CERTIFICATE OF ANALYSIS

REPORTED TO	High River, Town of 309B Macleod Trail S.W. High River, AB T1V 1Z5		
ATTENTION	Jason Craigie	**WORK ORDER**	21A2592
PO NUMBER		**RECEIVED / TEMP**	2021-01-28 08:55 / 10°C
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55
PROJECT INFO		**COC NUMBER**	10328

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.

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

Authorized By:

Alana Crump
Team Lead, Client Service

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO High River, Town of
PROJECT Bi-Annual Schedule 4

WORK ORDER 21A2592
REPORTED 2021-02-11 12:55

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Water Treatment Plant (21A2592-01) | Matrix: Water | Sampled: 2021-01-27 07:30						
Acid Herbicides						
2,4-D	< 0.10	MAC = 100	0.10	µg/L	2021-02-08	
MCPA	< 0.02	MAC = 100	0.02	µg/L	2021-02-08	
2,4,5-T	< 0.10	N/A	0.10	µg/L	2021-02-08	
Dicamba	< 0.10	MAC = 120	0.10	µg/L	2021-02-08	
Picloram	< 0.10	MAC = 190	0.10	µg/L	2021-02-08	
Dinoseb	< 0.10	N/A	0.10	µg/L	2021-02-08	
Anions						
Bromate	< 0.010	MAC = 0.01	0.010	mg/L	2021-02-04	
Chlorate	< 0.50	MAC = 1	0.50	mg/L	2021-01-28	
Chloride	**2.96**	AO ≤ 250	0.50	mg/L	2021-01-28	
Chlorite	< 0.50	MAC = 1	0.50	mg/L	2021-01-28	
Fluoride	**0.14**	MAC = 1.5	0.10	mg/L	2021-01-28	
Nitrate (as N)	**0.196**	MAC = 10	0.050	mg/L	2021-01-28	
Nitrite (as N)	< 0.050	MAC = 1	0.050	mg/L	2021-01-28	
Sulfate	**53.8**	AO ≤ 500	1.0	mg/L	2021-01-28	
Calculated Parameters						
Chloramines	**0.0700**	MAC = 3	0.0400	mg/L	N/A	
Total Trihalomethanes	< 0.00400	MAC = 0.1	0.00400	mg/L	N/A	
Hardness, Total (as CaCO3)	**251**	None Required	0.541	mg/L	N/A	
Solids, Total Dissolved	**300**	AO ≤ 500	3.35	mg/L	N/A	
Carbamates						
Aldicarb	< 0.0010	N/A	0.0010	mg/L	2021-02-02	
Bendiocarb	< 0.0010	N/A	0.0010	mg/L	2021-02-02	
Carbaryl	< 0.0010	MAC = 0.09	0.0010	mg/L	2021-02-02	
Carbofuran	< 0.0010	MAC = 0.09	0.0010	mg/L	2021-02-02	
Chlorinated Phenols						
2-Chlorophenol	< 0.10	N/A	0.10	µg/L	2021-02-03	
3 & 4-Chlorophenol	< 0.10	N/A	0.10	µg/L	2021-02-03	
4-Chloro-3-Methylphenol	< 0.50	N/A	0.50	µg/L	2021-02-03	
2,3-Dichlorophenol	< 0.20	N/A	0.20	µg/L	2021-02-03	
2,4 & 2,5-Dichlorophenol	< 0.20	AO ≤ 0.3	0.20	µg/L	2021-02-03	
2,6-Dichlorophenol	< 0.20	N/A	0.20	µg/L	2021-02-03	
3,4-Dichlorophenol	< 0.20	N/A	0.20	µg/L	2021-02-03	
3,5-Dichlorophenol	< 0.20	N/A	0.20	µg/L	2021-02-03	
2,3,4-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2021-02-03	
2,3,5-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2021-02-03	
2,3,6-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2021-02-03	
2,4,5-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2021-02-03	
2,4,6-Trichlorophenol	< 0.50	AO ≤ 2	0.50	µg/L	2021-02-03	
3,4,5-Trichlorophenol	< 0.50	N/A	0.50	µg/L	2021-02-03	

TEST RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Water Treatment Plant (21A2592-01) | Matrix: Water | Sampled: 2021-01-27 07:30, Continued						
Chlorinated Phenols, Continued						
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	< 0.50	N/A	0.50	µg/L	2021-02-03	
2,3,4,6-Tetrachlorophenol	< 0.50	AO ≤ 1	0.50	µg/L	2021-02-03	
Pentachlorophenol	< 0.50	AO ≤ 30	0.50	µg/L	2021-02-03	
Surrogate: 2,4-Dibromophenol	*72*		*60-130*	%	*2021-02-03*	
Surrogate: 2,4,6-Tribromophenol	*79*		*60-130*	%	*2021-02-03*	
General Parameters						
Alkalinity, Total (as CaCO3)	**238**	N/A	2.0	mg/L	2021-02-01	
Bicarbonate (HCO3)	**290**	N/A	2.0	mg/L	2021-02-01	
Carbonate (CO3)	< 2.0	N/A	2.0	mg/L	2021-02-01	
Hydroxide (OH)	< 2.0	N/A	2.0	mg/L	2021-02-01	
Ammonia, Total (as N)	< 0.050	None Required	0.050	mg/L	2021-01-29	
Carbon, Total Organic	< 0.50	N/A	0.50	mg/L	2021-02-01	
Chlorine, Total	**0.51**	None Required	0.02	mg/L	2021-01-29	HT2
Chlorine, Free	**0.44**	N/A	0.02	mg/L	2021-01-29	HT2
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2021-01-28	
Conductivity (EC)	**525**	N/A	2.0	µS/cm	2021-01-29	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2021-02-02	
Nitrilotriacetic Acid	< 0.20	MAC = 0.4	0.20	mg/L	2021-02-02	
pH	**7.17**	7.0-10.5	0.10	pH units	2021-02-01	HT2
Sulfide, Total	< 0.020	AO ≤ 0.05	0.020	mg/L	2021-02-01	
Turbidity	< 0.10	OG < 1	0.10	NTU	2021-01-28	
Microbiological Parameters						
Microcystin, total	< 0.14	MAC = 1.5	0.14	µg/L	2021-02-03	
Miscellaneous Herbicides						
Diquat	< 0.0100	MAC = 0.07	0.0100	mg/L	2021-02-02	
Paraquat	< 0.0050	MAC = 0.007	0.0050	mg/L	2021-02-02	
Glyphosate	< 0.050	MAC = 0.28	0.050	mg/L	2021-02-07	
Miscellaneous Organics						
N-Nitrosodimethylamine	< 0.0016	MAC = 0.04	0.0016	µg/L	2021-02-05	
Perfluorinated Compounds						
Perfluorooctanesulfonate (PFOS)	< 0.020	0.6	0.020	µg/L	2021-02-08	
Perfluorooctanoic acid (PFOA)	< 0.020	0.2	0.020	µg/L	2021-02-08	
Perfluoropentanoic acid (PFPeA)	< 0.020	N/A	0.020	µg/L	2021-02-08	
Perfluorobutanesulfonate (PFBS)	< 15.0	N/A	10.0	µg/L	2021-02-08	RS1
Perfluorohexanoic acid (PFHxA)	< 0.010	N/A	0.010	µg/L	2021-02-08	
Perfluoroheptanoic acid (PFHpA)	< 0.010	N/A	0.010	µg/L	2021-02-08	
Perfluorohexanesulfonate (PFHxS)	< 0.020	N/A	0.020	µg/L	2021-02-08	
Perfluoroheptane sulfonate (PFHpS)	< 0.020	N/A	0.020	µg/L	2021-02-08	
Perfluorononanoic acid (PFNA)	< 0.020	N/A	0.020	µg/L	2021-02-08	
Perfluorodecanoic acid (PFDA)	< 0.020	N/A	0.020	µg/L	2021-02-08	

TEST RESULTS

REPORTED TO High River, Town of
PROJECT Bi-Annual Schedule 4

WORK ORDER 21A2592
REPORTED 2021-02-11 12:55

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Water Treatment Plant (21A2592-01) | Matrix: Water | Sampled: 2021-01-27 07:30, Continued						
Perfluorinated Compounds, Continued						
Perfluoroundecanoic acid (PFUnA)	< 0.020	N/A	0.020	µg/L	2021-02-08	
Perfluorodecanesulfonate (PFDS)	< 0.040	N/A	0.040	µg/L	2021-02-08	
Perfluorododecanoic acid (PFDoA)	< 0.030	N/A	0.030	µg/L	2021-02-08	
Perfluorotetradecanoic acid (PFTeA)	< 0.020	N/A	0.020	µg/L	2021-02-08	
Perfluorooctanesulfonamide (PFOSA)	< 0.020	N/A	0.020	µg/L	2021-02-08	
Perfluorotridecanoic acid (PFTrA)	< 0.030	N/A	0.020	µg/L	2021-02-08	RS1
Perfluorobutanoic acid (PFBA)	< 10.0	N/A	10.0	µg/L	2021-02-08	
Pesticides, Herbicides, and Fungicides						
Alachlor	< 0.100	N/A	0.100	µg/L	2021-02-03	
Aldrin	< 0.006	N/A	0.006	µg/L	2021-02-03	
Atrazine and metabolites	< 0.100	MAC = 5	0.100	µg/L	2021-02-03	
Azinphos-methyl	< 0.200	MAC = 20	0.200	µg/L	2021-02-03	
alpha-BHC	< 0.010	N/A	0.010	µg/L	2021-02-03	
beta-BHC	< 0.050	N/A	0.050	µg/L	2021-02-03	
delta-BHC	< 0.050	N/A	0.050	µg/L	2021-02-03	
gamma-BHC (Lindane)	< 0.050	N/A	0.050	µg/L	2021-02-03	
Bromacil	< 0.100	N/A	0.100	µg/L	2021-02-03	
Bromoxynil	< 0.200	MAC = 5	0.200	µg/L	2021-02-03	
Butachlor	< 0.020	N/A	0.020	µg/L	2021-02-03	
Captan	< 0.100	N/A	0.100	µg/L	2021-02-03	
Chlordane (cis + trans)	< 0.050	N/A	0.050	µg/L	2021-02-03	
Chlorothalonil	< 0.050	N/A	0.050	µg/L	2021-02-03	
Chlorpyrifos	< 0.010	MAC = 90	0.010	µg/L	2021-02-03	
Cyanazine	< 0.100	N/A	0.100	µg/L	2021-02-03	
DDT, Total	< 0.010	N/A	0.010	µg/L	2021-02-03	
Deltamethrin	< 0.100	N/A	0.100	µg/L	2021-02-03	
Diazinon	< 0.020	MAC = 20	0.020	µg/L	2021-02-03	
Dichlorvos	< 0.100	N/A	0.100	µg/L	2021-02-03	
Diclofop-methyl	< 0.100	MAC = 9	0.100	µg/L	2021-02-03	
Dieldrin	< 0.010	N/A	0.010	µg/L	2021-02-03	
Dimethoate	< 0.200	MAC = 20	0.200	µg/L	2021-02-03	
Disulfoton	< 0.100	N/A	0.100	µg/L	2021-02-03	
Diuron	< 0.200	MAC = 150	0.200	µg/L	2021-02-03	
Endosulfan I + II	< 0.010	N/A	0.010	µg/L	2021-02-03	
Endosulfan sulfate	< 0.050	N/A	0.050	µg/L	2021-02-03	
Endrin	< 0.020	N/A	0.020	µg/L	2021-02-03	
Endrin aldehyde	< 0.020	N/A	0.020	µg/L	2021-02-03	
Endrin ketone	< 0.020	N/A	0.020	µg/L	2021-02-03	
Fenchlorphos (Ronnel)	< 0.100	N/A	0.100	µg/L	2021-02-03	
Heptachlor	< 0.010	N/A	0.010	µg/L	2021-02-03	
Heptachlor epoxide	< 0.010	N/A	0.010	µg/L	2021-02-03	
Linuron	< 0.050	N/A	0.050	µg/L	2021-02-03	

TEST RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Water Treatment Plant (21A2592-01) | Matrix: Water | Sampled: 2021-01-27 07:30, Continued						
Pesticides, Herbicides, and Fungicides, Continued						
Malathion	< 0.100	MAC = 190	0.100	µg/L	2021-02-03	
Methoxychlor	< 0.050	N/A	0.050	µg/L	2021-02-03	
Methyl parathion	< 0.100	N/A	0.100	µg/L	2021-02-03	
Metolachlor	< 0.100	MAC = 50	0.100	µg/L	2021-02-03	
Metribuzin	< 0.200	MAC = 80	0.200	µg/L	2021-02-03	
Parathion	< 0.100	N/A	0.100	µg/L	2021-02-03	
Pentachloronitrobenzene	< 0.100	N/A	0.100	µg/L	2021-02-03	
Permethrin	< 0.010	N/A	0.010	µg/L	2021-02-03	
Phorate	< 0.100	MAC = 2	0.100	µg/L	2021-02-03	
Prometon	< 0.300	N/A	0.300	µg/L	2021-02-03	
Prometryne	< 0.100	N/A	0.100	µg/L	2021-02-03	
Simazine	< 0.200	MAC = 10	0.200	µg/L	2021-02-03	
Sulfotep	< 0.100	N/A	0.100	µg/L	2021-02-03	
Tebuthiuron	< 0.200	N/A	0.200	µg/L	2021-02-03	
Temephos (Abate)	< 0.500	N/A	0.500	µg/L	2021-02-03	
Terbufos	< 0.100	MAC = 1	0.100	µg/L	2021-02-03	
Triallate	< 0.100	N/A	0.100	µg/L	2021-02-03	
Trifluralin	< 0.200	MAC = 45	0.200	µg/L	2021-02-03	
Surrogate: Tributyl Phosphate	*77*		*50-140*	%	*2021-02-03*	
Surrogate: 4-chloro-3-nitrobenzotrifluoride	*73*		*50-140*	%	*2021-02-03*	
Polycyclic Aromatic Hydrocarbons (PAH)						
Acenaphthene	< 0.050	N/A	0.050	µg/L	2021-02-02	
Acenaphthylene	< 0.200	N/A	0.200	µg/L	2021-02-02	
Acridine	< 0.050	N/A	0.050	µg/L	2021-02-02	
Anthracene	< 0.010	N/A	0.010	µg/L	2021-02-02	
Benz(a)anthracene	< 0.010	N/A	0.010	µg/L	2021-02-02	
Benzo(a)pyrene	< 0.010	MAC = 0.04	0.010	µg/L	2021-02-02	
Benzo(b+j)fluoranthene	< 0.050	N/A	0.050	µg/L	2021-02-02	
Benzo(g,h,i)perylene	< 0.050	N/A	0.050	µg/L	2021-02-02	
Benzo(k)fluoranthene	< 0.050	N/A	0.050	µg/L	2021-02-02	
2-Chloronaphthalene	< 0.100	N/A	0.100	µg/L	2021-02-02	
Chrysene	< 0.050	N/A	0.050	µg/L	2021-02-02	
Dibenz(a,h)anthracene	< 0.010	N/A	0.010	µg/L	2021-02-02	
Fluoranthene	< 0.030	N/A	0.030	µg/L	2021-02-02	
Fluorene	< 0.050	N/A	0.050	µg/L	2021-02-02	
Indeno(1,2,3-cd)pyrene	< 0.050	N/A	0.050	µg/L	2021-02-02	
1-Methylnaphthalene	< 0.100	N/A	0.100	µg/L	2021-02-02	
2-Methylnaphthalene	< 0.100	N/A	0.100	µg/L	2021-02-02	
Naphthalene	< 0.200	N/A	0.200	µg/L	2021-02-02	
Phenanthrene	< 0.100	N/A	0.100	µg/L	2021-02-02	
Pyrene	< 0.020	N/A	0.020	µg/L	2021-02-02	
Quinoline	< 0.050	N/A	0.050	µg/L	2021-02-02	

TEST RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Water Treatment Plant (21A2592-01) | Matrix: Water | Sampled: 2021-01-27 07:30, Continued						
Polycyclic Aromatic Hydrocarbons (PAH), Continued						
Surrogate: Acridine-d9	*96*		*50-140*	%	*2021-02-02*	
Surrogate: Naphthalene-d8	*91*		*50-140*	%	*2021-02-02*	
Surrogate: Perylene-d12	*82*		*50-140*	%	*2021-02-02*	
Total Metals						
Aluminum, total	**0.0229**	OG < 0.1	0.0050	mg/L	2021-02-01	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2021-02-01	
Arsenic, total	< 0.00050	MAC = 0.01	0.00050	mg/L	2021-02-01	
Barium, total	**0.121**	MAC = 2	0.0050	mg/L	2021-02-01	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2021-02-01	
Cadmium, total	< 0.000010	MAC = 0.005	0.000010	mg/L	2021-02-01	
Calcium, total	**69.6**	None Required	0.20	mg/L	2021-02-01	
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2021-02-01	
Copper, total	**0.00345**	MAC = 2	0.00040	mg/L	2021-02-01	
Iron, total	< 0.010	AO ≤ 0.3	0.010	mg/L	2021-02-01	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2021-02-01	
Magnesium, total	**18.8**	None Required	0.010	mg/L	2021-02-01	
Manganese, total	< 0.00020	MAC = 0.12	0.00020	mg/L	2021-02-01	
Mercury, total	< 0.000010	MAC = 0.001	0.000010	mg/L	2021-02-03	
Potassium, total	**1.18**	N/A	0.10	mg/L	2021-02-01	
Selenium, total	**0.00072**	MAC = 0.05	0.00050	mg/L	2021-02-01	
Silver, total	< 0.000050	None Required	0.000050	mg/L	2021-02-01	
Sodium, total	**7.89**	AO ≤ 200	0.10	mg/L	2021-02-01	
Strontium, total	**0.389**	7	0.0010	mg/L	2021-02-01	
Uranium, total	**0.000795**	MAC = 0.02	0.000020	mg/L	2021-02-01	
Zinc, total	< 0.0040	AO ≤ 5	0.0040	mg/L	2021-02-01	
Volatile Organic Compounds (VOC)						
Benzene	< 0.5	MAC = 5	0.5	µg/L	2021-02-01	
Bromodichloromethane	< 1.0	N/A	1.0	µg/L	2021-02-01	
Bromoform	< 1.0	N/A	1.0	µg/L	2021-02-01	
Carbon tetrachloride	< 0.5	MAC = 2	0.5	µg/L	2021-02-01	
Chlorobenzene	< 1.0	AO ≤ 30	1.0	µg/L	2021-02-01	
Chloroethane	< 2.0	N/A	2.0	µg/L	2021-02-01	
Chloroform	**2.4**	N/A	1.0	µg/L	2021-02-01	
Dibromochloromethane	< 1.0	N/A	1.0	µg/L	2021-02-01	
1,2-Dibromoethane	< 0.3	N/A	0.3	µg/L	2021-02-01	
Dibromomethane	< 1.0	N/A	1.0	µg/L	2021-02-01	
1,2-Dichlorobenzene	< 0.5	AO ≤ 3	0.5	µg/L	2021-02-01	
1,3-Dichlorobenzene	< 1.0	N/A	1.0	µg/L	2021-02-01	
1,4-Dichlorobenzene	< 1.0	AO ≤ 1	1.0	µg/L	2021-02-01	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	2021-02-01	
1,2-Dichloroethane	< 1.0	MAC = 5	1.0	µg/L	2021-02-01	
1,1-Dichloroethylene	< 1.0	MAC = 14	1.0	µg/L	2021-02-01	

TEST RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Water Treatment Plant (21A2592-01) | Matrix: Water | Sampled: 2021-01-27 07:30, Continued						
Volatile Organic Compounds (VOC), Continued						
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	2021-02-01	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	2021-02-01	
Dichloromethane	< 3.0	MAC = 50	3.0	µg/L	2021-02-01	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	2021-02-01	
1,3-Dichloropropene (cis + trans)	< 1.0	N/A	1.0	µg/L	2021-02-01	
Ethylbenzene	< 1.0	AO ≤ 1.6	1.0	µg/L	2021-02-01	
Methyl tert-butyl ether	< 1.0	AO ≤ 15	1.0	µg/L	2021-02-01	
Styrene	< 1.0	N/A	1.0	µg/L	2021-02-01	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	2021-02-01	
Tetrachloroethylene	< 1.0	MAC = 10	1.0	µg/L	2021-02-01	
Toluene	< 1.0	AO ≤ 24	1.0	µg/L	2021-02-01	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	2021-02-01	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	2021-02-01	
Trichloroethylene	< 1.0	MAC = 5	1.0	µg/L	2021-02-01	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	2021-02-01	
Vinyl chloride	< 1.0	MAC = 2	1.0	µg/L	2021-02-01	
Xylenes (total)	< 2.0	AO ≤ 20	2.0	µg/L	2021-02-01	
Surrogate: Toluene-d8	*93*		*70-130*	%	*2021-02-01*	
Surrogate: 4-Bromofluorobenzene	*98*		*70-130*	%	*2021-02-01*	
Surrogate: 1,4-Dichlorobenzene-d4	*99*		*70-130*	%	*2021-02-01*	

Sample Qualifiers:

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

RS1 The Reporting Limits for this sample have been raised due to high analyte concentration and/or matrix interference.

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analysis Description	Method Ref.	Technique	Accredited	Location
Acid Herbicides in Water in Water	In-House	N/A	✓	Richmond
Alkalinity in Water	SM 2320 B* (2017)	Titration with H2SO4	✓	Edmonton
Ammonia, Total in Water	SM 4500-NH3 D* (2017)	Ion Selective Electrode	✓	Edmonton
Anions in Water	SM 4110 B (2017)	Ion Chromatography	✓	Edmonton
Bromate in Water	SM 4110 B (2017)	Ion Chromatography	✓	Sublet
Carbamates in Water	EPA 531.2*	Direct Aqueous Injection HPLC with Post-Column Derivatization and Fluorescence Detection	✓	Richmond
Carbon, Total Organic in Water	SM 5310 B (2017)	Combustion, Infrared CO2 Detection	✓	Kelowna
Chlorine, Free in Water	SM 4500-Cl G (2017)	Colorimetry (DPD)	✓	Edmonton
Chlorine, Total in Water	SM 4500-Cl G (2017)	Colorimetry (DPD)	✓	Edmonton
Colour, True in Water	SM 2120 C (2017)	Spectrophotometry (456 nm)	✓	Edmonton
Conductivity in Water	SM 2510 B (2017)	Conductivity Meter	✓	Edmonton
Cyanide, SAD in Water	ASTM D7511-12	Flow Injection with In-Line UV Digestion and Amperometry	✓	Kelowna
Cyanobacterial Toxins in Water	EPA 546*	Adda Enzyme-Linked Immunosorbent Assay (ELISA)	✓	Sublet
Diquat/Paraquat in Water	EPA 549.2*	Liquid-Solid Extraction and HPLC-DAD	✓	Richmond
Glyphosate in Water	EPA 547*	Direct Aqueous Injection HPLC with Post-Column Derivatization and Fluorescence Detection	✓	Richmond
Hardness in Water	SM 2340 B (2017)	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
Nitrilotriacetic Acid in Water	EPA 430.1	Manual Colorimetry (Zinc-Zincon)		Kelowna
N-Nitrosodimethylamine in Water	In-House	N/A	✓	Sublet
Perfluorinated Compounds in Water	ASTM D7979-17	LC-MS/MS	✓	Richmond
Pesticides in Water	EPA 3510C* / EPA 8270D*	Liquid-Liquid DCM Extraction (B/N) / GC-MSD (SIM)	✓	Richmond
pH in Water	SM 4500-H+ B (2017)	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)	✓	Richmond
Solids, Total Dissolved in Water	SM 1030 E (2017)	SM 1030 E (2011)	✓	N/A
Sulfide, Total in Water	SM 4500-S2 D* (2017)	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 (2017)	Nephelometry	✓	Edmonton
Volatile Organic Compounds in Water	EPA 5030B / EPA 8260D	Purge&Trap / GC-MSD (SIM)	✓	Richmond

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	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

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 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:acrump@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	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

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 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 B1B0711										
Blank (B1B0711-BLK1)				Prepared: 2021-02-08, Analyzed: 2021-02-08						
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 (B1B0711-BS1)				Prepared: 2021-02-08, Analyzed: 2021-02-08						
2,4-D	4.87	0.10	µg/L	5.05		96	70-130			
MCPA	4.29	0.02	µg/L	5.05		85	70-130			
2,4,5-T	6.05	0.10	µg/L	4.98		122	70-130			
Dicamba	4.55	0.10	µg/L	5.05		90	70-130			
Picloram	3.90	0.10	µg/L	5.00		78	70-130			
Dinoseb	5.18	0.10	µg/L	4.98		104	70-130			
LCS Dup (B1B0711-BSD1)				Prepared: 2021-02-08, Analyzed: 2021-02-08						
2,4-D	4.95	0.10	µg/L	5.05		98	70-130	2	30	
MCPA	4.54	0.02	µg/L	5.05		90	70-130	6	30	
2,4,5-T	5.50	0.10	µg/L	4.98		111	70-130	9	30	
Dicamba	5.21	0.10	µg/L	5.05		103	70-130	14	30	
Picloram	5.51	0.10	µg/L	5.00		110	70-130	34	30	RPD
Dinoseb	4.96	0.10	µg/L	4.98		100	70-130	4	30	
Anions, Batch B1A2326										
Blank (B1A2326-BLK1)				Prepared: 2021-01-28, Analyzed: 2021-01-28						
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 (B1A2326-BS1)				Prepared: 2021-01-28, Analyzed: 2021-01-28						
Chlorate	10.3	0.50	mg/L	10.0		103	89-112			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Anions, Batch B1A2326, Continued										
LCS (B1A2326-BS1), Continued				Prepared: 2021-01-28, Analyzed: 2021-01-28						
Chloride	10.5	0.50	mg/L	10.0		105	90-110			
Chlorite	10.0	0.50	mg/L	10.0		100	80-120			
Fluoride	1.05	0.10	mg/L	1.00		105	85-115			
Nitrate (as N)	1.04	0.050	mg/L	1.00		104	92-108			
Nitrite (as N)	0.496	0.050	mg/L	0.500		99	85-115			
Sulfate	52.5	1.0	mg/L	50.0		105	90-110			
Carbamates, Batch B1B0115										
Blank (B1B0115-BLK1)				Prepared: 2021-02-02, Analyzed: 2021-02-02						
Aldicarb	< 0.0010	0.0010	mg/L							
Bendiocarb	< 0.0010	0.0010	mg/L							
Carbaryl	< 0.0010	0.0010	mg/L							
Carbofuran	< 0.0010	0.0010	mg/L							
LCS (B1B0115-BS1)				Prepared: 2021-02-02, Analyzed: 2021-02-02						
Aldicarb	0.0240	0.0010	mg/L	0.0200		120	80-120			
Bendiocarb	0.0167	0.0010	mg/L	0.0200		83	80-120			
Carbaryl	0.0162	0.0010	mg/L	0.0200		81	80-120			
Carbofuran	0.0181	0.0010	mg/L	0.0200		90	80-120			
LCS Dup (B1B0115-BSD1)				Prepared: 2021-02-02, Analyzed: 2021-02-02						
Aldicarb	0.0238	0.0010	mg/L	0.0200		119	80-120	1	20	
Bendiocarb	0.0157	0.0010	mg/L	0.0200		78	80-120	6	20	SPK1
Carbaryl	0.0154	0.0010	mg/L	0.0200		77	80-120	5	20	SPK1
Carbofuran	0.0172	0.0010	mg/L	0.0200		86	80-120	5	20	
Chlorinated Phenols, Batch B1B0111										
Blank (B1B0111-BLK1)				Prepared: 2021-02-02, Analyzed: 2021-02-03						
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	*1.10*		*µg/L*	2.02		*54*	*60-130*			*S02*
Surrogate: 2,4,6-Tribromophenol	*1.29*		*µg/L*	2.00		*64*	*60-130*			
LCS (B1B0111-BS1)				Prepared: 2021-02-02, Analyzed: 2021-02-02						
2-Chlorophenol	7.29	0.10	µg/L	10.0		73	60-108			
3 & 4-Chlorophenol	17.4	0.10	µg/L	20.1		86	60-120			
4-Chloro-3-Methylphenol	9.08	0.20	µg/L	10.0		90	60-140			
2,3-Dichlorophenol	8.59	0.20	µg/L	10.0		86	60-111			
2,4 & 2,5-Dichlorophenol	17.9	0.20	µg/L	20.2		89	60-116			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Chlorinated Phenols, Batch B1B0111, Continued										
LCS (B1B0111-BS1), Continued				Prepared: 2021-02-02, Analyzed: 2021-02-02						
2,6-Dichlorophenol	8.51	0.20	µg/L	10.0		85	60-112			
3,4-Dichlorophenol	8.48	0.20	µg/L	10.0		85	60-120			
3,5-Dichlorophenol	8.42	0.20	µg/L	10.0		84	60-121			
2,3,4-Trichlorophenol	8.76	0.50	µg/L	10.0		88	60-122			
2,3,5-Trichlorophenol	9.36	0.50	µg/L	10.0		94	60-126			
2,3,6-Trichlorophenol	7.29	0.50	µg/L	10.0		73	60-130			
2,4,5-Trichlorophenol	8.91	0.50	µg/L	10.0		89	60-118			
2,4,6-Trichlorophenol	8.98	0.50	µg/L	10.0		89	60-120			
3,4,5-Trichlorophenol	9.61	0.50	µg/L	10.0		96	60-129			
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	18.1	0.50	µg/L	20.0		90	60-127			
2,3,4,6-Tetrachlorophenol	9.70	0.50	µg/L	10.0		96	60-127			
Pentachlorophenol	9.98	0.50	µg/L	10.0		100	60-130			
Surrogate: 2,4-Dibromophenol	*1.89*		*µg/L*	2.02		*94*	*60-130*			
Surrogate: 2,4,6-Tribromophenol	*2.20*		*µg/L*	2.00		*110*	*60-130*			
LCS Dup (B1B0111-BSD1)				Prepared: 2021-02-02, Analyzed: 2021-02-03						
2-Chlorophenol	7.47	0.10	µg/L	10.0		75	60-108	2	32	
3 & 4-Chlorophenol	17.3	0.10	µg/L	20.1		86	60-120	< 1	21	
4-Chloro-3-Methylphenol	9.26	0.20	µg/L	10.0		92	60-140	2	30	
2,3-Dichlorophenol	8.23	0.20	µg/L	10.0		82	60-111	4	27	
2,4 & 2,5-Dichlorophenol	18.2	0.20	µg/L	20.2		90	60-116	2	22	
2,6-Dichlorophenol	8.76	0.20	µg/L	10.0		88	60-112	3	27	
3,4-Dichlorophenol	8.39	0.20	µg/L	10.0		84	60-120	1	22	
3,5-Dichlorophenol	8.91	0.20	µg/L	10.0		89	60-121	6	23	
2,3,4-Trichlorophenol	8.91	0.50	µg/L	10.0		89	60-122	2	26	
2,3,5-Trichlorophenol	9.61	0.50	µg/L	10.0		96	60-126	3	24	
2,3,6-Trichlorophenol	7.50	0.50	µg/L	10.0		75	60-130	3	26	
2,4,5-Trichlorophenol	9.25	0.50	µg/L	10.0		92	60-118	4	22	
2,4,6-Trichlorophenol	9.17	0.50	µg/L	10.0		91	60-120	2	26	
3,4,5-Trichlorophenol	10.2	0.50	µg/L	10.0		102	60-129	6	19	
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	19.5	0.50	µg/L	20.0		98	60-127	8	26	
2,3,4,6-Tetrachlorophenol	9.35	0.50	µg/L	10.0		93	60-127	4	23	
Pentachlorophenol	10.4	0.50	µg/L	10.0		104	60-130	4	17	
Surrogate: 2,4-Dibromophenol	*1.83*		*µg/L*	2.02		*91*	*60-130*			
Surrogate: 2,4,6-Tribromophenol	*2.26*		*µg/L*	2.00		*113*	*60-130*			
General Parameters, Batch B1A2198										
Blank (B1A2198-BLK1)				Prepared: 2021-01-28, Analyzed: 2021-01-28						
Colour, True	< 5.0	5.0	CU							
LCS (B1A2198-BS1)				Prepared: 2021-01-28, Analyzed: 2021-01-28						
Colour, True	22	5.0	CU	20.0		108	90-109			
General Parameters, Batch B1A2345										
Blank (B1A2345-BLK1)				Prepared: 2021-01-28, Analyzed: 2021-01-28						
Turbidity	< 0.10	0.10	NTU							
LCS (B1A2345-BS1)				Prepared: 2021-01-28, Analyzed: 2021-01-28						
Turbidity	40.8	0.10	NTU	40.0		102	90-110			
Duplicate (B1A2345-DUP1)			**Source: 21A2592-01**	Prepared: 2021-01-28, Analyzed: 2021-01-28						
Turbidity	< 0.10	0.10	NTU		< 0.10				10	

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B1A2356										
Blank (B1A2356-BLK1)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Carbon, Total Organic	< 0.50	0.50	mg/L							
Blank (B1A2356-BLK2)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Carbon, Total Organic	< 0.50	0.50	mg/L							
Blank (B1A2356-BLK3)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Carbon, Total Organic	< 0.50	0.50	mg/L							
LCS (B1A2356-BS1)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Carbon, Total Organic	10.1	0.50	mg/L	10.0		101	78-116			
LCS (B1A2356-BS2)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Carbon, Total Organic	9.99	0.50	mg/L	10.0		100	78-116			
LCS (B1A2356-BS3)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Carbon, Total Organic	9.46	0.50	mg/L	10.0		95	78-116			
General Parameters, Batch B1A2400										
Blank (B1A2400-BLK1)				Prepared: 2021-01-29, Analyzed: 2021-01-29						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							
LCS (B1A2400-BS1)				Prepared: 2021-01-29, Analyzed: 2021-01-29						
Ammonia, Total (as N)	0.203	0.050	mg/L	0.200		102	85-115			
General Parameters, Batch B1A2406										
Blank (B1A2406-BLK1)				Prepared: 2021-02-02, Analyzed: 2021-02-02						
Cyanide, Total	< 0.0020	0.0020	mg/L							
Blank (B1A2406-BLK2)				Prepared: 2021-02-02, Analyzed: 2021-02-02						
Cyanide, Total	< 0.0020	0.0020	mg/L							
LCS (B1A2406-BS1)				Prepared: 2021-02-02, Analyzed: 2021-02-02						
Cyanide, Total	0.0205	0.0020	mg/L	0.0200		102	82-120			
LCS (B1A2406-BS2)				Prepared: 2021-02-02, Analyzed: 2021-02-02						
Cyanide, Total	0.0187	0.0020	mg/L	0.0200		93	82-120			
LCS Dup (B1A2406-BSD1)				Prepared: 2021-02-02, Analyzed: 2021-02-02						
Cyanide, Total	0.0202	0.0020	mg/L	0.0200		101	82-120	1	10	
LCS Dup (B1A2406-BSD2)				Prepared: 2021-02-02, Analyzed: 2021-02-02						
Cyanide, Total	0.0190	0.0020	mg/L	0.0200		95	82-120	2	10	
General Parameters, Batch B1A2411										
Blank (B1A2411-BLK1)				Prepared: 2021-01-29, Analyzed: 2021-01-29						
Chlorine, Total	< 0.02	0.02	mg/L							
Chlorine, Free	< 0.02	0.02	mg/L							
Duplicate (B1A2411-DUP1)		**Source: 21A2592-01**		Prepared: 2021-01-29, Analyzed: 2021-01-29						
Chlorine, Total	0.51	0.02	mg/L		0.51			< 1	10	
Chlorine, Free	0.42	0.02	mg/L		0.44			5	20	

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B1A2411, Continued										
Reference (B1A2411-SRM1)				Prepared: 2021-01-29, Analyzed: 2021-01-29						
Chlorine, Total	1.56	0.02	mg/L	1.59		98	91.2-108.8			
Chlorine, Free	1.56	0.02	mg/L	1.59		98	91.2-108.8			
General Parameters, Batch B1A2432										
Blank (B1A2432-BLK1)				Prepared: 2021-01-29, Analyzed: 2021-01-29						
Conductivity (EC)	< 2.0	2.0	µS/cm							
LCS (B1A2432-BS1)				Prepared: 2021-01-29, Analyzed: 2021-01-29						
Conductivity (EC)	991	2.0	µS/cm	1000		99	95-105			
General Parameters, Batch B1B0001										
Blank (B1B0001-BLK1)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Alkalinity, Total (as CaCO3)	< 2.0	2.0	mg/L							
Bicarbonate (HCO3)	< 2.0	2.0	mg/L							
Carbonate (CO3)	< 2.0	2.0	mg/L							
Hydroxide (OH)	< 2.0	2.0	mg/L							
Blank (B1B0001-BLK2)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Alkalinity, Total (as CaCO3)	< 2.0	2.0	mg/L							
Bicarbonate (HCO3)	< 2.0	2.0	mg/L							
Carbonate (CO3)	< 2.0	2.0	mg/L							
Hydroxide (OH)	< 2.0	2.0	mg/L							
LCS (B1B0001-BS1)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Alkalinity, Total (as CaCO3)	245	2.0	mg/L	250		98	94-108			
LCS (B1B0001-BS2)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Alkalinity, Total (as CaCO3)	244	2.0	mg/L	250		98	94-108			
General Parameters, Batch B1B0002										
Reference (B1B0002-SRM1)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
pH	6.96	0.10	pH units	7.00		99	98-102			
Reference (B1B0002-SRM2)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
pH	7.00	0.10	pH units	7.00		100	98-102			
General Parameters, Batch B1B0028										
Blank (B1B0028-BLK1)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Sulfide, Total	< 0.020	0.020	mg/L							
LCS (B1B0028-BS1)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Sulfide, Total	0.434	0.020	mg/L	0.470		92	80-120			
General Parameters, Batch B1B0117										
Blank (B1B0117-BLK1)				Prepared: 2021-02-02, Analyzed: 2021-02-02						
Nitrilotriacetic Acid	< 0.20	0.20	mg/L							
LCS (B1B0117-BS1)				Prepared: 2021-02-02, Analyzed: 2021-02-02						
Nitrilotriacetic Acid	0.99	0.20	mg/L	1.00		99	80-120			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B1B0117, Continued										
LCS Dup (B1B0117-BSD1)				Prepared: 2021-02-02, Analyzed: 2021-02-02						
Nitrilotriacetic Acid	0.97	0.20	mg/L	1.00		97	80-120	1	20	
Miscellaneous Herbicides, Batch B1B0146										
Blank (B1B0146-BLK1)				Prepared: 2021-02-02, Analyzed: 2021-02-02						
Diquat	< 0.0100	0.0100	mg/L							
Paraquat	< 0.0050	0.0050	mg/L							
LCS (B1B0146-BS1)				Prepared: 2021-02-02, Analyzed: 2021-02-02						
Diquat	0.0389	0.0100	mg/L	0.0249		156	70-130			SPK1
Paraquat	0.0384	0.0050	mg/L	0.0252		153	70-130			SPK1
LCS Dup (B1B0146-BSD1)				Prepared: 2021-02-02, Analyzed: 2021-02-02						
Diquat	0.0394	0.0100	mg/L	0.0249		158	70-130	1	20	SPK1
Paraquat	0.0502	0.0050	mg/L	0.0252		200	70-130	27	20	SPK1
Miscellaneous Herbicides, Batch B1B0633										
Blank (B1B0633-BLK1)				Prepared: 2021-02-07, Analyzed: 2021-02-07						
Glyphosate	< 0.050	0.050	mg/L							
LCS (B1B0633-BS1)				Prepared: 2021-02-07, Analyzed: 2021-02-07						
Glyphosate	0.127	0.050	mg/L	0.252		50	70-130			SPK1
LCS Dup (B1B0633-BSD1)				Prepared: 2021-02-07, Analyzed: 2021-02-07						
Glyphosate	0.141	0.050	mg/L	0.252		56	70-130	10	20	SPK1
Matrix Spike (B1B0633-MS1)				Prepared: 2021-02-07, Analyzed: 2021-02-07						
Glyphosate	0.093	0.050	mg/L	0.252		37	60-120			MS1
Perfluorinated Compounds, Batch B1B0644										
Blank (B1B0644-BLK1)				Prepared: 2021-02-07, Analyzed: 2021-02-08						
Perfluorooctanesulfonate (PFOS)	< 0.020	0.020	µg/L							
Perfluorooctanoic acid (PFOA)	< 0.020	0.020	µg/L							
Perfluoropentanoic acid (PFPeA)	< 0.020	0.020	µg/L							
Perfluorobutanesulfonate (PFBS)	< 15.0	15.0	µg/L							
Perfluorohexanoic acid (PFHxA)	< 0.010	0.010	µg/L							
Perfluoroheptanoic acid (PFHpA)	< 0.010	0.010	µg/L							
Perfluorohexanesulfonate (PFHxS)	< 0.020	0.020	µg/L							
Perfluoroheptane sulfonate (PFHpS)	< 0.020	0.020	µg/L							
Perfluorononanoic acid (PFNA)	< 0.020	0.020	µg/L							
Perfluorodecanoic acid (PFDA)	< 0.020	0.020	µg/L							
Perfluoroundecanoic acid (PFUnA)	< 0.020	0.020	µg/L							
Perfluorodecanesulfonate (PFDS)	< 0.040	0.040	µg/L							
Perfluorododecanoic acid (PFDoA)	< 0.030	0.030	µg/L							
Perfluorotetradecanoic acid (PFTeA)	< 0.020	0.020	µg/L							
Perfluorooctanesulfonamide (PFOSA)	< 0.020	0.020	µg/L							
Perfluorotridecanoic acid (PFTrA)	< 0.020	0.020	µg/L							
Perfluorobutanoic acid (PFBA)	< 10.0	10.0	µg/L							
Blank (B1B0644-BLK2)				Prepared: 2021-02-07, Analyzed: 2021-02-08						
Perfluorooctanesulfonate (PFOS)	< 0.020	0.020	µg/L							
Perfluorooctanoic acid (PFOA)	< 0.020	0.020	µg/L							
Perfluoropentanoic acid (PFPeA)	< 0.020	0.020	µg/L							
Perfluorobutanesulfonate (PFBS)	< 15.0	15.0	µg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO High River, Town of
PROJECT Bi-Annual Schedule 4

WORK ORDER 21A2592
REPORTED 2021-02-11 12:55

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Perfluorinated Compounds, Batch B1B0644, Continued										
Blank (B1B0644-BLK2), Continued				Prepared: 2021-02-07, Analyzed: 2021-02-08						
Perfluorohexanoic acid (PFHxA)	< 0.010	0.010	µg/L							
Perfluoroheptanoic acid (PFHpA)	< 0.010	0.010	µg/L							
Perfluorohexanesulfonate (PFHxS)	< 0.020	0.020	µg/L							
Perfluoroheptane sulfonate (PFHpS)	< 0.020	0.020	µg/L							
Perfluorononanoic acid (PFNA)	< 0.020	0.020	µg/L							
Perfluorodecanoic acid (PFDA)	< 0.020	0.020	µg/L							
Perfluoroundecanoic acid (PFUnA)	< 0.020	0.020	µg/L							
Perfluorodecanesulfonate (PFDS)	< 0.040	0.040	µg/L							
Perfluorododecanoic acid (PFDoA)	< 0.030	0.030	µg/L							
Perfluorotetradecanoic acid (PFTeA)	< 0.020	0.020	µg/L							
Perfluorooctanesulfonamide (PFOSA)	< 0.020	0.020	µg/L							
Perfluorotridecanoic acid (PFTrA)	< 0.020	0.020	µg/L							
Perfluorobutanoic acid (PFBA)	< 10.0	10.0	µg/L							
LCS (B1B0644-BS1)				Prepared: 2021-02-07, Analyzed: 2021-02-08						
Perfluorooctanesulfonate (PFOS)	0.0520	0.020	µg/L	0.0500		104	70-130			
Perfluorooctanoic acid (PFOA)	0.0618	0.020	µg/L	0.0500		124	70-130			
Perfluoropentanoic acid (PFPeA)	0.0482	0.020	µg/L	0.0500		96	70-130			
Perfluorobutanesulfonate (PFBS)	32.0	10.0	µg/L	24.9		128	70-130			
Perfluorohexanoic acid (PFHxA)	0.0762	0.010	µg/L	0.0500		152	70-130			
Perfluoroheptanoic acid (PFHpA)	0.0439	0.010	µg/L	0.0500		88	70-130			
Perfluorohexanesulfonate (PFHxS)	0.0988	0.020	µg/L	0.0500		198	70-130			
Perfluoroheptane sulfonate (PFHpS)	0.125	0.020	µg/L	0.0500		250	70-130			
Perfluorononanoic acid (PFNA)	0.0350	0.020	µg/L	0.0500		70	70-130			
Perfluorodecanoic acid (PFDA)	0.0418	0.020	µg/L	0.0500		84	70-130			
Perfluoroundecanoic acid (PFUnA)	0.0468	0.020	µg/L	0.0500		94	70-130			
Perfluorodecanesulfonate (PFDS)	0.0739	0.040	µg/L	0.0499		148	70-130			
Perfluorododecanoic acid (PFDoA)	0.0403	0.030	µg/L	0.0500		81	70-130			
Perfluorotetradecanoic acid (PFTeA)	0.0374	0.020	µg/L	0.0500		75	70-130			
Perfluorooctanesulfonamide (PFOSA)	0.0851	0.020	µg/L	0.0500		170	70-130			
Perfluorotridecanoic acid (PFTrA)	0.0429	0.020	µg/L	0.0500		86	70-130			
Perfluorobutanoic acid (PFBA)	24.5	10.0	µg/L	24.8		99	70-130			
LCS Dup (B1B0644-BSD1)				Prepared: 2021-02-07, Analyzed: 2021-02-08						
Perfluorooctanesulfonate (PFOS)	0.0425	0.020	µg/L	0.0500		85	70-130	20	30	
Perfluorooctanoic acid (PFOA)	0.0613	0.020	µg/L	0.0500		123	70-130	< 1	30	
Perfluoropentanoic acid (PFPeA)	0.0226	0.020	µg/L	0.0500		45	70-130	72	30	RPD
Perfluorobutanesulfonate (PFBS)	32.7	10.0	µg/L	24.9		131	70-130	2	30	
Perfluorohexanoic acid (PFHxA)	0.0750	0.010	µg/L	0.0500		150	70-130	2	30	
Perfluoroheptanoic acid (PFHpA)	0.0585	0.010	µg/L	0.0500		117	70-130	29	30	
Perfluorohexanesulfonate (PFHxS)	0.0862	0.020	µg/L	0.0500		172	70-130	14	30	
Perfluoroheptane sulfonate (PFHpS)	0.125	0.020	µg/L	0.0500		251	70-130	< 1	30	
Perfluorononanoic acid (PFNA)	0.0428	0.020	µg/L	0.0500		86	70-130	20	30	
Perfluorodecanoic acid (PFDA)	0.0477	0.020	µg/L	0.0500		95	70-130	13	30	
Perfluoroundecanoic acid (PFUnA)	0.0520	0.020	µg/L	0.0500		104	70-130	10	30	
Perfluorodecanesulfonate (PFDS)	0.0901	0.040	µg/L	0.0499		180	70-130	20	30	
Perfluorododecanoic acid (PFDoA)	0.0473	0.030	µg/L	0.0500		95	70-130	16	30	
Perfluorotetradecanoic acid (PFTeA)	0.0367	0.020	µg/L	0.0500		73	70-130	2	30	
Perfluorooctanesulfonamide (PFOSA)	0.0715	0.020	µg/L	0.0500		143	70-130	17	30	
Perfluorotridecanoic acid (PFTrA)	0.0383	0.020	µg/L	0.0500		77	70-130	11	30	
Perfluorobutanoic acid (PFBA)	22.7	10.0	µg/L	24.8		91	70-130	8	30	
Pesticides, Herbicides, and Fungicides, Batch B1B0218										
Blank (B1B0218-BLK1)				Prepared: 2021-02-03, Analyzed: 2021-02-03						
Alachlor	< 0.100	0.100	µg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Pesticides, Herbicides, and Fungicides, Batch B1B0218, Continued										
Blank (B1B0218-BLK1), Continued				Prepared: 2021-02-03, Analyzed: 2021-02-03						
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							
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							
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	*0.631*		*µg/L*	1.00		*63*	*50-140*			
Surrogate: 4-chloro-3-nitrobenzotrifluoride	*0.637*		*µg/L*	1.00		*64*	*50-140*			
LCS (B1B0218-BS1)				Prepared: 2021-02-03, Analyzed: 2021-02-03						
Alachlor	0.850	0.100	µg/L	1.01		84	65-118			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Pesticides, Herbicides, and Fungicides, Batch B1B0218, Continued										
LCS (B1B0218-BS1), Continued				Prepared: 2021-02-03, Analyzed: 2021-02-03						
Aldrin	0.782	0.006	µg/L	1.00		78	58-107			
Atrazine	0.841	0.100	µg/L	1.00		84	61-122			
Atrazine-desethyl	1.04	0.100	µg/L	1.03		101	50-140			
Azinphos-methyl	1.17	0.200	µg/L	1.00		117	53-127			
alpha-BHC	0.791	0.010	µg/L	1.01		78	54-134			
beta-BHC	0.798	0.050	µg/L	1.01		79	58-112			
delta-BHC	0.781	0.050	µg/L	1.00		78	58-119			
gamma-BHC (Lindane)	0.759	0.050	µg/L	1.00		76	59-113			
Bromacil	1.05	0.100	µg/L	1.00		105	52-123			
Bromoxynil	0.732	0.200	µg/L	1.02		72	50-132			
Butachlor	0.885	0.020	µg/L	0.998		89	50-140			
Captan	1.18	0.100	µg/L	1.05		112	63-137			
Chlordane (cis + trans)	2.10	0.050	µg/L	2.01		105	50-140			
Chlorothalonil	0.633	0.050	µg/L	1.01		63	50-110			
Chlorpyrifos	0.788	0.010	µg/L	1.00		79	61-121			
Cyanazine	0.880	0.100	µg/L	1.00		88	57-126			
DDT, Total	3.96	0.010	µg/L	5.04		79	50-140			
Deltamethrin	8.62	0.100	µg/L	10.2		85	50-121			
Diazinon	0.756	0.020	µg/L	1.00		76	52-126			
Dichlorvos	0.894	0.100	µg/L	1.03		87	50-110			
Diclofop-methyl	0.833	0.100	µg/L	0.990		84	58-112			
Dieldrin	0.641	0.010	µg/L	1.00		64	64-112			
Dimethoate	0.950	0.200	µg/L	0.989		96	50-120			
Disulfoton	0.860	0.100	µg/L	1.01		85	50-122			
Diuron	1.62	0.200	µg/L	1.03		157	54-116			SPK1
Endosulfan I + II	1.45	0.010	µg/L	2.01		72	50-140			
Endosulfan sulfate	0.746	0.050	µg/L	1.01		74	64-110			
Endrin	0.756	0.020	µg/L	1.01		75	59-123			
Endrin aldehyde	0.781	0.020	µg/L	1.00		78	58-118			
Endrin ketone	0.950	0.020	µg/L	1.01		94	53-114			
Fenchlorphos (Ronnel)	0.654	0.100	µg/L	1.02		64	63-110			
Heptachlor	0.581	0.010	µg/L	1.01		58	58-128			
Heptachlor epoxide	0.809	0.010	µg/L	1.01		80	64-110			
Linuron	1.35	0.050	µg/L	1.02		132	59-140			
Malathion	0.955	0.100	µg/L	1.00		95	61-121			
Methoxychlor	0.977	0.050	µg/L	1.01		97	53-121			
Methyl parathion	0.967	0.100	µg/L	0.998		97	65-114			
Metolachlor	0.888	0.100	µg/L	1.01		88	65-112			
Metribuzin	0.917	0.200	µg/L	1.00		92	53-123			
Parathion	0.748	0.100	µg/L	0.997		75	53-130			
Pentachloronitrobenzene	0.656	0.100	µg/L	1.00		66	54-136			
Permethrin	1.03	0.010	µg/L	1.01		102	50-130			
Phorate	0.750	0.100	µg/L	1.00		75	55-120			
Prometon	0.783	0.300	µg/L	1.00		78	57-124			
Prometryne	0.663	0.100	µg/L	1.00		66	50-140			
Simazine	0.889	0.200	µg/L	1.01		88	54-119			
Sulfotep	0.855	0.100	µg/L	1.04		82	61-121			
Tebuthiuron	1.26	0.200	µg/L	1.01		124	50-127			
Temephos (Abate)	10.5	0.500	µg/L	10.2		103	67-135			
Terbufos	0.633	0.100	µg/L	0.993		64	51-122			
Triallate	0.622	0.100	µg/L	1.02		61	50-120			
Trifluralin	0.738	0.200	µg/L	1.00		74	52-129			
Surrogate: Tributyl Phosphate	*0.940*		*µg/L*	1.00		*94*	*50-140*			
Surrogate: 4-chloro-3-nitrobenzotrifluoride	*0.772*		*µg/L*	1.00		*77*	*50-140*			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Pesticides, Herbicides, and Fungicides, Batch B1B0218, Continued										
LCS Dup (B1B0218-BSD1)				Prepared: 2021-02-03, Analyzed: 2021-02-03						
Alachlor	0.920	0.100	µg/L	1.01		91	65-118	8	30	
Aldrin	0.820	0.006	µg/L	1.00		82	58-107	5	30	
Atrazine	0.885	0.100	µg/L	1.00		88	61-122	5	30	
Atrazine-desethyl	1.11	0.100	µg/L	1.03		107	50-140	6	30	
Azinphos-methyl	1.23	0.200	µg/L	1.00		123	53-127	5	30	
alpha-BHC	0.846	0.010	µg/L	1.01		84	54-134	7	30	
beta-BHC	0.846	0.050	µg/L	1.01		84	58-112	6	30	
delta-BHC	0.816	0.050	µg/L	1.00		82	58-119	4	30	
gamma-BHC (Lindane)	0.811	0.050	µg/L	1.00		81	59-113	7	30	
Bromacil	1.13	0.100	µg/L	1.00		113	52-123	8	30	
Bromoxynil	0.785	0.200	µg/L	1.02		77	50-132	7	30	
Butachlor	0.964	0.020	µg/L	0.998		97	50-140	9	30	
Captan	1.18	0.100	µg/L	1.05		113	63-137	< 1	30	
Chlordane (cis + trans)	2.12	0.050	µg/L	2.01		106	50-140	1	30	
Chlorothalonil	0.664	0.050	µg/L	1.01		66	50-110	5	30	
Chlorpyrifos	0.832	0.010	µg/L	1.00		83	61-121	5	30	
Cyanazine	0.946	0.100	µg/L	1.00		95	57-126	7	30	
DDT, Total	3.95	0.010	µg/L	5.04		78	50-140	< 1	30	
Deltamethrin	9.11	0.100	µg/L	10.2		89	50-121	5	30	
Diazinon	0.810	0.020	µg/L	1.00		81	52-126	7	30	
Dichlorvos	0.994	0.100	µg/L	1.03		97	50-110	11	30	
Diclofop-methyl	0.885	0.100	µg/L	0.990		89	58-112	6	30	
Dieldrin	0.650	0.010	µg/L	1.00		65	64-112	1	30	
Dimethoate	1.02	0.200	µg/L	0.989		103	50-120	7	30	
Disulfoton	0.919	0.100	µg/L	1.01		91	50-122	7	30	
Diuron	1.71	0.200	µg/L	1.03		166	54-116	5	30	SPK1
Endosulfan I + II	1.51	0.010	µg/L	2.01		75	50-140	4	30	
Endosulfan sulfate	0.768	0.050	µg/L	1.01		76	64-110	3	30	
Endrin	0.790	0.020	µg/L	1.01		78	59-123	4	30	
Endrin aldehyde	0.806	0.020	µg/L	1.00		81	58-118	3	30	
Endrin ketone	0.993	0.020	µg/L	1.01		98	53-114	4	30	
Fenchlorphos (Ronnel)	0.618	0.100	µg/L	1.02		61	63-110	6	30	SPK1
Heptachlor	0.595	0.010	µg/L	1.01		59	58-128	2	30	
Heptachlor epoxide	0.796	0.010	µg/L	1.01		79	64-110	2	30	
Linuron	1.51	0.050	µg/L	1.02		148	59-140	11	30	SPK1
Malathion	1.05	0.100	µg/L	1.00		105	61-121	10	30	
Methoxychlor	1.03	0.050	µg/L	1.01		102	53-121	5	30	
Methyl parathion	1.03	0.100	µg/L	0.998		103	65-114	6	30	
Metolachlor	0.960	0.100	µg/L	1.01		95	65-112	8	30	
Metribuzin	0.982	0.200	µg/L	1.00		98	53-123	7	30	
Parathion	0.654	0.100	µg/L	0.997		66	53-130	13	30	
Pentachloronitrobenzene	0.660	0.100	µg/L	1.00		66	54-136	< 1	30	
Permethrin	1.13	0.010	µg/L	1.01		112	50-130	9	30	
Phorate	0.833	0.100	µg/L	1.00		83	55-120	10	30	
Prometon	0.880	0.300	µg/L	1.00		88	57-124	12	30	
Prometryne	0.682	0.100	µg/L	1.00		68	50-140	3	30	
Simazine	0.938	0.200	µg/L	1.01		93	54-119	5	30	
Sulfotep	0.834	0.100	µg/L	1.04		80	61-121	2	30	
Tebuthiuron	1.12	0.200	µg/L	1.01		111	50-127	11	30	
Temephos (Abate)	10.6	0.500	µg/L	10.2		104	67-135	< 1	30	
Terbufos	0.695	0.100	µg/L	0.993		70	51-122	9	30	
Triallate	0.582	0.100	µg/L	1.02		57	50-120	7	30	
Trifluralin	0.757	0.200	µg/L	1.00		76	52-129	2	30	
Surrogate: Tributyl Phosphate	*0.988*		*µg/L*	1.00		*99*	*50-140*			
Surrogate: 4-chloro-3-nitrobenzotrifluoride	*0.851*		*µg/L*	1.00		*85*	*50-140*			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B1B0180										
Blank (B1B0180-BLK1)				Prepared: 2021-02-02, Analyzed: 2021-02-03						
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: Acridine-d9	*4.51*		*µg/L*	4.44		*101*	*50-140*			
Surrogate: Naphthalene-d8	*4.81*		*µg/L*	4.47		*108*	*50-140*			
Surrogate: Perylene-d12	*4.73*		*µg/L*	4.47		*106*	*50-140*			
LCS (B1B0180-BS1)				Prepared: 2021-02-02, Analyzed: 2021-02-03						
Acenaphthene	3.83	0.050	µg/L	4.44		86	55-137			
Acenaphthylene	3.64	0.200	µg/L	4.44		82	53-140			
Acridine	2.97	0.050	µg/L	4.44		67	50-120			
Anthracene	4.37	0.010	µg/L	4.44		98	64-130			
Benz(a)anthracene	3.45	0.010	µg/L	4.44		78	57-140			
Benzo(a)pyrene	4.00	0.010	µg/L	4.44		90	63-133			
Benzo(b+j)fluoranthene	8.58	0.050	µg/L	8.89		96	60-129			
Benzo(g,h,i)perylene	4.16	0.050	µg/L	4.44		94	52-139			
Benzo(k)fluoranthene	3.45	0.050	µg/L	4.44		78	50-138			
2-Chloronaphthalene	3.58	0.100	µg/L	4.38		82	50-139			
Chrysene	4.11	0.050	µg/L	4.44		93	59-140			
Dibenz(a,h)anthracene	3.67	0.010	µg/L	4.44		83	53-136			
Fluoranthene	4.01	0.030	µg/L	4.44		90	67-135			
Fluorene	3.90	0.050	µg/L	4.44		88	57-134			
Indeno(1,2,3-cd)pyrene	3.37	0.050	µg/L	4.44		76	52-129			
1-Methylnaphthalene	3.55	0.100	µg/L	4.44		80	50-140			
2-Methylnaphthalene	3.51	0.100	µg/L	4.44		79	50-140			
Naphthalene	4.18	0.200	µg/L	4.44		94	50-140			
Phenanthrene	3.88	0.100	µg/L	4.44		87	61-134			
Pyrene	4.01	0.020	µg/L	4.44		90	66-131			
Quinoline	5.00	0.050	µg/L	4.44		113	50-140			
Surrogate: Acridine-d9	*3.24*		*µg/L*	4.44		*73*	*50-140*			
Surrogate: Naphthalene-d8	*4.15*		*µg/L*	4.47		*93*	*50-140*			
Surrogate: Perylene-d12	*3.58*		*µg/L*	4.47		*80*	*50-140*			
LCS Dup (B1B0180-BSD1)				Prepared: 2021-02-02, Analyzed: 2021-02-03						
Acenaphthene	3.87	0.050	µg/L	4.44		87	55-137	1	18	
Acenaphthylene	3.57	0.200	µg/L	4.44		80	53-140	2	20	
Acridine	3.12	0.050	µg/L	4.44		70	50-120	5	30	
Anthracene	4.10	0.010	µg/L	4.44		92	64-130	6	15	

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B1B0180, Continued										
LCS Dup (B1B0180-BSD1), Continued				Prepared: 2021-02-02, Analyzed: 2021-02-03						
Benz(a)anthracene	3.58	0.010	µg/L	4.44		81	57-140	4	25	
Benzo(a)pyrene	4.00	0.010	µg/L	4.44		90	63-133	< 1	18	
Benzo(b+j)fluoranthene	8.74	0.050	µg/L	8.89		98	60-129	2	17	
Benzo(g,h,i)perylene	4.75	0.050	µg/L	4.44		107	52-139	13	22	
Benzo(k)fluoranthene	4.16	0.050	µg/L	4.44		94	50-138	19	26	
2-Chloronaphthalene	3.35	0.100	µg/L	4.38		77	50-139	6	23	
Chrysene	4.28	0.050	µg/L	4.44		96	59-140	4	23	
Dibenz(a,h)anthracene	3.91	0.010	µg/L	4.44		88	53-136	6	21	
Fluoranthene	3.89	0.030	µg/L	4.44		88	67-135	3	18	
Fluorene	3.78	0.050	µg/L	4.44		85	57-134	3	18	
Indeno(1,2,3-cd)pyrene	3.78	0.050	µg/L	4.44		85	52-129	11	21	
1-Methylnaphthalene	3.29	0.100	µg/L	4.44		74	50-140	7	20	
2-Methylnaphthalene	3.18	0.100	µg/L	4.44		72	50-140	10	21	
Naphthalene	3.89	0.200	µg/L	4.44		88	50-140	7	22	
Phenanthrene	4.34	0.100	µg/L	4.44		98	61-134	11	17	
Pyrene	3.86	0.020	µg/L	4.44		87	66-131	4	19	
Quinoline	4.63	0.050	µg/L	4.44		104	50-140	8	14	
Surrogate: Acridine-d9	*2.68*		*µg/L*	4.44		*60*	*50-140*			
Surrogate: Naphthalene-d8	*3.84*		*µg/L*	4.47		*86*	*50-140*			
Surrogate: Perylene-d12	*3.87*		*µg/L*	4.47		*87*	*50-140*			
Total Metals, Batch B1B0043										
Blank (B1B0043-BLK1)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
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							
LCS (B1B0043-BS1)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Aluminum, total	0.0215	0.0050	mg/L	0.0199		108	80-120			
Antimony, total	0.0196	0.00020	mg/L	0.0200		98	80-120			
Arsenic, total	0.0195	0.00050	mg/L	0.0200		98	80-120			
Barium, total	0.0188	0.0050	mg/L	0.0198		95	80-120			
Boron, total	< 0.0500	0.0500	mg/L	0.0200		107	80-120			
Cadmium, total	0.0194	0.000010	mg/L	0.0199		97	80-120			
Calcium, total	1.96	0.20	mg/L	2.02		97	80-120			
Chromium, total	0.0204	0.00050	mg/L	0.0198		103	80-120			
Copper, total	0.0204	0.00040	mg/L	0.0200		102	80-120			
Iron, total	1.94	0.010	mg/L	2.02		96	80-120			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B1B0043, Continued										
LCS (B1B0043-BS1), Continued				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Lead, total	0.0201	0.00020	mg/L	0.0199		101	80-120			
Magnesium, total	1.97	0.010	mg/L	2.02		97	80-120			
Manganese, total	0.0204	0.00020	mg/L	0.0199		102	80-120			
Potassium, total	2.14	0.10	mg/L	2.02		106	80-120			
Selenium, total	0.0194	0.00050	mg/L	0.0200		97	80-120			
Silver, total	0.0187	0.000050	mg/L	0.0200		93	80-120			
Sodium, total	2.18	0.10	mg/L	2.02		108	80-120			
Strontium, total	0.0194	0.0010	mg/L	0.0200		97	80-120			
Uranium, total	0.0201	0.000020	mg/L	0.0200		100	80-120			
Zinc, total	0.0198	0.0040	mg/L	0.0200		99	80-120			
Duplicate (B1B0043-DUP1)		**Source: 21A2592-01**		Prepared: 2021-02-01, Analyzed: 2021-02-01						
Aluminum, total	0.0250	0.0050	mg/L		0.0229			9	20	
Antimony, total	< 0.00020	0.00020	mg/L		< 0.00020				20	
Arsenic, total	< 0.00050	0.00050	mg/L		< 0.00050				20	
Barium, total	0.128	0.0050	mg/L		0.121			5	20	
Boron, total	< 0.0500	0.0500	mg/L		< 0.0500				20	
Cadmium, total	< 0.000010	0.000010	mg/L		< 0.000010				20	
Calcium, total	71.7	0.20	mg/L		69.6			3	20	
Chromium, total	< 0.00050	0.00050	mg/L		< 0.00050				20	
Copper, total	0.00364	0.00040	mg/L		0.00345			5	20	
Iron, total	< 0.010	0.010	mg/L		< 0.010				20	
Lead, total	< 0.00020	0.00020	mg/L		< 0.00020				20	
Magnesium, total	19.2	0.010	mg/L		18.8			2	20	
Manganese, total	< 0.00020	0.00020	mg/L		< 0.00020				20	
Potassium, total	1.23	0.10	mg/L		1.18			4	20	
Selenium, total	0.00073	0.00050	mg/L		0.00072				20	
Silver, total	< 0.000050	0.000050	mg/L		< 0.000050				20	
Sodium, total	8.14	0.10	mg/L		7.89			3	20	
Strontium, total	0.405	0.0010	mg/L		0.389			4	20	
Uranium, total	0.000822	0.000020	mg/L		0.000795			3	20	
Zinc, total	< 0.0040	0.0040	mg/L		< 0.0040				20	
Reference (B1B0043-SRM1)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Aluminum, total	0.301	0.0050	mg/L	0.299		101	70-130			
Antimony, total	0.0498	0.00020	mg/L	0.0517		96	70-130			
Arsenic, total	0.123	0.00050	mg/L	0.119		104	70-130			
Barium, total	0.782	0.0050	mg/L	0.801		98	70-130			
Boron, total	4.12	0.0500	mg/L	4.11		100	70-130			
Cadmium, total	0.0501	0.000010	mg/L	0.0503		100	70-130			
Calcium, total	9.29	0.20	mg/L	10.7		87	70-130			
Chromium, total	0.263	0.00050	mg/L	0.250		105	70-130			
Copper, total	0.514	0.00040	mg/L	0.487		106	70-130			
Iron, total	0.492	0.010	mg/L	0.504		98	70-130			
Lead, total	0.276	0.00020	mg/L	0.278		99	70-130			
Magnesium, total	3.57	0.010	mg/L	3.59		100	70-130			
Manganese, total	0.115	0.00020	mg/L	0.111		104	70-130			
Potassium, total	6.44	0.10	mg/L	5.89		109	70-130			
Selenium, total	0.119	0.00050	mg/L	0.120		99	70-130			
Sodium, total	9.78	0.10	mg/L	8.71		112	70-130			
Strontium, total	0.399	0.0010	mg/L	0.393		101	70-130			
Uranium, total	0.0350	0.000020	mg/L	0.0344		102	70-130			
Zinc, total	2.53	0.0040	mg/L	2.50		101	70-130			

Total Metals, Batch B1B0284

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B1B0284, Continued										
Blank (B1B0284-BLK1)				Prepared: 2021-02-03, Analyzed: 2021-02-03						
Mercury, total	< 0.000010	0.000010	mg/L							
Duplicate (B1B0284-DUP1)		**Source: 21A2592-01**		Prepared: 2021-02-03, Analyzed: 2021-02-03						
Mercury, total	< 0.000010	0.000010	mg/L		< 0.000010				20	
Reference (B1B0284-SRM1)				Prepared: 2021-02-03, Analyzed: 2021-02-03						
Mercury, total	0.00607	0.000010	mg/L	0.00581		104	70-130			
Volatile Organic Compounds (VOC), Batch B1A2560										
Blank (B1A2560-BLK1)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
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							
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	< 1.0	1.0	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	*23.6*		*µg/L*	26.5		*89*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*23.6*		*µg/L*	24.9		*95*	*70-130*			
Surrogate: 1,4-Dichlorobenzene-d4	*24.3*		*µg/L*	25.5		*95*	*70-130*			
LCS (B1A2560-BS1)				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Benzene	20.1	0.5	µg/L	20.0		100	70-130			
Bromodichloromethane	19.6	1.0	µg/L	20.0		98	70-130			
Bromoform	18.9	1.0	µg/L	20.1		94	70-130			
Carbon tetrachloride	21.0	0.5	µg/L	20.2		104	70-130			
Chlorobenzene	21.2	1.0	µg/L	20.1		106	70-130			
Chloroethane	9.9	2.0	µg/L	20.0		49	60-140			SPK
Chloroform	21.0	1.0	µg/L	20.1		104	70-130			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	High River, Town of	**WORK ORDER**	21A2592
PROJECT	Bi-Annual Schedule 4	**REPORTED**	2021-02-11 12:55

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Volatile Organic Compounds (VOC), Batch B1A2560, Continued										
LCS (B1A2560-BS1), Continued				Prepared: 2021-02-01, Analyzed: 2021-02-01						
Dibromochloromethane	19.6	1.0	µg/L	20.2		97	70-130			
1,2-Dibromoethane	20.2	0.3	µg/L	20.0		101	70-130			
Dibromomethane	19.5	1.0	µg/L	20.0		98	70-130			
1,2-Dichlorobenzene	21.2	0.5	µg/L	20.1		106	70-130			
1,3-Dichlorobenzene	21.6	1.0	µg/L	20.1		107	70-130			
1,4-Dichlorobenzene	21.8	1.0	µg/L	20.1		109	70-130			
1,1-Dichloroethane	20.4	1.0	µg/L	20.1		102	70-130			
1,2-Dichloroethane	19.4	1.0	µg/L	20.1		96	70-130			
1,1-Dichloroethylene	21.6	1.0	µg/L	20.1		107	70-130			
cis-1,2-Dichloroethylene	19.8	1.0	µg/L	20.0		99	70-130			
trans-1,2-Dichloroethylene	20.6	1.0	µg/L	20.0		103	70-130			
Dichloromethane	20.6	3.0	µg/L	20.1		102	70-130			
1,2-Dichloropropane	20.0	1.0	µg/L	20.1		99	70-130			
1,3-Dichloropropene (cis + trans)	40.7	1.0	µg/L	40.0		102	70-130			
Ethylbenzene	21.0	1.0	µg/L	20.0		105	70-130			
Methyl tert-butyl ether	20.5	1.0	µg/L	20.0		103	70-130			
Styrene	20.8	1.0	µg/L	20.0		104	70-130			
1,1,2,2-Tetrachloroethane	19.1	0.5	µg/L	20.1		95	70-130			
Tetrachloroethylene	21.7	1.0	µg/L	20.1		108	70-130			
Toluene	22.8	1.0	µg/L	20.0		114	70-130			
1,1,1-Trichloroethane	21.5	1.0	µg/L	20.0		108	70-130			
1,1,2-Trichloroethane	20.1	1.0	µg/L	20.1		100	70-130			
Trichloroethylene	20.8	1.0	µg/L	20.1		103	70-130			
Trichlorofluoromethane	21.8	1.0	µg/L	20.0		109	60-140			
Vinyl chloride	25.0	1.0	µg/L	20.0		125	60-140			
Xylenes (total)	61.7	2.0	µg/L	60.0		103	70-130			
Surrogate: Toluene-d8	*23.9*		*µg/L*	26.5		*90*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*23.3*		*µg/L*	24.9		*93*	*70-130*			
Surrogate: 1,4-Dichlorobenzene-d4	*23.8*		*µg/L*	25.5		*93*	*70-130*			

QC Qualifiers:

MS1	The matrix spike recovery was outside of control limits due to a matrix effect and/or interference.
RPD	Relative percent difference (RPD) of duplicate analysis are outside of control limits for unknown reason(s).
S02	Surrogate recovery outside of control limits. Data accepted based on acceptable recovery of other surrogates.
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.