

CERTIFICATE OF ANALYSIS

REPORTED TO Prince George, City of - Pump Station
1100 Patricia Boulevard
Prince George, BC V2L 3v9

ATTENTION Cheyenne Magee

PO NUMBER

PROJECT Raw Water - PW 660

PROJECT INFO [info]

WORK ORDER 25J3216

RECEIVED / TEMP 2025-10-23 11:45 / 14.9°C

REPORTED 2025-11-07 15:59

COC NUMBER No #

Introduction:

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

Big Picture Sidekicks



You know that the sample you collected after snowshoeing to site, digging 5 meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (whew) is VERY important. We know that too.

We've Got Chemistry



It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

Ahead of the Curve



Through research, regulation knowledge, and instrumentation, we are your analytical centre for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.

By engaging our services, you are agreeing to CARO Analytical Service's Standard Terms and Conditions outlined here:
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If you have any questions or concerns, please contact me at hhannaoui@caro.ca

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TEST RESULTS

REPORTED TO PROJECT Prince George, City of - Pump Station
Raw Water - PW 660

WORK ORDER REPORTED 25J3216
2025-11-07 15:59

Analyte	Result	RL	Units	Analyzed	Qualifier
PW660 (25J3216-01) Matrix: Drinking Water Sampled: 2025-10-22 12:40					
Anions					
Bromide	< 0.1	0.1	mg/L	2025-10-26	
Chloride	5.80	0.10	mg/L	2025-10-26	
Fluoride	< 0.10	0.10	mg/L	2025-10-25	
Nitrate (as N)	0.032	0.010	mg/L	2025-10-25	
Nitrite (as N)	< 0.010	0.010	mg/L	2025-10-25	
Sulfate	6.6	1.0	mg/L	2025-10-26	
Calculated Parameters					
Total Trihalomethanes	0.00750	0.00400	mg/L	N/A	
Hardness, Dissolved (as CaCO3)	101	0.500	mg/L	N/A	
Nitrate+Nitrite (as N)	0.0323	0.0100	mg/L	N/A	
Nitrogen, Total	0.0893	0.0500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	< 0.0050	0.0050	mg/L	2025-10-25	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2025-10-25	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2025-10-25	
Barium, dissolved	0.0336	0.0050	mg/L	2025-10-25	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2025-10-25	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2025-10-25	
Boron, dissolved	< 0.0500	0.0500	mg/L	2025-10-25	
Cadmium, dissolved	0.000022	0.000010	mg/L	2025-10-25	
Calcium, dissolved	27.3	0.20	mg/L	2025-10-25	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2025-10-25	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2025-10-25	
Copper, dissolved	0.0312	0.00040	mg/L	2025-10-30	
Iron, dissolved	< 0.010	0.010	mg/L	2025-10-25	
Lead, dissolved	0.00246	0.00020	mg/L	2025-10-30	RE2
Lithium, dissolved	0.00010	0.00010	mg/L	2025-10-25	
Magnesium, dissolved	7.85	0.010	mg/L	2025-10-25	
Manganese, dissolved	0.00861	0.00020	mg/L	2025-10-25	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2025-10-29	
Molybdenum, dissolved	0.00160	0.00010	mg/L	2025-10-25	
Nickel, dissolved	0.00073	0.00040	mg/L	2025-10-25	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2025-10-25	
Potassium, dissolved	1.15	0.10	mg/L	2025-10-25	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2025-10-25	
Silicon, dissolved	5.0	1.0	mg/L	2025-10-25	
Silver, dissolved	< 0.000050	0.000050	mg/L	2025-10-25	
Sodium, dissolved	5.40	0.10	mg/L	2025-10-25	
Strontium, dissolved	0.123	0.0010	mg/L	2025-10-25	
Sulfur, dissolved	< 3.0	3.0	mg/L	2025-10-25	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2025-10-25	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2025-10-25	

TEST RESULTS

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Raw Water - PW 660

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Analyte	Result	RL	Units	Analyzed	Qualifier
PW660 (25J3216-01) Matrix: Drinking Water Sampled: 2025-10-22 12:40, Continued					
Dissolved Metals, Continued					
Thorium, dissolved	< 0.00010	0.00010	mg/L	2025-10-25	
Tin, dissolved	< 0.00020	0.00020	mg/L	2025-10-25	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2025-10-25	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2025-10-25	
Uranium, dissolved	0.000218	0.000020	mg/L	2025-10-25	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2025-10-25	
Zinc, dissolved	0.0065	0.0040	mg/L	2025-10-25	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2025-10-25	
General Parameters					
Adsorbable Organic Halides	26	6	µg/L	2025-10-31	CST2
Alkalinity, Total (as CaCO ₃)	92.2	1.0	mg/L	2025-10-27	
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1.0	1.0	mg/L	2025-10-27	
Alkalinity, Bicarbonate (as CaCO ₃)	92.2	1.0	mg/L	2025-10-27	
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	1.0	mg/L	2025-10-27	
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	1.0	mg/L	2025-10-27	
Ammonia, Total (as N)	< 0.050	0.050	mg/L	2025-10-28	
Carbon, Total Organic	2.40	0.50	mg/L	2025-10-25	
Nitrogen, Total Kjeldahl	0.057	0.050	mg/L	2025-10-28	
Phosphorus, Dissolved Reactive	< 0.0050	0.0050	mg/L	2025-10-24	
Solids, Total Suspended	< 2.0	2.0	mg/L	2025-10-28	
Microbiological Parameters					
Coliforms, Total (Q-Tray)	< 1	1	MPN/100 mL	2025-10-24	HT3
Coliforms, Fecal (Q-Tray)	< 1	1	MPN/100 mL	2025-10-24	HT3
E. coli (Q-Tray)	< 1	1	MPN/100 mL	2025-10-24	HT3
Total Metals					F3
Aluminum, total	< 0.0050	0.0050	mg/L	2025-10-30	
Antimony, total	< 0.00020	0.00020	mg/L	2025-10-30	
Arsenic, total	< 0.00050	0.00050	mg/L	2025-10-30	
Barium, total	0.0318	0.0050	mg/L	2025-10-30	
Beryllium, total	< 0.00010	0.00010	mg/L	2025-10-30	
Bismuth, total	< 0.00010	0.00010	mg/L	2025-10-30	
Boron, total	< 0.0500	0.0500	mg/L	2025-10-30	
Cadmium, total	0.000022	0.000010	mg/L	2025-10-30	
Calcium, total	28.8	0.20	mg/L	2025-10-30	
Chromium, total	< 0.00050	0.00050	mg/L	2025-10-30	
Cobalt, total	< 0.00010	0.00010	mg/L	2025-10-30	
Copper, total	0.0236	0.00040	mg/L	2025-10-30	
Iron, total	< 0.010	0.010	mg/L	2025-10-30	
Lead, total	0.00131	0.00020	mg/L	2025-10-30	
Lithium, total	0.00013	0.00010	mg/L	2025-10-30	
Magnesium, total	7.94	0.010	mg/L	2025-10-30	

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Analyte	Result	RL	Units	Analyzed	Qualifier
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PW660 (25J3216-01) | Matrix: Drinking Water | Sampled: 2025-10-22 12:40, Continued

Total Metals, Continued

F3

Manganese, total	0.00851	0.00020	mg/L	2025-10-30	
Mercury, total	< 0.000010	0.000010	mg/L	2025-10-29	
Molybdenum, total	0.00176	0.00010	mg/L	2025-10-30	
Nickel, total	0.00072	0.00040	mg/L	2025-10-30	
Phosphorus, total	< 0.050	0.050	mg/L	2025-10-30	
Potassium, total	1.12	0.10	mg/L	2025-10-30	
Selenium, total	< 0.00050	0.00050	mg/L	2025-10-30	
Silicon, total	4.9	1.0	mg/L	2025-10-30	
Silver, total	< 0.000050	0.000050	mg/L	2025-10-30	
Sodium, total	5.40	0.10	mg/L	2025-10-30	
Strontium, total	0.122	0.0010	mg/L	2025-10-30	
Sulfur, total	3.0	3.0	mg/L	2025-10-30	
Tellurium, total	< 0.00050	0.00050	mg/L	2025-10-30	
Thallium, total	< 0.000020	0.000020	mg/L	2025-10-30	
Thorium, total	< 0.00010	0.00010	mg/L	2025-10-30	
Tin, total	< 0.00020	0.00020	mg/L	2025-10-30	
Titanium, total	< 0.0050	0.0050	mg/L	2025-10-30	
Tungsten, total	< 0.0010	0.0010	mg/L	2025-10-30	
Uranium, total	0.000226	0.000020	mg/L	2025-10-30	
Vanadium, total	< 0.0050	0.0050	mg/L	2025-10-30	
Zinc, total	< 0.0040	0.0040	mg/L	2025-10-30	
Zirconium, total	< 0.00010	0.00010	mg/L	2025-10-30	

Volatile Organic Compounds (VOC)

Bromodichloromethane	0.0010	0.0010	mg/L	2025-10-28	
Bromoform	< 0.0010	0.0010	mg/L	2025-10-28	
Chloroform	0.0065	0.0010	mg/L	2025-10-28	
Dibromochloromethane	< 0.0010	0.0010	mg/L	2025-10-28	
Surrogate: Toluene-d8	94	70-130	%	2025-10-28	
Surrogate: 4-Bromofluorobenzene	75	70-130	%	2025-10-28	

Sample Qualifiers:

CST2	High breakthrough noted. Further dilution not possible as the AOX result is close to the method detection limit. Breakthrough exceeds reporting requirements per reference method.
F3	Results may be biased low due to sub-sampling from general container.
HT3	Microbiological analysis was initiated beyond the maximum holding time of 30 hours. Results may not be valid.
RE2	Result was confirmed by re-analysis prior to reporting.

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO PROJECT Prince George, City of - Pump Station
Raw Water - PW 660

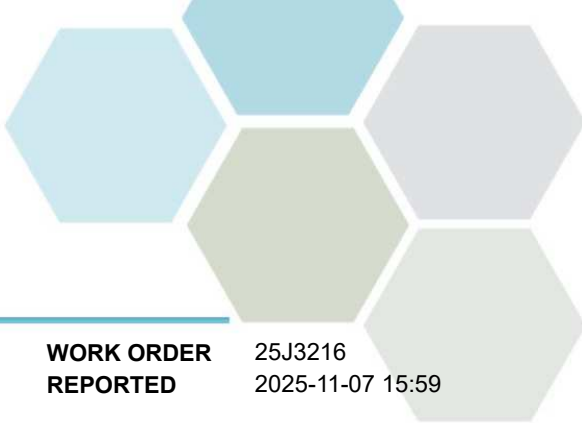
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Analysis Description	Method Ref.	Technique	Accredited	Location
Adsorbable Organic Halides in Water	PAPTAC/ISO - low level	Adsorption, Coulometric Titration		Sublet
Alkalinity in Water	SM 2320 B* (2021)	Titration with H2SO4	✓	Richmond
Ammonia, Total in Water	SM 4500-NH3 G* (2021)	Automated Colorimetry (Phenate)	✓	Kelowna
Anions in Water	SM 4110 B (2020)	Ion Chromatography	✓	Richmond
Carbon, Total Organic in Water	SM 5310 B (2022)	Combustion, Infrared CO2 Detection	✓	Kelowna
Coliforms, Fecal in Water	NA / SM 9223 (2016)	Quanti-Tray / Enzyme Substrate Endo Agar	✓	Richmond
Coliforms, Total in Water	NA / SM 9223 (2016)	Quanti-Tray / Enzyme Substrate Endo Agar	✓	Richmond
Dissolved Metals in Water	EPA 200.8 / EPA 6020B	0.45 µm Filtration / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond
E. coli in Water	NA / SM 9223 (2016)	Quanti-Tray / Enzyme Substrate Endo Agar	✓	Richmond
Hardness in Water	SM 2340 B (2021)	Calculation: 2.497 [diss Ca] + 4.118 [diss Mg]	✓	N/A
Hardness in Water	SM 2340 B* (2021)	Calculation: 2.497 [total Ca] + 4.118 [total Mg] (Est)	✓	N/A
Mercury, dissolved in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	✓	Richmond
Mercury, total in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	✓	Richmond
Nitrogen, Total Kjeldahl in Water	SM 4500-Norg D* (2021)	Block Digestion and Flow Injection Analysis	✓	Kelowna
Phosphorus, Dissolved Reactive in Water	SM 4500-P E (2021)	Colorimetry (Ascorbic Acid)	✓	Richmond
Solids, Total Suspended in Water	SM 2540 D* (2020)	Gravimetry (Dried at 103-105C)	✓	Richmond
Total Metals in Water	EPA 200.2 / EPA 6020B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond
Trihalomethanes 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

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
mg/L	Milligrams per litre
MPN/100 mL	Most Probable Number per 100 millilitres
µg/L	Micrograms per litre
EPA	United States Environmental Protection Agency Test Methods
PAPTAC	Pulp and Paper Technical Association of Canada Standard Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association



APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	Prince George, City of - Pump Station	WORK ORDER	25J3216
PROJECT	Raw Water - PW 660	REPORTED	2025-11-07 15:59

General Comments:

The results in this report apply to samples received by CARO and analyzed in accordance with the Chain of Custody document. This analytical report must be reproduced in its entirety and must not be modified. CARO is not responsible for losses or damages resulting directly or indirectly from errors or omissions in the conduct of the testing. Any 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. Results in **red** indicate values above the regulatory limits where these have been included. 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: hhannaoui@caro.ca

Regulatory limits are added to test reports on request and are as a convenience only. While CARO makes every effort to ensure accuracy of regulatory limits, CARO assumes no liability for the use of this information. It remains the client's responsibility to ensure that regulatory limits are correct for their circumstances.

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Prince George, City of - Pump Station
Raw Water - PW 660

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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
Anions, Batch B5J4773									
Blank (B5J4773-BLK1)			Prepared: 2025-10-26, Analyzed: 2025-10-26						
Bromide	< 0.1	0.1 mg/L							
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.10 mg/L							
Nitrate (as N)	< 0.010	0.010 mg/L							
Nitrite (as N)	< 0.010	0.010 mg/L							
Sulfate	< 1.0	1.0 mg/L							
Blank (B5J4773-BLK2)			Prepared: 2025-10-26, Analyzed: 2025-10-26						
Bromide	< 0.1	0.1 mg/L							
Chloride	< 0.10	0.10 mg/L							
Fluoride	< 0.10	0.10 mg/L							
Nitrate (as N)	< 0.010	0.010 mg/L							
Nitrite (as N)	< 0.010	0.010 mg/L							
Sulfate	< 1.0	1.0 mg/L							
LCS (B5J4773-BS1)			Prepared: 2025-10-26, Analyzed: 2025-10-26						
Bromide	8.9	0.1 mg/L	10.0		89	85-115			
Chloride	2.45	0.10 mg/L	3.00		82	85-115			SPK1
Fluoride	1.90	0.10 mg/L	2.00		95	85-115			
Nitrate (as N)	2.75	0.010 mg/L	3.00		92	85-115			
Nitrite (as N)	2.79	0.010 mg/L	3.00		93	85-115			
Sulfate	14.6	1.0 mg/L	15.0		97	85-115			
LCS (B5J4773-BS2)			Prepared: 2025-10-26, Analyzed: 2025-10-26						
Bromide	9.2	0.1 mg/L	10.0		92	85-115			
Chloride	2.51	0.10 mg/L	3.00		84	85-115			SPK1
Fluoride	1.80	0.10 mg/L	2.00		90	85-115			
Nitrate (as N)	2.75	0.010 mg/L	3.00		92	85-115			
Nitrite (as N)	2.69	0.010 mg/L	3.00		90	85-115			
Sulfate	14.5	1.0 mg/L	15.0		97	85-115			

Dissolved Metals, Batch B5J4756

Blank (B5J4756-BLK1)			Prepared: 2025-10-25, Analyzed: 2025-10-25						
Aluminum, dissolved	< 0.0050	0.0050 mg/L							
Antimony, dissolved	< 0.00020	0.00020 mg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Prince George, City of - Pump Station
Raw Water - PW 660

WORK ORDER REPORTED 25J3216
2025-11-07 15:59

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Dissolved Metals, Batch B5J4756, Continued

Blank (B5J4756-BLK1), Continued

Prepared: 2025-10-25, Analyzed: 2025-10-25

Arsenic, dissolved	< 0.00050	0.00050 mg/L							
Barium, dissolved	< 0.0050	0.0050 mg/L							
Beryllium, dissolved	< 0.00010	0.00010 mg/L							
Bismuth, dissolved	< 0.00010	0.00010 mg/L							
Boron, dissolved	< 0.0500	0.0500 mg/L							
Cadmium, dissolved	< 0.000010	0.000010 mg/L							
Calcium, dissolved	< 0.20	0.20 mg/L							
Chromium, dissolved	< 0.00050	0.00050 mg/L							
Cobalt, dissolved	< 0.00010	0.00010 mg/L							
Copper, dissolved	< 0.00040	0.00040 mg/L							
Iron, dissolved	< 0.010	0.010 mg/L							
Lead, dissolved	< 0.00020	0.00020 mg/L							
Lithium, dissolved	< 0.00010	0.00010 mg/L							
Magnesium, dissolved	< 0.010	0.010 mg/L							
Manganese, dissolved	< 0.00020	0.00020 mg/L							
Molybdenum, dissolved	< 0.00010	0.00010 mg/L							
Nickel, dissolved	< 0.00040	0.00040 mg/L							
Phosphorus, dissolved	< 0.050	0.050 mg/L							
Potassium, dissolved	< 0.10	0.10 mg/L							
Selenium, dissolved	< 0.00050	0.00050 mg/L							
Silicon, dissolved	< 1.0	1.0 mg/L							
Silver, dissolved	< 0.000050	0.000050 mg/L							
Sodium, dissolved	< 0.10	0.10 mg/L							
Strontium, dissolved	< 0.0010	0.0010 mg/L							
Sulfur, dissolved	< 3.0	3.0 mg/L							
Tellurium, dissolved	< 0.00050	0.00050 mg/L							
Thallium, dissolved	< 0.000020	0.000020 mg/L							
Thorium, dissolved	< 0.00010	0.00010 mg/L							
Tin, dissolved	< 0.00020	0.00020 mg/L							
Titanium, dissolved	< 0.0050	0.0050 mg/L							
Tungsten, dissolved	< 0.0010	0.0010 mg/L							
Uranium, dissolved	< 0.000020	0.000020 mg/L							
Vanadium, dissolved	< 0.0050	0.0050 mg/L							
Zinc, dissolved	< 0.0040	0.0040 mg/L							
Zirconium, dissolved	< 0.00010	0.00010 mg/L							

LCS (B5J4756-BS1)

Prepared: 2025-10-25, Analyzed: 2025-10-25

Aluminum, dissolved	3.98	0.0050 mg/L	4.00	99	80-120
Antimony, dissolved	0.0387	0.00020 mg/L	0.0400	97	80-120
Arsenic, dissolved	0.389	0.00050 mg/L	0.400	97	80-120
Barium, dissolved	0.0404	0.0050 mg/L	0.0400	101	80-120
Beryllium, dissolved	0.0408	0.00010 mg/L	0.0400	102	80-120
Bismuth, dissolved	0.0385	0.00010 mg/L	0.0400	96	80-120
Boron, dissolved	0.408	0.0500 mg/L	0.400	102	80-120
Cadmium, dissolved	0.0385	0.000010 mg/L	0.0400	96	80-120
Calcium, dissolved	4.02	0.20 mg/L	4.00	101	80-120
Chromium, dissolved	0.0397	0.00050 mg/L	0.0400	99	80-120
Cobalt, dissolved	0.0396	0.00010 mg/L	0.0400	99	80-120
Copper, dissolved	0.0400	0.00040 mg/L	0.0400	100	80-120
Iron, dissolved	3.97	0.010 mg/L	4.00	99	80-120
Lead, dissolved	0.0397	0.00020 mg/L	0.0400	99	80-120
Lithium, dissolved	0.0415	0.00010 mg/L	0.0400	104	80-120
Magnesium, dissolved	3.91	0.010 mg/L	4.00	98	80-120
Manganese, dissolved	0.0400	0.00020 mg/L	0.0400	100	80-120
Molybdenum, dissolved	0.0394	0.00010 mg/L	0.0400	99	80-120
Nickel, dissolved	0.0395	0.00040 mg/L	0.0400	99	80-120

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Prince George, City of - Pump Station
Raw Water - PW 660

WORK ORDER REPORTED 25J3216
2025-11-07 15:59

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B5J4756, Continued									
LCS (B5J4756-BS1), Continued				Prepared: 2025-10-25, Analyzed: 2025-10-25					
Phosphorus, dissolved	3.95	0.050 mg/L	4.00		99	80-120			
Potassium, dissolved	4.07	0.10 mg/L	4.00		102	80-120			
Selenium, dissolved	0.385	0.00050 mg/L	0.400		96	80-120			
Silicon, dissolved	3.9	1.0 mg/L	4.00		98	80-120			
Silver, dissolved	0.0379	0.000050 mg/L	0.0400		95	80-120			
Sodium, dissolved	3.94	0.10 mg/L	4.00		98	80-120			
Strontium, dissolved	0.0399	0.0010 mg/L	0.0400		100	80-120			
Sulfur, dissolved	39.4	3.0 mg/L	40.0		99	80-120			
Tellurium, dissolved	0.0369	0.00050 mg/L	0.0400		92	80-120			
Thallium, dissolved	0.0398	0.000020 mg/L	0.0400		99	80-120			
Thorium, dissolved	0.0389	0.00010 mg/L	0.0400		97	80-120			
Tin, dissolved	0.0395	0.00020 mg/L	0.0400		99	80-120			
Titanium, dissolved	0.0389	0.0050 mg/L	0.0400		97	80-120			
Tungsten, dissolved	0.0387	0.0010 mg/L	0.0400		97	80-120			
Uranium, dissolved	0.0395	0.000020 mg/L	0.0400		99	80-120			
Vanadium, dissolved	0.0393	0.0050 mg/L	0.0400		98	80-120			
Zinc, dissolved	0.391	0.0040 mg/L	0.400		98	80-120			
Zirconium, dissolved	0.0390	0.00010 mg/L	0.0400		97	80-120			
Matrix Spike (B5J4756-MS1)				Source: 25J3216-01		Prepared: 2025-10-25, Analyzed: 2025-10-25			
Aluminum, dissolved	3.17	0.0050 mg/L	4.00	< 0.0050	79	70-130			
Antimony, dissolved	0.0409	0.00020 mg/L	0.0400	< 0.00020	102	70-130			
Arsenic, dissolved	0.322	0.00050 mg/L	0.400	< 0.00050	80	70-130			
Barium, dissolved	0.0676	0.0050 mg/L	0.0400	0.0336	85	70-130			
Beryllium, dissolved	0.0311	0.00010 mg/L	0.0400	< 0.00010	78	70-130			
Bismuth, dissolved	0.0307	0.00010 mg/L	0.0400	< 0.00010	77	70-130			
Boron, dissolved	0.283	0.0500 mg/L	0.400	< 0.0500	70	70-130			
Cadmium, dissolved	0.0332	0.000010 mg/L	0.0400	0.000022	83	70-130			
Calcium, dissolved	30.4	0.20 mg/L	4.00	27.3	77	70-130			
Chromium, dissolved	0.0321	0.00050 mg/L	0.0400	< 0.00050	80	70-130			
Cobalt, dissolved	0.0308	0.00010 mg/L	0.0400	< 0.00010	77	70-130			
Copper, dissolved	0.0640	0.00040 mg/L	0.0400	0.0312	82	70-130			
Iron, dissolved	3.16	0.010 mg/L	4.00	< 0.010	79	70-130			
Lead, dissolved	0.0364	0.00020 mg/L	0.0400	0.00246	85	70-130			
Lithium, dissolved	0.0307	0.00010 mg/L	0.0400	0.00010	76	70-130			
Magnesium, dissolved	10.9	0.010 mg/L	4.00	7.85	76	70-130			
Manganese, dissolved	0.0405	0.00020 mg/L	0.0400	0.00861	80	70-130			
Molybdenum, dissolved	0.0407	0.00010 mg/L	0.0400	0.00160	98	70-130			
Nickel, dissolved	0.0310	0.00040 mg/L	0.0400	0.00073	76	70-130			
Phosphorus, dissolved	3.31	0.050 mg/L	4.00	< 0.050	83	70-130			
Potassium, dissolved	4.42	0.10 mg/L	4.00	1.15	82	70-130			
Selenium, dissolved	0.328	0.00050 mg/L	0.400	< 0.00050	82	70-130			
Silicon, dissolved	8.8	1.0 mg/L	4.00	5.0	96	70-130			
Silver, dissolved	0.0255	0.000050 mg/L	0.0400	< 0.000050	64	70-130			MES
Sodium, dissolved	8.37	0.10 mg/L	4.00	5.40	74	70-130			
Strontium, dissolved	0.154	0.0010 mg/L	0.0400	0.123	76	70-130			
Sulfur, dissolved	35.7	3.0 mg/L	40.0	< 3.0	83	70-130			
Tellurium, dissolved	0.0417	0.00050 mg/L	0.0400	< 0.00050	104	70-130			
Thallium, dissolved	0.0354	0.000020 mg/L	0.0400	< 0.000020	88	70-130			
Thorium, dissolved	0.0326	0.00010 mg/L	0.0400	< 0.00010	82	70-130			
Tin, dissolved	0.0418	0.00020 mg/L	0.0400	< 0.00020	104	70-130			
Titanium, dissolved	0.0382	0.0050 mg/L	0.0400	< 0.0050	96	70-130			
Tungsten, dissolved	0.0404	0.0010 mg/L	0.0400	< 0.0010	101	70-130			
Uranium, dissolved	0.0345	0.000020 mg/L	0.0400	0.000218	86	70-130			
Vanadium, dissolved	0.0321	0.0050 mg/L	0.0400	< 0.0050	80	70-130			
Zinc, dissolved	0.329	0.0040 mg/L	0.400	0.0065	81	70-130			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Prince George, City of - Pump Station
Raw Water - PW 660

WORK ORDER REPORTED 25J3216
2025-11-07 15:59

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B5J4756, Continued									
Matrix Spike (B5J4756-MS1), Continued		Source: 25J3216-01		Prepared: 2025-10-25, Analyzed: 2025-10-25					
Zirconium, dissolved	0.0410	0.00010 mg/L	0.0400	< 0.00010	102	70-130			
Dissolved Metals, Batch B5J5195									
Blank (B5J5195-BLK1)		Prepared: 2025-10-29, Analyzed: 2025-10-29							
Mercury, dissolved	< 0.000010	0.000010 mg/L							
Blank (B5J5195-BLK2)		Prepared: 2025-10-29, Analyzed: 2025-10-29							
Mercury, dissolved	< 0.000010	0.000010 mg/L							
LCS (B5J5195-BS1)		Prepared: 2025-10-29, Analyzed: 2025-10-29							
Mercury, dissolved	0.00268	0.000010 mg/L	0.00250		107	80-120			
LCS (B5J5195-BS2)		Prepared: 2025-10-29, Analyzed: 2025-10-29							
Mercury, dissolved	0.00261	0.000010 mg/L	0.00250		104	80-120			
General Parameters, Batch B5J4626									
Blank (B5J4626-BLK1)		Prepared: 2025-10-24, Analyzed: 2025-10-26							
Carbon, Total Organic	< 0.50	0.50 mg/L							
Blank (B5J4626-BLK2)		Prepared: 2025-10-24, Analyzed: 2025-10-26							
Carbon, Total Organic	< 0.50	0.50 mg/L							
Blank (B5J4626-BLK3)		Prepared: 2025-10-25, Analyzed: 2025-10-26							
Carbon, Total Organic	< 0.50	0.50 mg/L							
LCS (B5J4626-BS1)		Prepared: 2025-10-24, Analyzed: 2025-10-26							
Carbon, Total Organic	9.73	0.50 mg/L	10.0		97	78-116			
LCS (B5J4626-BS2)		Prepared: 2025-10-24, Analyzed: 2025-10-26							
Carbon, Total Organic	9.44	0.50 mg/L	10.0		94	78-116			
LCS (B5J4626-BS3)		Prepared: 2025-10-25, Analyzed: 2025-10-26							
Carbon, Total Organic	9.45	0.50 mg/L	10.0		94	78-116			
General Parameters, Batch B5J4707									
Blank (B5J4707-BLK1)		Prepared: 2025-10-24, Analyzed: 2025-10-24							
Phosphorus, Dissolved Reactive	< 0.0050	0.0050 mg/L							
LCS (B5J4707-BS1)		Prepared: 2025-10-24, Analyzed: 2025-10-24							
Phosphorus, Dissolved Reactive	0.0394	0.0050 mg/L	0.0320		123	75-125			
General Parameters, Batch B5J4898									
Blank (B5J4898-BLK1)		Prepared: 2025-10-28, Analyzed: 2025-10-28							
Ammonia, Total (as N)	< 0.050	0.050 mg/L							
Blank (B5J4898-BLK2)		Prepared: 2025-10-28, Analyzed: 2025-10-28							
Ammonia, Total (as N)	< 0.050	0.050 mg/L							
LCS (B5J4898-BS1)		Prepared: 2025-10-28, Analyzed: 2025-10-28							
Ammonia, Total (as N)	0.967	0.050 mg/L	1.00		97	85-115			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Prince George, City of - Pump Station
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WORK ORDER REPORTED 25J3216
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Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B5J4898, Continued									
LCS (B5J4898-BS2)				Prepared: 2025-10-28, Analyzed: 2025-10-28					
Ammonia, Total (as N)	0.950	0.050 mg/L	1.00		95	85-115			
General Parameters, Batch B5J4941									
Blank (B5J4941-BLK1)				Prepared: 2025-10-27, Analyzed: 2025-10-27					
Alkalinity, Total (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Bicarbonate (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	1.0 mg/L							
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	1.0 mg/L							
LCS (B5J4941-BS1)				Prepared: 2025-10-27, Analyzed: 2025-10-27					
Alkalinity, Total (as CaCO ₃)	96.2	1.0 mg/L	100		96	80-120			
LCS (B5J4941-BS2)				Prepared: 2025-10-27, Analyzed: 2025-10-27					
Alkalinity, Total (as CaCO ₃)	91.8	1.0 mg/L	100		92	80-120			
Duplicate (B5J4941-DUP1)				Source: 25J3216-01	Prepared: 2025-10-27, Analyzed: 2025-10-27				
Alkalinity, Total (as CaCO ₃)	89.6	1.0 mg/L		92.2			3	20	
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1.0	1.0 mg/L		< 1.0				20	
Alkalinity, Bicarbonate (as CaCO ₃)	89.6	1.0 mg/L		92.2			3	20	
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	1.0 mg/L		< 1.0				20	
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	1.0 mg/L		< 1.0				20	
General Parameters, Batch B5J4955									
Blank (B5J4955-BLK1)				Prepared: 2025-10-27, Analyzed: 2025-10-28					
Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
Blank (B5J4955-BLK2)				Prepared: 2025-10-27, Analyzed: 2025-10-28					
Nitrogen, Total Kjeldahl	< 0.050	0.050 mg/L							
LCS (B5J4955-BS1)				Prepared: 2025-10-27, Analyzed: 2025-10-28					
Nitrogen, Total Kjeldahl	0.997	0.050 mg/L	1.00		100	85-115			
LCS (B5J4955-BS2)				Prepared: 2025-10-27, Analyzed: 2025-10-28					
Nitrogen, Total Kjeldahl	0.968	0.050 mg/L	1.00		97	85-115			
General Parameters, Batch B5J5059									
Blank (B5J5059-BLK1)				Prepared: 2025-10-28, Analyzed: 2025-10-28					
Solids, Total Suspended	< 2.0	2.0 mg/L							
Blank (B5J5059-BLK2)				Prepared: 2025-10-28, Analyzed: 2025-10-28					
Solids, Total Suspended	< 2.0	2.0 mg/L							
LCS (B5J5059-BS1)				Prepared: 2025-10-28, Analyzed: 2025-10-28					
Solids, Total Suspended	87.0	5.0 mg/L	100		87	83-107			
LCS (B5J5059-BS2)				Prepared: 2025-10-28, Analyzed: 2025-10-28					
Solids, Total Suspended	84.0	5.0 mg/L	100		84	83-107			
Duplicate (B5J5059-DUP2)				Source: 25J3216-01	Prepared: 2025-10-28, Analyzed: 2025-10-28				
Solids, Total Suspended	< 2.0	2.0 mg/L		< 2.0				20	

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Prince George, City of - Pump Station
Raw Water - PW 660

WORK ORDER REPORTED 25J3216
2025-11-07 15:59

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
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Microbiological Parameters, Batch B5J4726

Blank (B5J4726-BLK1)				Prepared: 2025-10-24, Analyzed: 2025-10-24						
Coliforms, Total (Q-Tray)	< 1	1	MPN/100 mL							
E. coli (Q-Tray)	< 1	1	MPN/100 mL							

Microbiological Parameters, Batch B5J4729

Blank (B5J4729-BLK1)				Prepared: 2025-10-24, Analyzed: 2025-10-24						
Coliforms, Fecal (Q-Tray)	< 1	1	MPN/100 mL							

Total Metals, Batch B5J5195

Blank (B5J5195-BLK1)				Prepared: 2025-10-29, Analyzed: 2025-10-29						
Mercury, total	< 0.000010	0.000010	mg/L							
Blank (B5J5195-BLK2)				Prepared: 2025-10-29, Analyzed: 2025-10-29						
Mercury, total	< 0.000010	0.000010	mg/L							
LCS (B5J5195-BS1)				Prepared: 2025-10-29, Analyzed: 2025-10-29						
Mercury, total	0.00268	0.000010	mg/L	0.00250	107	80-120				
LCS (B5J5195-BS2)				Prepared: 2025-10-29, Analyzed: 2025-10-29						
Mercury, total	0.00261	0.000010	mg/L	0.00250	104	80-120				

Total Metals, Batch B5J5294

Blank (B5J5294-BLK1)				Prepared: 2025-10-29, Analyzed: 2025-10-30						
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							
Beryllium, total	< 0.00010	0.00010	mg/L							
Bismuth, total	< 0.00010	0.00010	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							
Cobalt, total	< 0.00010	0.00010	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							
Lithium, total	< 0.00010	0.00010	mg/L							
Magnesium, total	< 0.010	0.010	mg/L							
Manganese, total	< 0.00020	0.00020	mg/L							
Molybdenum, total	< 0.00010	0.00010	mg/L							
Nickel, total	< 0.00040	0.00040	mg/L							
Phosphorus, total	< 0.050	0.050	mg/L							
Potassium, total	< 0.10	0.10	mg/L							
Selenium, total	< 0.00050	0.00050	mg/L							
Silicon, total	< 1.0	1.0	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							
Sulfur, total	< 3.0	3.0	mg/L							
Tellurium, total	< 0.00050	0.00050	mg/L							
Thallium, total	< 0.000020	0.000020	mg/L							
Thorium, total	< 0.00010	0.00010	mg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Prince George, City of - Pump Station
Raw Water - PW 660

WORK ORDER REPORTED 25J3216
2025-11-07 15:59

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B5J5294, Continued									
Blank (B5J5294-BLK1), Continued					Prepared: 2025-10-29, Analyzed: 2025-10-30				
Tin, total	< 0.00020	0.00020 mg/L							
Titanium, total	< 0.0050	0.0050 mg/L							
Tungsten, total	< 0.0010	0.0010 mg/L							
Uranium, total	< 0.000020	0.000020 mg/L							
Vanadium, total	< 0.0050	0.0050 mg/L							
Zinc, total	< 0.0040	0.0040 mg/L							
Zirconium, total	< 0.00010	0.00010 mg/L							
LCS (B5J5294-BS1)					Prepared: 2025-10-29, Analyzed: 2025-10-30				
Aluminum, total	3.87	0.0050 mg/L	4.00		97	80-120			
Antimony, total	0.0376	0.00020 mg/L	0.0400		94	80-120			
Arsenic, total	0.389	0.00050 mg/L	0.400		97	80-120			
Barium, total	0.0388	0.0050 mg/L	0.0400		97	80-120			
Beryllium, total	0.0392	0.00010 mg/L	0.0400		98	80-120			
Bismuth, total	0.0385	0.00010 mg/L	0.0400		96	80-120			
Boron, total	0.393	0.0500 mg/L	0.400		98	80-120			
Cadmium, total	0.0391	0.000010 mg/L	0.0400		98	80-120			
Calcium, total	3.96	0.20 mg/L	4.00		99	80-120			
Chromium, total	0.0396	0.00050 mg/L	0.0400		99	80-120			
Cobalt, total	0.0414	0.00010 mg/L	0.0400		103	80-120			
Copper, total	0.0399	0.00040 mg/L	0.0400		100	80-120			
Iron, total	3.98	0.010 mg/L	4.00		99	80-120			
Lead, total	0.0389	0.00020 mg/L	0.0400		97	80-120			
Lithium, total	0.0393	0.00010 mg/L	0.0400		98	80-120			
Magnesium, total	3.95	0.010 mg/L	4.00		99	80-120			
Manganese, total	0.0392	0.00020 mg/L	0.0400		98	80-120			
Molybdenum, total	0.0395	0.00010 mg/L	0.0400		99	80-120			
Nickel, total	0.0393	0.00040 mg/L	0.0400		98	80-120			
Phosphorus, total	3.91	0.050 mg/L	4.00		98	80-120			
Potassium, total	3.94	0.10 mg/L	4.00		99	80-120			
Selenium, total	0.399	0.00050 mg/L	0.400		100	80-120			
Silicon, total	3.8	1.0 mg/L	4.00		96	80-120			
Silver, total	0.0391	0.000050 mg/L	0.0400		98	80-120			
Sodium, total	3.93	0.10 mg/L	4.00		98	80-120			
Strontium, total	0.0391	0.0010 mg/L	0.0400		98	80-120			
Sulfur, total	41.3	3.0 mg/L	40.0		103	80-120			
Tellurium, total	0.0372	0.00050 mg/L	0.0400		93	80-120			
Thallium, total	0.0407	0.000020 mg/L	0.0400		102	80-120			
Thorium, total	0.0395	0.00010 mg/L	0.0400		99	80-120			
Tin, total	0.0386	0.00020 mg/L	0.0400		97	80-120			
Titanium, total	0.0397	0.0050 mg/L	0.0400		99	80-120			
Tungsten, total	0.0403	0.0010 mg/L	0.0400		101	80-120			
Uranium, total	0.0402	0.000020 mg/L	0.0400		100	80-120			
Vanadium, total	0.0401	0.0050 mg/L	0.0400		100	80-120			
Zinc, total	0.391	0.0040 mg/L	0.400		98	80-120			
Zirconium, total	0.0394	0.00010 mg/L	0.0400		99	80-120			

Volatile Organic Compounds (VOC), Batch B5J5101

Blank (B5J5101-BLK1)					Prepared: 2025-10-28, Analyzed: 2025-10-28				
Bromodichloromethane	< 0.0010	0.0010 mg/L							
Bromoform	< 0.0010	0.0010 mg/L							
Chloroform	< 0.0010	0.0010 mg/L							
Dibromochloromethane	< 0.0010	0.0010 mg/L							
Surrogate: Toluene-d8	0.0214	mg/L	0.0250		86	70-130			
Surrogate: 4-Bromofluorobenzene	0.0180	mg/L	0.0249		72	70-130			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO PROJECT Prince George, City of - Pump Station
Raw Water - PW 660

WORK ORDER REPORTED 25J3216
2025-11-07 15:59

Analyte	Result	RL Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Volatile Organic Compounds (VOC), Batch B5J5101, Continued									
LCS (B5J5101-BS1)					Prepared: 2025-10-28, Analyzed: 2025-10-28				
Bromodichloromethane	0.0163	0.0010 mg/L	0.0198		82	70-130			
Bromoform	0.0176	0.0010 mg/L	0.0200		88	70-130			
Chloroform	0.0170	0.0010 mg/L	0.0198		86	70-130			
Dibromochloromethane	0.0169	0.0010 mg/L	0.0200		84	70-130			
Surrogate: Toluene-d8	0.0218	mg/L	0.0250		87	70-130			
Surrogate: 4-Bromofluorobenzene	0.0215	mg/L	0.0249		86	70-130			

QC Qualifiers:

MES A number up to 10% (rounded down) of the analytes in a Multi-Element Scan may exceed control limits by up to 10% (absolute).

SPK1 The recovery of this analyte was outside of established control limits. The data was accepted based on performance of other batch QC.