0.050	<0.050
Phosphorus, Total	mg/L	none applied	0.0026	0.0119

MICROORGANISMS		Drinking Water LIMIT*	Drinking Water	Main Raw Water Intake
Chlorophyll a (Plant Pigment)	µg/L	none applied		2.87
<i>E.coli</i> ** (COS-WL parameter)	MPN/100mL	0		33
Total Coliform (COS-WL parameter)	CFU/100mL	0	0	323
Background Non-Coliform (COS-WL parameter)	CFU/100mL	200	0	3898
<i>Giardia</i>	cysts/100 L	3 log inactivation		9.9
<i>Cryptosporidium</i>	oocysts/100 L	3 log inactivation		0.0
Microcystins***	µg/L	1.5	<0.15	

TRihalOMETHANES		Drinking Water LIMIT*	Drinking Water	East Distribution	West Distribution
• Bromodichloromethane	µg/L	none applied	6.5	6.8	6.5
• Bromoform	µg/L	none applied	<1.0	<1.0	<1.0
• Chloroform	µg/L	none applied	23.4	21.9	21.2
• Dibromochloromomethane	µg/L	none applied	1.4	1.5	1.5
Total Trihalomethanes (calc)	µg/L	100	31.1	30.2	29.2

HALOACETIC ACIDS		Drinking Water LIMIT*	Drinking Water	East Distribution	West Distribution
• Bromochloroacetic Acid	µg/L	none applied	1.8	2.0	1.9
• Dibromoacetic Acid	µg/L	none applied	<1.00	<1.00	<1.00
• Dichloroacetic Acid	µg/L	none applied	7.4	8.0	7.1
• Monobromoacetic Acid	µg/L	none applied	<1.00	<1.00	<1.00
• Monochloroacetic Acid	µg/L	none applied	1.0	<1.00	<1.00
• Trichloroacetic Acid	µg/L	none applied	6.3	6.1	5.8
Halo Acetic Acids 5, Total (calc)	µg/L	80	13.8	14.2	13.0

SPECIAL ORGANICS		Drinking Water LIMIT*	Drinking Water	Main Raw Water Intake
Benzene	µg/L	0	<0.50	<0.50
Benzo(a)pyrene	µg/L	0.000	<0.0050	<0.0050
Carbon Tetrachloride	µg/L	0	<0.50	<0.50
Dichlorobenzene, 1,2-	µg/L	0	<0.50	<0.50
Dichlorobenzene, 1,4-	µg/L	0	<0.50	<0.50
Dichloroethane, 1,2-	µg/L	0	<0.50	<0.50
Dichloroethylene, 1,1-	µg/L	0	<0.50	<0.50
Dichloromethane	µg/L	0	<1.0	<1.0
Dichlorophenol, 2,4-	µg/L	0	<0.20	<0.20
Ethylbenzene	µg/L	0	<0.50	<0.50
Monochlorobenzene	µg/L	0	<0.50	<0.50
Perfluorooctane Sulfonate (PFOS)	µg/L	0.00	<0.020	<0.020
Perfluorooctanoic Acid (PFOA)	µg/L	0.00	<0.020	<0.020
Tetrachloroethylene	µg/L	0	<0.50	<0.50
Tetrachlorophenol, 2,3,4,6-	µg/L	0	<0.50	<0.50
Toluene	µg/L	0	<0.50	<0.50
Trichloroethylene	µg/L	0	<0.25	<0.25
Trichlorophenol, 2,4,6-	µg/L	0	<0.20	<0.20
Vinyl Chloride	µg/L	0	<0.50	<0.50
Xylene (Total)	µg/L	0	<0.5	<0.5

RADIOCHEMICALS		Drinking Water LIMIT*	Drinking Water	Main Raw Water Intake
Gross Alpha	Bq/L	0.5	<0.14	<0.20
Gross Beta	Bq/L	1.0	0.16 ± 0.03	0.14 ± 0.03
Cesium-137	Bq/L	10	<0.2	<0.2
Iodine-131	Bq/L	6	<0.1	<0.2
Lead-210	Bq/L	0.2	<0.02	<0.02
Potassium-40		none applied	<4	<2
Radium-226	Bq/L	0.5	<0.005	<0.005
Radon-222	Bq/L	none applied	<3	<3
Strontium-90	Bq/L	5	<0.05	<0.05
Tritium	Bq/L	7000	<40	<40

PESTICIDES and HERBICIDES		Drinking Water LIMIT*	Drinking Water	Main Raw Water Intake
Atrazine	µg/L	0	<0.050	<0.050
Bromoxynil	µg/L	0	<0.0500	<0.0500
Carbofuran	µg/L	0	<0.025	<0.025
Chlorpyrifos	µg/L	0	<0.10	<0.10
Dicamba	µg/L	0	<0.100	<0.100
Dichlorophenoxyacetic Acid (2,4-D)	µg/L	0	<0.0500	<0.0500
Diclofop-methyl	µg/L	0	<0.10	<0.10
Dimethoate	µg/L	0	<0.050	<0.050
Glyphosate	µg/L	0	<1.0	<1.0
Malathion	µg/L	0	<0.025	<0.025
MCPA	µg/L	0	<0.010	<0.010
Pentachlorophenol (PCP)	µg/L	0	<0.50	<0.50
Picloram	µg/L	0	<0.100	<0.100
Trifluralin	µg/L	0	<0.10	<0.10

*Drinking Water Limit: This is the Limit for the parameter specified, as determined by Health Canada and/or the City of Saskatoon *Permit to Operate a Waterworks* issued by the Water Security Agency under the jurisdiction of the Saskatchewan Minister of Environment. Limits may be a MAC (Maximum Acceptable Concentration), Interim or Guideline MAC (MAC has yet to be determined) or AO (Aesthetic Objective - may affect acceptance of water by consumers but are not a health-based limit. Compliance within this range is not mandatory). Further information can be obtained by consulting the Health Canada document *Guidelines for Canadian Drinking Water Quality*.

**Analyzed only if indicated by a Total Coliform sample ≥ 1 cfu/100mL.

***Analyzed May to October only

Symbol of "<" means "less than" and indicates that the analyte was not detected above the stated level.

- END REPORT -