

### **CERTIFICATE OF ANALYSIS**

**REPORTED TO** Stettler, Town of (Alberta)

5031 - 50 Street Stettler, AB T0C 2L0

ATTENTION Chris Saunders WORK ORDER 23G0548

PO NUMBER RECEIVED / TEMP 2023-07-06 08:30 / 13.5°C

PROJECT Distribution System - Biannual Analysis REPORTED 2023-07-28 11:01

PROJECT INFO COC NUMBER 11701

#### Introduction:

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Big Picture Sidekicks

We've Got Chemistry

It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

Ahead of the Curve

Through research, regulation knowledge, and instrumentation, we are your analytical centre for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.



This is a revised report; please refer to Appendix 3 for details.

You know that the sample you collected after

snowshoeing to site, digging 5 meters, and

racing to get it on a plane so you can submit it

to the lab for time sensitive results needed to

make important and expensive decisions

(whew) is VERY important. We know that too.

By engaging our services, you are agreeing to CARO Analytical Service's Standard Terms and Conditions outlined here: https://www.caro.ca/terms-conditions

If you have any questions or concerns, please contact me at rpshyk@caro.ca

Authorized By:

Regan Pshyk Account Manager hell



REPORTED TO PROJECT	Stettler, Town of (All Distribution System	,			WORK ORDER REPORTED	23G0548 2023-07-2	8 11:01
Analyte		Result	Guideline	RL	Units	Analyzed	Qualifier
GT Hydraulics (2	3G0548-01)   Matrix: \	Water   Sampled: 202	23-07-05 10:48				
Acid Herbicides							
2,4-D		< 0.10	MAC = 100	0.10	μg/L	2023-07-14	
MCPA		< 0.02	MAC = 350		μg/L	2023-07-14	
2,4,5-T		< 0.10	N/A		μg/L	2023-07-14	
Dicamba		< 0.10	MAC = 110		μg/L	2023-07-14	
Picloram		< 0.10	MAC = 190		µg/L	2023-07-14	
Dinoseb		< 0.10	N/A		µg/L	2023-07-14	
Anions					r-9· –		
Bromate		< 0.010	MAC = 0.01	0.010	ma/L	2023-07-13	
Chloride		12.2	AO ≤ 250		mg/L	2023-07-07	
Fluoride		0.71	MAC = 1.5		mg/L	2023-07-07	
Nitrate (as N)		0.057	MAC = 10	0.050		2023-07-07	
Nitrite (as N)		< 0.050	MAC = 1	0.050		2023-07-07	
Sulfate		54.7	AO ≤ 500		mg/L	2023-07-07	
Calculated Parame	ters						
Chloramines		0.0800	MAC = 3	0.0400	ma/L	N/A	
Total Trihalometha	anes	0.0796	MAC = 0.1	0.00400		N/A	
Ion Balance		104	N/A		%	N/A	
Hardness, Total (a	ns CaCO3)	192	None Required	0.541		N/A	
Nitrate+Nitrite (as	· · · · · · · · · · · · · · · · · · ·	0.0566	N/A	0.0500		N/A	
Solids, Total Disso	· · · · · · · · · · · · · · · · · · ·	242	AO ≤ 500		mg/L	N/A	
Solids, Total Disso		242	AO ≤ 500		mg/L	2023-07-11	
Chlorinated Pheno		2-72	710 - 000			2020 07 11	
2,4-Dichloropheno	nl	< 0.00020	AO ≤ 0.0003	0.00020	ma/l	2023-07-11	
2,4,6-Trichlorophe		< 0.00050	AO ≤ 0.002	0.00050		2023-07-11	
2,3,4,6-Tetrachlor		< 0.00050	AO ≤ 0.001	0.00050		2023-07-11	
Pentachloropheno	•	< 0.00050	AO ≤ 0.03	0.00050		2023-07-11	
General Parameter		* 0.0000	710 = 0.00	0.00000	9/2	2020 07 11	
Alkalinity, Total (as		145	N/A	2.0	mg/L	2023-07-08	
Bicarbonate (HCC	•	177	N/A		mg/L	2023-07-08	
Carbonate (CO3)	,	< 2.0	N/A		mg/L	2023-07-08	
Hydroxide (OH)		< 2.0	N/A		mg/L	2023-07-08	
Ammonia, Total (a	s N)	0.407	None Required	0.050		2023-07-12	
Carbon, Total Orga		3.36	N/A		mg/L	2023-07-08	
Chlorine, Total	u	0.65	None Required		mg/L	2023-07-00	HT2
Chlorine, Free		0.57	N/A		mg/L	2023-07-12	HT2
Colour, True		< 5.0	AO ≤ 15		CU	2023-07-12	1112
· · · · · · · · · · · · · · · · · · ·		439	N/A		μS/cm	2023-07-07	
Cyanida Total			MAC = 0.2		·		
Cyanide, Total		< 0.0020		0.0020		2023-07-07	
Nitrilotriacetic Acid	1	< 0.20	MAC = 0.4		mg/L	2023-07-08	LITO
pH		7.31	7.0-10.5	0.10	pH units	2023-07-08	HT2



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PROJECT	Distribution System - Biannual Analysis	REPORTED	2023-07-28 11:01

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
GT Hydraulics (23G0548-01)   Matrix: Wa	ater   Sampled: 20	23-07-05 10:48, Cor	ntinued			
General Parameters, Continued						
Sulfide, Total	< 0.020	AO ≤ 0.05	0.020	mg/L	2023-07-10	
Turbidity	0.34	OG < 1	0.10	NTU	2023-07-08	
Microbiological Parameters						
Microcystin, total	< 0.00005	MAC = 0.0015	0.00005	mg/L	2023-07-10	
Miscellaneous Herbicides						
Diquat	< 0.0100	MAC = 0.05	0.0100	ma/L	2023-07-12	HT1
Paraquat	< 0.0050	MAC = 0.007	0.0050		2023-07-12	HT1
Glyphosate	< 0.050	MAC = 0.28	0.050		2023-07-15	
Miscellaneous Organics						
N-Nitrosodimethylamine	< 0.000009	MAC = 0.00004	0.000009	mg/L	2023-07-14	
Perfluorinated Compounds						
Perfluorooctanesulfonate (PFOS)	< 0.200	0.6	0.200	ua/L	2023-07-19	
Perfluorooctanoic acid (PFOA)	< 0.200	0.2	0.200		2023-07-19	
Perfluoropentanoic acid (PFPeA)	< 0.200	N/A	0.200		2023-07-19	
Perfluorobutanesulfonate (PFBS)	< 10.0	N/A		µg/L	2023-07-19	
Perfluorohexanoic acid (PFHxA)	< 0.200	N/A	0.200		2023-07-19	
Perfluoroheptanoic acid (PFHpA)	< 0.200	N/A	0.200		2023-07-19	
Perfluorohexanesulfonate (PFHxS)	< 0.200	N/A	0.200		2023-07-19	
Perfluoroheptane sulfonate (PFHpS)	< 0.200	N/A	0.200		2023-07-19	
Perfluorononanoic acid (PFNA)	< 0.020	N/A	0.020		2023-07-19	
Perfluorodecanoic acid (PFDA)	< 0.200	N/A	0.200		2023-07-19	
Perfluoroundecanoic acid (PFUnA)	< 0.200	N/A	0.200		2023-07-19	
Perfluorodecanesulfonate (PFDS)	< 0.200	N/A	0.200		2023-07-19	
Perfluorododecanoic acid (PFDoA)	< 0.200	N/A	0.200		2023-07-19	
Perfluorotetradecanoic acid (PFTeA)	< 2.00	N/A		µg/L	2023-07-19	RA1
Perfluorooctanesulfonamide (PFOSA)	< 1.00	N/A		µg/L	2023-07-19	
Perfluorotridecanoic acid (PFTrA)	< 1.00	N/A		μg/L	2023-07-19	
Perfluorobutanoic acid (PFBA)	< 25.0	N/A		μg/L	2023-07-19	
6:2 Fluorotelomer sulfonate (6:2FTS)	< 0.200	N/A	0.200		2023-07-19	
8:2 Fluorotelomer sulfonate (8:2FTS)	< 0.200	N/A	0.200		2023-07-19	
Pesticides, Herbicides, and Fungicides						HT1
Atrazine and metabolites	< 0.000500	MAC = 0.005	0.000100	mg/L	2023-07-20	RA1
Azinphos-methyl	< 0.000200	MAC = 0.02	0.000200		2023-07-20	
Bromoxynil	< 0.000200	MAC = 0.03	0.000200		2023-07-20	
Chlorpyrifos	< 0.000010	MAC = 0.09	0.000010		2023-07-20	
Cyanazine	< 0.00100	N/A	0.000100		2023-07-20	RA1
Diazinon	< 0.000020	MAC = 0.02	0.000020		2023-07-20	
Diclofop-methyl	< 0.000100	MAC = 0.009	0.000100		2023-07-20	
Dimethoate	< 0.000200	MAC = 0.02	0.000200		2023-07-20	
Diuron	< 0.000200	MAC = 0.15	0.000200		2023-07-20	



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GT Hydraulics (23G0548-01)   Matrix: Water  Pesticides, Herbicides, and Fungicides, Continu Malathion Methoxychlor Metolachlor Metribuzin Phorate Simazine Terbufos Triallate Trifluralin  Polycyclic Aromatic Hydrocarbons (PAH) Acenaphthene Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b+j)fluoranthene		MAC = 0.29 N/A MAC = 0.05 MAC = 0.08 MAC = 0.002 MAC = 0.01 MAC = 0.001 N/A MAC = 0.045	0.000100 0.00050 0.000100 0.000200 0.000100 0.000200 0.000100 0.000100 0.000200	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	2023-07-20 2023-07-20 2023-07-20 2023-07-20 2023-07-20 2023-07-20 2023-07-20 2023-07-20	HT1  RA1  RA1
Malathion Methoxychlor Metolachlor Metribuzin Phorate Simazine Terbufos Triallate Trifluralin  Polycyclic Aromatic Hydrocarbons (PAH) Acenaphthene Acenaphthylene Anthracene Benzo(a)pyrene Benzo(b+j)fluoranthene	< 0.000100 < 0.000050 < 0.000100 < 0.000800 < 0.000100 < 0.00100 < 0.000100 < 0.000200	N/A  MAC = 0.05  MAC = 0.08  MAC = 0.002  MAC = 0.001  MAC = 0.001  N/A  MAC = 0.045	0.000050 0.000100 0.000200 0.000100 0.000200 0.000100 0.000100	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	2023-07-20 2023-07-20 2023-07-20 2023-07-20 2023-07-20 2023-07-20	RA1
Methoxychlor Metolachlor Metribuzin Phorate Simazine Terbufos Triallate Trifluralin  Polycyclic Aromatic Hydrocarbons (PAH) Acenaphthene Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b+j)fluoranthene	< 0.000050 < 0.000100 < 0.000800 < 0.000100 < 0.00100 < 0.000100 < 0.000100 < 0.000200 < 0.0050	N/A  MAC = 0.05  MAC = 0.08  MAC = 0.002  MAC = 0.001  MAC = 0.001  N/A  MAC = 0.045	0.000050 0.000100 0.000200 0.000100 0.000200 0.000100 0.000100	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	2023-07-20 2023-07-20 2023-07-20 2023-07-20 2023-07-20 2023-07-20	
Metolachlor Metribuzin Phorate Simazine Terbufos Triallate Trifluralin  Polycyclic Aromatic Hydrocarbons (PAH) Acenaphthene Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b+j)fluoranthene	< 0.000100 < 0.000800 < 0.000100 < 0.00100 < 0.000100 < 0.000100 < 0.000200	MAC = 0.05 MAC = 0.08 MAC = 0.002 MAC = 0.01 MAC = 0.001 N/A MAC = 0.045	0.000100 0.000200 0.000100 0.000200 0.000100 0.000100	mg/L mg/L mg/L mg/L mg/L mg/L	2023-07-20 2023-07-20 2023-07-20 2023-07-20 2023-07-20	
Metribuzin Phorate Simazine Terbufos Triallate Trifluralin  Polycyclic Aromatic Hydrocarbons (PAH) Acenaphthene Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b+j)fluoranthene	< 0.000800 < 0.000100 < 0.00100 < 0.000100 < 0.000100 < 0.000200	MAC = 0.08 MAC = 0.002 MAC = 0.01 MAC = 0.001 N/A MAC = 0.045	0.000200 0.000100 0.000200 0.000100 0.000100	mg/L mg/L mg/L mg/L mg/L	2023-07-20 2023-07-20 2023-07-20 2023-07-20	
Phorate Simazine Terbufos Triallate Trifluralin  Polycyclic Aromatic Hydrocarbons (PAH) Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b+j)fluoranthene	< 0.000100 < 0.00100 < 0.000100 < 0.000100 < 0.000200 < 0.050	MAC = 0.002 MAC = 0.01 MAC = 0.001 N/A MAC = 0.045	0.000100 0.000200 0.000100 0.000100	mg/L mg/L mg/L mg/L	2023-07-20 2023-07-20 2023-07-20	
Simazine Terbufos Triallate Trifluralin  Polycyclic Aromatic Hydrocarbons (PAH) Acenaphthene Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b+j)fluoranthene	< 0.00100 < 0.000100 < 0.000100 < 0.000200 < 0.050	MAC = 0.01 MAC = 0.001 N/A MAC = 0.045	0.000200 0.000100 0.000100	mg/L mg/L mg/L	2023-07-20 2023-07-20	RA1
Terbufos Triallate Trifluralin  Polycyclic Aromatic Hydrocarbons (PAH) Acenaphthene Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b+j)fluoranthene	< 0.000100 < 0.000100 < 0.000200 < 0.050	MAC = 0.001 N/A MAC = 0.045	0.000100 0.000100	mg/L mg/L	2023-07-20	RA1
Triallate Trifluralin  Polycyclic Aromatic Hydrocarbons (PAH) Acenaphthene Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b+j)fluoranthene	< 0.000100 < 0.000200 < 0.050	N/A MAC = 0.045	0.000100	mg/L		
Trifluralin  Polycyclic Aromatic Hydrocarbons (PAH)  Acenaphthene Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b+j)fluoranthene	< 0.000200 < 0.050	MAC = 0.045				
Polycyclic Aromatic Hydrocarbons (PAH)  Acenaphthene Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b+j)fluoranthene	< 0.050		0.000200	mg/L		
Acenaphthene Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b+j)fluoranthene		<b>N</b> 1/A			2023-07-20	
Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b+j)fluoranthene		B 1 / A				
Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b+j)fluoranthene	< 0.200	N/A	0.050	μg/L	2023-07-07	
Benz(a)anthracene Benzo(a)pyrene Benzo(b+j)fluoranthene		N/A	0.200		2023-07-07	
Benzo(a)pyrene Benzo(b+j)fluoranthene	< 0.010	N/A	0.010	μg/L	2023-07-07	
Benzo(b+j)fluoranthene	< 0.010	N/A	0.010	μg/L	2023-07-07	
	< 0.010	MAC = 0.04	0.010	μg/L	2023-07-07	
	< 0.050	N/A	0.050		2023-07-07	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050		2023-07-07	
Benzo(k)fluoranthene	< 0.050	N/A	0.050		2023-07-07	
2-Chloronaphthalene	< 0.100	N/A	0.100		2023-07-07	
Chrysene	< 0.050	N/A	0.050		2023-07-07	
Dibenz(a,h)anthracene	< 0.010	N/A	0.010		2023-07-07	
Fluoranthene	< 0.030	N/A	0.030		2023-07-07	
Fluorene	< 0.050	N/A	0.050	· -	2023-07-07	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050		2023-07-07	
1-Methylnaphthalene	< 0.100	N/A	0.100		2023-07-07	
2-Methylnaphthalene	< 0.100	N/A	0.100	· -	2023-07-07	
Naphthalene	< 0.200	N/A	0.200		2023-07-07	
Phenanthrene	< 0.100	N/A	0.100		2023-07-07	
Pyrene	< 0.020	N/A	0.020		2023-07-07	
Quinoline	< 0.050	N/A	0.050		2023-07-07	
Surrogate: Naphthalene-d8	84		50-140		2023-07-07	
Surrogate: Perylene-d12	91		50-140		2023-07-07	
Total Metals						
Aluminum, total	0.0667	OG < 0.1	0.0050	mg/L	2023-07-09	
Antimony, total	< 0.00020	MAC = 0.006	0.00020		2023-07-09	
Arsenic, total	0.00064	MAC = 0.01	0.00050		2023-07-09	
Barium, total	0.101	MAC = 2	0.0050		2023-07-09	
Boron, total	< 0.0500	MAC = 5	0.0500		2023-07-09	
Cadmium, total	< 0.010	MAC = 7	0.010		2023-07-09	
Calcium, total	49.4	None Required		mg/L	2023-07-09	
Chromium, total	< 0.00050	MAC = 0.05	0.00050		2023-07-09	
Copper, total	0.0108	MAC = 2	0.00040			



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					Qualifier
Nater   Sampled: 202	23-07-05 10:48, Con	tinued			
< 0.010	AO ≤ 0.3	0.010	mg/L	2023-07-09	
< 0.00020	MAC = 0.005	0.00020	mg/L	2023-07-09	
16.6	None Required	0.010	mg/L	2023-07-09	
0.00574	MAC = 0.12	0.00020	mg/L	2023-07-09	
< 0.000040	MAC = 0.001	0.000040	mg/L	2023-07-09	HG1
< 0.00050	MAC = 0.05	0.00050	mg/L	2023-07-09	
< 0.050	N/A	0.050	μg/L	2023-07-09	
17.7	AO ≤ 200	0.10	mg/L	2023-07-09	
0.383	MAC = 7	0.0010	mg/L	2023-07-09	
0.228	MAC = 20	0.020	μg/L	2023-07-09	
< 0.0040	AO ≤ 5	0.0040	mg/L	2023-07-09	
< 0.5	MAC = 5	0.5	μg/L	2023-07-10	
2.7	N/A	1.0	μg/L	2023-07-10	
< 1.0	N/A	1.0	μg/L	2023-07-10	
< 0.5	MAC = 2	0.5	μg/L	2023-07-10	
< 1.0	AO ≤ 30	1.0	μg/L	2023-07-10	
< 2.0	N/A			2023-07-10	
77.0	N/A	1.0	μg/L	2023-07-10	
< 1.0	N/A			2023-07-10	
< 0.3	N/A			2023-07-10	
< 1.0	N/A	1.0	μg/L	2023-07-10	
< 0.5	AO ≤ 3	0.5		2023-07-10	
< 1.0	N/A	1.0	μg/L	2023-07-10	
< 1.0	AO ≤ 1	1.0	μg/L	2023-07-10	
< 1.0	N/A	1.0		2023-07-10	
< 1.0	MAC = 5	1.0		2023-07-10	
< 1.0	MAC = 14	1.0		2023-07-10	
< 1.0	N/A	1.0		2023-07-10	
< 1.0	N/A			2023-07-10	
< 3.0	MAC = 50			2023-07-10	
< 1.0	N/A			2023-07-10	
	N/A			2023-07-10	
				2023-07-10	
< 1.0	AO ≤ 15			2023-07-10	
< 1.0	N/A			2023-07-10	
< 0.5				2023-07-10	
< 1.0				2023-07-10	
< 1.0					
	< 0.010 < 0.00020 16.6 0.00574 < 0.000040 < 0.00050 < 0.050 17.7 0.383 0.228 < 0.0040  < 0.5 2.7 < 1.0 < 0.5 < 1.0 < 0.5 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0 < 1.0	<pre>&lt; 0.010</pre>	<ul> <li>&lt; 0.010</li> <li>AO ≤ 0.3</li> <li>0.00020</li> <li>MAC = 0.005</li> <li>0.00020</li> <li>16.6</li> <li>None Required</li> <li>0.010</li> <li>0.00574</li> <li>MAC = 0.12</li> <li>0.00020</li> <li>&lt; 0.000040</li> <li>MAC = 0.05</li> <li>0.00050</li> <li>&lt; 0.050</li> <li>N/A</li> <li>0.050</li> <li>17.7</li> <li>AO ≤ 200</li> <li>0.10</li> <li>0.383</li> <li>MAC = 7</li> <li>0.0010</li> <li>0.228</li> <li>MAC = 20</li> <li>0.020</li> <li>&lt; 0.0040</li> <li>&lt; 0.5</li> <li>MAC = 5</li> <li>0.5</li> <li>2.7</li> <li>N/A</li> <li>1.0</li> <li>&lt; 1.0</li> <li>N/A</li> <li>&lt; 1.0</li> <li>AO ≤ 30</li> <li>&lt; 1.0</li> <li>&lt; 2.0</li> <li>N/A</li> <li>&lt; 1.0</li> <li>AO ≤ 30</li> <li>&lt; 1.0</li> <li>&lt; 2.0</li> <li>N/A</li> <li>&lt; 1.0</li> <li>AO ≤ 30</li> <li>&lt; 1.0</li> <li>&lt; 2.0</li> <li>N/A</li> <li>&lt; 1.0</li> <li>AO ≤ 30</li> <li>&lt; 1.0</li> <li>&lt; 1.0</li> <li>AO ≤ 30</li> <li>AD ≤ 1.0</li> <li>AD ≤ 3</li> <li>AD ≤ 4</li> <li>AD ≤ 4</li> <li>AD ≤ 4</li> <li>AD ≤ 5</li> <li>AD ≤ 4</li> <li>AD ≤ 5</li> <li>AD ≤ 4</li> <li>AD ≤ 5</li> <li>AD ≤ 1</li> <li>AD ≤ 1</li></ul>	<pre>&lt;0.010</pre>	< 0.010



REPORTED TO Stettler, Town of (Alberta)

PROJECT Distribution System - Biannual Analysis

WORK ORDER REPORTED 23G0548

**PRTED** 2023-07-28 11:01

Analyte	Result	Guideline	RL Units	Analyzed Qualifi	er
GT Hydraulics (23G0548-01)   Matrix: Wa	ter   Sampled: 202	3-07-05 10:48, Con	tinued		
Volatile Organic Compounds (VOC), Continu	red				
Trichlorofluoromethane	< 1.0	N/A	1.0 μg/L	2023-07-10	
Vinyl chloride	< 1.0	MAC = 2	1.0 µg/L	2023-07-10	
Xylenes (total)	< 2.0	AO ≤ 20	2.0 μg/L	2023-07-10	
Surrogate: Toluene-d8	119		70-130 %	2023-07-10	
Surrogate: 4-Bromofluorobenzene	94		70-130 %	2023-07-10	

#### Sample Qualifiers:

HG1 Sample bottle and preservation submitted is not suitable for Mercury analysis and analyte stability may be affected.

HT1 The sample was prepared and/or analyzed past the recommended holding time.

HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.

RA1 The Reporting Limit for this sample has been raised due to matrix interference.



## **APPENDIX 1: SUPPORTING INFORMATION**

**REPORTED TO** Stettler, Town of (Alberta)

PROJECT Distribution System - Biannual Analysis

WORK ORDER REPORTED 23G0548 2023-07-28 11:01

Analysis Description	Method Ref.	Technique	Accredited	Location
Acid Herbicides in Water in Water	In-House	N/A	✓	Richmond
Alkalinity in Water	SM 2320 B* (2021)	Titration with H2SO4	✓	Edmonton
Ammonia, Total in Water	SM 4500-NH3 D* (2021)	Ion Selective Electrode	✓	Edmonton
Anions in Water	SM 4110 B (2020)	Ion Chromatography	✓	Edmonton
Bromate in Water	SM 4110 B (2020)	Ion Chromatography	✓	Sublet
Carbon, Total Organic in Water	SM 5310 B (2022)	Combustion, Infrared CO2 Detection	✓	Kelowna
Chlorine, Free in Water	SM 4500-CI G (2021)	Colorimetry (DPD)	✓	Edmontor
Chlorine, Total in Water	SM 4500-CI G (2021)	Colorimetry (DPD)	✓	Edmontor
Colour, True in Water	SM 2120 C (2021)	Spectrophotometry (456 nm)	✓	Edmonton
Conductivity in Water	SM 2510 B (2021)	Conductivity Meter	✓	Edmonton
Cyanide, SAD in Water	ASTM D7511-12	Flow Injection with In-Line UV Digestion and Amperometry	✓	Kelowna
Cyanobacterial Toxins in Water	EPA 546*	Adda Enzyme-Linked Immunosorbent Assay (ELISA)	✓	Sublet
Diquat/Paraquat in Water	EPA 549.2*	Liquid-Solid Extraction and HPLC-DAD	✓	Richmond
Glyphosate in Water	EPA 547*	Direct Aqueous Injection HPLC with Post-Column Derivatization and Fluorescence Detection	✓	Richmond
Hardness in Water	SM 2340 B (2021)	Calculation: 2.497 [diss Ca] + 4.118 [diss Mg]	✓	N/A
Ion Balance in Water	SM 2340 B (2021)	Calculation: 2.497 [diss Ca] + 4.118 [diss Mg]	✓	N/A
Nitrate+Nitrite in Water	SM 2340 B (2021)	Calculation: 2.497 [diss Ca] + 4.118 [diss Mg]	✓	N/A
Nitrilotriacetic Acid in Water	EPA 430.1	Manual Colorimetry (Zinc-Zincon)		Kelowna
N-Nitrosodimethylamine in Water	In-House	N/A	✓	Sublet
Perfluorinated Compounds in Water	ASTM D7979-17	LC-MS/MS	✓	Richmond
Pesticides in Water	EPA 3510C* / EPA 8270D*	Liquid-Liquid DCM Extraction (B/N) / GC-MSD (SIM)	✓	Richmond
pH in Water	SM 4500-H+ B (2021)	Electrometry	✓	Edmontor
Phenols, Chlorinated in Water	EPA 3510C* / EPA 8270D	Liquid-Liquid DCM Extraction (Acidic) / GC-MSD (SIM)	✓	Richmond
Polycyclic Aromatic Hydrocarbons in Water	EPA 3511* / EPA 8270D	Hexane MicroExtraction (Base/Neutral) / GC-MSD (SIM)		Edmontor
Solids, Total Dissolved in Water	SM 1030 E (2021)	SM 1030 E	✓	N/A
Sulfide, Total in Water	SM 4500-S2 D* (2021)	Colorimetry (Methylene Blue)	✓	Edmontor
Total Metals in Water	EPA 200.2 / EPA 6020B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond
Turbidity in Water	SM 2130 B (2020)	Nephelometry	✓	Edmontor
Volatile Organic Compounds in Water	EPA 5030B / EPA 8260D	Purge&Trap / GC-MSD (SIM)		Edmontor



### **APPENDIX 1: SUPPORTING INFORMATION**

**REPORTED TO** Stettler, Town of (Alberta) **WORK ORDER** 23G0548

PROJECT Distribution System - Biannual Analysis REPORTED 2023-07-28 11:01

**Glossary of Terms:** 

RL Reporting Limit (default)

% Percent

Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors

AO Aesthetic Objective

CU Colour Units (referenced against a platinum cobalt standard)

MAC Maximum Acceptable Concentration (health based)

mg/L Milligrams per litre

NTU Nephelometric Turbidity Units
OG Operational Guideline (treated water)
pH units pH < 7 = acidic, ph > 7 = basic

μg/L Micrograms per litre

μS/cm Microsiemens per centimetre
ASTM ASTM International Test Methods

EPA United States Environmental Protection Agency Test Methods

SM Standard Methods for the Examination of Water and Wastewater, American Public Health Association

#### **General Comments:**

The results in this report apply to the received samples analyzed in accordance with the Chain of Custody document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Caro will dispose of all samples within 30 days of sample receipt, unless otherwise agreed. The quality control (QC) data is available upon request

Results in **Bold** indicate values that are above CARO's method reporting limits. Any results that are above regulatory limits are highlighted **red**. Please note that results will only be highlighted red if the regulatory limits are included on the CARO report. Any Bold and/or highlighted results do <u>not</u> take into account method uncertainty. If you would like method uncertainty or regulatory limits to be included on your report, please contact your Account Manager:rpshyk@caro.ca

Please note any regulatory guidelines applied to this report are added as a convenience to the client, at their request, to help provide some initial context to analytical results obtained. Although CARO makes every effort to ensure accuracy of the associated regulatory guideline(s) applied, the guidelines applied cannot be assumed to be correct due to a variety of factors and as such CARO Analytical Services assumes no liability or responsibility for the use of those guidelines to make any decisions. The original source of the regulation should be verified and a review of the guideline(s) should be validated as correct in order to make any decisions arising from the comparison of the analytical data obtained to the relevant regulatory guideline for one's particular circumstances. Further, CARO Analytical Services assumes no liability or responsibility for any loss attributed from the use of these guidelines in any way.





REPORTED TO PROJECT				WORK ORDER REPORTED	23G0548 2023-07-28 11:01
Sample ID	Changed	Change	Analysis	Analyte(s)	
23G0548-01	2023-07-28	Made Reportable	Total Metals by ICPMS	Strontium, total	