

CERTIFICATE OF ANALYSIS

REPORTED TO Newell Regional Services Corporation
P.O. Box 638
Brooks, AB T1R 1B6

ATTENTION Kole Steinley

PO NUMBER 4785

PROJECT Schedule 4

PROJECT INFO NRSC Winter Analysis 2023

WORK ORDER 23A1652

RECEIVED / TEMP 2023-01-18 08:30 / 9.1°C

REPORTED 2023-02-02 08:32

COC NUMBER 09471

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 rpsyhk@caro.ca

Authorized By:

Regan Pshyk
Account Manager



1-888-311-8846 | www.caro.ca

#110 4011 Viking Way Richmond, BC V6V 2K9 | #102 3677 Highway 97N Kelowna, BC V1X 5C3 | 17225 109 Avenue Edmonton, AB T5S 1H7 |
#108 4475 Wayburne Drive Burnaby, BC V5G 4X4

TEST RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Header #1 (23A1652-01) Matrix: Water Sampled: 2023-01-17 09:20						PRES
Acid Herbicides						
2,4-D	< 0.10	MAC = 100	0.10	µg/L	2023-01-30	
MCPA	< 0.02	MAC = 350	0.02	µg/L	2023-01-30	
2,4,5-T	< 0.10	N/A	0.10	µg/L	2023-01-30	
Dicamba	< 0.10	MAC = 110	0.10	µg/L	2023-01-30	
Picloram	< 0.10	MAC = 190	0.10	µg/L	2023-01-30	
Dinoseb	< 0.10	N/A	0.10	µg/L	2023-01-30	
Anions						
Bromate	< 0.010	MAC = 0.01	0.010	mg/L	2023-01-25	
Chlorate	< 0.50	MAC = 1	0.50	mg/L	2023-01-19	
Chloride	17.6	AO ≤ 250	0.10	mg/L	2023-01-20	
Chlorite	< 0.50	MAC = 1	0.50	mg/L	2023-01-19	
Fluoride	0.12	MAC = 1.5	0.10	mg/L	2023-01-20	
Nitrate (as N)	< 0.010	MAC = 10	0.010	mg/L	2023-01-20	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2023-01-20	
Sulfate	60.8	AO ≤ 500	1.0	mg/L	2023-01-20	
Calculated Parameters						
Chloramines	0.200	MAC = 3	0.0400	mg/L	N/A	
Total Trihalomethanes	0.0315	MAC = 0.1	0.00400	mg/L	N/A	
Ion Balance	170	N/A		mg/L	N/A	
Hardness, Total (as CaCO3)	198	None Required	0.541	mg/L	N/A	
Solids, Total Dissolved	262	AO ≤ 500	10	mg/L	2023-01-25	
Chlorinated Phenols						
2-Chlorophenol	< 0.10	N/A	0.10	µg/L	2023-01-25	
3 & 4-Chlorophenol	< 0.10	N/A	0.10	µg/L	2023-01-25	
4-Chloro-3-Methylphenol	< 0.50	N/A	0.50	µg/L	2023-01-25	
2,3-Dichlorophenol	< 0.20	N/A	0.20	µg/L	2023-01-25	
2,4 & 2,5-Dichlorophenol	< 0.20	AO ≤ 0.3	0.20	µg/L	2023-01-25	
2,6-Dichlorophenol	< 0.20	N/A	0.20	µg/L	2023-01-25	
3,4-Dichlorophenol	< 0.20	N/A	0.20	µg/L	2023-01-25	
3,5-Dichlorophenol	< 0.20	N/A	0.20	µg/L	2023-01-25	
2,3,4-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2023-01-25	
2,3,5-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2023-01-25	
2,3,6-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2023-01-25	
2,4,5-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2023-01-25	
2,4,6-Trichlorophenol	< 0.50	AO ≤ 2	0.50	µg/L	2023-01-25	
3,4,5-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2023-01-25	
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	< 0.50	N/A	0.50	µg/L	2023-01-25	
2,3,4,6-Tetrachlorophenol	< 0.50	AO ≤ 1	0.50	µg/L	2023-01-25	
Pentachlorophenol	< 0.50	AO ≤ 30	0.50	µg/L	2023-01-25	
Surrogate: 2,4-Dibromophenol	83		60-130	%	2023-01-25	
Surrogate: 2,4,6-Tribromophenol	87		60-130	%	2023-01-25	

TEST RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Header #1 (23A1652-01) Matrix: Water Sampled: 2023-01-17 09:20, Continued						PRES
General Parameters						
Alkalinity, Total (as CaCO ₃)	150	N/A	2.0	mg/L	2023-01-23	
Bicarbonate (HCO ₃)	183	N/A	2.0	mg/L	2023-01-23	
Carbonate (CO ₃)	< 2.0	N/A	2.0	mg/L	2023-01-23	
Hydroxide (OH)	< 2.0	N/A	2.0	mg/L	2023-01-23	
Ammonia, Total (as N)	< 0.050	None Required	0.050	mg/L	2023-01-20	
Carbon, Total Organic	2.52	N/A	0.50	mg/L	2023-01-23	
Chlorine, Total	1.83	None Required	0.02	mg/L	2023-01-18	HT2
Chlorine, Free	1.63	N/A	0.02	mg/L	2023-01-18	HT2
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2023-01-19	
Conductivity (EC)	467	N/A	2.0	µS/cm	2023-01-23	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2023-01-19	
Nitritotriacetic Acid	< 0.20	MAC = 0.4	0.20	mg/L	2023-01-19	
pH	7.08	7.0-10.5	0.10	pH units	2023-01-23	HT2
Sulfide, Total	< 0.020	AO ≤ 0.05	0.020	mg/L	2023-01-18	
Turbidity	< 0.10	OG < 1	0.10	NTU	2023-01-19	
Microbiological Parameters						
Microcystin, total	< 0.05	MAC = 1.5	0.05	µg/L	2023-01-20	
Miscellaneous Herbicides						
Glyphosate	< 0.050	MAC = 0.28	0.050	mg/L	2023-01-28	
Miscellaneous Organics						
N-Nitrosodimethylamine	< 0.0004	MAC = 0.00004	0.0004	mg/L	2023-02-01	
Pesticides, Herbicides, and Fungicides						
Alachlor	< 0.100	N/A	0.100	µg/L	2023-01-24	
Aldrin	< 0.006	N/A	0.006	µg/L	2023-01-24	
Atrazine and metabolites	< 0.100	MAC = 5	0.100	µg/L	2023-01-24	
Azinphos-methyl	< 0.200	MAC = 20	0.200	µg/L	2023-01-24	
alpha-BHC	< 0.010	N/A	0.010	µg/L	2023-01-24	
beta-BHC	< 0.050	N/A	0.050	µg/L	2023-01-24	
delta-BHC	< 0.050	N/A	0.050	µg/L	2023-01-24	
gamma-BHC (Lindane)	< 0.050	N/A	0.050	µg/L	2023-01-24	
Bromacil	< 0.100	N/A	0.100	µg/L	2023-01-24	
Bromoxynil	< 0.200	MAC = 30	0.200	µg/L	2023-01-24	
Butachlor	< 0.020	N/A	0.020	µg/L	2023-01-24	
Captan	< 0.100	N/A	0.100	µg/L	2023-01-24	
Chlordane (cis + trans)	< 0.050	N/A	0.050	µg/L	2023-01-24	
Chlorothalonil	< 0.050	N/A	0.050	µg/L	2023-01-24	
Chlorpyrifos	< 0.010	MAC = 90	0.010	µg/L	2023-01-24	
Cyanazine	< 0.100	N/A	0.100	µg/L	2023-01-24	
DDT, Total	< 0.010	N/A	0.010	µg/L	2023-01-24	
Deltamethrin	< 0.100	N/A	0.100	µg/L	2023-01-24	

TEST RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
---------	--------	-----------	----	-------	----------	-----------

Header #1 (23A1652-01) | Matrix: Water | Sampled: 2023-01-17 09:20, Continued

PRES

Pesticides, Herbicides, and Fungicides, Continued

Diazinon	< 0.020	MAC = 20	0.020	µg/L	2023-01-24	
Dichlorvos	< 0.100	N/A	0.100	µg/L	2023-01-24	
Diclofop-methyl	< 0.100	MAC = 9	0.100	µg/L	2023-01-24	
Dieldrin	< 0.010	N/A	0.010	µg/L	2023-01-24	
Dimethoate	< 0.200	MAC = 20	0.200	µg/L	2023-01-24	
Disulfoton	< 0.100	N/A	0.100	µg/L	2023-01-24	
Diuron	< 0.200	MAC = 150	0.200	µg/L	2023-01-24	
Endosulfan I + II	< 0.010	N/A	0.010	µg/L	2023-01-24	
Endosulfan sulfate	< 0.050	N/A	0.050	µg/L	2023-01-24	
Endrin	< 0.020	N/A	0.020	µg/L	2023-01-24	
Endrin aldehyde	< 0.020	N/A	0.020	µg/L	2023-01-24	
Endrin ketone	< 0.020	N/A	0.020	µg/L	2023-01-24	
Fenchlorphos (Ronnell)	< 0.100	N/A	0.100	µg/L	2023-01-24	
Heptachlor	< 0.010	N/A	0.010	µg/L	2023-01-24	
Heptachlor epoxide	< 0.010	N/A	0.010	µg/L	2023-01-24	
Linuron	< 0.050	N/A	0.050	µg/L	2023-01-24	
Malathion	< 0.100	MAC = 290	0.100	µg/L	2023-01-24	
Methoxychlor	< 0.050	N/A	0.050	µg/L	2023-01-24	
Methyl parathion	< 0.100	N/A	0.100	µg/L	2023-01-24	
Metolachlor	< 0.100	MAC = 50	0.100	µg/L	2023-01-24	
Metribuzin	< 0.200	MAC = 80	0.200	µg/L	2023-01-24	
Parathion	< 0.100	N/A	0.100	µg/L	2023-01-24	
Pentachloronitrobenzene	< 0.100	N/A	0.100	µg/L	2023-01-24	
Permethrin	< 0.010	N/A	0.010	µg/L	2023-01-24	
Phorate	< 0.100	MAC = 2	0.100	µg/L	2023-01-24	
Prometon	< 0.300	N/A	0.300	µg/L	2023-01-24	
Prometryne	< 0.100	N/A	0.100	µg/L	2023-01-24	
Simazine	< 0.200	MAC = 10	0.200	µg/L	2023-01-24	
Sulfotep	< 0.100	N/A	0.100	µg/L	2023-01-24	
Tebuthiuron	< 0.200	N/A	0.200	µg/L	2023-01-24	
Temephos (Abate)	< 0.500	N/A	0.500	µg/L	2023-01-24	
Terbufos	< 0.100	MAC = 1	0.100	µg/L	2023-01-24	
Triallate	< 0.100	N/A	0.100	µg/L	2023-01-24	
Trifluralin	< 0.200	MAC = 45	0.200	µg/L	2023-01-24	
Surrogate: Tributyl Phosphate	99		50-140	%	2023-01-24	
Surrogate: 4-chloro-3-nitrobenzotrifluoride	72		50-140	%	2023-01-24	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	N/A	0.050	µg/L	2023-01-24	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2023-01-24	
Anthracene	< 0.010	N/A	0.010	µg/L	2023-01-24	
Benz(a)anthracene	< 0.010	N/A	0.010	µg/L	2023-01-24	
Benzo(a)pyrene	< 0.010	MAC = 0.04	0.010	µg/L	2023-01-24	

TEST RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Header #1 (23A1652-01) Matrix: Water Sampled: 2023-01-17 09:20, Continued						PRES

Polycyclic Aromatic Hydrocarbons (PAH), Continued

Benzo(b+j)fluoranthene	< 0.050	N/A	0.050	µg/L	2023-01-24	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2023-01-24	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2023-01-24	
2-Chloronaphthalene	< 0.100	N/A	0.100	µg/L	2023-01-24	
Chrysene	< 0.050	N/A	0.050	µg/L	2023-01-24	
Dibenz(a,h)anthracene	< 0.010	N/A	0.010	µg/L	2023-01-24	
Fluoranthene	< 0.030	N/A	0.030	µg/L	2023-01-24	
Fluorene	< 0.050	N/A	0.050	µg/L	2023-01-24	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2023-01-24	
1-Methylnaphthalene	< 0.100	N/A	0.100	µg/L	2023-01-24	
2-Methylnaphthalene	< 0.100	N/A	0.100	µg/L	2023-01-24	
Naphthalene	< 0.200	N/A	0.200	µg/L	2023-01-24	
Phenanthrene	< 0.100	N/A	0.100	µg/L	2023-01-24	
Pyrene	< 0.020	N/A	0.020	µg/L	2023-01-24	
Quinoline	< 0.050	N/A	0.050	µg/L	2023-01-24	
Surrogate: Naphthalene-d8	119		50-140	%	2023-01-24	
Surrogate: Perylene-d12	94		50-140	%	2023-01-24	

Total Metals

Aluminum, total	0.0526	OG < 0.1	0.0050	mg/L	2023-01-23	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2023-01-23	
Arsenic, total	0.00116	MAC = 0.01	0.00050	mg/L	2023-01-23	
Barium, total	0.0777	MAC = 2	0.0050	mg/L	2023-01-23	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2023-01-23	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2023-01-23	
Calcium, total	45.1	None Required	0.20	mg/L	2023-01-23	
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2023-01-23	
Copper, total	0.00050	MAC = 2	0.00040	mg/L	2023-01-23	
Iron, total	< 0.010	AO ≤ 0.3	0.010	mg/L	2023-01-23	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2023-01-23	
Magnesium, total	20.8	None Required	0.010	mg/L	2023-01-23	
Manganese, total	0.00071	MAC = 0.12	0.00020	mg/L	2023-01-23	
Mercury, total	< 0.000010	MAC = 0.001	0.000010	mg/L	2023-01-21	
Potassium, total	2.24	N/A	0.10	mg/L	2023-01-23	
Selenium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2023-01-23	
Silver, total	< 0.000050	None Required	0.000050	mg/L	2023-01-23	
Sodium, total	24.3	AO ≤ 200	0.10	mg/L	2023-01-23	
Strontium, total	0.239	MAC = 7	0.0010	mg/L	2023-01-23	
Uranium, total	0.000724	MAC = 0.02	0.000020	mg/L	2023-01-23	
Zinc, total	< 0.0040	AO ≤ 5	0.0040	mg/L	2023-01-23	

Volatile Organic Compounds (VOC)

Benzene	< 0.5	MAC = 5	0.5	µg/L	2023-01-20	
Bromodichloromethane	5.4	N/A	1.0	µg/L	2023-01-20	

TEST RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Header #1 (23A1652-01) Matrix: Water Sampled: 2023-01-17 09:20, Continued						PRES
<i>Volatile Organic Compounds (VOC), Continued</i>						
Bromoform	< 1.0	N/A	1.0	µg/L	2023-01-20	
Carbon tetrachloride	< 0.5	MAC = 2	0.5	µg/L	2023-01-20	
Chlorobenzene	< 1.0	AO ≤ 30	1.0	µg/L	2023-01-20	
Chloroethane	< 2.0	N/A	2.0	µg/L	2023-01-20	
Chloroform	26.2	N/A	1.0	µg/L	2023-01-20	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	2023-01-20	
1,2-Dibromoethane	< 0.3	N/A	0.3	µg/L	2023-01-20	
Dibromomethane	< 1.0	N/A	1.0	µg/L	2023-01-20	
1,2-Dichlorobenzene	< 0.5	AO ≤ 3	0.5	µg/L	2023-01-20	
1,3-Dichlorobenzene	< 1.0	N/A	1.0	µg/L	2023-01-20	
1,4-Dichlorobenzene	< 1.0	AO ≤ 1	1.0	µg/L	2023-01-20	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	2023-01-20	
1,2-Dichloroethane	< 1.0	MAC = 5	1.0	µg/L	2023-01-20	
1,1-Dichloroethylene	< 1.0	MAC = 14	1.0	µg/L	2023-01-20	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	2023-01-20	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	2023-01-20	
Dichloromethane	< 3.0	MAC = 50	3.0	µg/L	2023-01-20	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	2023-01-20	
1,3-Dichloropropene (cis + trans)	< 1.0	N/A	1.0	µg/L	2023-01-20	
Ethylbenzene	< 1.0	AO ≤ 1.6	1.0	µg/L	2023-01-20	
Methyl tert-butyl ether	< 1.0	AO ≤ 15	1.0	µg/L	2023-01-20	
Styrene	< 1.0	N/A	1.0	µg/L	2023-01-20	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	2023-01-20	
Tetrachloroethylene	< 1.0	MAC = 10	1.0	µg/L	2023-01-20	
Toluene	< 0.5	MAC = 60	0.5	µg/L	2023-01-20	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	2023-01-20	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	2023-01-20	
Trichloroethylene	< 1.0	MAC = 5	1.0	µg/L	2023-01-20	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	2023-01-20	
Vinyl chloride	< 1.0	MAC = 2	1.0	µg/L	2023-01-20	
Xylenes (total)	< 2.0	AO ≤ 20	2.0	µg/L	2023-01-20	
Surrogate: Toluene-d8	96		70-130	%	2023-01-20	
Surrogate: 4-Bromofluorobenzene	105		70-130	%	2023-01-20	

Sample Qualifiers:

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

PRES Sample has been preserved for Glyph,Herb, and metals conainers were not submitted, they were preserved in the lab. in the laboratory and the holding time has been extended.

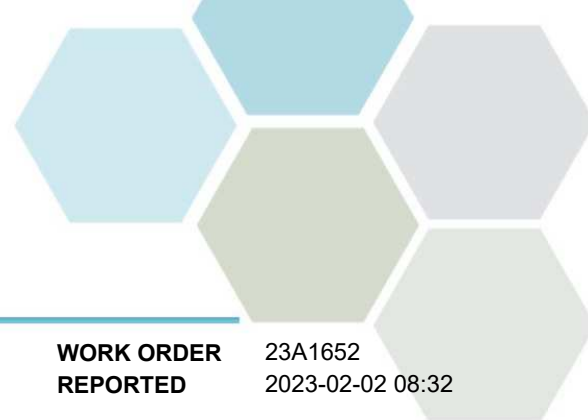
APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

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	✓	Kelowna
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-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
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
Nitritotriacetic Acid in Water	EPA 430.1	Manual Colorimetry (Zinc-Zincon)		Kelowna
N-Nitrosodimethylamine in Water	In-House	N/A	✓	Sublet
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 PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

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
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. Samples will be disposed of 30 days after the test report has been issued or once samples expire, whichever comes first. Longer hold is possible if agreed to in writing.

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.

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

The following section displays the quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with QC samples that ensure your data is of the highest quality. Common QC types include:

- **Method Blank (BLK):** A blank sample that undergoes sample processing identical to that carried out for the test samples. Method blank results are used to assess contamination from the laboratory environment and reagents.
- **Duplicate (Dup):** An additional or second portion of a randomly selected sample in the analytical run carried through the entire analytical process. Duplicates provide a measure of the analytical method's precision (reproducibility).
- **Blank Spike (BS):** A sample of known concentration which undergoes processing identical to that carried out for test samples, also referred to as a laboratory control sample (LCS). Blank spikes provide a measure of the analytical method's accuracy.
- **Matrix Spike (MS):** A second aliquot of sample is fortified with a known concentration of target analytes and carried through the entire analytical process. Matrix spikes evaluate potential matrix effects that may affect the analyte recovery.
- **Reference Material (SRM):** A homogenous material of similar matrix to the samples, certified for the parameter(s) listed. Reference Materials ensure that the analytical process is adequate to achieve acceptable recoveries of the parameter(s) tested.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10-20 samples. For all types of QC, the specified recovery (% Rec) and relative percent difference (RPD) limits are derived from long-term method performance averages and/or prescribed by the reference method.

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
---------	--------	----------	-------------	---------------	-------	-----------	-------	-----------	-----------

Acid Herbicides, Batch B3A2637

Blank (B3A2637-BLK1)			Prepared: 2023-01-27, Analyzed: 2023-01-30						
2,4-D	< 0.10	0.10 µg/L							
MCPA	< 0.02	0.02 µg/L							
2,4,5-T	< 0.10	0.10 µg/L							
Dicamba	< 0.10	0.10 µg/L							
Picloram	< 0.10	0.10 µg/L							
Dinoseb	< 0.10	0.10 µg/L							
LCS (B3A2637-BS1)			Prepared: 2023-01-27, Analyzed: 2023-01-30						
2,4-D	5.59	0.10 µg/L	5.00		112	70-130			
MCPA	5.32	0.02 µg/L	5.00		106	70-130			
2,4,5-T	5.46	0.10 µg/L	4.98		110	70-130			
Dicamba	4.94	0.10 µg/L	5.00		99	70-130			
Picloram	5.75	0.10 µg/L	5.00		115	70-130			
Dinoseb	5.96	0.10 µg/L	5.00		119	70-130			
LCS Dup (B3A2637-BSD1)			Prepared: 2023-01-27, Analyzed: 2023-01-30						
2,4-D	5.72	0.10 µg/L	5.00		114	70-130	2	30	
MCPA	5.42	0.02 µg/L	5.00		108	70-130	2	30	
2,4,5-T	5.52	0.10 µg/L	4.98		111	70-130	1	30	
Dicamba	5.03	0.10 µg/L	5.00		101	70-130	2	30	
Picloram	5.76	0.10 µg/L	5.00		115	70-130	< 1	30	
Dinoseb	5.98	0.10 µg/L	5.00		120	70-130	< 1	30	

Anions, Batch B3A1824

Blank (B3A1824-BLK1)			Prepared: 2023-01-20, Analyzed: 2023-01-20						
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.05	0.05 mg/L							
Nitrate (as N)	< 0.010	0.010 mg/L							
Nitrite (as N)	< 0.010	0.010 mg/L							
Sulfate	< 0.5	0.5 mg/L							
Blank (B3A1824-BLK2)			Prepared: 2023-01-21, Analyzed: 2023-01-21						
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.05	0.05 mg/L							
Nitrate (as N)	< 0.010	0.010 mg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Anions, Batch B3A1824, Continued									
Blank (B3A1824-BLK2), Continued				Prepared: 2023-01-21, Analyzed: 2023-01-21					
Nitrite (as N)	< 0.010	0.010 mg/L							
Sulfate	< 0.5	0.5 mg/L							
LCS (B3A1824-BS1)				Prepared: 2023-01-20, Analyzed: 2023-01-20					
Chloride	15.8	0.10 mg/L	16.0		99	90-110			
Fluoride	4.09	0.05 mg/L	4.00		102	88-108			
Nitrate (as N)	3.97	0.010 mg/L	4.00		99	90-110			
Nitrite (as N)	1.97	0.010 mg/L	2.00		99	85-115			
Sulfate	15.7	0.5 mg/L	16.0		98	90-110			
LCS (B3A1824-BS2)				Prepared: 2023-01-21, Analyzed: 2023-01-21					
Chloride	15.8	0.10 mg/L	16.0		99	90-110			
Fluoride	4.07	0.05 mg/L	4.00		102	88-108			
Nitrate (as N)	3.96	0.010 mg/L	4.00		99	90-110			
Nitrite (as N)	1.96	0.010 mg/L	2.00		98	85-115			
Sulfate	15.7	0.5 mg/L	16.0		98	90-110			
Anions, Batch B3A2187									
Blank (B3A2187-BLK1)				Prepared: 2023-01-19, Analyzed: 2023-01-19					
Chlorate	< 0.50	0.50 mg/L							
Chlorite	< 0.50	0.50 mg/L							
LCS (B3A2187-BS1)				Prepared: 2023-01-19, Analyzed: 2023-01-19					
Chlorate	10.5	0.50 mg/L	10.0		105	89-112			
Chlorite	5.11	0.50 mg/L	5.00		102	80-120			
Chlorinated Phenols, Batch B3A2205									
Blank (B3A2205-BLK1)				Prepared: 2023-01-24, Analyzed: 2023-01-25					
2-Chlorophenol	< 0.10	0.10 µg/L							
3 & 4-Chlorophenol	< 0.10	0.10 µg/L							
4-Chloro-3-Methylphenol	< 0.20	0.20 µg/L							
2,3-Dichlorophenol	< 0.20	0.20 µg/L							
2,4 & 2,5-Dichlorophenol	< 0.20	0.20 µg/L							
2,6-Dichlorophenol	< 0.20	0.20 µg/L							
3,4-Dichlorophenol	< 0.20	0.20 µg/L							
3,5-Dichlorophenol	< 0.20	0.20 µg/L							
2,3,4-Trichlorophenol	< 0.50	0.50 µg/L							
2,3,5-Trichlorophenol	< 0.50	0.50 µg/L							
2,3,6-Trichlorophenol	< 0.50	0.50 µg/L							
2,4,5-Trichlorophenol	< 0.50	0.50 µg/L							
2,4,6-Trichlorophenol	< 0.50	0.50 µg/L							
3,4,5-Trichlorophenol	< 0.50	0.50 µg/L							
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	< 0.50	0.50 µg/L							
2,3,4,6-Tetrachlorophenol	< 0.50	0.50 µg/L							
Pentachlorophenol	< 0.50	0.50 µg/L							
Surrogate: 2,4-Dibromophenol	1.80	µg/L	2.00		90	60-130			
Surrogate: 2,4,6-Tribromophenol	1.80	µg/L	2.02		89	60-130			
LCS (B3A2205-BS1)				Prepared: 2023-01-24, Analyzed: 2023-01-25					
2-Chlorophenol	7.74	0.10 µg/L	10.0		77	60-130			
3 & 4-Chlorophenol	16.4	0.10 µg/L	20.0		82	60-130			
4-Chloro-3-Methylphenol	8.75	0.20 µg/L	10.0		88	60-130			
2,3-Dichlorophenol	7.88	0.20 µg/L	10.0		79	60-130			
2,4 & 2,5-Dichlorophenol	16.8	0.20 µg/L	20.0		84	60-130			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
---------	--------	----------	-------------	---------------	-------	-----------	-------	-----------	-----------

Chlorinated Phenols, Batch B3A2205, Continued

LCS (B3A2205-BS1), Continued

Prepared: 2023-01-24, Analyzed: 2023-01-25

2,6-Dichlorophenol	8.28	0.20 µg/L	10.0		83	60-130			
3,4-Dichlorophenol	8.44	0.20 µg/L	10.0		84	60-130			
3,5-Dichlorophenol	8.70	0.20 µg/L	10.0		87	60-130			
2,3,4-Trichlorophenol	8.50	0.50 µg/L	10.0		85	60-130			
2,3,5-Trichlorophenol	8.91	0.50 µg/L	10.0		89	60-130			
2,3,6-Trichlorophenol	8.45	0.50 µg/L	10.0		84	60-130			
2,4,5-Trichlorophenol	8.85	0.50 µg/L	10.0		88	60-130			
2,4,6-Trichlorophenol	8.82	0.50 µg/L	10.0		88	60-130			
3,4,5-Trichlorophenol	9.32	0.50 µg/L	10.0		93	60-130			
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	18.7	0.50 µg/L	20.0		94	60-130			
2,3,4,6-Tetrachlorophenol	6.68	0.50 µg/L	10.0		67	60-130			
Pentachlorophenol	11.9	0.50 µg/L	10.0		119	60-130			
Surrogate: 2,4-Dibromophenol	1.94	µg/L	2.00		97	60-130			
Surrogate: 2,4,6-Tribromophenol	1.93	µg/L	2.02		96	60-130			

LCS Dup (B3A2205-BSD1)

Prepared: 2023-01-24, Analyzed: 2023-01-25

2-Chlorophenol	7.40	0.10 µg/L	10.0		74	60-130	4	40	
3 & 4-Chlorophenol	16.4	0.10 µg/L	20.0		82	60-130	< 1	40	
4-Chloro-3-Methylphenol	8.83	0.20 µg/L	10.0		88	60-130	< 1	40	
2,3-Dichlorophenol	8.11	0.20 µg/L	10.0		81	60-130	3	40	
2,4 & 2,5-Dichlorophenol	16.5	0.20 µg/L	20.0		83	60-130	2	40	
2,6-Dichlorophenol	8.16	0.20 µg/L	10.0		82	60-130	1	40	
3,4-Dichlorophenol	8.60	0.20 µg/L	10.0		86	60-130	2	40	
3,5-Dichlorophenol	9.95	0.20 µg/L	10.0		100	60-130	13	40	
2,3,4-Trichlorophenol	8.54	0.50 µg/L	10.0		85	60-130	< 1	40	
2,3,5-Trichlorophenol	9.08	0.50 µg/L	10.0		91	60-130	2	40	
2,3,6-Trichlorophenol	8.42	0.50 µg/L	10.0		84	60-130	< 1	40	
2,4,5-Trichlorophenol	9.11	0.50 µg/L	10.0		91	60-130	3	40	
2,4,6-Trichlorophenol	8.96	0.50 µg/L	10.0		90	60-130	2	40	
3,4,5-Trichlorophenol	9.47	0.50 µg/L	10.0		95	60-130	2	40	
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	18.6	0.50 µg/L	20.0		93	60-130	< 1	40	
2,3,4,6-Tetrachlorophenol	6.66	0.50 µg/L	10.0		67	60-130	< 1	40	
Pentachlorophenol	12.1	0.50 µg/L	10.0		121	60-130	2	40	
Surrogate: 2,4-Dibromophenol	1.86	µg/L	2.00		93	60-130			
Surrogate: 2,4,6-Tribromophenol	1.90	µg/L	2.02		94	60-130			

General Parameters, Batch B3A1685

Blank (B3A1685-BLK1)

Prepared: 2023-01-18, Analyzed: 2023-01-18

Chlorine, Total	< 0.02	0.02 mg/L							
Chlorine, Free	< 0.02	0.02 mg/L							

Duplicate (B3A1685-DUP1)

Source: 23A1652-01

Prepared: 2023-01-18, Analyzed: 2023-01-18

Chlorine, Total	1.86	0.02 mg/L		1.83			2	10	
Chlorine, Free	1.61	0.02 mg/L		1.63			1	20	

Reference (B3A1685-SRM1)

Prepared: 2023-01-18, Analyzed: 2023-01-18

Chlorine, Total	1.55	0.02 mg/L		1.59		97	91.2-108.8		
Chlorine, Free	1.55	0.02 mg/L		1.59		97	91.2-108.8		

General Parameters, Batch B3A1688

Blank (B3A1688-BLK1)

Prepared: 2023-01-18, Analyzed: 2023-01-18

Sulfide, Total	< 0.020	0.020 mg/L							
----------------	---------	------------	--	--	--	--	--	--	--

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B3A1688, Continued									
LCS (B3A1688-BS1)				Prepared: 2023-01-18, Analyzed: 2023-01-18					
Sulfide, Total	0.511	0.020 mg/L	0.500		102	80-120			
General Parameters, Batch B3A1711									
Blank (B3A1711-BLK1)				Prepared: 2023-01-19, Analyzed: 2023-01-19					
Cyanide, Total	< 0.0020	0.0020 mg/L							
Blank (B3A1711-BLK2)				Prepared: 2023-01-19, Analyzed: 2023-01-19					
Cyanide, Total	< 0.0020	0.0020 mg/L							
LCS (B3A1711-BS1)				Prepared: 2023-01-19, Analyzed: 2023-01-19					
Cyanide, Total	0.0208	0.0020 mg/L	0.0200		104	82-120			
LCS (B3A1711-BS2)				Prepared: 2023-01-19, Analyzed: 2023-01-19					
Cyanide, Total	0.0222	0.0020 mg/L	0.0200		111	82-120			
LCS Dup (B3A1711-BSD1)				Prepared: 2023-01-19, Analyzed: 2023-01-19					
Cyanide, Total	0.0197	0.0020 mg/L	0.0200		98	82-120	6	10	
LCS Dup (B3A1711-BSD2)				Prepared: 2023-01-19, Analyzed: 2023-01-19					
Cyanide, Total	0.0225	0.0020 mg/L	0.0200		113	82-120	1	10	
General Parameters, Batch B3A1736									
Blank (B3A1736-BLK1)				Prepared: 2023-01-19, Analyzed: 2023-01-19					
Turbidity	< 0.10	0.10 NTU							
LCS (B3A1736-BS1)				Prepared: 2023-01-19, Analyzed: 2023-01-19					
Turbidity	41.7	0.10 NTU	40.0		104	90-110			
General Parameters, Batch B3A1738									
Blank (B3A1738-BLK1)				Prepared: 2023-01-19, Analyzed: 2023-01-19					
Colour, True	< 5.0	5.0 CU							
LCS (B3A1738-BS1)				Prepared: 2023-01-19, Analyzed: 2023-01-19					
Colour, True	26	5.0 CU	25.0		104	90-109			
General Parameters, Batch B3A1759									
Blank (B3A1759-BLK1)				Prepared: 2023-01-19, Analyzed: 2023-01-19					
Nitritotriacetic Acid	< 0.20	0.20 mg/L							
LCS (B3A1759-BS1)				Prepared: 2023-01-19, Analyzed: 2023-01-19					
Nitritotriacetic Acid	0.99	0.20 mg/L	1.00		99	80-120			
LCS Dup (B3A1759-BSD1)				Prepared: 2023-01-19, Analyzed: 2023-01-19					
Nitritotriacetic Acid	1.06	0.20 mg/L	1.00		106	80-120	6	20	
General Parameters, Batch B3A1844									
Blank (B3A1844-BLK1)				Prepared: 2023-01-20, Analyzed: 2023-01-20					
Ammonia, Total (as N)	< 0.050	0.050 mg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B3A1844, Continued									
LCS (B3A1844-BS1)				Prepared: 2023-01-20, Analyzed: 2023-01-20					
Ammonia, Total (as N)	0.211	0.050 mg/L	0.200		106	85-115			
Duplicate (B3A1844-DUP1)				Source: 23A1652-01		Prepared: 2023-01-20, Analyzed: 2023-01-20			
Ammonia, Total (as N)	< 0.050	0.050 mg/L		< 0.050				8	
General Parameters, Batch B3A1850									
Blank (B3A1850-BLK1)				Prepared: 2023-01-23, Analyzed: 2023-01-23					
Carbon, Total Organic	< 0.50	0.50 mg/L							
Blank (B3A1850-BLK2)				Prepared: 2023-01-23, Analyzed: 2023-01-23					
Carbon, Total Organic	< 0.50	0.50 mg/L							
Blank (B3A1850-BLK3)				Prepared: 2023-01-23, Analyzed: 2023-01-23					
Carbon, Total Organic	< 0.50	0.50 mg/L							
Blank (B3A1850-BLK4)				Prepared: 2023-01-23, Analyzed: 2023-01-23					
Carbon, Total Organic	< 0.50	0.50 mg/L							
Blank (B3A1850-BLK5)				Prepared: 2023-01-23, Analyzed: 2023-01-23					
Carbon, Total Organic	< 0.50	0.50 mg/L							
Blank (B3A1850-BLK6)				Prepared: 2023-01-23, Analyzed: 2023-01-23					
Carbon, Total Organic	< 0.50	0.50 mg/L							
LCS (B3A1850-BS1)				Prepared: 2023-01-23, Analyzed: 2023-01-23					
Carbon, Total Organic	9.92	0.50 mg/L	10.0		99	78-116			
LCS (B3A1850-BS2)				Prepared: 2023-01-23, Analyzed: 2023-01-23					
Carbon, Total Organic	9.78	0.50 mg/L	10.0		98	78-116			
LCS (B3A1850-BS3)				Prepared: 2023-01-23, Analyzed: 2023-01-23					
Carbon, Total Organic	9.96	0.50 mg/L	10.0		100	78-116			
LCS (B3A1850-BS4)				Prepared: 2023-01-23, Analyzed: 2023-01-23					
Carbon, Total Organic	10.2	0.50 mg/L	10.0		102	78-116			
LCS (B3A1850-BS5)				Prepared: 2023-01-23, Analyzed: 2023-01-23					
Carbon, Total Organic	10.3	0.50 mg/L	10.0		103	78-116			
LCS (B3A1850-BS6)				Prepared: 2023-01-23, Analyzed: 2023-01-23					
Carbon, Total Organic	10.3	0.50 mg/L	10.0		103	78-116			
General Parameters, Batch B3A2092									
Blank (B3A2092-BLK1)				Prepared: 2023-01-23, Analyzed: 2023-01-23					
Alkalinity, Total (as CaCO ₃)	< 2.0	2.0 mg/L							
Bicarbonate (HCO ₃)	< 2.0	2.0 mg/L							
Carbonate (CO ₃)	< 2.0	2.0 mg/L							
Hydroxide (OH)	< 2.0	2.0 mg/L							
Conductivity (EC)	< 2.0	2.0 µS/cm							
LCS (B3A2092-BS1)				Prepared: 2023-01-23, Analyzed: 2023-01-23					
Alkalinity, Total (as CaCO ₃)	251	2.0 mg/L	250		100	94-108			
Conductivity (EC)	998	2.0 µS/cm	1000		100	95-105			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
---------	--------	----------	-------------	---------------	-------	-----------	-------	-----------	-----------

General Parameters, Batch B3A2092, Continued

Reference (B3A2092-SRM1)				Prepared: 2023-01-23, Analyzed: 2023-01-23					
pH	7.01	0.10 pH units	7.00		100	98-102			

Miscellaneous Herbicides, Batch B3A2546

Blank (B3A2546-BLK1)				Prepared: 2023-01-28, Analyzed: 2023-01-28					
Glyphosate	< 0.050	0.050 mg/L							
LCS (B3A2546-BS1)				Prepared: 2023-01-28, Analyzed: 2023-01-28					
Glyphosate	0.270	0.050 mg/L	0.250		108	70-130			
LCS Dup (B3A2546-BSD1)				Prepared: 2023-01-28, Analyzed: 2023-01-28					
Glyphosate	0.272	0.050 mg/L	0.250		109	70-130	< 1	20	

Pesticides, Herbicides, and Fungicides, Batch B3A2049

Blank (B3A2049-BLK1)				Prepared: 2023-01-22, Analyzed: 2023-01-24					
Alachlor	< 0.100	0.100 µg/L							
Aldrin	< 0.006	0.006 µg/L							
Atrazine and metabolites	< 0.100	0.100 µg/L							
Azinphos-methyl	< 0.200	0.200 µg/L							
alpha-BHC	< 0.010	0.010 µg/L							
beta-BHC	< 0.050	0.050 µg/L							
delta-BHC	< 0.050	0.050 µg/L							
gamma-BHC (Lindane)	< 0.050	0.050 µg/L							
Bromacil	< 0.100	0.100 µg/L							
Bromoxynil	< 0.200	0.200 µg/L							
Butachlor	< 0.020	0.020 µg/L							
Captan	< 0.100	0.100 µg/L							
Chlordane (cis + trans)	< 0.050	0.050 µg/L							
Chlorothalonil	< 0.050	0.050 µg/L							
Chlorpyrifos	< 0.010	0.010 µg/L							
Cyanazine	< 0.100	0.100 µg/L							
DDT, Total	< 0.010	0.010 µg/L							
Deltamethrin	< 0.100	0.100 µg/L							
Diazinon	< 0.020	0.020 µg/L							
Dichlorvos	< 0.100	0.100 µg/L							
Diclofop-methyl	< 0.100	0.100 µg/L							
Dieldrin	< 0.010	0.010 µg/L							
Dimethoate	< 0.200	0.200 µg/L							
Disulfoton	< 0.100	0.100 µg/L							
Diuron	< 0.200	0.200 µg/L							
Endosulfan I + II	< 0.010	0.010 µg/L							
Endosulfan sulfate	< 0.050	0.050 µg/L							
Endrin	< 0.020	0.020 µg/L							
Endrin aldehyde	< 0.020	0.020 µg/L							
Endrin ketone	< 0.020	0.020 µg/L							
Fenchlorphos (Ronnel)	< 0.100	0.100 µg/L							
Heptachlor	< 0.010	0.010 µg/L							
Heptachlor epoxide	< 0.010	0.010 µg/L							
Linuron	< 0.050	0.050 µg/L							
Malathion	< 0.100	0.100 µg/L							
Methoxychlor	< 0.050	0.050 µg/L							
Methyl parathion	< 0.100	0.100 µg/L							
Metolachlor	< 0.100	0.100 µg/L							
Metribuzin	< 0.200	0.200 µg/L							
Parathion	< 0.100	0.100 µg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Pesticides, Herbicides, and Fungicides, Batch B3A2049, Continued									
Blank (B3A2049-BLK1), Continued					Prepared: 2023-01-22, Analyzed: 2023-01-24				
Pentachloronitrobenzene	< 0.100	0.100 µg/L							BLK
Permethrin	0.091	0.010 µg/L							
Phorate	< 0.100	0.100 µg/L							
Prometon	< 0.300	0.300 µg/L							
Prometryne	< 0.100	0.100 µg/L							
Simazine	< 0.200	0.200 µg/L							
Sulfotep	< 0.100	0.100 µg/L							
Tebuthiuron	< 0.200	0.200 µg/L							
Temephos (Abate)	< 0.500	0.500 µg/L							
Terbufos	< 0.100	0.100 µg/L							
Triallate	< 0.100	0.100 µg/L							
Trifluralin	< 0.200	0.200 µg/L							
Surrogate: Tributyl Phosphate	1.11	µg/L	0.998		111	50-140			
Surrogate: 4-chloro-3-nitrobenzotrifluoride	0.729	µg/L	1.00		73	50-140			
LCS (B3A2049-BS1)					Prepared: 2023-01-22, Analyzed: 2023-01-24				
Alachlor	0.743	0.100 µg/L	0.768		97	50-140			SPK
Aldrin	0.618	0.006 µg/L	1.00		62	50-140			
Atrazine	0.623	0.100 µg/L	0.768		81	50-140			
Atrazine-desethyl	0.487	0.100 µg/L	1.03		47	50-140			
Azinphos-methyl	1.14	0.200 µg/L	0.981		116	50-140			
alpha-BHC	0.834	0.010 µg/L	1.01		83	50-140			
beta-BHC	0.740	0.050 µg/L	1.01		73	50-140			
delta-BHC	0.750	0.050 µg/L	1.00		75	50-140			
gamma-BHC (Lindane)	0.773	0.050 µg/L	1.00		77	50-140			
Bromacil	0.648	0.100 µg/L	0.768		84	50-140			
Bromoxynil	0.781	0.200 µg/L	0.978		80	50-140			
Butachlor	0.935	0.020 µg/L	0.768		122	50-140			
Captan	0.820	0.100 µg/L	0.996		82	50-140			
Chlordane (cis + trans)	1.75	0.050 µg/L	2.01		87	50-140			
Chlorothalonil	0.842	0.050 µg/L	1.01		83	50-140			
Chlorpyrifos	0.861	0.010 µg/L	1.00		86	50-140			
Cyanazine	0.626	0.100 µg/L	0.768		82	50-140			
DDT, Total	5.52	0.010 µg/L	5.97		92	50-140			
Deltamethrin	10.8	0.100 µg/L	11.3		95	50-140			
Diazinon	0.916	0.020 µg/L	1.00		92	50-140			
Dichlorvos	0.855	0.100 µg/L	1.09		78	50-140			
Diclofop-methyl	1.02	0.100 µg/L	1.02		100	50-140			
Dieldrin	0.949	0.010 µg/L	1.00		95	50-140			
Dimethoate	0.694	0.200 µg/L	0.990		70	50-140			
Disulfoton	0.788	0.100 µg/L	1.02		77	50-140			
Diuron	0.887	0.200 µg/L	1.06		84	50-140			
Endosulfan I + II	1.83	0.010 µg/L	2.01		91	50-140			
Endosulfan sulfate	0.930	0.050 µg/L	1.01		92	50-140			
Endrin	0.998	0.020 µg/L	1.01		99	50-140			
Endrin aldehyde	0.981	0.020 µg/L	1.00		98	50-140			
Endrin ketone	0.793	0.020 µg/L	1.01		78	50-140			
Fenchlorphos (Ronnel)	0.873	0.100 µg/L	1.03		85	50-140			
Heptachlor	0.902	0.010 µg/L	1.01		89	50-140			
Heptachlor epoxide	0.869	0.010 µg/L	1.01		86	50-140			
Linuron	0.999	0.050 µg/L	1.07		93	50-140			
Malathion	1.00	0.100 µg/L	1.00		100	50-140			
Methoxychlor	0.988	0.050 µg/L	1.01		98	50-140			
Methyl parathion	1.00	0.100 µg/L	0.997		101	50-140			
Metolachlor	0.765	0.100 µg/L	0.760		101	50-140			
Metribuzin	0.632	0.200 µg/L	0.760		83	50-140			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Pesticides, Herbicides, and Fungicides, Batch B3A2049, Continued									
LCS (B3A2049-BS1), Continued					Prepared: 2023-01-22, Analyzed: 2023-01-24				
Parathion	1.07	0.100 µg/L	0.999		107	50-140			
Pentachloronitrobenzene	0.897	0.100 µg/L	0.989		91	50-140			
Permethrin	1.39	0.010 µg/L	1.04		134	50-140			
Phorate	0.790	0.100 µg/L	1.00		79	50-140			
Prometon	< 0.300	0.300 µg/L	0.760		22	50-140			SPK
Prometryne	0.291	0.100 µg/L	0.760		38	50-140			SPK
Simazine	0.520	0.200 µg/L	0.768		68	50-140			
Sulfotep	1.01	0.100 µg/L	1.04		98	50-140			
Tebuthiuron	0.748	0.200 µg/L	0.768		97	50-140			
Temephos (Abate)	12.7	0.500 µg/L	10.5		121	50-140			
Terbufos	0.989	0.100 µg/L	0.994		100	50-140			
Triallate	0.845	0.100 µg/L	1.01		84	50-140			
Trifluralin	0.859	0.200 µg/L	0.760		113	50-140			
Surrogate: Tributyl Phosphate	1.12	µg/L	0.998		112	50-140			
Surrogate: 4-chloro-3-nitrobenzotrifluoride	0.777	µg/L	1.00		78	50-140			
LCS Dup (B3A2049-BS1)					Prepared: 2023-01-22, Analyzed: 2023-01-24				
Alachlor	0.710	0.100 µg/L	0.768		92	50-140	5	30	
Aldrin	0.655	0.006 µg/L	1.00		66	50-140	6	30	
Atrazine	0.576	0.100 µg/L	0.768		75	50-140	8	30	
Atrazine-desethyl	0.444	0.100 µg/L	1.03		43	50-140	9	30	SPK
Azinphos-methyl	1.06	0.200 µg/L	0.981		108	50-140	7	30	
alpha-BHC	0.811	0.010 µg/L	1.01		80	50-140	3	30	
beta-BHC	0.719	0.050 µg/L	1.01		71	50-140	3	30	
delta-BHC	0.730	0.050 µg/L	1.00		73	50-140	3	30	
gamma-BHC (Lindane)	0.728	0.050 µg/L	1.00		73	50-140	6	30	
Bromacil	0.520	0.100 µg/L	0.768		68	50-140	22	30	
Bromoxynil	0.672	0.200 µg/L	0.978		69	50-140	15	30	
Butachlor	0.926	0.020 µg/L	0.768		121	50-140	1	30	
Captan	0.794	0.100 µg/L	0.996		80	50-140	3	30	
Chlordane (cis + trans)	1.78	0.050 µg/L	2.01		88	50-140	2	30	
Chlorothalonil	0.812	0.050 µg/L	1.01		80	50-140	4	30	
Chlorpyrifos	0.847	0.010 µg/L	1.00		85	50-140	2	30	
Cyanazine	0.599	0.100 µg/L	0.768		78	50-140	4	30	
DDT, Total	5.51	0.010 µg/L	5.97		92	50-140	< 1	30	
Deltamethrin	10.9	0.100 µg/L	11.3		96	50-140	< 1	30	
Diazinon	0.978	0.020 µg/L	1.00		98	50-140	7	30	
Dichlorvos	0.720	0.100 µg/L	1.09		66	50-140	17	30	
Diclofop-methyl	1.01	0.100 µg/L	1.02		99	50-140	< 1	30	
Dieldrin	0.939	0.010 µg/L	1.00		94	50-140	1	30	
Dimethoate	0.595	0.200 µg/L	0.990		60	50-140	15	30	
Disulfoton	0.786	0.100 µg/L	1.02		77	50-140	< 1	30	
Diuron	0.759	0.200 µg/L	1.06		72	50-140	16	30	
Endosulfan I + II	1.80	0.010 µg/L	2.01		89	50-140	2	30	
Endosulfan sulfate	0.927	0.050 µg/L	1.01		92	50-140	< 1	30	
Endrin	0.986	0.020 µg/L	1.01		98	50-140	1	30	
Endrin aldehyde	0.482	0.020 µg/L	1.00		48	50-140	68	30	RPD, SPK
Endrin ketone	0.787	0.020 µg/L	1.01		78	50-140	< 1	30	
Fenchlorphos (Ronnell)	0.903	0.100 µg/L	1.03		88	50-140	3	30	
Heptachlor	0.895	0.010 µg/L	1.01		89	50-140	< 1	30	
Heptachlor epoxide	0.879	0.010 µg/L	1.01		87	50-140	1	30	
Linuron	0.887	0.050 µg/L	1.07		83	50-140	12	30	
Malathion	0.991	0.100 µg/L	1.00		99	50-140	1	30	
Methoxychlor	0.984	0.050 µg/L	1.01		97	50-140	< 1	30	
Methyl parathion	0.953	0.100 µg/L	0.997		96	50-140	5	30	
Metolachlor	0.735	0.100 µg/L	0.760		97	50-140	4	30	

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Pesticides, Herbicides, and Fungicides, Batch B3A2049, Continued									
LCS Dup (B3A2049-BSD1), Continued				Prepared: 2023-01-22, Analyzed: 2023-01-24					
Metribuzin	0.608	0.200 µg/L	0.760		80	50-140	4	30	
Parathion	1.01	0.100 µg/L	0.999		101	50-140	6	30	
Pentachloronitrobenzene	0.895	0.100 µg/L	0.989		91	50-140	< 1	30	
Permethrin	1.36	0.010 µg/L	1.04		130	50-140	2	30	
Phorate	0.812	0.100 µg/L	1.00		81	50-140	3	30	
Prometon	0.651	0.300 µg/L	0.760		86	50-140	117	30	RPD
Prometryne	0.603	0.100 µg/L	0.760		79	50-140	70	30	RPD
Simazine	0.487	0.200 µg/L	0.768		63	50-140	6	30	
Sulfotep	1.01	0.100 µg/L	1.04		97	50-140	< 1	30	
Tebuthiuron	0.617	0.200 µg/L	0.768		80	50-140	19	30	
Temephos (Abate)	12.8	0.500 µg/L	10.5		122	50-140	< 1	30	
Terbufos	0.982	0.100 µg/L	0.994		99	50-140	< 1	30	
Triallate	0.837	0.100 µg/L	1.01		83	50-140	< 1	30	
Trifluralin	0.854	0.200 µg/L	0.760		112	50-140	< 1	30	
Surrogate: Tributyl Phosphate	1.12	µg/L	0.998		112	50-140			
Surrogate: 4-chloro-3-nitrobenzotrifluoride	0.693	µg/L	1.00		69	50-140			

Polycyclic Aromatic Hydrocarbons (PAH), Batch B3A2200

Blank (B3A2200-BLK1)			Prepared: 2023-01-24, Analyzed: 2023-01-24						
Acenaphthene	< 0.050	0.050 µg/L							
Acenaphthylene	< 0.200	0.200 µg/L							
Anthracene	< 0.010	0.010 µg/L							
Benz(a)anthracene	< 0.010	0.010 µg/L							
Benzo(a)pyrene	< 0.010	0.010 µg/L							
Benzo(b+j)fluoranthene	< 0.050	0.050 µg/L							
Benzo(g,h,i)perylene	< 0.050	0.050 µg/L							
Benzo(k)fluoranthene	< 0.050	0.050 µg/L							
2-Chloronaphthalene	< 0.100	0.100 µg/L							
Chrysene	< 0.050	0.050 µg/L							
Dibenz(a,h)anthracene	< 0.010	0.010 µg/L							
Fluoranthene	< 0.030	0.030 µg/L							
Fluorene	< 0.050	0.050 µg/L							
Indeno(1,2,3-cd)pyrene	< 0.050	0.050 µg/L							
1-Methylnaphthalene	< 0.100	0.100 µg/L							
2-Methylnaphthalene	< 0.100	0.100 µg/L							
Naphthalene	< 0.200	0.200 µg/L							
Phenanthrene	< 0.100	0.100 µg/L							
Pyrene	< 0.020	0.020 µg/L							
Quinoline	< 0.050	0.050 µg/L							
Surrogate: Naphthalene-d8	51.5	µg/L	44.9		115	50-140			
Surrogate: Perylene-d12	49.1	µg/L	44.9		109	50-140			

LCS (B3A2200-BS2)			Prepared: 2023-01-24, Analyzed: 2023-01-24						
Acenaphthene	24.6	0.050 µg/L	22.2		111	50-140			
Acenaphthylene	25.3	0.200 µg/L	22.2		114	50-140			
Anthracene	23.3	0.010 µg/L	22.2		105	50-140			
Benz(a)anthracene	21.4	0.010 µg/L	22.2		96	50-140			
Benzo(a)pyrene	32.9	0.010 µg/L	22.2		148	50-140			SPK1
Benzo(b+j)fluoranthene	61.6	0.050 µg/L	44.4		139	50-140			
Benzo(g,h,i)perylene	29.0	0.050 µg/L	22.2		131	50-140			
Benzo(k)fluoranthene	29.9	0.050 µg/L	22.2		134	50-140			
2-Chloronaphthalene	21.2	0.100 µg/L	22.4		95	50-140			
Chrysene	24.0	0.050 µg/L	22.2		108	50-140			
Dibenz(a,h)anthracene	28.2	0.010 µg/L	22.2		127	50-140			
Fluoranthene	23.6	0.030 µg/L	22.2		106	50-140			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B3A2200, Continued									
LCS (B3A2200-BS2), Continued					Prepared: 2023-01-24, Analyzed: 2023-01-24				
Fluorene	23.3	0.050 µg/L	22.2		105	50-140			
Indeno(1,2,3-cd)pyrene	29.2	0.050 µg/L	22.2		131	50-140			
1-Methylnaphthalene	24.1	0.100 µg/L	22.2		108	50-140			
2-Methylnaphthalene	23.6	0.100 µg/L	22.2		106	50-140			
Naphthalene	23.9	0.200 µg/L	22.2		107	50-140			
Phenanthrene	23.9	0.100 µg/L	22.2		108	50-140			
Pyrene	23.4	0.020 µg/L	22.2		105	50-140			
Quinoline	26.5	0.050 µg/L	23.4		113	50-140			
Surrogate: Naphthalene-d8	51.6	µg/L	44.9		115	50-140			
Surrogate: Perylene-d12	49.1	µg/L	44.9		109	50-140			
LCS Dup (B3A2200-BSD2)					Prepared: 2023-01-24, Analyzed: 2023-01-24				
Acenaphthene	25.0	0.050 µg/L	22.2		113	50-140	2	30	
Acenaphthylene	25.7	0.200 µg/L	22.2		115	50-140	1	30	
Anthracene	23.7	0.010 µg/L	22.2		107	50-140	2	30	
Benz(a)anthracene	22.2	0.010 µg/L	22.2		100	50-140	4	30	
Benzo(a)pyrene	32.1	0.010 µg/L	22.2		144	50-140	2	30	SPK1
Benzo(b+j)fluoranthene	57.9	0.050 µg/L	44.4		130	50-140	6	30	
Benzo(g,h,i)perylene	28.7	0.050 µg/L	22.2		129	50-140	1	30	
Benzo(k)fluoranthene	28.3	0.050 µg/L	22.2		128	50-140	5	30	
2-Chloronaphthalene	22.0	0.100 µg/L	22.4		98	50-140	4	30	
Chrysene	23.9	0.050 µg/L	22.2		108	50-140	< 1	30	
Dibenz(a,h)anthracene	27.6	0.010 µg/L	22.2		124	50-140	2	30	
Fluoranthene	24.2	0.030 µg/L	22.2		109	50-140	2	30	
Fluorene	23.8	0.050 µg/L	22.2		107	50-140	2	30	
Indeno(1,2,3-cd)pyrene	28.7	0.050 µg/L	22.2		129	50-140	2	30	
1-Methylnaphthalene	24.2	0.100 µg/L	22.2		109	50-140	< 1	30	
2-Methylnaphthalene	24.0	0.100 µg/L	22.2		108	50-140	1	30	
Naphthalene	24.3	0.200 µg/L	22.2		109	50-140	2	30	
Phenanthrene	24.3	0.100 µg/L	22.2		109	50-140	2	30	
Pyrene	24.2	0.020 µg/L	22.2		109	50-140	4	30	
Quinoline	25.2	0.050 µg/L	23.4		108	50-140	5	30	
Surrogate: Naphthalene-d8	51.0	µg/L	44.9		114	50-140			
Surrogate: Perylene-d12	47.6	µg/L	44.9		106	50-140			

Total Metals, Batch B3A1934

Blank (B3A1934-BLK1)					Prepared: 2023-01-20, Analyzed: 2023-01-21				
Mercury, total	< 0.000010	0.000010 mg/L							
LCS (B3A1934-BS1)					Prepared: 2023-01-20, Analyzed: 2023-01-21				
Mercury, total	0.000230	0.000010 mg/L	0.000250		92	80-120			
Matrix Spike (B3A1934-MS1)					Prepared: 2023-01-20, Analyzed: 2023-01-21				
Mercury, total	0.000262	0.000010 mg/L	0.000250	< 0.000010	105	70-130			

Total Metals, Batch B3A2104

Blank (B3A2104-BLK1)					Prepared: 2023-01-23, Analyzed: 2023-01-23				
Aluminum, total	< 0.0050	0.0050 mg/L							
Antimony, total	< 0.00020	0.00020 mg/L							
Arsenic, total	< 0.00050	0.00050 mg/L							
Barium, total	< 0.0050	0.0050 mg/L							
Boron, total	< 0.0500	0.0500 mg/L							
Cadmium, total	< 0.000010	0.000010 mg/L							
Calcium, total	< 0.20	0.20 mg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
---------	--------	----------	-------------	---------------	-------	-----------	-------	-----------	-----------

Total Metals, Batch B3A2104, Continued

Blank (B3A2104-BLK1), Continued

Prepared: 2023-01-23, Analyzed: 2023-01-23

Chromium, total	< 0.00050	0.00050 mg/L							
Copper, total	< 0.00040	0.00040 mg/L							
Iron, total	< 0.010	0.010 mg/L							
Lead, total	< 0.00020	0.00020 mg/L							
Magnesium, total	< 0.010	0.010 mg/L							
Manganese, total	< 0.00020	0.00020 mg/L							
Potassium, total	< 0.10	0.10 mg/L							
Selenium, total	< 0.00050	0.00050 mg/L							
Silver, total	< 0.000050	0.000050 mg/L							
Sodium, total	< 0.10	0.10 mg/L							
Strontium, total	< 0.0010	0.0010 mg/L							
Uranium, total	< 0.000020	0.000020 mg/L							
Zinc, total	< 0.0040	0.0040 mg/L							

LCS (B3A2104-BS1)

Prepared: 2023-01-23, Analyzed: 2023-01-23

Aluminum, total	4.12	0.0050 mg/L	4.00		103	80-120			
Antimony, total	0.0397	0.00020 mg/L	0.0400		99	80-120			
Arsenic, total	0.402	0.00050 mg/L	0.400		101	80-120			
Barium, total	0.0380	0.0050 mg/L	0.0400		95	80-120			
Boron, total	0.459	0.0500 mg/L	0.400		115	80-120			
Cadmium, total	0.0391	0.000010 mg/L	0.0400		98	80-120			
Calcium, total	4.11	0.20 mg/L	4.00		103	80-120			
Chromium, total	0.0409	0.00050 mg/L	0.0400		102	80-120			
Copper, total	0.0405	0.00040 mg/L	0.0400		101	80-120			
Iron, total	4.12	0.010 mg/L	4.00		103	80-120			
Lead, total	0.0396	0.00020 mg/L	0.0400		99	80-120			
Magnesium, total	4.38	0.010 mg/L	4.00		110	80-120			
Manganese, total	0.0415	0.00020 mg/L	0.0400		104	80-120			
Potassium, total	4.15	0.10 mg/L	4.00		104	80-120			
Selenium, total	0.405	0.00050 mg/L	0.400		101	80-120			
Silver, total	0.0400	0.000050 mg/L	0.0400		100	80-120			
Sodium, total	4.41	0.10 mg/L	4.00		110	80-120			
Strontium, total	0.0405	0.0010 mg/L	0.0400		101	80-120			
Uranium, total	0.0411	0.000020 mg/L	0.0400		103	80-120			
Zinc, total	0.405	0.0040 mg/L	0.400		101	80-120			

Volatile Organic Compounds (VOC), Batch B3A1770

Blank (B3A1770-BLK1)

Prepared: 2023-01-19, Analyzed: 2023-01-19

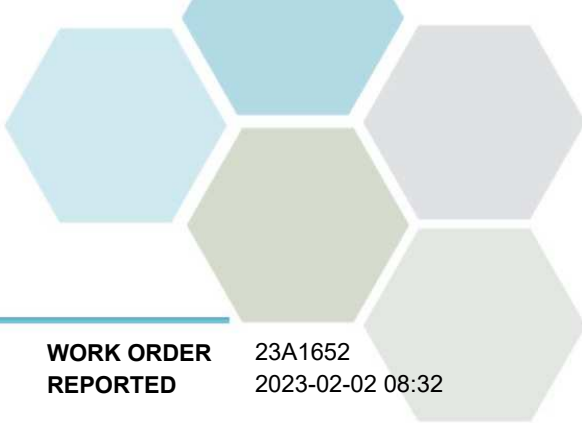
Benzene	< 0.5	0.5 µg/L							
Bromodichloromethane	< 1.0	1.0 µg/L							
Bromoform	< 1.0	1.0 µg/L							
Carbon tetrachloride	< 0.5	0.5 µg/L							
Chlorobenzene	< 1.0	1.0 µg/L							
Chloroethane	< 2.0	2.0 µg/L							
Chloroform	< 1.0	1.0 µg/L							
Dibromochloromethane	< 1.0	1.0 µg/L							
1,2-Dibromoethane	< 0.3	0.3 µg/L							
Dibromomethane	< 1.0	1.0 µg/L							
1,2-Dichlorobenzene	< 0.5	0.5 µg/L							
1,3-Dichlorobenzene	< 1.0	1.0 µg/L							
1,4-Dichlorobenzene	< 1.0	1.0 µg/L							
1,1-Dichloroethane	< 1.0	1.0 µg/L							
1,2-Dichloroethane	< 1.0	1.0 µg/L							
1,1-Dichloroethylene	< 1.0	1.0 µg/L							
cis-1,2-Dichloroethylene	< 1.0	1.0 µg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 23A1652
2023-02-02 08:32

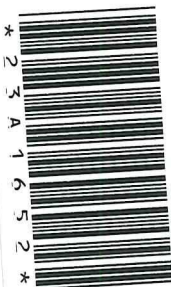
Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Volatile Organic Compounds (VOC), Batch B3A1770, Continued									
Blank (B3A1770-BLK1), Continued					Prepared: 2023-01-19, Analyzed: 2023-01-19				
trans-1,2-Dichloroethylene	< 1.0	1.0 µg/L							
Dichloromethane	< 3.0	3.0 µg/L							
1,2-Dichloropropane	< 1.0	1.0 µg/L							
1,3-Dichloropropene (cis + trans)	< 1.0	1.0 µg/L							
Ethylbenzene	< 1.0	1.0 µg/L							
Methyl tert-butyl ether	< 1.0	1.0 µg/L							
Styrene	< 1.0	1.0 µg/L							
1,1,2,2-Tetrachloroethane	< 0.5	0.5 µg/L							
Tetrachloroethylene	< 1.0	1.0 µg/L							
Toluene	< 0.5	0.5 µg/L							
1,1,1-Trichloroethane	< 1.0	1.0 µg/L							
1,1,2-Trichloroethane	< 1.0	1.0 µg/L							
Trichloroethylene	< 1.0	1.0 µg/L							
Trichlorofluoromethane	< 1.0	1.0 µg/L							
Vinyl chloride	< 1.0	1.0 µg/L							
Xylenes (total)	< 2.0	2.0 µg/L							
Surrogate: Toluene-d8	20.0	µg/L	20.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	19.4	µg/L	20.0		97	70-130			
LCS (B3A1770-BS1)					Prepared: 2023-01-19, Analyzed: 2023-01-19				
Benzene	19.2	0.5 µg/L	20.1		95	70-130			
Bromodichloromethane	21.5	1.0 µg/L	20.1		107	70-130			
Bromoform	21.7	1.0 µg/L	20.1		108	70-130			
Carbon tetrachloride	19.3	0.5 µg/L	20.1		96	70-130			
Chlorobenzene	19.2	1.0 µg/L	20.1		96	70-130			
Chloroethane	17.2	2.0 µg/L	20.1		86	60-140			
Chloroform	20.2	1.0 µg/L	20.1		101	70-130			
Dibromochloromethane	21.6	1.0 µg/L	20.1		107	70-130			
1,2-Dibromoethane	19.8	0.3 µg/L	20.1		98	70-130			
Dibromomethane	19.6	1.0 µg/L	20.1		98	70-130			
1,2-Dichlorobenzene	18.6	0.5 µg/L	20.1		92	70-130			
1,3-Dichlorobenzene	16.9	1.0 µg/L	20.1		84	70-130			
1,4-Dichlorobenzene	18.2	1.0 µg/L	20.1		90	70-130			
1,1-Dichloroethane	19.2	1.0 µg/L	20.1		96	70-130			
1,2-Dichloroethane	19.3	1.0 µg/L	20.1		96	70-130			
1,1-Dichloroethylene	19.1	1.0 µg/L	20.1		95	70-130			
cis-1,2-Dichloroethylene	19.9	1.0 µg/L	20.1		99	70-130			
trans-1,2-Dichloroethylene	19.5	1.0 µg/L	20.1		97	70-130			
Dichloromethane	19.5	3.0 µg/L	20.1		97	70-130			
1,2-Dichloropropane	19.2	1.0 µg/L	20.1		96	70-130			
1,3-Dichloropropene (cis + trans)	42.1	1.0 µg/L	40.0		105	70-130			
Ethylbenzene	18.9	1.0 µg/L	20.1		94	70-130			
Methyl tert-butyl ether	21.3	1.0 µg/L	20.0		106	70-130			
Styrene	19.4	1.0 µg/L	20.1		97	70-130			
1,1,2,2-Tetrachloroethane	20.1	0.5 µg/L	20.1		100	70-130			
Tetrachloroethylene	18.4	1.0 µg/L	20.1		91	70-130			
Toluene	19.3	0.5 µg/L	20.1		96	70-130			
1,1,1-Trichloroethane	18.0	1.0 µg/L	20.1		90	70-130			
1,1,2-Trichloroethane	19.9	1.0 µg/L	20.1		99	70-130			
Trichloroethylene	18.8	1.0 µg/L	20.1		94	70-130			
Trichlorofluoromethane	16.6	1.0 µg/L	20.1		83	60-140			
Vinyl chloride	16.4	1.0 µg/L	20.1		82	60-140			
Xylenes (total)	53.8	2.0 µg/L	60.2		89	70-130			
Surrogate: Toluene-d8	17.6	µg/L	20.0		88	70-130			
Surrogate: 4-Bromofluorobenzene	18.0	µg/L	20.0		90	70-130			



APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT	Newell Regional Services Corporation Schedule 4	WORK ORDER REPORTED	23A1652 2023-02-02 08:32
----------------------------	--	----------------------------	-----------------------------

QC Qualifiers:	
BLK	Analyte concentration in the Method Blank is above the Reporting Limit (RL).
RPD	Relative percent difference (RPD) of duplicate analysis are outside of control limits for unknown reason(s).
SPK	The recovery of this analyte was outside of established control limits.
SPK1	The recovery of this analyte was outside of established control limits. The data was accepted based on performance of other batch QC.



* 2 3 A 1 6 5 2 *

CARO.ca 1-888-311-8846

#110-4011 Viking Way, Richmond, BC V6V 2K9
#102-3677 Highway 97N, Kelowna, BC V1X 5C3
17225 109 Avenue NW, Edmonton, AB T5S 1H7
#108-4475 Waybunne Dr, Burnaby, BC V5G 4X4

CHAIN OF CUSTODY RECORD COC# 09471

PAGE OF

CARO AB COC, Rev 2020-01

COMPANY: Maxwell Regional Services Corp

ADDRESS: 330 Canal St. E.

P.O. Box 638 Brooks, AB. T1R 1B6

CONTACT: Ryan Melrose

TEL/FAX: 403-793-3177

DELIVERY METHOD: EMAIL ☒ MAIL ☐ OTHER* ☐

DATA FORMAT: EXCEL ☒ WATERTRAX ☒ Esdat ☐

EQUIS ☐ AEP EMS ☐ OTHER* ☐

EMAIL 1: rmelrose@nrsc.ca

EMAIL 2: ksteinley@nrsc.ca

EMAIL 3:

PO #: 4185

SAMPLED BY: Caleb Robinson

CLIENT SAMPLE ID:

Header #1

DRINKING WATER

OTHER WATER

SOIL

OTHER

CONTAINER QTY

DATE

TIME

CHLORINATED

FILTERED

PRESERVED

(e.g. flow/volume media ID/notes)

17-01-23 9:20

Header #1

Header #1

Header #1

Header #1

Header #1

Header #1

INVOICE TO: SAME AS REPORT TO

COMPANY:

ADDRESS:

CONTACT:

TEL/FAX:

DELIVERY METHOD: EMAIL ☐ MAIL ☐ OTHER* ☐

EMAIL 1: jstake@nrsc.ca

EMAIL 2: rmelrose@nrsc.ca

EMAIL 3:

PO #:

4185

SAMPLED BY:

CLIENT SAMPLE ID:

Header #1

DRINKING WATER

OTHER WATER

SOIL

OTHER

CONTAINER QTY

DATE

TIME

CHLORINATED

FILTERED

PRESERVED

(e.g. flow/volume media ID/notes)

17-01-23 9:20

Header #1

Header #1

Header #1

Header #1

Header #1

Header #1

Header #1

Header #1

RELINQUISHED BY:

DATE: 17-01-23

RECEIVED BY: N/A

DATE: 17-01-23

Caleb Robinson

TIME: 10:30

Signature

TIME: 8:30

TURNAROUND TIME REQUESTED:

Routine: (5-7 Days) ☒

Rush: 1 Day* ☐ 2 Day* ☐ 3 Day* ☐

Other* ☐

REGULATORY APPLICATION:

Canadian Drinking Water Quality ☒

AB T1 SOIL/GW: NA ☐ AG ☐ RES/PL ☐

AB SWOG: FWAL ☐ IW ☐ LW ☐

CCME: ☐

*Contact Lab To Confirm. Surcharge May Apply

PROJECT NUMBER / INFO:

NRSC Winter Analysis 2023

ANALYSES REQUESTED:

SOIL PHC F1-F4 BTEX ☐

WATER PHC F1-F2 BTEX ☐

VOC ☐ THM ☐ PAH ☐ HAA ☐

DISSOLVED METALS Hg ☐ Cr6 ☐

TOTAL METALS Hg ☐ Cr6 ☐

SOIL METALS SatP B ☐ Cr6 ☐ Hg ☐

SOIL SALINITY BASIC ☐ DETAILED ☐

CLASS 2 LANDFILL

ROUTINE WATER Fe+Mn ☐

COD ☐ BOD ☐ TOC ☐ DOC ☐

TSS ☐ TDS ☐ VSS ☐

AMMONIA ☐ TKN ☐ TP ☐

TO&G ☐ PHENOLICS ☐

TCOL ☐ E. Coli ☐ FCOL ☐ HPC ☐

TOXICITY TROUT ☐ DAPHNIA ☐

PSA HYDROMETER ☐ 75 um SIEVE ☐

See attached Schedule 4

Header #1

Header #1

Header #1

Header #1

SCHEDULE 4

Table of Physical, Inorganic chemicals, Organic chemicals and Pesticides

Substance	Specific Parameter	Substance	Specific Parameter
Physical Parameters (Primary and Secondary)	Colour; pH; Total Dissolved Solids	Organic Chemicals and Pesticides (Primary)	Atrazine + metabolites; Benzene; Benzo(a)pyrene; Bromoxynil; Carbon Tetrachloride; Chlorpyrifos; Cyanazine; Cyanobacterial toxins (as Total Microcystin); Diazinon; Dicamba; 1,2-Dichlorobenzene; 1,4-Dichlorobenzene; 1,2-Dichlorethane; Dichloromethane; 2,4-Dichlorophenol; 2,4-D; Diclofop-methyl; Diuron; Dimethoate; Ethylbenzene; Glyphosate; Malathion; Methoxychlor; Metolachlor; Metribuzin; Monochlorobenzene; Nitrilotriacetic Acid (NTA); Pentachlorophenol; Picloram; Simazine; Terbufos; Tetrachloroethylene; 2,3,4,6-Tetrachlorophenol; Toluene; Trichloroethylene; 2,4,6-Trichlorophenol; Trifluralin; and Vinyl Chloride.
Inorganic chemicals (Primary)	Antimony; Arsenic; Barium; Boron; Bromate; Cadmium; Chloramines; Chromium; Cyanide; Fluoride; Lead; Mercury; Nitrate; Nitrite; Selenium; and Uranium;		
Inorganic and Organic Chemicals (Secondary)	Aluminum; Ammonia; Calcium; Chloride; Copper; Total Hardness; Iron; Magnesium; Manganese; Silver; Sodium; Sulphate; Sulphide; Total Organic Carbon; Xylenes (total); and Zinc;		