

CERTIFICATE OF ANALYSIS

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

ATTENTION Ryan Melrose

PO NUMBER S622

PROJECT Schedule 4

PROJECT INFO Water Treatment Plant winter analysis 2025

WORK ORDER 25A1522

RECEIVED / TEMP REPORTED 2025-01-16 08:50 / 16.8°C
2025-03-19 08:39

COC NUMBER no#

Introduction:

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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.

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

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TEST RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
Schedule 4

WORK ORDER REPORTED 25A1522
2025-03-19 08:39

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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WTP HDR #1 (25A1522-01) | Matrix: Water | Sampled: 2025-01-15 09:45

Acid Herbicides

2,4-D	< 0.10	MAC = 100	0.10	µg/L	2025-01-21	
2,4-DB	< 0.10	N/A	0.10	µg/L	2025-01-21	
Dichlorprop (2,4-DP)	< 0.10	N/A	0.10	µg/L	2025-01-21	
Fenoprop	< 0.10	N/A	0.10	µg/L	2025-01-21	
MCPA	< 0.02	MAC = 350	0.02	µg/L	2025-01-21	
MCPB	< 0.10	N/A	0.10	µg/L	2025-01-21	
2,4,5-T	< 0.10	N/A	0.10	µg/L	2025-01-21	
MCP	< 0.10	N/A	0.10	µg/L	2025-01-21	
Acifluorfen	< 0.10	N/A	0.10	µg/L	2025-01-21	
Bentazon	< 0.10	N/A	0.10	µg/L	2025-01-21	
Chloramben	< 0.10	N/A	0.10	µg/L	2025-01-21	
Dicamba	< 0.10	MAC = 110	0.10	µg/L	2025-01-21	
Triclopyr	< 0.10	N/A	0.10	µg/L	2025-01-21	
Picloram	< 0.10	MAC = 190	0.10	µg/L	2025-01-21	
Clopyralid	< 0.10	N/A	0.10	µg/L	2025-01-21	
Bromoxynil	< 0.10	MAC = 30	0.10	µg/L	2025-01-21	
Dinoseb	< 0.10	N/A	0.10	µg/L	2025-01-21	

Anions

Bromate	< 0.005	MAC = 0.01	0.005	mg/L	2025-01-22	
Chlorate	< 0.50	MAC = 1	0.50	mg/L	2025-01-17	
Chloride	20.5	AO ≤ 250	0.50	mg/L	2025-01-17	
Chlorite	< 0.50	MAC = 1	0.50	mg/L	2025-01-17	
Fluoride	0.16	MAC = 1.5	0.10	mg/L	2025-01-17	
Nitrate (as N)	< 0.050	MAC = 10	0.050	mg/L	2025-01-17	
Nitrite (as N)	< 0.050	MAC = 1	0.050	mg/L	2025-01-17	
Sulfate	60.0	AO ≤ 500	1.0	mg/L	2025-01-17	

Calculated Parameters

Chloramines	0.200	MAC = 3	0.0400	mg/L	N/A	
Total Trihalomethanes	0.0226	MAC = 0.1	0.00400	mg/L	N/A	
Ion Balance	101	N/A		%	N/A	
Hardness, Total (as CaCO ₃)	186	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	257	AO ≤ 500	5.00	mg/L	N/A	

Chlorinated Phenols

2-Chlorophenol	< 0.10	N/A	0.10	µg/L	2025-01-22	
3 & 4-Chlorophenol	< 0.10	N/A	0.10	µg/L	2025-01-22	
4-Chloro-3-Methylphenol	< 0.50	N/A	0.50	µg/L	2025-01-22	
2,3-Dichlorophenol	< 0.20	N/A	0.20	µg/L	2025-01-22	
2,4 & 2,5-Dichlorophenol	< 0.20	AO ≤ 0.3	0.20	µg/L	2025-01-22	
2,6-Dichlorophenol	< 0.20	N/A	0.20	µg/L	2025-01-22	
3,4-Dichlorophenol	< 0.20	N/A	0.20	µg/L	2025-01-22	

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WTP HDR #1 (25A1522-01) | Matrix: Water | Sampled: 2025-01-15 09:45, Continued

Chlorinated Phenols, Continued

3,5-Dichlorophenol	< 0.20	N/A	0.20	µg/L	2025-01-22	
2,3,4-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2025-01-22	
2,3,5-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2025-01-22	
2,3,6-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2025-01-22	
2,4,5-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2025-01-22	
2,4,6-Trichlorophenol	< 0.50	AO ≤ 2	0.50	µg/L	2025-01-22	
3,4,5-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2025-01-22	
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	< 0.50	N/A	0.50	µg/L	2025-01-22	
2,3,4,6-Tetrachlorophenol	< 0.50	AO ≤ 1	0.50	µg/L	2025-01-22	
Pentachlorophenol	< 0.50	AO ≤ 30	0.50	µg/L	2025-01-22	
Surrogate: 2,4-Dibromophenol	68		60-130	%	2025-01-22	
Surrogate: 2,4,6-Tribromophenol	69		60-130	%	2025-01-22	
Surrogate: Phenol-d6	94		70-130	%	2025-01-22	

General Parameters

Alkalinity, Total (as CaCO ₃)	145	N/A	2.0	mg/L	2025-01-21	
Bicarbonate (HCO ₃)	177	N/A	2.5	mg/L	2025-01-21	
Carbonate (CO ₃)	< 2.0	N/A	2.0	mg/L	2025-01-21	
Hydroxide (OH)	< 2.0	N/A	2.0	mg/L	2025-01-21	
Ammonia, Total (as N)	< 0.050	None Required	0.050	mg/L	2025-01-22	
Carbon, Total Organic	2.65	N/A	0.50	mg/L	2025-01-20	
Chlorine, Total	1.41	None Required	0.02	mg/L	2025-01-22	HT2
Chlorine, Free	1.21	N/A	0.02	mg/L	2025-01-22	HT2
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2025-01-17	
Conductivity (EC)	464	N/A	2.0	µS/cm	2025-01-21	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2025-01-20	
Nitritotriacetic Acid	< 0.20	MAC = 0.4	0.20	mg/L	2025-01-17	
pH	8.00	7.0-10.5	0.10	pH units	2025-01-21	HT2
Sulfide, Total	< 0.020	AO ≤ 0.05	0.020	mg/L	2025-01-16	
Turbidity	0.31	OG < 1	0.10	NTU	2025-01-17	

Microbiological Parameters

Microcystin, total	< 0.10	MAC = 1.5	0.05	µg/L	2025-01-20	
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Miscellaneous Herbicides

Glyphosate	< 0.050	MAC = 0.28	0.050	mg/L	2025-01-29	
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Miscellaneous Organics

N-Nitrosodimethylamine	< 0.000009	MAC = 0.00004	0.000009	mg/L	2025-01-27	HT1
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Pesticides, Herbicides, and Fungicides

Alachlor	< 0.100	N/A	0.100	µg/L	2025-01-29	
Aldrin	< 0.006	N/A	0.006	µg/L	2025-01-29	
Atrazine and metabolites	< 0.100	MAC = 5	0.100	µg/L	2025-01-29	
Azinphos-methyl	< 0.200	MAC = 20	0.200	µg/L	2025-01-29	

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WTP HDR #1 (25A1522-01) Matrix: Water Sampled: 2025-01-15 09:45, Continued						
<i>Pesticides, Herbicides, and Fungicides, Continued</i>						HT1
alpha-BHC	< 0.010	N/A	0.010	µg/L	2025-01-29	
beta-BHC	< 0.050	N/A	0.050	µg/L	2025-01-29	
delta-BHC	< 0.050	N/A	0.050	µg/L	2025-01-29	
gamma-BHC (Lindane)	< 0.050	N/A	0.050	µg/L	2025-01-29	
Bromacil	< 0.100	N/A	0.100	µg/L	2025-01-29	
Bromoxynil	< 0.200	MAC = 30	0.200	µg/L	2025-01-29	
Butachlor	< 0.020	N/A	0.020	µg/L	2025-01-29	
Captan	< 0.100	N/A	0.100	µg/L	2025-01-29	
Chlordane (cis + trans)	< 0.050	N/A	0.050	µg/L	2025-01-29	
Chlorothalonil	< 0.050	N/A	0.050	µg/L	2025-01-29	
Chlorpyrifos	< 0.010	MAC = 90	0.010	µg/L	2025-01-29	
Cyanazine	< 0.100	N/A	0.100	µg/L	2025-01-29	
DDT, Total	< 0.010	N/A	0.010	µg/L	2025-01-29	
Deltamethrin	< 0.100	N/A	0.100	µg/L	2025-01-29	
Diazinon	< 0.020	MAC = 20	0.020	µg/L	2025-01-29	
Dichlorvos	< 0.100	N/A	0.100	µg/L	2025-01-29	
Diclofop-methyl	< 0.100	MAC = 9	0.100	µg/L	2025-01-29	
Dieldrin	< 0.010	N/A	0.010	µg/L	2025-01-29	
Dimethoate	< 0.200	MAC = 20	0.200	µg/L	2025-01-29	
Disulfoton	< 0.100	N/A	0.100	µg/L	2025-01-29	
Diuron	< 0.200	MAC = 150	0.200	µg/L	2025-01-29	
Endosulfan I + II	< 0.010	N/A	0.010	µg/L	2025-01-29	
Endosulfan sulfate	< 0.050	N/A	0.050	µg/L	2025-01-29	
Endrin	< 0.020	N/A	0.020	µg/L	2025-01-29	
Endrin aldehyde	< 0.020	N/A	0.020	µg/L	2025-01-29	
Endrin ketone	< 0.020	N/A	0.020	µg/L	2025-01-29	
Fenchlorphos (Ronnell)	< 0.100	N/A	0.100	µg/L	2025-01-29	
Heptachlor	< 0.010	N/A	0.010	µg/L	2025-01-29	
Heptachlor epoxide	< 0.010	N/A	0.010	µg/L	2025-01-29	
Linuron	< 0.050	N/A	0.050	µg/L	2025-01-29	
Malathion	< 0.100	MAC = 290	0.100	µg/L	2025-01-29	
Methoxychlor	< 0.050	N/A	0.050	µg/L	2025-01-29	
Methyl parathion	< 0.100	N/A	0.100	µg/L	2025-01-29	
Metolachlor	< 0.100	MAC = 50	0.100	µg/L	2025-01-29	
Metribuzin	< 0.200	MAC = 80	0.200	µg/L	2025-01-29	
Parathion	< 0.100	N/A	0.100	µg/L	2025-01-29	
Pentachloronitrobenzene	< 0.100	N/A	0.100	µg/L	2025-01-29	
Permethrin	< 0.010	N/A	0.010	µg/L	2025-01-29	
Phorate	< 0.100	MAC = 2	0.100	µg/L	2025-01-29	
Prometon	< 0.300	N/A	0.300	µg/L	2025-01-29	
Prometryne	< 0.100	N/A	0.100	µg/L	2025-01-29	
Simazine	< 0.200	MAC = 10	0.200	µg/L	2025-01-29	
Sulfotep	< 0.100	N/A	0.100	µg/L	2025-01-29	

TEST RESULTS

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2025-03-19 08:39

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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WTP HDR #1 (25A1522-01) | Matrix: Water | Sampled: 2025-01-15 09:45, Continued

Pesticides, Herbicides, and Fungicides, Continued

HT1

Tebuthiuron	< 0.200	N/A	0.200	µg/L	2025-01-29	
Temephos (Abate)	< 0.500	N/A	0.500	µg/L	2025-01-29	
Terbufos	< 0.100	MAC = 1	0.100	µg/L	2025-01-29	
Triallate	< 0.100	N/A	0.100	µg/L	2025-01-29	
Trifluralin	< 0.200	MAC = 45	0.200	µg/L	2025-01-29	
Surrogate: Tributyl Phosphate	145		50-140	%	2025-01-29	S02
Surrogate: 4-chloro-3-nitrobenzotrifluoride	120		50-140	%	2025-01-29	

Polycyclic Aromatic Hydrocarbons (PAH)

Acenaphthene	< 0.050	N/A	0.050	µg/L	2025-01-21	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2025-01-21	
Acridine	< 0.050	N/A	0.050	µg/L	2025-01-21	
Anthracene	< 0.010	N/A	0.010	µg/L	2025-01-21	
Benz(a)anthracene	< 0.010	N/A	0.010	µg/L	2025-01-21	
Benzo(a)pyrene	< 0.010	MAC = 0.04	0.010	µg/L	2025-01-21	
Benzo(b+j)fluoranthene	< 0.050	N/A	0.050	µg/L	2025-01-21	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2025-01-21	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2025-01-21	
2-Chloronaphthalene	< 0.100	N/A	0.100	µg/L	2025-01-21	
Chrysene	< 0.050	N/A	0.050	µg/L	2025-01-21	
Dibenz(a,h)anthracene	< 0.010	N/A	0.010	µg/L	2025-01-21	
Fluoranthene	< 0.030	N/A	0.030	µg/L	2025-01-21	
Fluorene	< 0.050	N/A	0.050	µg/L	2025-01-21	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2025-01-21	
1-Methylnaphthalene	< 0.100	N/A	0.100	µg/L	2025-01-21	
2-Methylnaphthalene	< 0.100	N/A	0.100	µg/L	2025-01-21	
Naphthalene	< 0.200	N/A	0.200	µg/L	2025-01-21	
Phenanthrene	< 0.100	N/A	0.100	µg/L	2025-01-21	
Pyrene	< 0.020	N/A	0.020	µg/L	2025-01-21	
Quinoline	< 0.050	N/A	0.050	µg/L	2025-01-21	
Surrogate: Naphthalene-d8	72		50-140	%	2025-01-21	
Surrogate: Perylene-d12	61		50-140	%	2025-01-21	

Total Metals

Aluminum, total	0.0480	OG < 0.1	0.0050	mg/L	2025-01-17	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2025-01-17	
Arsenic, total	0.00109	MAC = 0.01	0.00050	mg/L	2025-01-17	
Barium, total	0.0778	MAC = 2	0.0050	mg/L	2025-01-17	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2025-01-17	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2025-01-17	
Calcium, total	45.0	None Required	0.20	mg/L	2025-01-17	
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2025-01-17	
Copper, total	0.00045	MAC = 2	0.00040	mg/L	2025-01-17	
Iron, total	< 0.010	AO ≤ 0.3	0.010	mg/L	2025-01-17	

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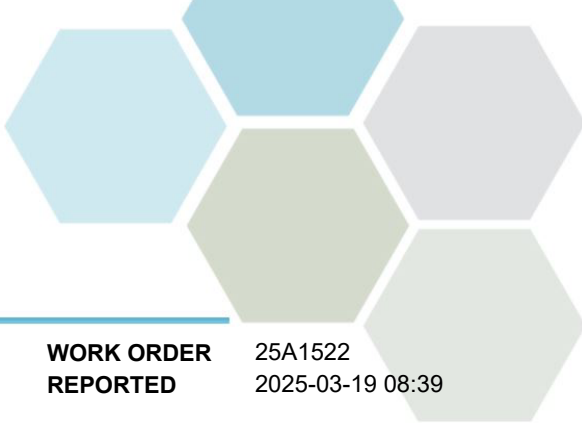
WTP HDR #1 (25A1522-01) | Matrix: Water | Sampled: 2025-01-15 09:45, Continued

Total Metals, Continued

Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2025-01-17	
Magnesium, total	17.8	None Required	0.010	mg/L	2025-01-17	
Manganese, total	0.00082	MAC = 0.12	0.00020	mg/L	2025-01-17	
Mercury, total	< 0.000010	MAC = 0.001	0.000010	mg/L	2025-01-19	
Potassium, total	2.11	N/A	0.10	mg/L	2025-01-17	
Selenium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2025-01-17	
Silver, total	0.000064	None Required	0.000050	mg/L	2025-01-17	
Sodium, total	23.4	AO ≤ 200	0.10	mg/L	2025-01-17	
Strontium, total	0.245	MAC = 7	0.0010	mg/L	2025-01-17	
Uranium, total	0.000679	MAC = 0.02	0.000020	mg/L	2025-01-17	
Zinc, total	< 0.0040	AO ≤ 5	0.0040	mg/L	2025-01-17	

Volatile Organic Compounds (VOC)

Benzene	< 0.5	MAC = 5	0.5	µg/L	2025-01-17	
Bromodichloromethane	5.0	N/A	1.0	µg/L	2025-01-17	
Bromoform	< 1.0	N/A	1.0	µg/L	2025-01-17	
Carbon tetrachloride	< 0.5	MAC = 2	0.5	µg/L	2025-01-17	
Chlorobenzene	< 1.0	AO ≤ 30	1.0	µg/L	2025-01-17	
Chloroethane	< 2.0	N/A	2.0	µg/L	2025-01-17	
Chloroform	17.6	N/A	1.0	µg/L	2025-01-17	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	2025-01-17	
1,2-Dibromoethane	< 0.3	N/A	0.3	µg/L	2025-01-17	
Dibromomethane	< 1.0	N/A	1.0	µg/L	2025-01-17	
1,2-Dichlorobenzene	< 0.5	AO ≤ 3	0.5	µg/L	2025-01-17	
1,3-Dichlorobenzene	< 1.0	N/A	1.0	µg/L	2025-01-17	
1,4-Dichlorobenzene	< 1.0	AO ≤ 1	1.0	µg/L	2025-01-17	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	2025-01-17	
1,2-Dichloroethane	< 1.0	MAC = 5	1.0	µg/L	2025-01-17	
1,1-Dichloroethylene	< 1.0	MAC = 14	1.0	µg/L	2025-01-17	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	2025-01-17	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	2025-01-17	
Dichloromethane	< 3.0	MAC = 50	3.0	µg/L	2025-01-17	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	2025-01-17	
1,3-Dichloropropene (cis + trans)	< 1.0	N/A	1.0	µg/L	2025-01-17	
Ethylbenzene	< 1.0	AO ≤ 1.6	1.0	µg/L	2025-01-17	
Methyl tert-butyl ether	< 1.0	AO ≤ 15	1.0	µg/L	2025-01-17	
Styrene	< 1.0	N/A	1.0	µg/L	2025-01-17	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	2025-01-17	
Tetrachloroethylene	< 1.0	MAC = 10	1.0	µg/L	2025-01-17	
Toluene	< 0.5	MAC = 60	0.5	µg/L	2025-01-17	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	2025-01-17	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	2025-01-17	
Trichloroethylene	< 1.0	MAC = 5	1.0	µg/L	2025-01-17	



TEST RESULTS

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WTP HDR #1 (25A1522-01) | Matrix: Water | Sampled: 2025-01-15 09:45, Continued

Volatile Organic Compounds (VOC), Continued

Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	2025-01-17	
Vinyl chloride	< 1.0	MAC = 2	1.0	µg/L	2025-01-17	
Xylenes (total)	< 2.0	AO ≤ 20	2.0	µg/L	2025-01-17	
Surrogate: Toluene-d8	106		70-130	%	2025-01-17	
Surrogate: 4-Bromofluorobenzene	103		70-130	%	2025-01-17	

Sample Qualifiers:

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.
S02	Surrogate recovery outside of control limits. Data accepted based on acceptable recovery of other surrogates.

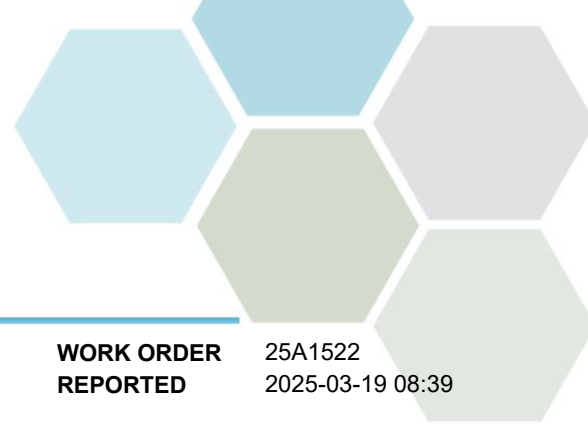
APPENDIX 1: SUPPORTING INFORMATION

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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
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-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



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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.

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: efex@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

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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
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Acid Herbicides, Batch B5A2748

Blank (B5A2748-BLK1)			Prepared: 2025-01-20, Analyzed: 2025-01-21						
2,4-D	< 0.10	0.10 µg/L							
2,4-DB	< 0.10	0.10 µg/L							
Dichlorprop (2,4-DP)	< 0.10	0.10 µg/L							
Fenoprop	< 0.10	0.10 µg/L							
MCPA	< 0.02	0.02 µg/L							
MCPB	< 0.10	0.10 µg/L							
2,4,5-T	< 0.10	0.10 µg/L							
MCP	< 0.10	0.10 µg/L							
Acifluorfen	< 0.10	0.10 µg/L							
Bentazon	< 0.10	0.10 µg/L							
Chloramben	< 0.10	0.10 µg/L							
Dicamba	< 0.10	0.10 µg/L							
Triclopyr	< 0.10	0.10 µg/L							
Picloram	< 0.10	0.10 µg/L							
Clpyralid	< 0.10	0.10 µg/L							
Bromoxynil	< 0.10	0.10 µg/L							
Dinoseb	< 0.10	0.10 µg/L							

LCS (B5A2748-BS1)			Prepared: 2025-01-20, Analyzed: 2025-01-21						
2,4-D	5.25	0.10 µg/L	5.05		104	75-125			
2,4-DB	4.95	0.10 µg/L	5.00		99	70-130			
Dichlorprop (2,4-DP)	5.14	0.10 µg/L	5.00		103	75-125			
Fenoprop	5.10	0.10 µg/L	5.00		102	70-130			
MCPA	5.13	0.02 µg/L	5.00		103	80-120			
MCPB	4.96	0.10 µg/L	5.00		99	70-130			
2,4,5-T	5.04	0.10 µg/L	4.97		101	75-125			
MCP	5.14	0.10 µg/L	5.00		103	75-125			
Acifluorfen	4.75	0.10 µg/L	5.00		95	70-130			
Bentazon	5.06	0.10 µg/L	5.00		101	70-130			
Chloramben	5.05	0.10 µg/L	5.00		101	75-125			
Dicamba	5.13	0.10 µg/L	5.00		103	70-130			
Triclopyr	4.98	0.10 µg/L	5.00		100	75-125			
Picloram	5.16	0.10 µg/L	5.00		103	70-130			
Clpyralid	4.96	0.10 µg/L	5.00		99	70-130			
Bromoxynil	5.19	0.10 µg/L	5.00		104	70-130			
Dinoseb	5.36	0.10 µg/L	5.00		107	70-130			

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Acid Herbicides, Batch B5A2748, Continued									
LCS Dup (B5A2748-BSD1)					Prepared: 2025-01-20, Analyzed: 2025-01-21				
2,4-D	5.37	0.10 µg/L	5.05		106	75-125	2	30	
2,4-DB	4.94	0.10 µg/L	5.00		99	70-130	< 1	30	
Dichlorprop (2,4-DP)	5.24	0.10 µg/L	5.00		105	75-125	2	30	
Fenoprop	5.00	0.10 µg/L	5.00		100	70-130	2	30	
MCPA	5.02	0.02 µg/L	5.00		100	80-120	2	30	
MCPB	5.01	0.10 µg/L	5.00		100	70-130	< 1	30	
2,4,5-T	5.21	0.10 µg/L	4.97		105	75-125	3	30	
MCP	5.17	0.10 µg/L	5.00		104	75-125	< 1	30	
Acifluorfen	4.67	0.10 µg/L	5.00		94	70-130	2	30	
Bentazon	5.10	0.10 µg/L	5.00		102	70-130	< 1	30	
Chloramben	5.13	0.10 µg/L	5.00		103	75-125	1	30	
Dicamba	5.05	0.10 µg/L	5.00		101	70-130	2	30	
Triclopyr	5.17	0.10 µg/L	5.00		103	75-125	4	30	
Picloram	5.19	0.10 µg/L	5.00		104	70-130	< 1	30	
Clopyralid	5.09	0.10 µg/L	5.00		102	70-130	3	30	
Bromoxynil	5.23	0.10 µg/L	5.00		105	70-130	< 1	30	
Dinoseb	5.25	0.10 µg/L	5.00		105	70-130	2	30	

Anions, Batch B5A2531

Blank (B5A2531-BLK1)			Prepared: 2025-01-16, Analyzed: 2025-01-16						
Chlorate	< 0.50	0.50 mg/L							
Chloride	< 0.50	0.50 mg/L							
Chlorite	< 0.50	0.50 mg/L							
Fluoride	< 0.10	0.10 mg/L							
Nitrate (as N)	< 0.050	0.050 mg/L							
Nitrite (as N)	< 0.050	0.050 mg/L							
Sulfate	< 1.0	1.0 mg/L							
Blank (B5A2531-BLK2)			Prepared: 2025-01-17, Analyzed: 2025-01-17						
Chlorate	< 0.50	0.50 mg/L							
Chloride	< 0.50	0.50 mg/L							
Chlorite	< 0.50	0.50 mg/L							
Fluoride	< 0.10	0.10 mg/L							
Nitrate (as N)	< 0.050	0.050 mg/L							
Nitrite (as N)	< 0.050	0.050 mg/L							
Sulfate	< 1.0	1.0 mg/L							
LCS (B5A2531-BS1)			Prepared: 2025-01-16, Analyzed: 2025-01-16						
Chlorate	10.0	0.50 mg/L	10.0		100	89-112			
Chloride	9.72	0.50 mg/L	10.0		97	90-110			
Chlorite	10.5	0.50 mg/L	10.0		105	80-120			
Fluoride	0.95	0.10 mg/L	1.00		95	85-115			
Nitrate (as N)	0.990	0.050 mg/L	1.00		99	92-108			
Nitrite (as N)	0.465	0.050 mg/L	0.500		93	85-115			
Sulfate	47.2	1.0 mg/L	50.0		94	90-110			
LCS (B5A2531-BS2)			Prepared: 2025-01-17, Analyzed: 2025-01-17						
Chlorate	9.79	0.50 mg/L	10.0		98	89-112			
Chloride	9.59	0.50 mg/L	10.0		96	90-110			
Chlorite	9.57	0.50 mg/L	10.0		96	80-120			
Fluoride	0.90	0.10 mg/L	1.00		90	85-115			
Nitrate (as N)	0.981	0.050 mg/L	1.00		98	92-108			
Nitrite (as N)	0.535	0.050 mg/L	0.500		107	85-115			
Sulfate	47.6	1.0 mg/L	50.0		95	90-110			

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Chlorinated Phenols, Batch B5A2549									
Blank (B5A2549-BLK1)					Prepared: 2025-01-16, Analyzed: 2025-01-20				
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	1.54	µg/L	2.00		77	60-130			
Surrogate: 2,4,6-Tribromophenol	1.40	µg/L	2.00		70	60-130			
Surrogate: Phenol-d6	4.30	µg/L	5.00		86	70-130			
LCS (B5A2549-BS1)					Prepared: 2025-01-16, Analyzed: 2025-01-20				
2-Chlorophenol	6.96	0.10 µg/L	10.0		70	60-130			
3 & 4-Chlorophenol	14.3	0.10 µg/L	20.0		72	60-130			
4-Chloro-3-Methylphenol	8.60	0.20 µg/L	10.0		86	60-130			
2,3-Dichlorophenol	7.79	0.20 µg/L	10.0		78	60-130			
2,4 & 2,5-Dichlorophenol	16.0	0.20 µg/L	20.0		80	60-130			
2,6-Dichlorophenol	7.93	0.20 µg/L	10.0		79	60-130			
3,4-Dichlorophenol	8.59	0.20 µg/L	10.0		86	60-130			
3,5-Dichlorophenol	8.52	0.20 µg/L	10.0		85	60-130			
2,3,4-Trichlorophenol	8.56	0.50 µg/L	10.0		86	60-130			
2,3,5-Trichlorophenol	8.81	0.50 µg/L	10.0		88	60-130			
2,3,6-Trichlorophenol	8.34	0.50 µg/L	10.0		83	60-130			
2,4,5-Trichlorophenol	8.98	0.50 µg/L	10.0		90	60-130			
2,4,6-Trichlorophenol	8.44	0.50 µg/L	10.0		84	60-130			
3,4,5-Trichlorophenol	9.33	0.50 µg/L	10.0		93	60-130			
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	15.4	0.50 µg/L	20.0		77	60-130			
2,3,4,6-Tetrachlorophenol	7.13	0.50 µg/L	10.0		71	60-130			
Pentachlorophenol	10.5	0.50 µg/L	10.0		105	60-130			
Surrogate: 2,4-Dibromophenol	1.70	µg/L	2.00		85	60-130			
Surrogate: 2,4,6-Tribromophenol	1.74	µg/L	2.00		87	60-130			
Surrogate: Phenol-d6	4.41	µg/L	5.00		88	70-130			
LCS Dup (B5A2549-BSD1)					Prepared: 2025-01-16, Analyzed: 2025-01-20				
2-Chlorophenol	7.55	0.10 µg/L	10.0		76	60-130	8	40	
3 & 4-Chlorophenol	16.1	0.10 µg/L	20.0		80	60-130	11	40	
4-Chloro-3-Methylphenol	9.88	0.20 µg/L	10.0		99	60-130	14	40	
2,3-Dichlorophenol	8.66	0.20 µg/L	10.0		87	60-130	10	40	
2,4 & 2,5-Dichlorophenol	17.7	0.20 µg/L	20.0		89	60-130	11	40	
2,6-Dichlorophenol	9.02	0.20 µg/L	10.0		90	60-130	13	40	
3,4-Dichlorophenol	9.65	0.20 µg/L	10.0		96	60-130	12	40	
3,5-Dichlorophenol	9.44	0.20 µg/L	10.0		94	60-130	10	40	
2,3,4-Trichlorophenol	9.42	0.50 µg/L	10.0		94	60-130	10	40	
2,3,5-Trichlorophenol	9.73	0.50 µg/L	10.0		97	60-130	10	40	
2,3,6-Trichlorophenol	9.16	0.50 µg/L	10.0		92	60-130	9	40	
2,4,5-Trichlorophenol	10.0	0.50 µg/L	10.0		100	60-130	11	40	

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Chlorinated Phenols, Batch B5A2549, Continued									
LCS Dup (B5A2549-BSD1), Continued				Prepared: 2025-01-16, Analyzed: 2025-01-20					
2,4,6-Trichlorophenol	9.35	0.50 µg/L	10.0		94	60-130	10	40	
3,4,5-Trichlorophenol	10.1	0.50 µg/L	10.0		101	60-130	8	40	
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	18.6	0.50 µg/L	20.0		93	60-130	19	40	
2,3,4,6-Tetrachlorophenol	7.34	0.50 µg/L	10.0		73	60-130	3	40	
Pentachlorophenol	11.4	0.50 µg/L	10.0		114	60-130	8	40	
Surrogate: 2,4-Dibromophenol	1.84	µg/L	2.00		92	60-130			
Surrogate: 2,4,6-Tribromophenol	1.78	µg/L	2.00		89	60-130			
Surrogate: Phenol-d6	4.62	µg/L	5.00		92	70-130			
General Parameters, Batch B5A2420									
Blank (B5A2420-BLK1)				Prepared: 2025-01-16, Analyzed: 2025-01-20					
Carbon, Total Organic	< 0.50	0.50 mg/L							
Blank (B5A2420-BLK2)				Prepared: 2025-01-16, Analyzed: 2025-01-20					
Carbon, Total Organic	< 0.50	0.50 mg/L							
Blank (B5A2420-BLK3)				Prepared: 2025-01-16, Analyzed: 2025-01-20					
Carbon, Total Organic	< 0.50	0.50 mg/L							
LCS (B5A2420-BS1)				Prepared: 2025-01-16, Analyzed: 2025-01-20					
Carbon, Total Organic	9.48	0.50 mg/L	10.0		95	78-116			
LCS (B5A2420-BS2)				Prepared: 2025-01-16, Analyzed: 2025-01-20					
Carbon, Total Organic	9.28	0.50 mg/L	10.0		93	78-116			
LCS (B5A2420-BS3)				Prepared: 2025-01-16, Analyzed: 2025-01-20					
Carbon, Total Organic	9.37	0.50 mg/L	10.0		94	78-116			
General Parameters, Batch B5A2491									
Blank (B5A2491-BLK1)				Prepared: 2025-01-16, Analyzed: 2025-01-16					
Sulfide, Total	< 0.020	0.020 mg/L							
LCS (B5A2491-BS1)				Prepared: 2025-01-16, Analyzed: 2025-01-16					
Sulfide, Total	0.500	0.020 mg/L	0.530		94	80-120			
General Parameters, Batch B5A2647									
Blank (B5A2647-BLK1)				Prepared: 2025-01-17, Analyzed: 2025-01-17					
Nitritotriacetic Acid	< 0.20	0.20 mg/L							
LCS (B5A2647-BS1)				Prepared: 2025-01-17, Analyzed: 2025-01-17					
Nitritotriacetic Acid	1.16	0.20 mg/L	1.00		116	80-120			
LCS Dup (B5A2647-BSD1)				Prepared: 2025-01-17, Analyzed: 2025-01-17					
Nitritotriacetic Acid	1.16	0.20 mg/L	1.00		116	80-120	< 1	20	
General Parameters, Batch B5A2658									
Blank (B5A2658-BLK1)				Prepared: 2025-01-17, Analyzed: 2025-01-17					
Colour, True	< 5.0	5.0 CU							
LCS (B5A2658-BS1)				Prepared: 2025-01-17, Analyzed: 2025-01-17					
Colour, True	25	5.0 CU	25.0		100	90-110			

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B5A2659									
Blank (B5A2659-BLK1)				Prepared: 2025-01-17, Analyzed: 2025-01-17					
Turbidity	< 0.10	0.10 NTU							
LCS (B5A2659-BS1)				Prepared: 2025-01-17, Analyzed: 2025-01-17					
Turbidity	40.6	0.10 NTU	40.0		102	90-110			
General Parameters, Batch B5A2708									
Blank (B5A2708-BLK1)				Prepared: 2025-01-20, Analyzed: 2025-01-20					
Cyanide, Total	< 0.0020	0.0020 mg/L							
LCS (B5A2708-BS1)				Prepared: 2025-01-20, Analyzed: 2025-01-20					
Cyanide, Total	0.0211	0.0020 mg/L	0.0200		105	82-120			
LCS Dup (B5A2708-BSD1)				Prepared: 2025-01-20, Analyzed: 2025-01-20					
Cyanide, Total	0.0214	0.0020 mg/L	0.0200		107	82-120	2	10	
General Parameters, Batch B5A2878									
Blank (B5A2878-BLK1)				Prepared: 2025-01-21, Analyzed: 2025-01-21					
Alkalinity, Total (as CaCO ₃)	< 2.0	2.0 mg/L							
Bicarbonate (HCO ₃)	< 2.5	2.5 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 (B5A2878-BS1)				Prepared: 2025-01-21, Analyzed: 2025-01-21					
Alkalinity, Total (as CaCO ₃)	253	2.0 mg/L	250		101	94-108			
Conductivity (EC)	1010	2.0 µS/cm	1000		101	95-105			
Reference (B5A2878-SRM1)				Prepared: 2025-01-21, Analyzed: 2025-01-21					
pH	7.13	0.10 pH units	7.00		102	98-102			
General Parameters, Batch B5A2931									
Blank (B5A2931-BLK1)				Prepared: 2025-01-22, Analyzed: 2025-01-22					
Ammonia, Total (as N)	< 0.050	0.050 mg/L							
LCS (B5A2931-BS1)				Prepared: 2025-01-22, Analyzed: 2025-01-22					
Ammonia, Total (as N)	0.198	0.050 mg/L	0.200		99	85-115			
General Parameters, Batch B5A3019									
Blank (B5A3019-BLK1)				Prepared: 2025-01-22, Analyzed: 2025-01-22					
Chlorine, Total	< 0.02	0.02 mg/L							
Chlorine, Free	< 0.02	0.02 mg/L							
Duplicate (B5A3019-DUP1)				Source: 25A1522-01		Prepared: 2025-01-22, Analyzed: 2025-01-22			
Chlorine, Total	1.34	0.02 mg/L	1.41			5	10		
Chlorine, Free	1.14	0.02 mg/L	1.21			6	20		
Reference (B5A3019-SRM1)				Prepared: 2025-01-22, Analyzed: 2025-01-22					
Chlorine, Total	1.54	0.02 mg/L	1.55		99	91.2-108.8			
Chlorine, Free	1.54	0.02 mg/L	1.55		99	91.2-108.8			

Miscellaneous Herbicides, Batch B5A3468

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Miscellaneous Herbicides, Batch B5A3468, Continued									
Blank (B5A3468-BLK1)				Prepared: 2025-01-29, Analyzed: 2025-01-29					
Glyphosate	< 0.050	0.050 mg/L							
LCS (B5A3468-BS1)				Prepared: 2025-01-29, Analyzed: 2025-01-29					
Glyphosate	0.244	0.050 mg/L	0.250		97	70-130			
LCS Dup (B5A3468-BSD1)				Prepared: 2025-01-29, Analyzed: 2025-01-29					
Glyphosate	0.245	0.050 mg/L	0.250		98	70-130	< 1	20	

Pesticides, Herbicides, and Fungicides, Batch B5A3626

Blank (B5A3626-BLK1)				Prepared: 2025-01-29, Analyzed: 2025-01-29					
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 (Ronnell)	< 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							
Pentachloronitrobenzene	< 0.100	0.100 µg/L							
Permethrin	< 0.010	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							

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Pesticides, Herbicides, and Fungicides, Batch B5A3626, Continued									
Blank (B5A3626-BLK1), Continued					Prepared: 2025-01-29, Analyzed: 2025-01-29				
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	1.34	µg/L	1.00		134	50-140			
Surrogate: 4-chloro-3-nitrobenzotrifluoride	0.965	µg/L	0.970		99	50-140			
LCS (B5A3626-BS1)					Prepared: 2025-01-29, Analyzed: 2025-01-29				
Alachlor	1.17	0.100 µg/L	1.01		116	50-140			
Aldrin	1.07	0.006 µg/L	1.00		107	50-140			
Atrazine	1.14	0.100 µg/L	1.01		113	50-140			
Atrazine-desethyl	0.697	0.100 µg/L	1.01		69	50-140			
Azinphos-methyl	0.921	0.200 µg/L	0.992		93	50-140			
alpha-BHC	0.917	0.010 µg/L	1.00		92	50-140			
beta-BHC	1.72	0.050 µg/L	1.00		172	50-140			SPK
delta-BHC	1.04	0.050 µg/L	1.00		104	50-140			
gamma-BHC (Lindane)	0.945	0.050 µg/L	1.00		95	50-140			
Bromacil	1.32	0.100 µg/L	1.00		132	50-140			
Bromoxynil	1.39	0.200 µg/L	1.01		137	50-140			
Butachlor	1.30	0.020 µg/L	1.00		130	50-140			
Captan	1.41	0.100 µg/L	1.04		135	50-140			
Chlordane (cis + trans)	2.47	0.050 µg/L	2.00		123	50-140			
Chlorothalonil	1.36	0.050 µg/L	1.16		117	50-140			
Chlorpyrifos	1.14	0.010 µg/L	1.00		114	50-140			
Cyanazine	1.27	0.100 µg/L	1.00		127	50-140			
DDT, Total	7.86	0.010 µg/L	6.01		131	50-140			
Deltamethrin	6.15	0.100 µg/L	9.99		62	50-140			
Diazinon	1.11	0.020 µg/L	1.02		109	50-140			
Dichlorvos	1.03	0.100 µg/L	1.00		103	50-140			
Diclofop-methyl	1.42	0.100 µg/L	1.00		142	50-140			SPK
Dieldrin	1.23	0.010 µg/L	1.00		123	50-140			
Dimethoate	1.20	0.200 µg/L	1.01		119	50-140			
Disulfoton	0.963	0.100 µg/L	1.01		95	50-140			
Diuron	1.25	0.200 µg/L	1.01		123	50-140			
Endosulfan I + II	2.26	0.010 µg/L	2.00		113	50-140			
Endosulfan sulfate	1.27	0.050 µg/L	1.00		127	50-140			
Endrin	1.34	0.020 µg/L	1.00		134	50-140			
Endrin aldehyde	1.25	0.020 µg/L	1.00		125	50-140			
Endrin ketone	0.504	0.020 µg/L	1.00		50	50-140			
Fenchlorphos (Ronnel)	1.17	0.100 µg/L	1.00		117	50-140			
Heptachlor	1.10	0.010 µg/L	1.00		110	50-140			
Heptachlor epoxide	1.26	0.010 µg/L	1.00		126	50-140			
Linuron	1.21	0.050 µg/L	0.994		121	50-140			
Malathion	1.34	0.100 µg/L	0.998		134	50-140			
Methoxychlor	0.653	0.050 µg/L	1.00		65	50-140			
Methyl parathion	1.38	0.100 µg/L	1.05		132	50-140			
Metolachlor	1.23	0.100 µg/L	1.00		123	50-140			
Metribuzin	1.29	0.200 µg/L	1.00		129	50-140			
Parathion	1.34	0.100 µg/L	1.02		131	50-140			
Pentachloronitrobenzene	1.17	0.100 µg/L	0.989		118	50-140			
Permethrin	0.877	0.010 µg/L	1.00		88	50-140			
Phorate	1.06	0.100 µg/L	1.01		105	50-140			
Prometon	1.23	0.300 µg/L	1.00		123	50-140			

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Pesticides, Herbicides, and Fungicides, Batch B5A3626, Continued									
LCS (B5A3626-BS1), Continued					Prepared: 2025-01-29, Analyzed: 2025-01-29				
Prometryne	1.25	0.100 µg/L	1.00		125	50-140			
Simazine	1.13	0.200 µg/L	1.01		111	50-140			
Sulfotep	1.23	0.100 µg/L	0.999		123	50-140			
Tebuthiuron	1.21	0.200 µg/L	1.00		121	50-140			
Temephos (Abate)	10.3	0.500 µg/L	10.1		102	50-140			
Terbufos	1.18	0.100 µg/L	1.01		117	50-140			
Triallate	1.28	0.100 µg/L	0.998		128	50-140			
Trifluralin	1.34	0.200 µg/L	1.00		134	50-140			
Surrogate: Tributyl Phosphate	1.26	µg/L	1.00		126	50-140			
Surrogate: 4-chloro-3-nitrobenzotrifluoride	0.914	µg/L	0.970		94	50-140			
LCS Dup (B5A3626-BSD1)					Prepared: 2025-01-29, Analyzed: 2025-01-29				
Alachlor	1.23	0.100 µg/L	1.01		122	50-140	5	30	
Aldrin	1.11	0.006 µg/L	1.00		111	50-140	4	30	
Atrazine	1.21	0.100 µg/L	1.01		119	50-140	6	30	
Atrazine-desethyl	0.765	0.100 µg/L	1.01		76	50-140	9	30	
Azinphos-methyl	0.936	0.200 µg/L	0.992		94	50-140	2	30	
alpha-BHC	0.941	0.010 µg/L	1.00		94	50-140	3	30	
beta-BHC	1.70	0.050 µg/L	1.00		170	50-140	< 1	30	SPK
delta-BHC	1.07	0.050 µg/L	1.00		107	50-140	3	30	
gamma-BHC (Lindane)	1.01	0.050 µg/L	1.00		101	50-140	6	30	
Bromacil	1.53	0.100 µg/L	1.00		153	50-140	15	30	SPK
Bromoxynil	1.83	0.200 µg/L	1.01		181	50-140	28	30	SPK
Butachlor	1.39	0.020 µg/L	1.00		139	50-140	6	30	
Captan	1.61	0.100 µg/L	1.04		155	50-140	13	30	SPK
Chlordane (cis + trans)	2.76	0.050 µg/L	2.00		138	50-140	11	30	
Chlorothalonil	1.57	0.050 µg/L	1.16		136	50-140	14	30	
Chlorpyrifos	1.20	0.010 µg/L	1.00		120	50-140	5	30	
Cyanazine	1.44	0.100 µg/L	1.00		144	50-140	12	30	SPK
DDT, Total	8.45	0.010 µg/L	6.01		141	50-140	7	30	SPK
Deltamethrin	5.99	0.100 µg/L	9.99		60	50-140	3	30	
Diazinon	1.15	0.020 µg/L	1.02		112	50-140	3	30	
Dichlorvos	1.15	0.100 µg/L	1.00		115	50-140	11	30	
Diclofop-methyl	1.63	0.100 µg/L	1.00		163	50-140	14	30	SPK
Dieldrin	1.30	0.010 µg/L	1.00		130	50-140	5	30	
Dimethoate	1.31	0.200 µg/L	1.01		129	50-140	8	30	
Disulfoton	1.03	0.100 µg/L	1.01		102	50-140	7	30	
Diuron	1.33	0.200 µg/L	1.01		132	50-140	7	30	
Endosulfan I + II	2.49	0.010 µg/L	2.00		125	50-140	10	30	
Endosulfan sulfate	1.47	0.050 µg/L	1.00		147	50-140	15	30	SPK
Endrin	1.46	0.020 µg/L	1.00		146	50-140	8	30	SPK
Endrin aldehyde	1.40	0.020 µg/L	1.00		140	50-140	11	30	
Endrin ketone	0.499	0.020 µg/L	1.00		50	50-140	< 1	30	
Fenchlorphos (Ronnel)	1.37	0.100 µg/L	1.00		137	50-140	16	30	
Heptachlor	1.17	0.010 µg/L	1.00		117	50-140	6	30	
Heptachlor epoxide	1.38	0.010 µg/L	1.00		138	50-140	9	30	
Linuron	1.38	0.050 µg/L	0.994		139	50-140	13	30	
Malathion	1.39	0.100 µg/L	0.998		139	50-140	4	30	
Methoxychlor	0.608	0.050 µg/L	1.00		61	50-140	7	30	
Methyl parathion	1.54	0.100 µg/L	1.05		147	50-140	11	30	SPK
Metolachlor	1.28	0.100 µg/L	1.00		128	50-140	4	30	
Metribuzin	1.38	0.200 µg/L	1.00		138	50-140	6	30	
Parathion	1.67	0.100 µg/L	1.02		163	50-140	22	30	SPK
Pentachloronitrobenzene	1.33	0.100 µg/L	0.989		135	50-140	13	30	
Permethrin	0.864	0.010 µg/L	1.00		86	50-140	1	30	
Phorate	1.20	0.100 µg/L	1.01		119	50-140	12	30	

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Pesticides, Herbicides, and Fungicides, Batch B5A3626, Continued									
LCS Dup (B5A3626-BSD1), Continued				Prepared: 2025-01-29, Analyzed: 2025-01-29					
Prometon	1.27	0.300 µg/L	1.00		127	50-140	4	30	
Prometryne	1.36	0.100 µg/L	1.00		136	50-140	9	30	
Simazine	1.19	0.200 µg/L	1.01		118	50-140	6	30	
Sulfotep	1.38	0.100 µg/L	0.999		138	50-140	11	30	
Tebuthiuron	1.58	0.200 µg/L	1.00		158	50-140	27	30	SPK
Temephos (Abate)	11.4	0.500 µg/L	10.1		113	50-140	10	30	
Terbufos	1.30	0.100 µg/L	1.01		129	50-140	10	30	
Triallate	1.34	0.100 µg/L	0.998		134	50-140	4	30	
Trifluralin	1.49	0.200 µg/L	1.00		149	50-140	10	30	SPK
Surrogate: Tributyl Phosphate	1.38	µg/L	1.00		138	50-140			
Surrogate: 4-chloro-3-nitrobenzotrifluoride	0.954	µg/L	0.970		98	50-140			

Polycyclic Aromatic Hydrocarbons (PAH), Batch B5A2545

Blank (B5A2545-BLK1)			Prepared: 2025-01-16, Analyzed: 2025-01-20						
Acenaphthene	< 0.050	0.050 µg/L							
Acenaphthylene	< 0.200	0.200 µg/L							
Acridine	< 0.050	0.050 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	18.2	µg/L	20.0		91	50-140			
Surrogate: Perylene-d12	22.2	µg/L	20.0		111	50-140			

LCS (B5A2545-BS2)			Prepared: 2025-01-16, Analyzed: 2025-01-20						
Acenaphthene	20.6	0.050 µg/L	20.0		103	50-140			
Acenaphthylene	24.5	0.200 µg/L	20.0		123	50-140			
Acridine	22.0	0.050 µg/L	20.0		110	50-140			
Anthracene	21.7	0.010 µg/L	20.0		109	50-140			
Benz(a)anthracene	25.9	0.010 µg/L	20.0		130	50-140			
Benzo(a)pyrene	18.9	0.010 µg/L	20.0		94	50-140			
Benzo(b+j)fluoranthene	37.8	0.050 µg/L	40.0		95	50-140			
Benzo(g,h,i)perylene	20.1	0.050 µg/L	20.0		101	50-140			
Benzo(k)fluoranthene	21.9	0.050 µg/L	20.0		110	50-140			
2-Chloronaphthalene	18.8	0.100 µg/L	20.4		92	50-140			
Chrysene	19.8	0.050 µg/L	20.0		99	50-140			
Dibenz(a,h)anthracene	20.3	0.010 µg/L	20.0		101	50-140			
Fluoranthene	21.5	0.030 µg/L	20.0		108	50-140			
Fluorene	22.8	0.050 µg/L	20.0		114	50-140			
Indeno(1,2,3-cd)pyrene	20.8	0.050 µg/L	20.0		104	50-140			
1-Methylnaphthalene	20.8	0.100 µg/L	19.9		104	50-140			

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B5A2545, Continued									
LCS (B5A2545-BS2), Continued					Prepared: 2025-01-16, Analyzed: 2025-01-20				
2-Methylnaphthalene	20.1	0.100 µg/L	20.0		101	50-140			
Naphthalene	20.4	0.200 µg/L	20.0		102	50-140			
Phenanthrene	19.5	0.100 µg/L	20.0		97	50-140			
Pyrene	21.8	0.020 µg/L	20.0		109	50-140			
Quinoline	23.4	0.050 µg/L	20.0		117	50-140			
Surrogate: Naphthalene-d8	15.9	µg/L	20.0		79	50-140			
Surrogate: Perylene-d12	20.6	µg/L	20.0		103	50-140			
LCS Dup (B5A2545-BSD2)					Prepared: 2025-01-16, Analyzed: 2025-01-20				
Acenaphthene	19.4	0.050 µg/L	20.0		97	50-140	6	30	
Acenaphthylene	23.0	0.200 µg/L	20.0		115	50-140	7	30	
Acridine	21.7	0.050 µg/L	20.0		109	50-140	1	30	
Anthracene	20.8	0.010 µg/L	20.0		104	50-140	4	30	
Benz(a)anthracene	24.8	0.010 µg/L	20.0		124	50-140	5	30	
Benzo(a)pyrene	18.8	0.010 µg/L	20.0		94	50-140	< 1	30	
Benzo(b+j)fluoranthene	37.9	0.050 µg/L	40.0		95	50-140	< 1	30	
Benzo(g,h,i)perylene	20.1	0.050 µg/L	20.0		100	50-140	< 1	30	
Benzo(k)fluoranthene	22.0	0.050 µg/L	20.0		110	50-140	< 1	30	
2-Chloronaphthalene	18.0	0.100 µg/L	20.4		88	50-140	4	30	
Chrysene	18.9	0.050 µg/L	20.0		94	50-140	5	30	
Dibenz(a,h)anthracene	20.1	0.010 µg/L	20.0		101	50-140	< 1	30	
Fluoranthene	20.3	0.030 µg/L	20.0		102	50-140	6	30	
Fluorene	21.6	0.050 µg/L	20.0		108	50-140	5	30	
Indeno(1,2,3-cd)pyrene	20.8	0.050 µg/L	20.0		104	50-140	< 1	30	
1-Methylnaphthalene	19.9	0.100 µg/L	19.9		100	50-140	4	30	
2-Methylnaphthalene	19.2	0.100 µg/L	20.0		96	50-140	5	30	
Naphthalene	19.7	0.200 µg/L	20.0		99	50-140	3	30	
Phenanthrene	18.6	0.100 µg/L	20.0		93	50-140	4	30	
Pyrene	20.7	0.020 µg/L	20.0		104	50-140	5	30	
Quinoline	22.6	0.050 µg/L	20.0		113	50-140	4	30	
Surrogate: Naphthalene-d8	16.3	µg/L	20.0		82	50-140			
Surrogate: Perylene-d12	20.7	µg/L	20.0		104	50-140			

Total Metals, Batch B5A2656

Blank (B5A2656-BLK1)			Prepared: 2025-01-17, Analyzed: 2025-01-17						
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							
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							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Newell Regional Services Corporation
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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B5A2656, Continued									
LCS (B5A2656-BS1)					Prepared: 2025-01-17, Analyzed: 2025-01-17				
Aluminum, total	3.97	0.0050 mg/L	4.00		99	80-120			
Antimony, total	0.0392	0.00020 mg/L	0.0400		98	80-120			
Arsenic, total	0.394	0.00050 mg/L	0.400		99	80-120			
Barium, total	0.0405	0.0050 mg/L	0.0400		101	80-120			
Boron, total	0.383	0.0500 mg/L	0.400		96	80-120			
Cadmium, total	0.0393	0.000010 mg/L	0.0400		98	80-120			
Calcium, total	4.11	0.20 mg/L	4.00		103	80-120			
Chromium, total	0.0401	0.00050 mg/L	0.0400		100	80-120			
Copper, total	0.0396	0.00040 mg/L	0.0400		99	80-120			
Iron, total	4.00	0.010 mg/L	4.00		100	80-120			
Lead, total	0.0398	0.00020 mg/L	0.0400		100	80-120			
Magnesium, total	4.01	0.010 mg/L	4.00		100	80-120			
Manganese, total	0.0401	0.00020 mg/L	0.0400		100	80-120			
Potassium, total	3.92	0.10 mg/L	4.00		98	80-120			
Selenium, total	0.403	0.00050 mg/L	0.400		101	80-120			
Silver, total	0.0389	0.000050 mg/L	0.0400		97	80-120			
Sodium, total	4.11	0.10 mg/L	4.00		103	80-120			
Strontium, total	0.0405	0.0010 mg/L	0.0400		101	80-120			
Uranium, total	0.0391	0.000020 mg/L	0.0400		98	80-120			
Zinc, total	0.395	0.0040 mg/L	0.400		99	80-120			

Total Metals, Batch B5A2713

Blank (B5A2713-BLK1)					Prepared: 2025-01-19, Analyzed: 2025-01-19				
Mercury, total	< 0.000010	0.000010 mg/L							
Blank (B5A2713-BLK2)					Prepared: 2025-01-19, Analyzed: 2025-01-19				
Mercury, total	< 0.000010	0.000010 mg/L							
Blank (B5A2713-BLK3)					Prepared: 2025-01-19, Analyzed: 2025-01-19				
Mercury, total	< 0.000010	0.000010 mg/L							
Blank (B5A2713-BLK4)					Prepared: 2025-01-19, Analyzed: 2025-01-19				
Mercury, total	< 0.000010	0.000010 mg/L							
LCS (B5A2713-BS1)					Prepared: 2025-01-19, Analyzed: 2025-01-19				
Mercury, total	0.00260	0.000010 mg/L	0.00250		104	80-120			
LCS (B5A2713-BS2)					Prepared: 2025-01-19, Analyzed: 2025-01-19				
Mercury, total	0.00258	0.000010 mg/L	0.00250		103	80-120			
LCS (B5A2713-BS3)					Prepared: 2025-01-19, Analyzed: 2025-01-19				
Mercury, total	0.00262	0.000010 mg/L	0.00250		105	80-120			
LCS (B5A2713-BS4)					Prepared: 2025-01-19, Analyzed: 2025-01-19				
Mercury, total	0.00245	0.000010 mg/L	0.00250		98	80-120			

Volatile Organic Compounds (VOC), Batch B5A2538

Blank (B5A2538-BLK1)					Prepared: 2025-01-16, Analyzed: 2025-01-17				
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							

APPENDIX 2: QUALITY CONTROL RESULTS

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Volatile Organic Compounds (VOC), Batch B5A2538, Continued									
Blank (B5A2538-BLK1), Continued					Prepared: 2025-01-16, Analyzed: 2025-01-17				
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							
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	19.2	µg/L	18.8		102	70-130			
Surrogate: 4-Bromofluorobenzene	19.7	µg/L	19.9		99	70-130			
LCS (B5A2538-BS1)					Prepared: 2025-01-16, Analyzed: 2025-01-17				
Benzene	24.3	0.5 µg/L	20.1		121	70-130			
Bromodichloromethane	21.7	1.0 µg/L	20.1		108	70-130			
Bromoform	22.3	1.0 µg/L	20.1		111	70-130			
Carbon tetrachloride	18.1	0.5 µg/L	20.1		90	70-130			
Chlorobenzene	23.4	1.0 µg/L	20.1		117	70-130			
Chloroethane	29.4	2.0 µg/L	20.1		146	60-140			SPK1
Chloroform	21.3	1.0 µg/L	20.1		106	70-130			
Dibromochloromethane	21.0	1.0 µg/L	20.1		104	70-130			
1,2-Dibromoethane	21.2	0.3 µg/L	20.1		105	70-130			
Dibromomethane	19.8	1.0 µg/L	20.1		99	70-130			
1,2-Dichlorobenzene	22.2	0.5 µg/L	20.1		110	70-130			
1,3-Dichlorobenzene	22.0	1.0 µg/L	20.1		110	70-130			
1,4-Dichlorobenzene	21.7	1.0 µg/L	20.1		108	70-130			
1,1-Dichloroethane	21.8	1.0 µg/L	20.1		109	70-130			
1,2-Dichloroethane	21.8	1.0 µg/L	20.1		108	70-130			
1,1-Dichloroethylene	25.2	1.0 µg/L	20.1		126	70-130			
cis-1,2-Dichloroethylene	20.7	1.0 µg/L	20.1		103	70-130			
trans-1,2-Dichloroethylene	25.9	1.0 µg/L	20.1		129	70-130			
Dichloromethane	27.4	3.0 µg/L	20.1		136	70-130			SPK1
1,2-Dichloropropane	22.2	1.0 µg/L	20.1		110	70-130			
1,3-Dichloropropene (cis + trans)	38.5	1.0 µg/L	40.0		96	70-130			
Ethylbenzene	23.8	1.0 µg/L	20.1		118	70-130			
Methyl tert-butyl ether	23.7	1.0 µg/L	20.0		118	70-130			
Styrene	23.3	1.0 µg/L	20.1		116	70-130			
1,1,2,2-Tetrachloroethane	36.8	0.5 µg/L	20.1		183	70-130			SPK1

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Volatile Organic Compounds (VOC), Batch B5A2538, Continued									
LCS (B5A2538-BS1), Continued				Prepared: 2025-01-16, Analyzed: 2025-01-17					
Tetrachloroethylene	19.9	1.0 µg/L	20.1		99	70-130			
Toluene	23.9	0.5 µg/L	20.1		119	70-130			
1,1,1-Trichloroethane	18.3	1.0 µg/L	20.1		91	70-130			
1,1,2-Trichloroethane	22.1	1.0 µg/L	20.1		110	70-130			
Trichloroethylene	20.0	1.0 µg/L	20.1		99	70-130			
Trichlorofluoromethane	23.5	1.0 µg/L	20.1		117	60-140			
Vinyl chloride	21.3	1.0 µg/L	20.1		106	60-140			
Xylenes (total)	71.9	2.0 µg/L	60.3		119	70-130			
Surrogate: Toluene-d8	20.0	µg/L	18.8		106	70-130			
Surrogate: 4-Bromofluorobenzene	20.4	µg/L	19.9		103	70-130			
Duplicate (B5A2538-DUP1)				Source: 25A1522-01	Prepared: 2025-01-16, Analyzed: 2025-01-17				
Benzene	< 0.5	0.5 µg/L		< 0.5				30	
Bromodichloromethane	4.9	1.0 µg/L		5.0			2	30	
Bromoform	< 1.0	1.0 µg/L		< 1.0				30	
Carbon tetrachloride	< 0.5	0.5 µg/L		< 0.5				30	
Chlorobenzene	< 1.0	1.0 µg/L		< 1.0				30	
Chloroethane	< 2.0	2.0 µg/L		< 2.0				30	
Chloroform	17.6	1.0 µg/L		17.6			< 1	30	
Dibromochloromethane	< 1.0	1.0 µg/L		< 1.0				30	
1,2-Dibromoethane	< 0.3	0.3 µg/L		< 0.3				30	
Dibromomethane	< 1.0	1.0 µg/L		< 1.0				30	
1,2-Dichlorobenzene	< 0.5	0.5 µg/L		< 0.5				30	
1,3-Dichlorobenzene	< 1.0	1.0 µg/L		< 1.0				30	
1,4-Dichlorobenzene	< 1.0	1.0 µg/L		< 1.0				30	
1,1-Dichloroethane	< 1.0	1.0 µg/L		< 1.0				30	
1,2-Dichloroethane	< 1.0	1.0 µg/L		< 1.0				30	
1,1-Dichloroethylene	< 1.0	1.0 µg/L		< 1.0				30	
cis-1,2-Dichloroethylene	< 1.0	1.0 µg/L		< 1.0				30	
trans-1,2-Dichloroethylene	< 1.0	1.0 µg/L		< 1.0				30	
Dichloromethane	< 3.0	3.0 µg/L		< 3.0				30	
1,2-Dichloropropane	< 1.0	1.0 µg/L		< 1.0				30	
1,3-Dichloropropene (cis + trans)	< 1.0	1.0 µg/L		< 1.0				30	
Ethylbenzene	< 1.0	1.0 µg/L		< 1.0				30	
Methyl tert-butyl ether	< 1.0	1.0 µg/L		< 1.0				30	
Styrene	< 1.0	1.0 µg/L		< 1.0				30	
1,1,2,2-Tetrachloroethane	< 0.5	0.5 µg/L		< 0.5				30	
Tetrachloroethylene	< 1.0	1.0 µg/L		< 1.0				30	
Toluene	< 0.5	0.5 µg/L		< 0.5				30	
1,1,1-Trichloroethane	< 1.0	1.0 µg/L		< 1.0				30	
1,1,2-Trichloroethane	< 1.0	1.0 µg/L		< 1.0				30	
Trichloroethylene	< 1.0	1.0 µg/L		< 1.0				30	
Trichlorofluoromethane	< 1.0	1.0 µg/L		< 1.0				30	
Vinyl chloride	< 1.0	1.0 µg/L		< 1.0				30	
Xylenes (total)	< 2.0	2.0 µg/L		< 2.0				30	
Surrogate: Toluene-d8	20.4	µg/L	18.8		108	70-130			
Surrogate: 4-Bromofluorobenzene	21.6	µg/L	19.9		108	70-130			
Matrix Spike (B5A2538-MS1)				Source: 25A1522-01	Prepared: 2025-01-16, Analyzed: 2025-01-17				
Benzene	24.6	0.5 µg/L	20.1	< 0.5	122	70-130			
Bromodichloromethane	28.4	1.0 µg/L	20.1	5.0	117	70-130			
Bromoform	22.8	1.0 µg/L	20.1	< 1.0	114	70-130			
Carbon tetrachloride	18.3	0.5 µg/L	20.1	< 0.5	91	70-130			
Chlorobenzene	24.5	1.0 µg/L	20.1	< 1.0	122	70-130			
Chloroethane	20.8	2.0 µg/L	20.1	< 2.0	103	60-140			
Chloroform	39.0	1.0 µg/L	20.1	17.6	106	70-130			

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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Volatile Organic Compounds (VOC), Batch B5A2538, Continued									
Matrix Spike (B5A2538-MS1), Continued		Source: 25A1522-01		Prepared: 2025-01-16, Analyzed: 2025-01-17					
Dibromochloromethane	22.6	1.0 µg/L	20.1	< 1.0	109	70-130			
1,2-Dibromoethane	21.6	0.3 µg/L	20.1	< 0.3	108	70-130			
Dibromomethane	20.0	1.0 µg/L	20.1	< 1.0	99	70-130			
1,2-Dichlorobenzene	22.7	0.5 µg/L	20.1	< 0.5	113	70-130			
1,3-Dichlorobenzene	22.5	1.0 µg/L	20.1	< 1.0	112	70-130			
1,4-Dichlorobenzene	22.2	1.0 µg/L	20.1	< 1.0	110	70-130			
1,1-Dichloroethane	22.3	1.0 µg/L	20.1	< 1.0	111	70-130			
1,2-Dichloroethane	21.6	1.0 µg/L	20.1	< 1.0	108	70-130			
1,1-Dichloroethylene	25.9	1.0 µg/L	20.1	< 1.0	129	70-130			
cis-1,2-Dichloroethylene	21.4	1.0 µg/L	20.1	< 1.0	107	70-130			
trans-1,2-Dichloroethylene	25.8	1.0 µg/L	20.1	< 1.0	128	70-130			
Dichloromethane	27.4	3.0 µg/L	20.1	< 3.0	136	70-130			MS1
1,2-Dichloropropane	22.8	1.0 µg/L	20.1	< 1.0	114	70-130			
1,3-Dichloropropene (cis + trans)	38.3	1.0 µg/L	40.0	< 1.0	96	70-130			
Ethylbenzene	24.6	1.0 µg/L	20.1	< 1.0	122	70-130			
Methyl tert-butyl ether	23.4	1.0 µg/L	20.0	< 1.0	116	70-130			
Styrene	14.8	1.0 µg/L	20.1	< 1.0	73	70-130			
1,1,2,2-Tetrachloroethane	41.9	0.5 µg/L	20.1	< 0.5	208	70-130			MS1
Tetrachloroethylene	20.2	1.0 µg/L	20.1	< 1.0	101	70-130			
Toluene	24.6	0.5 µg/L	20.1	< 0.5	122	70-130			
1,1,1-Trichloroethane	18.6	1.0 µg/L	20.1	< 1.0	92	70-130			
1,1,2-Trichloroethane	22.7	1.0 µg/L	20.1	< 1.0	113	70-130			
Trichloroethylene	19.9	1.0 µg/L	20.1	< 1.0	99	70-130			
Trichlorofluoromethane	24.0	1.0 µg/L	20.1	< 1.0	119	60-140			
Vinyl chloride	21.0	1.0 µg/L	20.1	< 1.0	104	60-140			
Xylenes (total)	74.7	2.0 µg/L	60.3	< 2.0	124	70-130			
Surrogate: Toluene-d8	19.4	µg/L	18.8		103	70-130			
Surrogate: 4-Bromofluorobenzene	20.1	µg/L	19.9		101	70-130			

QC Qualifiers:

MS1 The matrix spike recovery was outside of control limits due to a matrix effect and/or interference.
 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.