CERTIFICATE OF ANALYSIS

REPORTED TO	Stettler, Town of (Alberta) 5031 - 50 Street Stettler, AB T0C 2L0		
ATTENTION	Grant McQuay	**WORK ORDER**	23J0431
PO NUMBER		**RECEIVED / TEMP**	2023-10-05 08:40 / 9.3°C
PROJECT	THM+HAA	**REPORTED**	2023-10-17 13:06
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 rpshyk@caro.ca

Authorized By:

Regan Pshyk
Account Manager

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO Stettler, Town of (Alberta)
PROJECT THM+HAA

WORK ORDER 23J0431
REPORTED 2023-10-17 13:06

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
GT Hydraulic (23J0431-01) | Matrix: Water | Sampled: 2023-10-04 10:39						
Calculated Parameters						
Total Trihalomethanes	**0.0282**	MAC = 0.1	0.00400	mg/L	N/A	
Haloacetic Acids						
Monochloroacetic Acid	< 0.0020	N/A	0.0020	mg/L	2023-10-10	
Monobromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2023-10-10	
Dichloroacetic Acid	**0.0195**	N/A	0.0020	mg/L	2023-10-10	
Trichloroacetic Acid	**0.0114**	N/A	0.0020	mg/L	2023-10-10	
Dibromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2023-10-10	
Total Haloacetic Acids (HAA5)	**0.0309**	MAC = 0.08	0.00200	mg/L	N/A	
Surrogate: 2-Bromopropionic Acid	*106*		*70-130*	%	*2023-10-10*	
Volatile Organic Compounds (VOC)						
Bromodichloromethane	**0.0024**	N/A	0.0010	mg/L	2023-10-05	
Bromoform	< 0.0010	N/A	0.0010	mg/L	2023-10-05	
Chloroform	**0.0257**	N/A	0.0010	mg/L	2023-10-05	
Dibromochloromethane	< 0.0010	N/A	0.0010	mg/L	2023-10-05	
Surrogate: Toluene-d8	*94*		*70-130*	%	*2023-10-05*	
Surrogate: 4-Bromofluorobenzene	*90*		*70-130*	%	*2023-10-05*	
Town Shop (23J0431-02) | Matrix: Water | Sampled: 2023-10-04 10:18						
Calculated Parameters						
Total Trihalomethanes	**0.0342**	MAC = 0.1	0.00400	mg/L	N/A	
Haloacetic Acids						
Monochloroacetic Acid	< 0.0020	N/A	0.0020	mg/L	2023-10-10	
Monobromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2023-10-10	
Dichloroacetic Acid	**0.0135**	N/A	0.0020	mg/L	2023-10-10	
Trichloroacetic Acid	**0.0089**	N/A	0.0020	mg/L	2023-10-10	
Dibromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2023-10-10	
Total Haloacetic Acids (HAA5)	**0.0225**	MAC = 0.08	0.00200	mg/L	N/A	
Surrogate: 2-Bromopropionic Acid	*102*		*70-130*	%	*2023-10-10*	
Volatile Organic Compounds (VOC)						
Bromodichloromethane	**0.0032**	N/A	0.0010	mg/L	2023-10-05	
Bromoform	< 0.0010	N/A	0.0010	mg/L	2023-10-05	
Chloroform	**0.0309**	N/A	0.0010	mg/L	2023-10-05	
Dibromochloromethane	< 0.0010	N/A	0.0010	mg/L	2023-10-05	
Surrogate: Toluene-d8	*100*		*70-130*	%	*2023-10-05*	
Surrogate: 4-Bromofluorobenzene	*92*		*70-130*	%	*2023-10-05*	
Turtle Club (23J0431-03) | Matrix: Water | Sampled: 2023-10-04 10:28						
Calculated Parameters						

TEST RESULTS

REPORTED TO	Stettler, Town of (Alberta)	**WORK ORDER**	23J0431
PROJECT	THM+HAA	**REPORTED**	2023-10-17 13:06

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Turtle Club (23J0431-03) | Matrix: Water | Sampled: 2023-10-04 10:28, Continued						
Calculated Parameters, Continued						
Total Trihalomethanes	**0.0273**	MAC = 0.1	0.00400	mg/L	N/A	
Haloacetic Acids						
Monochloroacetic Acid	< 0.0020	N/A	0.0020	mg/L	2023-10-10	
Monobromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2023-10-10	
Dichloroacetic Acid	**0.0188**	N/A	0.0020	mg/L	2023-10-10	
Trichloroacetic Acid	**0.0105**	N/A	0.0020	mg/L	2023-10-10	
Dibromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2023-10-10	
Total Haloacetic Acids (HAA5)	**0.0293**	MAC = 0.08	0.00200	mg/L	N/A	
Surrogate: 2-Bromopropionic Acid	*110*		*70-130*	%	*2023-10-10*	
Volatile Organic Compounds (VOC)						
Bromodichloromethane	**0.0025**	N/A	0.0010	mg/L	2023-10-05	
Bromoform	< 0.0010	N/A	0.0010	mg/L	2023-10-05	
Chloroform	**0.0248**	N/A	0.0010	mg/L	2023-10-05	
Dibromochloromethane	< 0.0010	N/A	0.0010	mg/L	2023-10-05	
Surrogate: Toluene-d8	*96*		*70-130*	%	*2023-10-05*	
Surrogate: 4-Bromofluorobenzene	*91*		*70-130*	%	*2023-10-05*	

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	Stettler, Town of (Alberta)	**WORK ORDER**	23J0431
PROJECT	THM+HAA	**REPORTED**	2023-10-17 13:06

Analysis Description	Method Ref.	Technique	Accredited	Location
Haloacetic Acids in Water	EPA 552.3*	Liquid-Liquid Microextraction, Derivatization and GC-ECD	✓	Richmond
Trihalomethanes 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

Glossary of Terms:

RL	Reporting Limit (default)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
MAC	Maximum Acceptable Concentration (health based)
mg/L	Milligrams per litre
EPA	United States Environmental Protection Agency Test Methods

Guidelines Referenced in this Report:

Guidelines for Canadian Drinking Water Quality (Health Canada, September 2022)

Note: In some cases, the values displayed on the report represent the lowest guideline and are to be verified by the end user

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 not 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.