CERTIFICATE OF ANALYSIS

REPORTED TO	Stettler, Town of (Alberta) 5031 - 50 Street Stettler, AB T0C 2L0		
ATTENTION	Chris Saunders	**WORK ORDER**	24G0431
PO NUMBER		**RECEIVED / TEMP**	2024-07-04 09:00 / 14.1°C
PROJECT	Distribution System - Biannual Analysis	**REPORTED**	2024-07-18 14:50
PROJECT INFO		**COC NUMBER**	no#

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO/IEC 17025:2017 for specific tests listed in the scope of accreditation approved by CALA.

Big Picture Sidekicks

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.

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.

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 efex@caro.ca

Authorized By:

Echo Fex
Junior Account Manager

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO	Stettler, Town of (Alberta)	**WORK ORDER**	24G0431
PROJECT	Distribution System - Biannual Analysis	**REPORTED**	2024-07-18 14:50

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
GT Hydraulics (24G0431-01) | Matrix: Water | Sampled: 2024-07-03 10:00						
Acid Herbicides						
2,4-D	< 0.10	MAC = 100	0.10	µg/L	2024-07-16	
2,4-DB	< 0.10	N/A	0.10	µg/L	2024-07-16	
Dichlorprop (2,4-DP)	< 0.10	N/A	0.10	µg/L	2024-07-16	
Fenoprop	< 0.10	N/A	0.10	µg/L	2024-07-16	
MCPA	< 0.02	MAC = 350	0.02	µg/L	2024-07-16	
MCPB	< 0.10	N/A	0.10	µg/L	2024-07-16	
2,4,5-T	< 0.10	N/A	0.10	µg/L	2024-07-16	
MCPP	< 0.10	N/A	0.10	µg/L	2024-07-16	
Acifluorfen	< 0.10	N/A	0.10	µg/L	2024-07-16	
Bentazon	< 0.10	N/A	0.10	µg/L	2024-07-16	
Chloramben	< 0.10	N/A	0.10	µg/L	2024-07-16	
Dicamba	< 0.10	MAC = 110	0.10	µg/L	2024-07-16	
Triclopyr	< 0.10	N/A	0.10	µg/L	2024-07-16	
Picloram	< 0.10	MAC = 190	0.10	µg/L	2024-07-16	
Clopyralid	< 0.10	N/A	0.10	µg/L	2024-07-16	
Bromoxynil	< 0.10	MAC = 30	0.10	µg/L	2024-07-16	
Dinoseb	< 0.10	N/A	0.10	µg/L	2024-07-16	
Anions						
Bromate	< 0.005	MAC = 0.01	0.010	mg/L	2024-07-12	
Chloride	**11.7**	AO ≤ 250	0.50	mg/L	2024-07-05	
Fluoride	**0.68**	MAC = 1.5	0.10	mg/L	2024-07-05	
Nitrate (as N)	< 0.050	MAC = 10	0.050	mg/L	2024-07-05	
Nitrite (as N)	< 0.050	MAC = 1	0.050	mg/L	2024-07-05	
Sulfate	**43.5**	AO ≤ 500	1.0	mg/L	2024-07-05	
Calculated Parameters						
Chloramines	**0.450**	MAC = 3	0.0400	mg/L	N/A	
Total Trihalomethanes	**0.0589**	MAC = 0.1	0.00400	mg/L	N/A	
Ion Balance	**101**	N/A		%	N/A	
Hardness, Total (as CaCO3)	**181**	None Required	0.541	mg/L	N/A	
Nitrate+Nitrite (as N)	< 0.0500	N/A	0.0500	mg/L	N/A	
Solids, Total Dissolved	**225**	AO ≤ 500	2.00	mg/L	N/A	
Solids, Total Dissolved	**226**	AO ≤ 500	10	mg/L	2024-07-10	
Carbamates						
Aldicarb	< 0.0010	N/A	0.0010	mg/L	2024-07-08	
Bendiocarb	< 0.0010	N/A	0.0010	mg/L	2024-07-08	
Carbaryl	< 0.0010	MAC = 0.09	0.0010	mg/L	2024-07-08	
Carbofuran	< 0.0010	MAC = 0.09	0.0010	mg/L	2024-07-08	
Chlorinated Phenols						
2-Chlorophenol	< 0.10	N/A	0.10	µg/L	2024-07-10	
3 & 4-Chlorophenol	< 0.10	N/A	0.10	µg/L	2024-07-10	

CARO ANALYTICAL SERVICES

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GT Hydraulics (24G0431-01) | Matrix: Water | Sampled: 2024-07-03 10:00, Continued						
Chlorinated Phenols, Continued						
4-Chloro-3-Methylphenol	< 0.50	N/A	0.50	µg/L	2024-07-10	
2,3-Dichlorophenol	< 0.20	N/A	0.20	µg/L	2024-07-10	
2,4 & 2,5-Dichlorophenol	< 0.20	AO ≤ 0.3	0.20	µg/L	2024-07-10	
2,6-Dichlorophenol	< 0.20	N/A	0.20	µg/L	2024-07-10	
3,4-Dichlorophenol	< 0.20	N/A	0.20	µg/L	2024-07-10	
3,5-Dichlorophenol	< 0.20	N/A	0.20	µg/L	2024-07-10	
2,3,4-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2024-07-10	
2,3,5-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2024-07-10	
2,3,6-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2024-07-10	
2,4,5-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2024-07-10	
2,4,6-Trichlorophenol	< 0.50	AO ≤ 2	0.50	µg/L	2024-07-10	
3,4,5-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2024-07-10	
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	< 0.50	N/A	0.50	µg/L	2024-07-10	
2,3,4,6-Tetrachlorophenol	< 0.50	AO ≤ 1	0.50	µg/L	2024-07-10	
Pentachlorophenol	< 0.50	AO ≤ 30	0.50	µg/L	2024-07-10	
Surrogate: 2,4-Dibromophenol	*87*		*60-130*	%	*2024-07-10*	
Surrogate: 2,4,6-Tribromophenol	*86*		*60-130*	%	*2024-07-10*	
Surrogate: Phenol-d6	*118*		*70-130*	%	*2024-07-10*	
General Parameters						
Alkalinity, Total (as CaCO3)	**149**	N/A	2.0	mg/L	2024-07-08	
Bicarbonate (HCO3)	**182**	N/A	2.0	mg/L	2024-07-08	
Carbonate (CO3)	< 2.0	N/A	2.0	mg/L	2024-07-08	
Hydroxide (OH)	< 2.0	N/A	2.0	mg/L	2024-07-08	
Ammonia, Total (as N)	**0.445**	None Required	0.050	mg/L	2024-07-17	
Carbon, Total Organic	**6.82**	N/A	0.50	mg/L	2024-07-08	
Chlorine, Total	**1.37**	None Required	0.02	mg/L	2024-07-17	HT2
Chlorine, Free	**0.92**	N/A	0.02	mg/L	2024-07-17	HT2
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2024-07-04	
Conductivity (EC)	**408**	N/A	2.0	µS/cm	2024-07-08	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2024-07-06	
Nitrilotriacetic Acid	**0.26**	MAC = 0.4	0.20	mg/L	2024-07-09	
pH	**8.27**	7.0-10.5	0.10	pH units	2024-07-08	HT2
Sulfide, Total	< 0.020	AO ≤ 0.05	0.020	mg/L	2024-07-05	
Turbidity	**0.17**	OG < 1	0.10	NTU	2024-07-05	
Microbiological Parameters						
Microcystin, total	< 0.05	MAC = 1.5	0.05	µg/L	2024-07-11	
Miscellaneous Herbicides						
Diquat	< 0.0100	MAC = 0.05	0.0100	mg/L	2024-07-08	
Paraquat	< 0.0050	MAC = 0.007	0.0050	mg/L	2024-07-08	
Glyphosate	< 0.050	MAC = 0.28	0.050	mg/L	2024-07-10	

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GT Hydraulics (24G0431-01) | Matrix: Water | Sampled: 2024-07-03 10:00, Continued						
Miscellaneous Organics						
N-Nitrosodimethylamine	< 0.000009	MAC = 0.00004	0.000009	mg/L	2024-07-16	
Perfluorinated Compounds						
Perfluorooctanesulfonate (PFOS)	< 0.200	0.6	0.200	µg/L	2024-07-17	
Perfluorooctanoic acid (PFOA)	< 0.200	0.2	0.200	µg/L	2024-07-17	
Perfluoropentanoic acid (PFPeA)	< 0.200	N/A	0.200	µg/L	2024-07-17	
Perfluorobutanesulfonate (PFBS)	< 10.0	N/A	10.0	µg/L	2024-07-17	
Perfluorohexanoic acid (PFHxA)	< 0.200	N/A	0.200	µg/L	2024-07-17	
Perfluoroheptanoic acid (PFHpA)	< 0.200	N/A	0.200	µg/L	2024-07-17	
Perfluorohexanesulfonate (PFHxS)	< 0.200	N/A	0.200	µg/L	2024-07-17	
Perfluoroheptane sulfonate (PFHpS)	< 0.200	N/A	0.200	µg/L	2024-07-17	
Perfluorononanoic acid (PFNA)	< 0.020	N/A	0.020	µg/L	2024-07-17	
Perfluorodecanoic acid (PFDA)	< 0.200	N/A	0.200	µg/L	2024-07-17	
Perfluoroundecanoic acid (PFUnA)	< 0.200	N/A	0.200	µg/L	2024-07-17	
Perfluorodecanesulfonate (PFDS)	< 0.200	N/A	0.200	µg/L	2024-07-17	
Perfluorododecanoic acid (PFDoA)	< 0.200	N/A	0.200	µg/L	2024-07-17	
Perfluorooctanesulfonamide (PFOSA)	< 1.00	N/A	1.00	µg/L	2024-07-17	
Perfluorotridecanoic acid (PFTrA)	< 1.00	N/A	1.00	µg/L	2024-07-17	
Perfluorobutanoic acid (PFBA)	< 25.0	N/A	25.0	µg/L	2024-07-17	
6:2 Fluorotelomer sulfonate (6:2FTS)	< 0.200	N/A	0.200	µg/L	2024-07-17	
8:2 Fluorotelomer sulfonate (8:2FTS)	< 0.200	N/A	0.200	µg/L	2024-07-17	
Pesticides, Herbicides, and Fungicides						
Alachlor	< 0.100	N/A	0.100	µg/L	2024-07-12	
Aldrin	< 0.006	N/A	0.006	µg/L	2024-07-12	
Atrazine and metabolites	< 0.100	MAC = 5	0.100	µg/L	2024-07-12	
Azinphos-methyl	< 0.200	MAC = 20	0.200	µg/L	2024-07-12	
alpha-BHC	< 0.010	N/A	0.010	µg/L	2024-07-12	
beta-BHC	< 0.050	N/A	0.050	µg/L	2024-07-12	
delta-BHC	< 0.050	N/A	0.050	µg/L	2024-07-12	
gamma-BHC (Lindane)	< 0.050	N/A	0.050	µg/L	2024-07-12	
Bromacil	< 0.100	N/A	0.100	µg/L	2024-07-12	
Bromoxynil	< 0.200	MAC = 30	0.200	µg/L	2024-07-12	
Butachlor	< 0.020	N/A	0.020	µg/L	2024-07-12	
Captan	< 0.100	N/A	0.100	µg/L	2024-07-12	
Chlordane (cis + trans)	< 0.050	N/A	0.050	µg/L	2024-07-12	
Chlorothalonil	< 0.050	N/A	0.050	µg/L	2024-07-12	
Chlorpyrifos	< 0.010	MAC = 90	0.010	µg/L	2024-07-12	
Cyanazine	< 0.100	N/A	0.100	µg/L	2024-07-12	
DDT, Total	< 0.010	N/A	0.010	µg/L	2024-07-12	
Deltamethrin	< 0.100	N/A	0.100	µg/L	2024-07-12	
Diazinon	< 0.020	MAC = 20	0.020	µg/L	2024-07-12	
Dichlorvos	< 0.100	N/A	0.100	µg/L	2024-07-12	
Diclofop-methyl	< 0.100	MAC = 9	0.100	µg/L	2024-07-12	

TEST RESULTS

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GT Hydraulics (24G0431-01) | Matrix: Water | Sampled: 2024-07-03 10:00, Continued						
Pesticides, Herbicides, and Fungicides, Continued						
Dieldrin	< 0.010	N/A	0.010	µg/L	2024-07-12	
Dimethoate	< 0.200	MAC = 20	0.200	µg/L	2024-07-12	
Disulfoton	< 0.100	N/A	0.100	µg/L	2024-07-12	
Diuron	< 0.200	MAC = 150	0.200	µg/L	2024-07-12	
Endosulfan I + II	< 0.010	N/A	0.010	µg/L	2024-07-12	
Endosulfan sulfate	< 0.050	N/A	0.050	µg/L	2024-07-12	
Endrin	< 0.020	N/A	0.020	µg/L	2024-07-12	
Endrin aldehyde	< 0.020	N/A	0.020	µg/L	2024-07-12	
Endrin ketone	< 0.020	N/A	0.020	µg/L	2024-07-12	
Fenchlorphos (Ronnel)	< 0.100	N/A	0.100	µg/L	2024-07-12	
Heptachlor	< 0.010	N/A	0.010	µg/L	2024-07-12	
Heptachlor epoxide	< 0.010	N/A	0.010	µg/L	2024-07-12	
Linuron	< 0.050	N/A	0.050	µg/L	2024-07-12	
Malathion	< 0.100	MAC = 290	0.100	µg/L	2024-07-12	
Methoxychlor	< 0.050	N/A	0.050	µg/L	2024-07-12	
Methyl parathion	< 0.100	N/A	0.100	µg/L	2024-07-12	
Metolachlor	< 0.100	MAC = 50	0.100	µg/L	2024-07-12	
Metribuzin	< 0.200	MAC = 80	0.200	µg/L	2024-07-12	
Parathion	< 0.100	N/A	0.100	µg/L	2024-07-12	
Pentachloronitrobenzene	< 0.100	N/A	0.100	µg/L	2024-07-12	
Permethrin	< 0.010	N/A	0.010	µg/L	2024-07-12	
Phorate	< 0.100	MAC = 2	0.100	µg/L	2024-07-12	
Prometon	< 0.300	N/A	0.300	µg/L	2024-07-12	
Prometryne	< 0.100	N/A	0.100	µg/L	2024-07-12	
Simazine	< 0.200	MAC = 10	0.200	µg/L	2024-07-12	
Sulfotep	< 0.100	N/A	0.100	µg/L	2024-07-12	
Tebuthiuron	< 0.200	N/A	0.200	µg/L	2024-07-12	
Temephos (Abate)	< 0.500	N/A	0.500	µg/L	2024-07-12	
Terbufos	< 0.100	MAC = 1	0.100	µg/L	2024-07-12	
Triallate	< 0.100	N/A	0.100	µg/L	2024-07-12	
Trifluralin	< 0.200	MAC = 45	0.200	µg/L	2024-07-12	
Surrogate: Tributyl Phosphate	*93*		*50-140*	%	*2024-07-12*	
Surrogate: 4-chloro-3-nitrobenzotrifluoride	*89*		*50-140*	%	*2024-07-12*	
Polycyclic Aromatic Hydrocarbons (PAH)						
Acenaphthene	< 0.050	N/A	0.050	µg/L	2024-07-04	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2024-07-04	
Acridine	< 0.050	N/A	0.050	µg/L	2024-07-04	
Anthracene	< 0.010	N/A	0.010	µg/L	2024-07-04	
Benz(a)anthracene	< 0.010	N/A	0.010	µg/L	2024-07-04	
Benzo(a)pyrene	< 0.010	MAC = 0.04	0.010	µg/L	2024-07-04	
Benzo(b+j)fluoranthene	< 0.050	N/A	0.050	µg/L	2024-07-04	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2024-07-04	

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Polycyclic Aromatic Hydrocarbons (PAH), Continued						
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2024-07-04	
2-Chloronaphthalene	< 0.100	N/A	0.100	µg/L	2024-07-04	
Chrysene	< 0.050	N/A	0.050	µg/L	2024-07-04	
Dibenz(a,h)anthracene	< 0.010	N/A	0.010	µg/L	2024-07-04	
Fluoranthene	< 0.030	N/A	0.030	µg/L	2024-07-04	
Fluorene	< 0.050	N/A	0.050	µg/L	2024-07-04	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2024-07-04	
1-Methylnaphthalene	< 0.100	N/A	0.100	µg/L	2024-07-04	
2-Methylnaphthalene	< 0.100	N/A	0.100	µg/L	2024-07-04	
Naphthalene	< 0.200	N/A	0.200	µg/L	2024-07-04	
Phenanthrene	< 0.100	N/A	0.100	µg/L	2024-07-04	
Pyrene	< 0.020	N/A	0.020	µg/L	2024-07-04	
Quinoline	< 0.050	N/A	0.050	µg/L	2024-07-04	
Surrogate: Naphthalene-d8	*97*		*50-140*	%	*2024-07-04*	
Surrogate: Perylene-d12	*101*		*50-140*	%	*2024-07-04*	
Total Metals						
Aluminum, total	**0.0477**	OG < 0.1	0.0050	mg/L	2024-07-08	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2024-07-08	
Arsenic, total	< 0.00050	MAC = 0.01	0.00050	mg/L	2024-07-08	
Barium, total	**0.0946**	MAC = 2	0.0050	mg/L	2024-07-08	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2024-07-08	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2024-07-08	
Calcium, total	**48.1**	None Required	0.20	mg/L	2024-07-08	
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2024-07-08	
Copper, total	**0.00854**	MAC = 2	0.00040	mg/L	2024-07-08	
Iron, total	< 0.010	AO ≤ 0.3	0.010	mg/L	2024-07-08	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2024-07-08	
Magnesium, total	**14.7**	None Required	0.010	mg/L	2024-07-08	
Manganese, total	**0.00274**	MAC = 0.12	0.00020	mg/L	2024-07-08	
Mercury, total	< 0.000010	MAC = 0.001	0.000010	mg/L	2024-07-07	
Potassium, total	**2.38**	N/A	0.10	mg/L	2024-07-08	
Selenium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2024-07-08	
Silver, total	< 0.000050	None Required	0.000050	mg/L	2024-07-08	
Sodium, total	**14.1**	AO ≤ 200	0.10	mg/L	2024-07-08	
Strontium, total	**0.333**	MAC = 7	0.0010	mg/L	2024-07-08	
Uranium, total	**0.000074**	MAC = 0.02	0.000020	mg/L	2024-07-08	
Zinc, total	< 0.0040	AO ≤ 5	0.0040	mg/L	2024-07-08	
Volatile Organic Compounds (VOC)						
Benzene	< 0.5	MAC = 5	0.5	µg/L	2024-07-04	
Bromodichloromethane	**2.7**	N/A	1.0	µg/L	2024-07-04	
Bromoform	< 1.0	N/A	1.0	µg/L	2024-07-04	
Carbon tetrachloride	< 0.5	MAC = 2	0.5	µg/L	2024-07-04	

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GT Hydraulics (24G0431-01) | Matrix: Water | Sampled: 2024-07-03 10:00, Continued						
Volatile Organic Compounds (VOC), Continued						
Chlorobenzene	< 1.0	AO ≤ 30	1.0	µg/L	2024-07-04	
Chloroethane	< 2.0	N/A	2.0	µg/L	2024-07-04	
Chloroform	**56.3**	N/A	1.0	µg/L	2024-07-04	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	2024-07-04	
1,2-Dibromoethane	< 0.3	N/A	0.3	µg/L	2024-07-04	
Dibromomethane	< 1.0	N/A	1.0	µg/L	2024-07-04	
1,2-Dichlorobenzene	< 0.5	AO ≤ 3	0.5	µg/L	2024-07-04	
1,3-Dichlorobenzene	< 1.0	N/A	1.0	µg/L	2024-07-04	
1,4-Dichlorobenzene	< 1.0	AO ≤ 1	1.0	µg/L	2024-07-04	
1,2-Dichloroethane	< 1.0	MAC = 5	1.0	µg/L	2024-07-04	
1,1-Dichloroethylene	< 1.0	MAC = 14	1.0	µg/L	2024-07-04	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	2024-07-04	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	2024-07-04	
Dichloromethane	< 3.0	MAC = 50	3.0	µg/L	2024-07-04	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	2024-07-04	
1,3-Dichloropropene (cis + trans)	< 1.0	N/A	1.0	µg/L	2024-07-04	
Ethylbenzene	< 1.0	AO ≤ 1.6	1.0	µg/L	2024-07-04	
Methyl tert-butyl ether	< 1.0	AO ≤ 15	1.0	µg/L	2024-07-04	
Styrene	< 1.0	N/A	1.0	µg/L	2024-07-04	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	2024-07-04	
Tetrachloroethylene	< 1.0	MAC = 10	1.0	µg/L	2024-07-04	
Toluene	< 0.5	MAC = 60	0.5	µg/L	2024-07-04	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	2024-07-04	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	2024-07-04	
Trichloroethylene	< 1.0	MAC = 5	1.0	µg/L	2024-07-04	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	2024-07-04	
Vinyl chloride	< 1.0	MAC = 2	1.0	µg/L	2024-07-04	
Xylenes (total)	< 2.0	AO ≤ 20	2.0	µg/L	2024-07-04	
Surrogate: Toluene-d8	*110*		*70-130*	%	*2024-07-04*	
Surrogate: 4-Bromofluorobenzene	*99*		*70-130*	%	*2024-07-04*	

Sample Qualifiers:

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

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	Stettler, Town of (Alberta)	**WORK ORDER**	24G0431
PROJECT	Distribution System - Biannual Analysis	**REPORTED**	2024-07-18 14:50

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
Carbamates in Water	EPA 531.2*	Direct Aqueous Injection HPLC with Post-Column Derivatization and Fluorescence Detection	✓	Richmond
Carbon, Total Organic in Water	SM 5310 B (2022)	Combustion, Infrared CO2 Detection	✓	Kelowna
Chlorine, Free in Water	SM 4500-Cl G (2021)	Colorimetry (DPD)	✓	Edmonton
Chlorine, Total in Water	SM 4500-Cl G (2021)	Colorimetry (DPD)	✓	Edmonton
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
Mercury, total in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	✓	Richmond
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	✓	Edmonton
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)		Edmonton
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)	✓	Edmonton
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	✓	Edmonton
Volatile Organic Compounds in Water	EPA 5030B / EPA 8260D	Purge&Trap / GC-MSD (SIM)		Edmonton

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	Stettler, Town of (Alberta)	**WORK ORDER**	24G0431
PROJECT	Distribution System - Biannual Analysis	**REPORTED**	2024-07-18 14:50

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:

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