Appendix 45

Meadowbank and Whale Tail 2024 QAQC Results

TABLE OF CONTENT

LIST OF TABLES

SECTION 1. QAQC SAMPLING

As required by NIRB Project Certificate No.004, Condition 23: ***ensure that water quality monitoring performed at locations within receiving waters that allow for an assimilative capacity assessment of concern to regulators, be carried out by an independent contractor and submitted to an independent accredited lab for analysis, on a type and frequency basis as determined by the NWB; results of analysis shall be provided to the NWB and NIRB's Monitoring Officer.***

And

As required by NWB Water License 2AM-MEA1530 Part I, Item 17: ***The Licensee shall annually review the approved QA/QC Plan and modify the Plan as necessary. Proposed changes shall be submitted to an Accredited Laboratory for approval.***

And

As required by NWB Water License 2AM-WTP1830 Part I, Item 20: ***The Licensee shall annually review the approved QA/QC Plan and modify the Plan as necessary. Proposed changes shall be submitted to an Accredited Laboratory for approval.***

The objective of quality assurance and quality control (QA/QC) program is to assure that the chemical data collected are representative of the material being sampled, are of known quality, are properly documented, and are scientifically defensible. Data quality was assured throughout the collection and analysis of samples using specified standardized procedures, by the employment of accredited laboratories, and by staffing the program with experienced technicians.

Most of the chemical analyses for Meadowbank and Whale Tail sites were performed by Bureau Veritas (BV) in Ontario, an accredited facility. All data from BV lab underwent a vigorous internal QA/QC process, including the use of spiked samples and duplicate samples. All QA/QC data passed the laboratories acceptable limits. The laboratory certificates of quality control can be provided on request for Meadowbank and Whale Tail.

Toxicity and sublethal tests were performed by Nautilus Environmental in Ontario. Testing was conducted as stipulated in the corresponding Environment Canada Biological Test Methods. QA/QC measures implemented by the lab, including the use of reference toxicants, met the acceptable limits. Toxicity reports for Meadowbank and Whale Tail can be provided on request.

Agnico Eagle also require the services of laboratory as Bureau Veritas in Edmonton, Alberta, H2Lab in Val-D'Or, Quebec, and SGS in Lakefield, Ontario. Agnico Eagle also uses the services of ALS for many of the CREMP and AEMP water quality analysis.

Field blanks (FB) are laboratory bottles filled with deionized water in the field and then treated as a normal sample (N). They are used to identify errors or contamination in sample collection and analysis. Trip blank (TB) are laboratory pre-filed bottles with DI water carried to the sampling location and are left unopened. Duplicate field water quality samples (FD) are collected simultaneously in the field and used to assess sampling variability and sample homogeneity.

The QA/QC Plan was revised in March 2025 (Version 10) and can be found in Appendix 44 of the 2024 Annual Report.

1.1 MEADOWBANK SITE

In 2024, 257 water samples were collected (excluding Groundwater and CREMP monitoring programs), 55 duplicates, 53 field blanks and 41 trip blanks, representing 21% of duplicates, 21% of field blanks and 16% of trip blanks which is above the QA/QC duplicate and trip blank program objective of 10%.

The following presents the percentage of duplicate and field samples collected from each of the monitoring programs:

- MDMER and EEM monitoring programs: 6 duplicate samples, 7 field blanks and 6 trip blanks were collected from a total of 21 samples, representing 29% of duplicates, 33% of field blanks, and 29% of trip blanks;

- Sewage Treatment Plant (STP) monitoring program: 6 duplicate samples, 4 field blanks, and 3 trip blanks were collected from a total of 36 samples, representing 17% of duplicates, 11% of field blanks, and 8% for trip blanks.

- Surface water monitoring programs: 40 duplicate samples, 39 field blanks and 32 trip blanks were collected from a total of 195 samples, representing 21 % for duplicates, 20% for field blanks, and 16% for trip blanks;

- Bulk fuel storage facilities monitoring program: 3 duplicate samples and 3 field blanks were collected from a total of 6 samples, representing 50 % for duplicates and field blanks; As per the QAQC Plan, one (1) field duplicate and one (1) field blank are to be collected per monitoring station. The objective of the bulk fuel storage facilities monitoring program is met;

- Groundwater Monitoring Program: Duplicates were collected for each station during the July and August monitoring sessions. One (1) field blank and one (1) trip blank were also collected for each groundwater monitoring session (refer to Section 4.2 of the 2024 Meadowbank Groundwater Monitoring Report – Appendix 35 of the 2024 Annual Report), which aligns with the frequency outlined in the current QAQC Management Plan (Appendix 44 of the 2024 Annual Report); and

- Core Receiving Environment Monitoring Program (CREMP): A combined total of 20 duplicates were collected between the Meadowbank Lakes, Baker Lake, and the Whale Tail Lakes. Travel blanks (TB), de-ionized (DI) blanks and Equipment Blanks were submitted for all sampling events (refer to Appendix 26 of the 2024 Annual Report for the 2024 CREMP Report), which aligns with the frequency outlined in the current QAQC Management Plan (Appendix 44 of the 2024 Annual Report).

Analytical precision is a measurement of the variability associated with duplicate analyses of the same sample in the laboratory. Duplicate results were assessed using the relative percent difference (RPD) between measurements. The equation used to calculate a RPD is:

RPD = (A-B)/ ((A+B)/2)*100; where: A = field sample; B = duplicate sample.

Large variations in RPD values are often observed between duplicate samples when the concentrations of analytes are low and approaching the detection limit. Consequently, a RPD of 20% for concentrations of

field and duplicates samples that both exceed 10x the method detection limit (MDL) is considered notable. The analytical precision of one QA/QC sampling event is characterized as:

- High, when less than 10% of the parameters have variations that are notable;
- Medium, when 10 to 30% of the parameters have variations that are notable;
- Low, when more than 30% of the parameters have variations that are notable.

Meadowbank results of the QA/QC data are presented below in Table 1-1 to Table 1-32 for the MDMER and EEM, Surface Water, STP, and Bulk Fuel monitoring programs. The following is a summary of the QA/QC results, per sampling program:

- MDMER and EEM (Table 1-1 to Table 1-4): All the duplicate samples collected were considered as having high analytical precision.
- Surface Water (Table 1-5 to Table 1-30): All QA/QC sampling events conducted within the surface water quality program are rated as having high analytical precision except for five (5) samples having a medium analytical precision of 10% (x2), 11%, 13%, and 19%.
- Sewage Treatment Plant (STP) (Table 1-31): All the duplicate samples collected were considered as having high analytical precision except for two (2) samples having medium analytical precision of 13% (x2).
- Bulk Fuel Storage Facility (Table 1-32): All the duplicate samples collected were considered as having high analytical precision.

RPD values were also calculated for field blanks (FB) and lab blanks (LB) in 2024 as the QA/QC Plan. All field blank samples are considered to have high analytical precision.

The QA/QC plan was followed, and samples were collected by qualified technicians. Given the high number of samples collected in 2024, it is common to have some RPD exceedances as a result of the discrete differences in the original and field duplicates. Given the variability of these exceedances (occurring with different parameters, on different dates for different sampling programs) and the high number of successful samples, it is evident that field QA/QC standards during water sampling were maintained during sampling in 2024. Agnico Eagle environmental technicians will continue to follow standard QA/QC procedures for surface water sampling that requires the use of sample bottles that are provided by an accredited laboratory, proper handling, and storage of bottles to prevent cross-contamination between areas and, if appropriate, thoroughly rinsing the sample containers with sample water prior to sample collection.

Each equipment used for field measurement are calibrated prior usage. Calibration datasheets are kept for future reference, if needed.

Table 1-1 Meadowbank 2024 MDMER QAQC (ST-MMER-3)

Parameter	Sample date		10/14/2024							11/4/2024						12/2/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																						
TSS	mg/L	1	1	1	1	2	2	0.00	0.00	1	1	1	1	0.00	0.00	1	1	1	1	1	0.00	0.00
Major Ions																						
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005	0.0005	0.0005	0.00063	0.0005	**23.01**	0.00
Nutrients																						
Un-Ionized Ammonia, calculated	mg/L	-	-	-	-	0.00059	0.00043	**31.37**	-	-	-	0.0029	0.0029	0.00	-	-	-	-	0.0035	0.0035	0.00	-
Total Metals																						
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.00154	0.00169	9.29	0.00	0.0001	0.0001	0.00135	0.00128	5.32	0.00	0.0001	0.0001	0.0001	0.00114	0.00111	2.67	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00174	0.00189	8.26	0.00	0.0005	0.0005	0.00189	0.0017	10.58	0.00	0.0005	0.0005	0.0005	0.00145	0.00133	8.63	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0161	0.0169	4.85	0.00	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.0066	0.0069	4.44	0.00	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Radionuclides																						
Radium-226	Bq/l	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								0%	0%					0%	0%						0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-2 Meadowbank 2024 EEM QAQC Effluent Characterization (ST-MMER-3-EEM)

Parameter	Sample date		10/21/2024							11/25/2024				
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Original	RPD (FB/LB)
Conventional Parameters														
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	58.7	56.3	4.17	-	0.5	0.5	-	31.9	-
Total alkalinity, as $CaCO_3$	mg/L	1	2	1.2	1	34	33	2.99	18.18	1	1	1	28	0.00
Major Ions														
Chloride	mg/L	1.0	1.0	1.0	1	7.2	1	**151.22**	0.00	1	1	1	1.2	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	35	35	0.00	0.00	0.5	0.5	0.5	8.7	0.00
Nutrients														
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.64	0.63	1.57	0.00	0.1	0.1	0.1	0.11	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.0014	0.002	**35.29**	0.00	0.001	0.001	0.001	0.001	0.00
Total Metals														
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.0312	0.0291	6.97	0.00	0.003	0.003	0.003	0.0277	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	0.027	0.027	0.00	0.00	0.01	0.01	0.01	0.016	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.0078	0.0073	6.62	0.00	0.001	0.001	0.001	0.001	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0012	0.0013	8.00	0.00	0.001	0.001	0.001	0.001	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00212	0.00203	4.34	0.00	0.0001	0.0001	0.0001	0.00051	0.00
% Exceedance*								0%	0%					0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-3 Meadowbank 2024 EEM QAQC Exposure Area Second Portage (ST-MMER-3-EEM-SPLE)

Parameter	Sample date		11/24/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	19.1	19	0.52	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1.4	1	11	11	0.00	**33.33**
TSS	mg/L	1	1	1	1	1	1	0.00	0.00
Major Ions									
Chloride	mg/L	1	1	1	1	1.1	1.1	0.00	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	6.3	7.4	16.06	0.00
Nutrients									
Ammonia Nitrogen	mg N/L	0.05	0.069	0.05	0.05	0.05	0.05	0.00	0.00
Un-Ionized Ammonia, calculated	mg N/L	-	-	-	-	0.0004	0.0004	0.00	-
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Total Metals									
Aluminum	mg/L	0.0005	0.0005	0.00059	0.0005	0.0183	0.0178	2.77	16.51
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00002	0.00043	0.000408	5.25	0.00
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00	0.00
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Cobalt	mg/L	0.000005	0.000005	0.000005	0.000005	0.00004	0.000042	4.88	0.00
Copper	mg/L	0.00005	0.00005	0.00005	0.00005	0.000755	0.000793	4.91	0.00
Iron	mg/L	0.001	0.001	0.001	0.001	0.0176	0.0202	13.76	0.00
Lead	mg/L	0.000005	0.000005	0.000006	0.000005	0.00004	0.000052	*26.09*	18.18
Manganese	mg/L	0.00005	0.00005	0.00006	0.00005	0.00146	0.00147	0.68	18.18
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.00005	0.00017	0.000137	**21.50**	0.00
Nickel	mg/L	0.00002	0.000026	0.00002	0.00002	0.000754	0.000729	3.37	0.00
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00	0.00
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.00	0.00
Uranium	mg/L	0.000002	0.000003	0.000004	0.000002	0.000082	0.000082	0.00	**66.67**
Zinc	mg/L	0.0001	0.0001	0.0001	0.0001	0.00022	0.00034	**42.86**	0.00
Radionuclides									
Radium-226	Bq/l	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-4 Meadowbank 2024 EEM QAQC Reference Area Third Portage Lake (ST-MMER-1-EEM-TPS)

Parameter	Sample date		11/24/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	12	12	0.00	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1.9	1	7.8	7.5	3.92	**62.07**
TSS	mg/L	1	1	1	1	1	1	0.00	0.00
Major Ions									
Chloride	mg/L	1	1	1	1	1	1	0.00	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Sulfate	mg/L	0.5	0.88	0.5	0.5	4.3	4.3	0.00	0.00
Nutrients									
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.2	**120.00**	0.00
Un-Ionized Ammonia, calculated	mg N/L	-	-	-	-	0.0004	0.0004	0.00	-
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Total Metals									
Aluminum	mg/L	0.0005	0.0005	0.00059	0.0005	0.0155	0.00902	52.85	16.51
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00002	0.000222	0.00023	3.54	0.00
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00	0.00
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00012	0.0001	18.18	0.00
Cobalt	mg/L	0.000005	0.000005	0.000005	0.000005	0.000032	0.000041	**24.66**	0.00
Copper	mg/L	0.00005	0.00005	0.00005	0.00005	0.000484	0.000489	1.03	0.00
Iron	mg/L	0.001	0.001	0.001	0.001	0.0131	0.0122	7.11	0.00
Lead	mg/L	0.000005	0.000005	0.000005	0.000005	0.00006	0.000012	*133.33*	0.00
Manganese	mg/L	0.00005	0.00005	0.00005	0.00005	0.00124	0.0012	3.28	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.00005	0.000128	0.000105	19.74	0.00
Nickel	mg/L	0.00002	0.00002	0.00002	0.00002	0.000675	0.000644	4.70	0.00
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00	0.00
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.00	0.00
Uranium	mg/L	0.000002	0.000002	0.000002	0.000002	0.000058	0.000052	10.91	0.00
Zinc	mg/L	0.0001	0.0001	0.0001	0.0001	0.00042	0.00022	**62.50**	0.00
Radionuclides									
Radium-226	Bq/l	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								4%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-5 Meadowbank 2024 Non-Contact Water Diversion Ditch QAQC (ST-5)

Parameter	Sample date		9/15/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
TSS	mg/L	1	1	1	1	1	2	**66.67**	0.00
Major Ions									
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.00063	0.001	**45.40**	0.00
Sulfate	mg/L	1	1	1	1	40	40	0.00	0.00
Total Metals									
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.139	0.142	2.14	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.00866	0.00872	0.69	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00691	0.00711	2.85	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.00046	0.0005	8.33	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0028	0.0029	3.51	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Radionuclides									
Radium-226	Bq/l	0.005	0.005	0.005	0.005	0.007	0.007	0.00	0.00
% Exceedance*								0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-6 Meadowbank 2024 Non-Contact Water Diversion Ditch QAQC (ST-6)

Parameter	Sample date		9/15/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
TSS	mg/L	1	1	1	1	7	6	15.38	0.00
Major Ions									
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.00076	0.00091	17.96	0.00
Sulfate	mg/L	1	1	1	1	27	29	7.14	0.00
Total Metals									
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.219	0.229	4.46	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.00098	0.00096	2.06	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00281	0.00279	0.71	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.00022	0.00021	4.65	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0048	0.0049	2.06	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.0116	0.0116	0.00	0.00
Radionuclides									
Radium-226	Bq/l	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.
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Table 1-7 Meadowbank 2024 East Dike Seepage Discharge QAQC (ST-8)

Parameter	Sample date		10/14/2024							11/4/2024						12/2/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																						
TSS	mg/L	1	1	1	1	2	2	0.00	0.00	1	1	1	1	0.00	0.00	1	1	1	1	1	0.00	0.00
Major Ions																						
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005	0.0005	0.0005	0.00063	0.0005	**23.01**	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	61	61	0.00	0.00	0.5	0.5	13	12	8.00	0.00	0.5	0.5	0.5	9.5	9.8	3.11	0.00
Nutrients																						
Ammonia Nitrogen	mg/L	0.05	0.05	0.05	0.05	0.068	0.05	**30.51**	0.00	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Un-Ionized Ammonia, calculated	mg/L	-	-	-	-	0.00059	0.00043	**31.37**	-	-	-	0.0029	0.0029	0.00	-	-	-	-	0.0035	0.0035	0.00	-
Total Metals																						
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.0523	0.0518	0.96	0.00	0.003	0.003	0.0317	0.0301	5.18	0.00	0.003	0.003	0.003	0.0303	0.0295	2.68	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.00154	0.00169	9.29	0.00	0.0001	0.0001	0.00135	0.00128	5.32	0.00	0.0001	0.0001	0.0001	0.00114	0.00111	2.67	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00174	0.00189	8.26	0.00	0.0005	0.0005	0.00189	0.0017	10.58	0.00	0.0005	0.0005	0.0005	0.00145	0.00133	8.63	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0161	0.0169	4.85	0.00	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.0066	0.0069	4.44	0.00	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Radionuclides																						
Radium-226	Bq/l	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								0%	0%					0%	0%						0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-8 Meadowbank 2024 Portage WRSF QAQC (ST-16)

Parameter	Sample date		5/13/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	49.5	46.7	5.82	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	36	35	2.82	0.00
Carbonate, as $CaCO_3$	mg/L	1	1	1	-	1	1	0.00	-
Bicarbonate, as $CaCO_3$	mg/L	1	1	1	-	36	35	2.82	-
TDS	mg/L	10	10	20	10	100	90	10.53	**66.67**
TSS	mg/L	1	1	1	1	23	24	4.26	0.00
Total organic carbon	mg/L	0.4	0.45	0.4	0.4	2.8	2.8	0.00	0.00
Dissolved organic carbon	mg/L	0.4	0.4	0.4	0.4	1.9	1.9	0.00	0.00
Colour	TCU	2	2	2	2	4	4	0.00	0.00
Major Ions									
Bromide	mg/L	1	1	1	1	1	1	0.00	0.00
Chloride	mg/L	1	1	1	1	2.9	2.3	**23.08**	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.00096	0.00098	2.06	0.00
Cyanide (free)	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.00	0.00
Cyanide (WAD)	mg/L	0.0005	0.0005	0.0005	0.0005	0.00062	0.00058	6.67	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Silica	mg/L	0.05	0.05	0.05	0.05	1.2	1.3	8.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	26	26	0.00	0.00
Thiocyanate	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.00	0.00
Thiosulphates	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.00	0.00
Nutrients									
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.19	0.19	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.78	0.78	0.00	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Kjeldahl nitrogen	mg N/L	0.1	0.1	0.1	0.1	0.31	0.3	3.28	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.021	0.022	4.65	0.00
Orthophosphate	mg P/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals									
Aluminum	mg/L	0.003	0.003	0.003	0.003	1.07	0.949	11.99	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.0155	0.017	9.23	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0115	0.0111	3.54	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000016	0.000016	0.00	0.00
Calcium (total)	mg/L	0.05	0.05	0.05	-	12.9	12.2	5.58	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.0139	0.0137	1.45	0.00

Parameter	Sample date		5/13/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0002	0.00225	0.00225	0.00	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00511	0.00503	1.58	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	1.86	1.75	6.09	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0023	0.00244	5.91	0.00
Lithium	mg/L	0.002	0.002	0.002	0.002	0.0022	0.002	9.52	0.00
Magnesium (total)	mg/L	0.05	0.05	0.05	-	4.21	3.96	6.12	-
Manganese	mg/L	0.001	0.001	0.001	0.001	0.124	0.122	1.63	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0045	0.0045	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.014	0.0139	0.72	0.00
Potassium (total)	mg/L	0.05	0.05	0.05	-	3.35	3.24	3.34	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00011	0.00013	16.67	0.00
Silicon	mg/L	0.1	0.1	0.1	0.1	2.04	1.77	14.17	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Sodium (total)	mg/L	0.05	0.05	0.05	-	2.64	2.46	7.06	-
Strontium	mg/L	0.001	0.001	0.001	0.001	0.0579	0.0603	4.06	0.00
Tellurium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000018	0.000018	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.027	0.0275	1.83	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00215	0.00215	0.00	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.0051	0.005	1.98	0.00
Dissolved Metals									
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.0268	0.0336	*22.52*	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.00989	0.00998	0.91	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0061	0.0066	7.87	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000014	0.00001	**33.33**	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0002	0.00076	0.00073	4.03	0.00
Copper	mg/L	0.0002	0.0002	0.0002	0.0002	0.00663	0.00677	2.09	0.00
Iron	mg/L	0.005	0.005	0.005	0.005	0.0248	0.0287	14.58	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00038	**62.07**	0.00
Lithium	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.00	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.104	0.104	0.00	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00

Parameter	Sample date		5/13/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0053	0.0052	1.90	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0064	0.0062	3.17	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00014	0.00012	15.38	0.00
Silicon	mg/L	0.1	0.1	0.1	0.1	0.51	0.53	3.85	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Strontium	mg/L	0.001	0.001	0.001	0.001	0.0681	0.0705	3.46	0.00
Tellurium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0021	0.00209	0.48	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-9 Meadowbank 2024 NP-2 South QAQC (NP-2 South)

Parameter	Sample date		9/15/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	96.2	96.6	0.41	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	68	67	1.48	0.00
Carbonate, as $CaCO_3$	mg/L	1	1	1	-	1	1	0.00	-
Bicarbonate, as $CaCO_3$	mg/L	1	1	1	-	67	66	1.50	-
TDS	mg/L	10	10	10	10	135	115	16.00	0.00
TSS	mg/L	1	1	1	1	2	2	0.00	0.00
Total organic carbon	mg/L	0.4	0.4	0.4	0.4	3.9	3.9	0.00	0.00
Dissolved organic carbon	mg/L	0.4	0.4	0.4	0.4	3.8	3.9	2.60	0.00
Colour	TCU	2	2	2	2	6	6	0.00	0.00
Major Ions									
Bromide	mg/L	1	1	1	1	1	1	0.00	0.00
Chloride	mg/L	1	1	1	1	1.5	1.7	12.50	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00056	11.32	0.00
Cyanide (free)	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.00	0.00
Cyanide (WAD)	mg/L	0.0005	0.00065	0.0005	0.0005	0.001	0.0005	**66.67**	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.15	0.18	18.18	0.00
Silica	mg/L	0.05	0.05	0.05	0.05	1.2	1.2	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	39	40	2.53	0.00
Thiocyanate	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.00	0.00
Thiosulphates	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.00	0.00
Nutrients									
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.053	5.83	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.33	0.31	6.25	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Kjeldahl nitrogen	mg N/L	0.1	0.1	0.1	0.1	0.32	0.3	6.45	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.0025	0.0032	**24.56**	0.00
Orthophosphate	mg P/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals									
Aluminum	mg/L	0.003	0.0048	0.003	0.003	0.0316	0.0382	18.91	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.00181	0.00183	1.10	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0063	0.0064	1.57	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.000035	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Calcium (total)	mg/L	0.05	0.096	0.05	-	22.9	22.9	0.00	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0002	0.00025	0.00024	4.08	0.00
Copper	mg/L	0.0005	0.00061	0.0005	0.0005	0.00199	0.00199	0.00	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	0.116	0.117	0.86	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.00	0.00
Magnesium (total)	mg/L	0.05	0.058	0.05	-	9.48	9.54	0.63	-
Manganese	mg/L	0.001	0.001	0.001	0.001	0.0142	0.0142	0.00	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0026	0.0027	3.77	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0152	0.0153	0.66	0.00
Potassium (total)	mg/L	0.05	0.05	0.05	-	2.31	2.34	1.29	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Silicon	mg/L	0.1	0.1	0.1	0.1	0.52	0.52	0.00	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Sodium (total)	mg/L	0.05	0.306	0.05	-	3.09	3.06	0.98	-
Strontium	mg/L	0.001	0.001	0.001	0.001	0.0946	0.0957	1.16	0.00
Tellurium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00215	0.00212	1.41	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Dissolved Metals									
Aluminum	mg/L	0.003	0.003	0.0056	0.003	0.003	0.003	0.00	**60.47**
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.0022	0.00187	16.22	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.007	0.007	0.00	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Bismuth	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000019	0.00001	**62.07**	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Copper	mg/L	0.0002	0.0002	0.0002	0.0002	0.00318	0.00293	8.18	0.00
Iron	mg/L	0.005	0.005	0.005	0.005	0.02	0.0204	1.98	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.00	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.0098	0.0096	2.06	0.00
Mercury	mg/L	0.0001[1] / 0.00001	0.00001	0.0001	0.0001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0029	0.0029	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0171	0.0175	2.31	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00011	0.0001	9.52	0.00
Silicon	mg/L	0.1	0.1	0.1	0.1	0.51	0.5	1.98	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.000132	**147.37**	0.00
Strontium	mg/L	0.001	0.001	0.001	0.001	0.0971	0.0941	3.14	0.00
Tellurium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00

Parameter	Sample date		9/15/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00245	0.00236	3.74	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.
[1] Different MDL used for this parameter.

Table 1-10 Meadowbank 2024 North Portage Pit QAQC (ST-17)

Parameter	Sample date		4/9/2024							11/4/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	970	966	0.41	-	0.5	0.5	-	760	719	5.54	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	170	170	0.00	0.00	1	1	1	140	140	0.00	0.00
Carbonate, as $CaCO_3$	mg/L	1	1	1	-	1	1	0.00	-	1	1	-	1	1	0.00	-
Bicarbonate, as $CaCO_3$	mg/L	1	1	1	-	170	170	0.00	-	1	1	-	130	140	7.41	-
TDS	mg/L	10	10	10	10	2910	2840	2.43	0.00	10	10	10	2410	2340	2.95	0.00
TSS	mg/L	1	1	1	1	2	2	0.00	0.00	1	1	1	5	6	18.18	0.00
Total organic carbon	mg/L	0.4	0.4	0.5	0.4	28	28	0.00	**22.22**	0.4	0.4	0.4	23	23	0.00	0.00
Dissolved organic carbon	mg/L	0.4	0.4	0.4	0.4	27	27	0.00	0.00	0.4	0.4	0.4	22	21	4.65	0.00
Sodium Adsorption Ratio	-		0.59	0.36	-	5.4	5.7	5.41	-	NC	NC	-	5	5.1	1.98	-
Oxidation-Reduction Potential	mV	0	290	270	-	270	230	16.00	-	450	440	-	290	270	7.14	-
Major Ions																
Bromide	mg/L	1	1	1	1	2.4	2.4	0.00	0.00	1	1	1	1.9	2	5.13	0.00
Chloride	mg/L	1	1	1	1	290	290	0.00	0.00	1	1	1	180	180	0.00	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	1.66	1.54	7.50	0.00	0.0005	0.0005	0.0005	0.281	0.239	16.15	0.00
Cyanide (free)	mg/L	0.002	0.002	0.002	0.002	0.95	0.99	4.12	0.00	0.002	0.002	0.002	0.1	0.095	5.13	0.00
Cyanide (WAD)	mg/L	0.0005	0.0005	0.0005	0.0005	1.3	1.5	14.29	0.00	0.0005	0.0005	0.0005	0.16	0.12	28.57	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.2	0.21	4.88	0.00	0.1	0.1	0.1	0.25	0.28	11.32	0.00
Silica	mg/L	0.05	0.05	0.05	0.05	7	7	0.00	0.00	0.05	0.05	0.05	6.3	6.4	1.57	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	1700	1700	0.00	0.00	0.5	0.96	0.5	1400	1400	0.00	**63.01**
Nutrients																
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	51	50	1.98	0.00	0.05	0.05	0.05	40	40	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	2.04	2	1.98	0.00	0.1	0.1	0.1	0.65	0.64	1.55	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.45	0.456	1.32	0.00	0.01	0.01	0.01	0.127	0.125	1.59	0.00
Total Kjeldahl nitrogen	mg N/L	0.1	0.1	0.1	0.1	81	80	1.24	0.00	0.12	0.1	0.1	62	61	1.63	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.012	0.012	0.00	0.00	0.0011	0.001	0.001	0.016	0.016	0.00	0.00
Orthophosphate	mg P/L	0.01	0.01	0.01	0.01	0.013	0.013	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals																
Aluminum	mg/L	0.003[1] / 0.0005	0.0005	0.0005	0.0005	0.0082	0.0083	1.21	0.00	0.0005	0.0005	0.0005	0.0317	0.0617	64.24	0.00
Antimony	mg/L	0.00002	0.00002	0.00002	0.00002	0.00641	0.00652	1.70	0.00	0.00002	0.00002	0.00002	0.00352	0.00349	0.86	0.00
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00002	0.0804	0.0807	0.37	0.00	0.00002	0.00002	0.00002	0.0573	0.0586	2.24	0.00
Barium	mg/L	0.00002	0.00002	0.00002	0.00005	0.048	0.047	2.11	**85.71**	0.00002	0.00002	0.00005	0.0319	0.0311	2.54	**85.71**
Beryllium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00	0.00	0.00001	0.00001	0.00001	0.00002	0.000033	**49.06**	0.00
Boron	mg/L	0.01	0.01	0.01	0.01	0.238	0.233	2.12	0.00	0.01	0.01	0.01	0.186	0.172	7.82	0.00
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.000019	0.000016	17.14	0.00	0.000005	0.000005	0.000005	0.00001	0.00001	0.00	0.00
Calcium (total)	mg/L	0.01	0.05	0.05	-	337	335	0.60	-	0.05	0.05	-	259	245	5.56	-
Chromium	mg/L	0.0001	0.00016	0.0001	0.0001	0.0002	0.0002	0.00	0.00	0.0001	0.0001	0.00014	0.00081	0.00045	**57.14**	**33.33**
Copper	mg/L	0.0001[1]/ 0.00005	0.00005	0.00005	0.00005	0.671	0.644	4.11	0.00	0.00005	0.00005	0.00005	0.208	0.216	3.77	0.00
Iron	mg/L	0.005[1] / 0.001	0.001	0.001	0.001	0.389	0.388	0.26	0.00	0.001	0.001	0.001	0.749	1.2	46.28	0.00
Lead	mg/L	0.00002[1] / 0.000005	0.000005	0.000005	0.000005	0.000656	0.000689	4.91	0.00	0.000005	0.000005	0.000005	0.000572	0.000586	2.42	0.00
Lithium	mg/L	0.0005	0.0005	0.0005	0.0005	0.0044	0.0048	8.70	0.00	0.0005	0.0005	0.0005	0.0043	0.0041	4.76	0.00
Magnesium (total)	mg/L	0.01	0.05	0.05	-	31.3	31.7	1.27	-	0.05	0.05	-	27.2	25.8	5.28	-
Manganese	mg/L	0.0001[1] / 0.00005	0.00005	0.00005	0.00005	0.195	0.191	2.07	0.00	0.00005	0.00005	0.00005	0.251	0.245	2.42	0.00
Mercury	mg/L	0.0001[1] / 0.00001	0.00001	0.00001	0.00001	-	-	-	0.00	0.00001	0.00001	0.00001	0.0001	0.0001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.00005	0.102	0.0991	2.88	0.00	0.00005	0.00005	0.00005	0.0787	0.0765	2.84	0.00
Nickel	mg/L	0.0001[1] / 0.00002	0.00002	0.00002	0.00002	0.414	0.418	0.96	0.00	0.00002	0.00002	0.00002	0.226	0.22	2.69	0.00
Potassium (total)	mg/L	0.01	0.05	0.05	-	134	131	2.26	-	0.05	0.05	-	97.6	90.9	7.11	-
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.077	0.0851	9.99	0.00	0.00004	0.00004	0.00004	0.0404	0.04	1.00	0.00
Silver	mg/L	0.00001[1] / 0.000005	0.000005	0.000005	0.000005	0.000136	0.000146	7.09	0.00	0.000005	0.000005	0.000005	0.000071	0.000097	**30.95**	0.00
Sodium (total)	mg/L	0.01	0.05	0.05	-	382	384	0.52	-	0.05	0.05	-	303	283	6.83	-
Strontium	mg/L	0.00005	0.00005	0.00005	0.00005	1.85	1.83	1.09	0.00	0.00005	0.00005	0.00005	1.4	1.36	2.90	0.00
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.0000077	0.0000101	**26.97**	0.00	0.000002	0.000002	0.000002	0.0000082	0.000008	2.47	0.00

Parameter	Sample date		4/9/2024							11/4/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Tin	mg/L	0.0002	0.0002	0.0002	0.0002	0.0004	0.0004	0.00	0.00	0.0002	0.0002	0.0002	0.0004	0.0004	0.00	0.00
Titanium	mg/L	0.002[1] / 0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.00	0.00	0.0005	0.0005	0.0005	0.004	0.004	0.00	0.00
Uranium	mg/L	0.000005[1] / 0.000002	0.000002	0.000002	0.000002	0.0222	0.0215	3.20	0.00	0.000002	0.000002	0.000002	0.02	0.0191	4.60	0.00
Vanadium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0004	0.0004	0.00	0.00	0.0002	0.0002	0.0002	0.0004	0.0004	0.00	0.00
Zinc	mg/L	0.001/ 0.0001	0.00023	0.00046	0.0001	0.00061	0.00069	12.31	**128.57**	0.0001	0.0001	0.0001	0.0046	0.0142	*102.13*	0.00
Dissolved Metals																
Aluminum	mg/L	0.0005	0.0005	0.0005	0.0005	0.0026	0.0025	3.92	0.00	0.00055	0.0005	0.0005	0.0059	0.0061	3.33	0.00
Antimony	mg/L	0.00002	0.00002	0.00002	0.00002	0.00653	0.00635	2.80	0.00	0.00002	0.00002	0.00002	0.00361	0.00365	1.10	0.00
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00002	0.039	0.0408	4.51	0.00	0.00002	0.00002	0.00002	0.0381	0.0433	12.78	0.00
Barium	mg/L	0.00002	0.000035	0.00002	0.00002	0.0473	0.0463	2.14	0.00	0.00002	0.00002	0.00002	0.0336	0.0358	6.34	0.00
Beryllium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00	0.00	0.00001	0.00001	0.00001	0.00002	0.00002	0.00	0.00
Boron	mg/L	0.01	0.01	0.01	0.01	0.24	0.222	7.79	0.00	0.01	0.01	0.01	0.184	0.183	0.54	0.00
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.00001	0.000011	9.52	0.00	0.000005	0.000005	0.000005	0.00001	0.000022	**75.00**	0.00
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.00	0.00	0.0001	0.0001	0.0001	0.0002	0.0002	0.00	0.00
Copper	mg/L	0.00005	0.00005	0.000069	0.00005	0.575	0.546	5.17	**31.93**	0.00005	0.00005	0.00005	0.0645	0.0629	2.51	0.00
Iron	mg/L	0.001	0.001	0.001	0.001	0.0219	0.0568	88.69	0.00	0.001	0.001	0.001	0.0581	0.0652	11.52	0.00
Lead	mg/L	0.000005	0.000005	0.000005	0.000005	0.000026	0.000034	**26.67**	0.00	0.000005	0.000005	0.000005	0.000126	0.000187	38.98	0.00
Lithium	mg/L	0.0005	0.0005	0.0005	0.0005	0.0043	0.0042	2.35	0.00	0.0005	0.0005	0.0005	0.0045	0.0046	2.20	0.00
Manganese	mg/L	0.00005	0.00005	0.00005	0.00005	0.19	0.214	11.88	0.00	0.00005	0.00005	0.00005	0.265	0.261	1.52	0.00
Mercury	mg/L	0.0001[1] /0.00001	-	-	-	-	-	-	-	0.00001	0.00001	0.00001	0.0001	0.0001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.00005	0.103	0.101	1.96	0.00	0.00005	0.00005	0.00005	0.0856	0.0864	0.93	0.00
Nickel	mg/L	0.00002	0.00002	0.00002	0.00002	0.41	0.398	2.97	0.00	0.00002	0.00002	0.00002	0.236	0.227	3.89	0.00
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.0882	0.0861	2.41	0.00	0.00004	0.00004	0.00004	0.0542	0.0534	1.49	0.00
Silver	mg/L	0.000005	0.000005	0.000005	0.000005	0.000012	0.000027	**76.92**	0.00	0.000005	0.000005	0.000005	0.000025	0.000038	**41.27**	0.00
Strontium	mg/L	0.00005	0.00005	0.00005	0.00005	1.84	1.8	2.20	0.00	0.00005	0.00005	0.00005	1.44	1.47	2.06	0.00
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.000004	0.0000054	**29.79**	0.00	0.000002	0.000002	0.000002	0.000006	0.000007	15.38	0.00
Tin	mg/L	0.0002	0.0002	0.0002	0.0002	0.0004	0.0004	0.00	0.00	0.0002	0.0002	0.0002	0.0004	0.0004	0.00	0.00
Titanium	mg/L	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.00	0.00	0.0005	0.0005	0.0005	0.001	0.001	0.00	0.00
Uranium	mg/L	0.000002	0.0000022	0.000002	0.000002	0.0217	0.0218	0.46	0.00	0.000002	0.000002	0.000002	0.0224	0.0225	0.45	0.00
Vanadium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0004	0.0004	0.00	0.00	0.0002	0.0002	0.0002	0.0004	0.0004	0.00	0.00
Zinc	mg/L	0.0001	0.00028	0.00031	0.0001	0.00089	0.001	11.64	**102.44**	0.0001	0.0001	0.0001	0.00245	0.00334	30.74	0.00
% Exceedance*								1%	0%						6%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.
[1] Different MDL used for this parameter.

Table 1-11 Meadowbank 2024 South Portage Pit QAQC (ST-19)

Parameter	Sample date		4/9/2024							9/1/2024							10/7/2024					
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																						
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	1610	1720	6.61	-	11.8	0.5	-	1370	1350	1.47	-	5.3	-	1370	1300	5.24	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1.1	1	110	100	9.52	9.52	1	1	1	100	100	0.00	0.00	1	1	110	110	0.00	0.00
Carbonate, as $CaCO_3$	mg/L	1	1	1	-	1	1	0.00	-	1	1	-	1	1	0.00	-	1	-	1.1	1.2	8.70	-
Bicarbonate, as $CaCO_3$	mg/L	1	1	1.1	-	100	100	0.00	-	1	1	-	100	100	0.00	-	1	-	100	100	0.00	-
TDS	mg/L	10	10	10	10	5630	5550	1.43	0.00	10	10	10	4720	4750	0.63	0.00	10	10	4060	4190	3.15	0.00
TSS	mg/L	1	1	1	1	44	44	0.00	0.00	1	1	1	8	3	**90.91**	0.00	1	1	17	17	0.00	0.00
Total organic carbon	mg/L	0.4	0.4	0.4	0.4	110	110	0.00	0.00	0.4	0.4	0.4	80	80	0.00	0.00	0.4	0.4	80	80	0.00	0.00
Dissolved organic carbon	mg/L	0.4	0.4	0.4	0.4	100	99	1.01	0.00	0.4	0.4	0.4	81	81	0.00	0.00	0.4	0.4	77	79	2.56	0.00
Sodium Adsorption Ratio	-		NC	NC	-	8.4	8.5	1.18	-	NC	NC	-	7.3	7.4	1.36	-	NC	-	7	7.1	1.42	-
Oxidation-Reduction Potential	mV	0	280	290	-	210	210	0.00	-	290	280	-	210	210	0.00	-	350	-	270	300	10.53	-
Major Ions																						
Bromide	mg/L	1	1	1	1	4.9	5.6	13.33	0.00	1	1	1	4.5	3.2	**33.77**	0.00	1	1	2.7	2.8	3.64	0.00
Chloride	mg/L	1	1	1	1	950	950	0.00	0.00	1	1	1	650	690	5.97	0.00	1	1	600	600	0.00	0.00
Cyanate	mg/L	0.1	0.05	0.05	-	11	10	9.52	-	0.05	0.05	-	0.25	4.5	*178.95*	-	0.05	-	7.9	3	89.91	-
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	18	19.8	9.52	0.00	0.0005	0.0005	0.0005	0.04	0.04	0.00	0.00	0.0005	0.0005	0.16	0.346	73.52	0.00
Cyanide (free)	mg/L	0.002	0.002	0.002	0.002	4.1	4	2.47	0.00	0.002	0.002	0.002	0.022	0.024	8.70	0.00	0.002	0.002	0.33	0.35	5.88	0.00
Cyanide (WAD)	mg/L	0.0005	0.0005	0.0005	0.0005	7.6	5.5	32.06	0.00	0.0005	0.0005	0.0005	0.019	0.023	19.05	0.00	0.0005	0.0005	0.13	0.26	66.67	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.11	0.11	0.00	0.00	0.1	0.1	0.1	0.16	0.17	6.06	0.00	0.1	0.1	0.19	0.18	5.41	0.00
Silica	mg/L	0.05	0.05	0.05	0.05	5.9	5.9	0.00	0.00	0.05	0.05	0.05	5.3	5.5	3.70	0.00	0.05	0.05	5.5	5.5	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	2600	2600	0.00	0.00	0.5	0.5	0.5	2000	2000	0.00	0.00	0.5	0.5	1800	1900	5.41	0.00
Nutrients																						
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	65	65	0.00	0.00	0.05	0.05	0.05	55	55	0.00	0.00	0.05	0.05	47	47	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	29	29	0.00	0.00	0.1	0.1	0.1	19.4	18.6	4.21	0.00	0.1	0.1	22.6	19.6	14.22	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.322	0.323	0.31	0.00	0.01	0.01	0.01	0.26	0.261	0.38	0.00	0.01	0.01	0.254	0.254	0.00	0.00
Total Kjeldahl nitrogen	mg N/L	0.1	0.1	0.1	0.1	170	170	0.00	0.00	0.1	0.1	0.1	130	120	8.00	0.00	0.16	0.1	130	130	0.00	**46.15**
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.013	0.014	7.41	0.00	0.001	0.001	0.001	0.061	0.054	12.17	0.00	0.001	0.001	0.01	0.011	9.52	0.00
Orthophosphate	mg P/L	0.01	0.01	0.01	0.01	0.072	0.07	2.82	0.00	0.01	0.01	0.01	0.024	0.033	**31.58**	0.00	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals																						
Aluminum	mg/L	0.003[1] / 0.0005	0.0005	0.0005	0.0005	0.214	0.252	16.31	0.00	0.0273	0.0005	0.0005	0.145	0.055	90.00	0.00	0.0168	0.0005	0.164	0.148	10.26	*188.44*
Antimony	mg/L	0.00002	0.00002	0.00002	0.00002	0.00688	0.00643	6.76	0.00	0.00002	0.00002	0.00002	0.0111	0.00865	24.81	0.00	0.00002	0.00002	0.0154	0.0121	24.00	0.00
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00002	0.119	0.12	0.84	0.00	0.000022	0.00002	0.00002	0.275	0.265	3.70	0.00	0.000027	0.00002	0.164	0.157	4.36	**29.79**
Barium	mg/L	0.00002	0.00002	0.00002	0.00005	0.155	0.158	1.92	**85.71**	0.000924	0.000065	0.00005	0.143	0.145	1.39	**26.09**	0.000414	0.00005	0.133	0.123	7.81	*156.90*
Beryllium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00018	0.0001	57.14	0.00	0.00001	0.00001	0.00001	0.00005	0.00005	0.00	0.00	0.00001	0.00001	0.00005	0.00005	0.00	0.00
Boron	mg/L	0.01	0.01	0.01	0.01	0.337	0.341	1.18	0.00	0.01	0.01	0.01	0.345	0.339	1.75	0.00	0.01	0.01	0.313	0.31	0.96	0.00
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.000501	0.000564	11.83	0.00	0.000005	0.000005	0.000005	0.000452	0.000448	0.89	0.00	0.000005	0.000005	0.000205	0.000212	3.36	0.00
Calcium (total)	mg/L	0.01	0.05	0.05	-	608	654	7.29	-	4.66	0.05	-	520	511	1.75	-	2.4	-	517	486	6.18	-
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0064	0.0076	17.14	0.00	0.0001	0.00015	0.0001	0.003	0.00101	99.25	**40.00**	0.0001	0.0001	0.00477	0.00394	19.06	0.00
Copper	mg/L	0.0001[1] / 0.00005	0.00005	0.00005	0.00005	12.7	13.4	5.36	0.00	0.000196	0.00005	0.00005	4.44	4.5	1.34	0.00	0.000126	0.00005	1.2	1.13	6.01	**86.36**
Iron	mg/L	0.005[1] / 0.001	0.0011	0.001	0.001	1.31	2.2	50.71	0.00	0.0069	0.0027	0.001	0.287	0.093	102.11	**91.89**	0.0051	0.001	0.41	0.359	13.26	**134.43**
Lead	mg/L	0.00002[1] / 0.000005	0.0000081	0.000005	0.000005	0.00321	0.00321	0.00	0.00	0.0000463	0.000005	0.000005	0.00163	0.00153	6.33	0.00	0.0000808	0.000005	0.00331	0.00298	10.49	*176.69*
Lithium	mg/L	0.0005	0.0005	0.0005	0.0005	0.005	0.005	0.00	0.00	0.0005	0.0005	0.0005	0.0059	0.0056	5.22	0.00	0.0005	0.0005	0.0058	0.0061	5.04	0.00
Magnesium (total)	mg/L	0.01	0.05	0.05	-	21.1	21.7	2.80	-	0.051	0.05	-	18	18.1	0.55	-	0.05	-	20.4	19.9	2.48	-
Manganese	mg/L	0.0001[1] / 0.00005	0.00005	0.00005	0.00005	0.0505	0.0586	14.85	0.00	0.000497	0.000064	0.00005	0.0699	0.0661	5.59	**24.56**	0.000565	0.00005	0.08	0.0735	8.47	*167.48*
Mercury	mg/L	0.0001[1] / 0.00001	0.00001	0.00001	0.00001	0.0001	0.0001	0.00	0.00	0.00001	0.00001	0.00001	0.0001	0.0001	0.00	0.00	0.00001	0.00001	0.0001	0.0001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.00005	0.0711	0.0739	3.86	0.00	0.000168	0.00005	0.00005	0.0849	0.0844	0.59	0.00	0.00005	0.00005	0.086	0.0798	7.48	0.00
Nickel	mg/L	0.0001[1] / 0.00002	0.00002	0.00002	0.00002	4.49	4.86	7.91	0.00	0.000094	0.00002	0.00002	0.698	0.706	1.14	0.00	0.000082	0.00002	0.443	0.42	5.33	**121.57**
Potassium (total)	mg/L	0.01	0.05	0.05	-	236	237	0.42	-	0.07	0.05	-	164	164	0.00	-	0.05	-	167	159	4.91	-
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.245	0.254	3.61	0.00	0.00004	0.00004	0.00004	0.199	0.188	5.68	0.00	0.00004	0.00004	0.219	0.212	3.25	0.00
Silver	mg/L	0.00001 [1]/ 0.000005	0.000005	0.000005	0.000005	0.00014	0.00016	13.33	0.00	0.000005	0.000005	0.000005	0.000517	0.000054	*162.17*	0.00	0.000005	0.000005	0.000271	0.000257	5.30	0.00
Sodium (total)	mg/L	0.01	0.05	0.05	-	735	748	1.75	-	0.292	0.05	-	581	578	0.52	-	1.84	-	602	572	5.11	-

Parameter	Sample date		4/9/2024							9/1/2024							10/7/2024					
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Strontium	mg/L	0.00005	0.00005	0.00005	0.00005	4.09	4.26	4.07	0.00	0.0022	0.00005	0.00005	2.85	2.83	0.70	0.00	0.00133	0.00005	2.53	2.42	4.44	*185.51*
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.000037	0.000058	44.21	0.00	0.000002	0.000002	0.000002	0.000031	0.000047	41.03	0.00	0.000002	0.000002	0.000044	0.000046	4.44	0.00
Tin	mg/L	0.0002	0.0002	0.0002	0.0002	0.002	0.002	0.00	0.00	0.0002	0.0002	0.0002	0.001	0.001	0.00	0.00	0.0002	0.0002	0.001	0.001	0.00	0.00
Titanium	mg/L	0.002[1] / 0.0005	0.0005	0.0005	0.0005	0.02	0.02	0.00	0.00	0.0005	0.0005	0.0005	0.01	0.01	0.00	0.00	0.0005	0.0005	0.007	0.0061	13.74	0.00
Uranium	mg/L	0.000005[1] / 0.000002	0.000002	0.000002	0.000002	0.0101	0.0102	0.99	0.00	0.0000123	0.000002	0.000002	0.00934	0.00925	0.97	0.00	0.0000042	0.000002	0.0101	0.00954	5.70	**70.97**
Vanadium	mg/L	0.0002	0.0002	0.0002	0.0002	0.002	0.002	0.00	0.00	0.0002	0.0002	0.0002	0.001	0.001	0.00	0.00	0.0002	0.0002	0.001	0.001	0.00	0.00
Zinc	mg/L	0.001[1] / 0.0001	0.00027	0.0001	0.0001	0.01	0.01	0.00	0.00	0.00512	0.00018	0.0001	0.0079	0.005	**44.96**	**57.14**	0.0153	0.0001	0.00139	0.00123	12.21	*197.40*
Dissolved Metals																						
Aluminum	mg/L	0.0005	0.0005	0.0005	0.0005	0.014	0.0139	0.72	0.00	0.00086	0.00874	0.0005	0.0164	0.0154	6.29	*178.35*	0.0772	0.0005	0.0188	0.0221	16.14	*197.43*
Antimony	mg/L	0.00002	0.00002	0.00002	0.00002	0.0155	0.0148	4.62	0.00	0.00002	0.00002	0.00002	0.0131	0.0119	9.60	0.00	0.000023	0.00002	0.0168	0.0157	6.77	13.95
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00002	0.123	0.118	4.15	0.00	0.00002	0.00002	0.00002	0.274	0.273	0.37	0.00	0.000071	0.00002	0.173	0.173	0.00	**112.09**
Barium	mg/L	0.00002	0.00002	0.00002	0.00002	0.173	0.162	6.57	0.00	0.000058	0.000541	0.00002	0.15	0.152	1.32	*185.74*	0.00157	0.00002	0.112	0.112	0.00	*194.97*
Beryllium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00005	0.00005	0.00	0.00	0.00001	0.00001	0.00001	0.00005	0.00005	0.00	0.00	0.00001	0.00001	0.00005	0.00005	0.00	0.00
Boron	mg/L	0.01	0.01	0.01	0.01	0.426	0.395	7.55	0.00	0.01	0.01	0.01	0.33	0.319	3.39	0.00	0.01	0.01	0.365	0.367	0.55	0.00
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.000025	0.000125	*133.33*	0.00	0.000005	0.000005	0.000005	0.000453	0.000452	0.22	0.00	0.0000086	0.000005	0.000192	0.000188	2.11	**52.94**
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.00	0.00	0.0001	0.0001	0.0001	0.0005	0.0005	0.00	0.00	0.00017	0.0001	0.0005	0.0005	0.00	**51.85**
Copper	mg/L	0.00005	0.000071	0.00005	0.00005	14.9	13.4	10.60	0.00	0.00005	0.000119	0.00005	4.7	4.69	0.21	**81.66**	0.00093	0.00005	1.09	1.08	0.92	*179.59*
Iron	mg/L	0.001	0.001	0.001	0.001	0.0436	0.0512	16.03	0.00	0.001	0.0029	0.001	0.011	0.0066	*50.00*	**97.44**	0.0205	0.001	0.005	0.0084	**50.75**	*181.40*
Lead	mg/L	0.000005	0.0000146	0.0000249	0.000005	0.000325	0.000333	2.43	**133.11**	0.000005	0.0000292	0.000005	0.000359	0.000453	23.15	**141.52**	0.000565	0.000005	0.000391	0.0003	26.34	*196.49*
Lithium	mg/L	0.0005	0.0005	0.0005	0.0005	0.0025	0.0025	0.00	0.00	0.0005	0.0005	0.0005	0.0058	0.006	3.39	0.00	0.0005	0.0005	0.0063	0.0061	3.23	0.00
Manganese	mg/L	0.00005	0.00005	0.00005	0.00005	0.00581	0.013	76.45	0.00	0.00005	0.000168	0.00005	0.0682	0.0682	0.00	**108.26**	0.00202	0.00005	0.0628	0.0639	1.74	*190.34*
Mercury	mg/L	0.0001[1] / 0.00001	-	-	-	0.0001	0.0001	0.00	-	0.00001	0.00001	0.00001	0.0001	0.0001	0.00	0.00	0.00001	0.00001	0.0001	0.0001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.00005	0.109	0.0859	23.70	0.00	0.00005	0.00005	0.00005	0.0888	0.0881	0.79	0.00	0.000099	0.00005	0.0862	0.0871	1.04	**65.77**
Nickel	mg/L	0.00002	0.00002	0.00002	0.00002	3	2.94	2.02	0.00	0.00002	0.000087	0.00002	0.73	0.738	1.09	**125.23**	0.000329	0.00002	0.413	0.403	2.45	*177.08*
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.32	0.305	4.80	0.00	0.00004	0.00004	0.00004	0.234	0.235	0.43	0.00	0.00004	0.00004	0.23	0.224	2.64	0.00
Silver	mg/L	0.000005	0.000005	0.000005	0.000005	0.0048	0.000183	185.31	0.00	0.000005	0.000005	0.000005	0.000736	0.0316	190.90	0.00	0.000005	0.000005	0.000354	0.000341	3.74	0.00
Strontium	mg/L	0.00005	0.00005	0.00005	0.00005	4.69	4.52	3.69	0.00	0.00005	0.00064	0.00005	2.73	2.75	0.73	*171.01*	0.00425	0.00005	2.45	2.41	1.65	*195.35*
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.00001	0.00001	0.00	0.00	0.000002	0.000002	0.000002	0.000033	0.000037	11.43	0.00	0.000002	0.000002	0.00003	0.000042	33.33	0.00
Tin	mg/L	0.0002	0.0002	0.0002	0.0002	0.001	0.001	0.00	0.00	0.0002	0.0002	0.0002	0.001	0.001	0.00	0.00	0.0002	0.0002	0.001	0.001	0.00	0.00
Titanium	mg/L	0.0005	0.0005	0.0005	0.0005	0.0025	0.0025	0.00	0.00	0.0005	0.0005	0.0005	0.0025	0.0025	0.00	0.00	0.00053	0.0005	0.0025	0.0025	0.00	5.83
Uranium	mg/L	0.000002	0.000002	0.000002	0.000002	0.0119	0.0112	6.06	0.00	0.000002	0.0000048	0.000002	0.00959	0.0104	8.10	**82.35**	0.0000191	0.000002	0.00911	0.00901	1.10	**162.09**
Vanadium	mg/L	0.0002	0.0002	0.0002	0.0002	0.001	0.001	0.00	0.00	0.0002	0.0002	0.0002	0.001	0.001	0.00	0.00	0.00027	0.0002	0.001	0.001	0.00	**29.79**
Zinc	mg/L	0.0001	0.00045	0.00021	0.0001	0.0005	0.00066	**27.59**	**70.97**	0.00016	0.00232	0.0001	0.00288	0.00592	69.09	*183.47*	0.0153	0.0001	0.00454	0.00357	23.92	*197.40*
% Exceedance*								8%	0%						10%	0%					9%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.
[1] Different MDL used for this parameter.

Table 1-12 Meadowbank 2024 Goose Pit QAQC (ST-20)

Parameter	Sample date		5/26/2024							7/7/2024					
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters															
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	116	113	2.62	-	0.5	-	307	318	3.52	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	2.7	1	33	33	0.00	**91.89**	1.5	1	70	71	1.42	**40.00**
Carbonate, as $CaCO_3$	mg/L	1	1	1	-	1	1	0.00	-	1	-	1	1	0.00	-
Bicarbonate, as $CaCO_3$	mg/L	1	1	2.7	-	32	33	3.08	-	1.5	-	69	70	1.44	-
TDS	mg/L	10	10	10	10	260	265	1.90	0.00	10	10	855	875	2.31	0.00
TSS	mg/L	1	1	1	1	17	28	48.89	0.00	1	1	18	16	11.76	0.00
Total organic carbon	mg/L	0.4	0.4	0.41	0.4	1.4	1.4	0.00	2.47	0.4	0.4	5.1	4.4	14.74	0.00
Dissolved organic carbon	mg/L	0.4	0.4	0.4	0.4	1.2	1.1	8.70	0.00	0.4	0.4	4.1	4.4	7.06	0.00
Sodium Adsorption Ratio	-		NC	0.73	-	0.96	0.93	3.17	-	NC	-	2.6	2.6	0.00	-
Oxidation-Reduction Potential	mV	0	280	230	-	210	290	32.00	-	250	-	260	190	31.11	-
Major Ions															
Bromide	mg/L	1	1	1	1	1	1	0.00	0.00	1	1	1	1	0.00	0.00
Chloride	mg/L	1	1	1	1	13	12	8.00	0.00	1	1	54	54	0.00	0.00
Cyanate	mg/L	0.1	0.05	0.05	-	0.05	0.05	0.00	-	0.05	-	0.1	0.1	0.00	-
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.00721	0.00731	1.38	0.00	0.0005	0.0005	0.0159	0.0156	1.90	0.00
Cyanide (free)	mg/L	0.002	0.002	0.002	0.002	0.0057	0.01	**54.78**	0.00	0.002	0.002	0.012	0.012	0.00	0.00
Cyanide (WAD)	mg/L	0.0005	0.0005	0.0005	0.0005	0.0058	0.0067	14.40	0.00	0.0005	0.0005	0.0073	0.009	20.86	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.11	9.52	0.00	0.1	0.1	0.24	0.21	13.33	0.00
Silica	mg/L	0.05	0.05	0.05	0.05	1.6	1.5	6.45	0.00	0.05	0.05	4.2	4.2	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	170	160	6.06	0.00	0.5	0.5	500	470	6.19	0.00
Nutrients															
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	3.9	4	2.53	0.00	0.086	0.05	18	18	0.00	**52.94**
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.32	0.26	**20.69**	0.00	0.1	0.1	0.1	0.1	0.00	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.02	0.02	0.00	0.00	0.01	0.01	0.025	0.023	8.33	0.00
Total Kjeldahl nitrogen	mg N/L	0.1	0.1	0.1	0.1	4.3	4.5	4.55	0.00	0.1	0.1	23	22	4.44	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.015	0.013	14.29	0.00	0.001	0.001	0.047	0.02	80.60	0.00
Orthophosphate	mg P/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.032	0.034	6.06	0.00
Total Metals															
Aluminum	mg/L	0.0005	0.0005	0.0005	0.0005	0.348	0.372	6.67	0.00	0.00878	0.0005	0.0154	0.227	174.59	*178.45*
Antimony	mg/L	0.00002	0.00002	0.00002	0.00002	0.00137	0.00132	3.72	0.00	0.00002	0.00002	0.00537	0.00527	1.88	0.00
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00002	0.0514	0.0492	4.37	0.00	0.00002	0.00002	0.161	0.188	15.47	0.00
Barium	mg/L	0.00002	0.00002	0.00002	0.00002	0.0126	0.0146	14.71	0.00	0.000527	0.00005	0.0256	0.0254	0.78	*165.34*
Beryllium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000023	0.000026	12.24	0.00	0.00001	0.00001	0.00001	0.000014	**33.33**	0.00
Boron	mg/L	0.01	0.01	0.01	0.01	0.026	0.025	3.92	0.00	0.01	0.01	0.088	0.084	4.65	0.00
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.0000236	0.0000231	2.14	0.00	0.000005	0.000005	0.000016	0.0000159	0.63	0.00
Calcium (total)	mg/L	0.01	0.05	0.05	-	40.5	39.6	2.25	-	0.102	-	110	114	3.57	-
Chromium	mg/L	0.0001	0.00013	0.00015	0.0001	0.00601	0.00672	11.15	**40.00**	0.0001	0.0001	0.00022	0.00231	*165.22*	0.00
Copper	mg/L	0.00005	0.00005	0.00005	0.00005	0.00587	0.00588	0.17	0.00	0.000612	0.00005	0.0132	0.0101	26.61	*169.79*
Iron	mg/L	0.001	0.001	0.001	0.001	0.743	0.774	4.09	0.00	0.0011	0.001	0.0122	0.453	189.51	9.52
Lead	mg/L	0.000005	0.000005	0.000005	0.000005	0.00181	0.00204	11.95	0.00	0.0000152	0.000005	0.0000415	0.000894	*182.26*	**100.99**
Lithium	mg/L	0.0005	0.0005	0.0005	0.0005	0.00176	0.00178	1.13	0.00	0.0005	0.0005	0.0025	0.00275	9.52	0.00
Magnesium (total)	mg/L	0.01	0.05	0.05	-	3.61	3.51	2.81	-	0.05	-	7.62	7.81	2.46	-
Manganese	mg/L	0.00005	0.00005	0.00005	0.00005	0.0849	0.0863	1.64	0.00	0.000397	0.00005	0.0694	0.078	11.67	**155.26**
Mercury	mg/L	0.0001[1] / 0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.0001	0.0001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.00005	0.0106	0.00985	7.33	0.00	0.00005	0.00005	0.0416	0.0424	1.90	0.00
Nickel	mg/L	0.00002	0.00002	0.00002	0.00002	0.0223	0.0219	1.81	0.00	0.000291	0.00002	0.0452	0.0464	2.62	*174.28*
Potassium (total)	mg/L	0.01	0.05	0.05	-	11.9	11.6	2.55	-	0.05	-	45.5	44.4	2.45	-
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.00328	0.00309	5.97	0.00	0.00004	0.00004	0.0133	0.0135	1.49	0.00
Silver	mg/L	0.000005	0.000005	0.000005	0.000005	0.0000082	0.000009	9.30	0.00	0.000005	0.000005	0.000005	0.0000119	**81.66**	0.00
Sodium (total)	mg/L	0.01	0.05	0.05	-	22.1	20.7	6.54	-	0.1	-	94.6	93.1	1.60	-

Parameter	Sample date		5/26/2024							7/7/2024					
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Strontium	mg/L	0.00005	0.00005	0.00005	0.00005	0.143	0.143	0.00	0.00	0.000436	0.00005	0.377	0.389	3.13	**158.85**
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.0000177	0.0000172	2.87	0.00	0.000002	0.000002	0.0000144	0.0000144	0.00	0.00
Tin	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Titanium	mg/L	0.0005	0.0005	0.0005	0.0005	0.0135	0.0141	4.35	0.00	0.0005	0.0005	0.0005	0.00833	*177.35*	0.00
Uranium	mg/L	0.000002	0.000002	0.000002	0.000002	0.00228	0.00225	1.32	0.00	0.000002	0.000002	0.00547	0.00536	2.03	0.00
Vanadium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0008	0.00086	7.23	0.00	0.0002	0.0002	0.0002	0.00066	**106.98**	0.00
Zinc	mg/L	0.0001	0.00018	0.00018	0.0001	0.00268	0.00428	45.98	**57.14**	0.00306	0.0001	0.00149	0.00187	22.62	*187.34*
Dissolved Metals															
Aluminum	mg/L	0.0005	0.0005	0.0005	0.0005	0.025	0.0174	35.85	0.00	0.00086	0.0005	0.243	0.0282	158.41	**52.94**
Antimony	mg/L	0.00002	0.00002	0.00002	0.00002	0.0013	0.00116	11.38	0.00	0.00002	0.00002	0.00584	0.00518	11.98	0.00
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00002	0.0323	0.0289	11.11	0.00	0.00002	0.00002	0.195	0.152	24.78	0.00
Barium	mg/L	0.00002	0.00002	0.00002	0.00002	0.0116	0.0102	12.84	0.00	0.000031	0.00002	0.0266	0.0231	14.08	**43.14**
Beryllium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.000015	0.00001	**40.00**	0.00
Boron	mg/L	0.01	0.01	0.01	0.01	0.022	0.02	9.52	0.00	0.01	0.01	0.08	0.073	9.15	0.00
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.00002	0.0000161	**21.61**	0.00	0.000005	0.000005	0.000016	0.0000165	3.08	0.00
Chromium	mg/L	0.0001	0.00011	0.00012	0.0001	0.0009	0.00022	**121.43**	18.18	0.0001	0.0001	0.00279	0.0001	*186.16*	0.00
Copper	mg/L	0.00005	0.00005	0.00005	0.00005	0.00586	0.00327	56.74	0.00	0.00005	0.00005	0.0106	0.00588	57.28	0.00
Iron	mg/L	0.001	0.0062	0.0023	0.001	0.0689	0.0145	130.46	**78.79**	0.001	0.001	0.494	0.0088	*193.00*	0.00
Lead	mg/L	0.000005	0.000005	0.0000065	0.000005	0.0000433	0.000143	*107.03*	**26.09**	0.0000138	0.000005	0.000916	0.0000698	171.68	**93.62**
Lithium	mg/L	0.0005	0.0005	0.0005	0.0005	0.00129	0.00117	9.76	0.00	0.0005	0.0005	0.00247	0.00217	12.93	0.00
Manganese	mg/L	0.00005	0.000051	0.00005	0.00005	0.0912	0.0749	19.63	0.00	0.00005	0.00005	0.0829	0.0637	26.19	0.00
Mercury	mg/L	0.0001[1] / 0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.0001	0.0001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.00005	0.01	0.00926	7.68	0.00	0.00005	0.00005	0.0429	0.0394	8.51	0.00
Nickel	mg/L	0.00002	0.00002	0.00002	0.00002	0.0184	0.0164	11.49	0.00	0.00004	0.00002	0.0505	0.0399	23.45	**66.67**
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.00299	0.00268	10.93	0.00	0.00004	0.00004	0.0142	0.0133	6.55	0.00
Silver	mg/L	0.000005	0.000005	0.000005	0.000005	0.0000149	0.00005	**108.17**	0.00	0.000005	0.000005	0.000011	0.000005	**75.00**	0.00
Strontium	mg/L	0.00005	0.00005	0.00005	0.00005	0.14	0.123	12.93	0.00	0.00006	0.00005	0.363	0.337	7.43	18.18
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.0000123	0.000011	11.16	0.00	0.000002	0.000002	0.000014	0.000013	7.41	0.00
Tin	mg/L	0.0002	0.0002	0.0002	0.0002	0.00048	0.00046	4.26	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Titanium	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00071	**34.71**	0.00	0.0005	0.0005	0.00855	0.0005	*177.90*	0.00
Uranium	mg/L	0.000002	0.000002	0.000002	0.000002	0.00205	0.00189	8.12	0.00	0.000002	0.0000035	0.00532	0.00509	4.42	**54.55**
Vanadium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00021	4.88	0.00	0.0002	0.0002	0.00095	0.00069	**31.71**	0.00
Zinc	mg/L	0.0001	0.00026	0.00023	0.0001	0.00275	0.00212	25.87	**78.79**	0.00076	0.0001	0.00364	0.00724	66.18	**153.49**
% Exceedance*								9%	0%					19%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.
[1] Different MDL used for this parameter.

Table 1-13 Meadowbank 2024 Goose Pit Sump QAQC (ST-20 Pit Sump)

Parameter	Sample date			9/1/2024						
	Unit	MDL	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters										
Hardness, as $CaCO_3$	mg/L	0.5	0.5[1] / 0.6	0.5	0.5	-	207	205	0.97	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	1	65	59	9.68	0.00
TDS	mg/L	10	10[1] / 15	10	10	10	305	310	1.63	0.00
TSS	mg/L	1	1[1] / 1.2	1	1	1	1	2	**66.67**	0.00
Major Ions										
Chloride	mg/L	1	1[1] / 2	1	1	1	8.4	7.7	8.70	0.00
Cyanide	mg/L	0.0005	0.0005[1] / 0.005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Fluoride	mg/L	0.1	0.1[1] / 0.4	0.1	0.1	0.1	0.26	0.27	3.77	0.00
Sulfate	mg/L	0.5	0.5[1] / 6	0.5	0.5	0.5	160	160	0.00	0.00
Nutrients										
Ammonia Nitrogen	mg N/L	0.05	0.05[1] / 2	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.1	0.99	0.99	0.00	0.00
Nitrite	mg N/L	0.01	0.01[1] / 0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals										
Aluminum	mg/L	0.0005	0.0005[1] / 0.003	0.0005	0.0005	0.0005	0.0181	0.0227	22.55	0.00
Arsenic	mg/L	0.00002	0.00002[1] / 0.0001	0.00002	0.00002	0.00002	0.00359	0.0036	0.28	0.00
Barium	mg/L	0.00002	0.00002[1] / 0.0001	0.000062	0.00002	0.00005	0.0222	0.0216	2.74	**85.71**
Cadmium	mg/L	0.000005	0.000005[1] / 0.000025	0.000005	0.000005	0.000005	0.0000214	0.0000219	2.31	0.00
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00024	0.0003	**22.22**	0.00
Copper	mg/L	0.00005	0.00005[1] / 0.0005	0.00005	0.00005	0.00005	0.00175	0.00178	1.70	0.00
Iron	mg/L	0.001	0.001[1] / 0.01	0.001	0.001	0.001	0.036	0.0424	16.33	0.00
Lead	mg/L	0.000005	0.000005[1] / 0.00005	0.000005	0.000005	0.000005	0.0000935	0.0000959	2.53	0.00
Manganese	mg/L	0.00005	0.00005[1] / 0.0001	0.00005	0.00005	0.00005	0.0231	0.0233	0.86	0.00
Mercury	mg/L	0.00001	0.00001[1] / 0.000005	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005[1] / 0.00005	0.00005	0.00005	0.00005	0.00324	0.0033	1.83	0.00
Nickel	mg/L	0.00002	0.00002[1] / 0.0005	0.00002	0.00002	0.00002	0.0551	0.0554	0.54	0.00
Selenium	mg/L	0.00004	0.00004[1] / 0.00005	0.00004	0.00004	0.00004	0.000421	0.00039	7.64	0.00
Silver	mg/L	0.000005	0.000005[1] / 0.00001	0.000005	0.000005	0.000005	0.000005	0.000005	0.00	0.00
Thallium	mg/L	0.000002	0.000002[1] / 0.00001	0.000002	0.000002	0.000002	0.000044	0.0000444	0.90	0.00
Zinc	mg/L	0.0001	0.0001[1] / 0.003	0.0001	0.0001	0.0001	0.00053	0.00043	**20.83**	0.00
% Exceedance*									4%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.
[1] Different MDL used for this parameter.

Table 1-14 Meadowbank 2024 TSF Water QAQC (ST-21)

Parameter	Sample date		5/19/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	345	312	10.05	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	44	43	2.30	0.00
TDS	mg/L	10	10	10	10	570	560	1.77	0.00
TSS	mg/L	1	1	1	1	31	29	6.67	0.00
Major Ions									
Chloride	mg/L	1	1	1	1	9	8.7	3.39	0.00
Cyanide	mg/L	0.0005	0.0042	0.004	0.0005	0.0163	0.0166	1.82	**155.56**
Cyanide (free)	mg/L	0.002	0.002	0.002	0.002	0.0049	0.0052	5.94	0.00
Cyanide (WAD)	mg/L	0.0005	0.0042	0.0045	0.0005	0.0056	0.0065	14.88	**160.00**
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Sulfate	mg/L	0.5	0.55	0.5	0.5	360	340	5.71	0.00
Nutrients									
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.61	0.56	8.55	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.58	0.6	3.39	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.019	0.018	5.41	0.00
Total Metals									
Aluminum	mg/L	0.0005	0.0005	0.00074	0.0005	0.435	0.444	2.05	**38.71**
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00002	0.0772	0.068	12.67	0.00
Barium	mg/L	0.00002	0.00002	0.00002	0.00002	0.0218	0.0211	3.26	0.00
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.0000837	0.0000722	14.75	0.00
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0115	0.011	4.44	0.00
Copper	mg/L	0.00005	0.00005	0.00005	0.00005	0.0149	0.0143	4.11	0.00
Iron	mg/L	0.001	0.001	0.001	0.001	1.33	1.28	3.83	0.00
Lead	mg/L	0.000005	0.000005	0.000005	0.000005	0.00604	0.00529	13.24	0.00
Manganese	mg/L	0.00005	0.00005	0.00005	0.00005	0.368	0.347	5.87	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.00005	0.00913	0.00876	4.14	0.00
Nickel	mg/L	0.00002	0.00002	0.00002	0.00002	0.203	0.188	7.67	0.00
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.000744	0.000655	12.72	0.00
Silver	mg/L	0.000005	0.000005	0.000005	0.000005	0.0000137	0.0000195	**34.94**	0.00
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.0000107	0.0000105	1.89	0.00
Zinc	mg/L	0.0001	0.0001	0.0001	0.0001	0.00887	0.00708	22.45	0.00
% Exceedance*								3%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-15 Meadowbank 2024 Vault RSF QAQC (ST-24)

Parameter	Sample date		7/8/2024						9/10/2024
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank
Conventional Parameters									
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	49.8	54.7	9.38	-	0.5
Total alkalinity, as $CaCO_3$	mg/L	1	1.4	1	31	31	0.00	**33.33**	1
TDS	mg/L	10	10	10	95	70	**30.30**	0.00	10
TSS	mg/L	1	1	1	2	3	**40.00**	0.00	1
Major Ions									
Chloride	mg/L	1	1	1	1	1	0.00	0.00	1
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1
Sulfate	mg/L	0.5	0.51	0.51	32	27	16.95	0.00	0.5
Nutrients									
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05
Nitrate	mg N/L	0.1	0.1	0.1	0.29	0.29	0.00	0.00	0.1
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01
Total Metals									
Aluminum	mg/L	0.003	0.003	0.003	0.0412	0.0484	16.07	0.00	0.003
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00156	0.00175	11.48	0.00	0.0001
Barium	mg/L	0.001	0.001	0.001	0.005	0.0056	11.32	0.00	0.001
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001
Copper	mg/L	0.0005	0.0005	0.0005	0.00205	0.00234	13.21	0.00	0.0005
Iron	mg/L	0.01	0.01	0.01	0.067	0.077	13.89	0.00	0.01
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002
Manganese	mg/L	0.001	0.001	0.001	0.005	0.0058	14.81	0.00	0.001
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001
Molybdenum	mg/L	0.001	0.001	0.001	0.0112	0.0125	10.97	0.00	0.001
Nickel	mg/L	0.001	0.001	0.001	0.0012	0.0014	15.38	0.00	0.001
Selenium	mg/L	0.0001	0.0001	0.0001	0.00013	0.00014	7.41	0.00	0.0001
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005
% Exceedance*							0%	0%	

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-16 Meadowbank 2024 Vault Attenuation Pond QAQC (ST-25)

Parameter	Sample date		7/8/2024						9/10/2024
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank
Conventional Parameters									
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	58.2	57.9	0.52	-	0.5
Total alkalinity, as $CaCO_3$	mg/L	1	1.7	1	31	32	3.17	**51.85**	1
TDS	mg/L	10	10	10	75	95	**23.53**	0.00	10
TSS	mg/L	1	1	1	1	2	**66.67**	0.00	1
Major Ions									
Chloride	mg/L	1	1	1	2.3	2.1	9.09	0.00	1
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1
Sulfate	mg/L	0.5	0.5	0.51	34	38	11.11	1.98	0.5
Nutrients									
Ammonia Nitrogen	mg/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01
Total Metals									
Aluminum	mg/L	0.003	0.003	0.003	0.0161	0.0146	9.77	0.00	0.003
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00045	0.00043	4.55	0.00	0.0001
Barium	mg/L	0.001	0.001	0.001	0.0111	0.0106	4.61	0.00	0.001
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001
Copper	mg/L	0.0005	0.0005	0.0005	0.00133	0.00127	4.62	0.00	0.0005
Iron	mg/L	0.01	0.01	0.01	0.029	0.026	10.91	0.00	0.01
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002
Manganese	mg/L	0.001	0.001	0.001	0.007	0.0067	4.38	0.00	0.001
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001
Molybdenum	mg/L	0.001	0.001	0.001	0.0028	0.0027	3.64	0.00	0.001
Nickel	mg/L	0.001	0.001	0.001	0.0013	0.0013	0.00	0.00	0.001
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005
% Exceedance*							0%	0%	

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-17 Meadowbank 2024 Vault Pit Lake QAQC (ST-26)

Parameter	Sample date		7/8/2024						9/10/2024
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank
Conventional Parameters									
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	94.2	91.4	3.02	-	0.5
Total alkalinity, as $CaCO_3$	mg/L	1	1.7	1	46	48	4.26	**51.85**	1
Carbonate, as $CaCO_3$	mg/L	1	1	-	1	1	0.00	-	1
Bicarbonate, as $CaCO_3$	mg/L	1	1.7	-	46	47	2.15	-	1
TDS	mg/L	10	10	10	145	150	3.39	0.00	10
TSS	mg/L	1	1	1	15	12	22.22	0.00	1
Total organic carbon	mg/L	0.4	0.4	0.4	1.5	1.5	0.00	0.00	0.4
Dissolved organic carbon	mg/L	0.4	0.4	0.4	1.3	1.4	7.41	0.00	0.4
Major Ions									
Chloride	mg/L	1	1	1	7.2	7.3	1.38	0.00	1
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005
Cyanide (free)	mg/L	0.002	0.002	0.002	0.002	0.002	0.00	0.00	0.002
Silica	mg/L	0.05	0.05	0.05	2.1	2.1	0.00	0.00	0.05
Sulfate	mg/L	0.5	0.5	0.51	51	52	1.94	1.98	0.5
Nutrients									
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05
Nitrate	mg N/L	0.1	0.1	0.1	1.1	1.1	0.00	0.00	0.1
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01
Total Kjeldahl nitrogen	mg N/L	0.1	0.1	0.1	0.11	0.12	8.70	0.00	0.1
Total phosphorus	mg P/L	0.001	0.001	0.001	0.0053	0.0045	16.33	0.00	0.001
Orthophosphate	mg P/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01
Total Metals									
Aluminum	mg/L	0.0005	0.0005	0.0005	0.234	0.276	16.47	0.00	0.00287
Antimony	mg/L	0.00002	0.00002	0.00002	0.00102	0.00102	0.00	0.00	0.00002
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00334	0.00344	2.95	0.00	0.00002
Barium	mg/L	0.00002	0.000054	0.00002	0.0115	0.0118	2.58	**91.89**	0.00005
Beryllium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001
Boron	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01
Cadmium	mg/L	0.000005	0.000005	0.000005	0.0000158	0.000018	13.02	0.00	0.000005
Calcium (total)	mg/L	0.01	0.05	-	27.1	25.9	4.53	-	0.05
Chromium	mg/L	0.0001	0.0001	0.0001	0.0005	0.00063	**23.01**	0.00	0.0001
Copper	mg/L	0.00005	0.00005	0.00005	0.00148	0.00166	11.46	0.00	0.00005
Iron	mg/L	0.001	0.001	0.001	0.448	0.468	4.37	0.00	0.001
Lead	mg/L	0.000005	0.000005	0.000005	0.000912	0.00109	17.78	0.00	0.000005
Lithium	mg/L	0.0005	0.0005	0.0005	0.00211	0.00231	9.05	0.00	0.0005
Magnesium (total)	mg/L	0.01	0.05	-	6.41	6.48	1.09	-	0.05
Manganese	mg/L	0.00005	0.00005	0.00005	0.0188	0.0201	6.68	0.00	0.00005
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.0208	0.0209	0.48	0.00	0.00005
Nickel	mg/L	0.00002	0.00002	0.00002	0.00192	0.00231	18.44	0.00	0.00002
Potassium (total)	mg/L	0.01	0.05	-	2.18	2.23	2.27	-	0.05
Selenium	mg/L	0.00004	0.00004	0.00004	0.000208	0.000185	11.70	0.00	0.00004
Sodium (total)	mg/L	0.01	0.05	-	2.2	2.42	9.52	-	0.05
Strontium	mg/L	0.00005	0.00005	0.00005	0.208	0.208	0.00	0.00	0.000066
Thallium	mg/L	0.000002	0.000002	0.000002	0.0000121	0.0000131	7.94	0.00	0.000002
Tin	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002
Titanium	mg/L	0.0005	0.0005	0.0005	0.0026	0.00296	12.95	0.00	0.0005
Uranium	mg/L	0.000002	0.000002	0.000002	0.00424	0.00429	1.17	0.00	0.000002
Vanadium	mg/L	0.0002	0.0002	0.0002	0.00034	0.00105	**102.16**	0.00	0.0002
Zinc	mg/L	0.0001	0.0001	0.0001	0.00218	0.00497	78.04	0.00	0.0001
Dissolved Metals									
Aluminum	mg/L	0.0005	0.00124	0.0005	0.0181	0.0135	29.11	**85.06**	0.00232
Antimony	mg/L	0.00002	0.00002	0.00002	0.00103	0.00102	0.98	0.00	0.00002
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00502	0.00515	2.56	0.00	0.00002
Barium	mg/L	0.00002	0.000088	0.00002	0.0105	0.0109	3.74	**125.93**	0.000696
Beryllium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001
Boron	mg/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01
Cadmium	mg/L	0.000005	0.000005	0.000005	0.00001	0.0000104	3.92	0.00	0.000005
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00011	9.52	0.00	0.0001
Copper	mg/L	0.00005	0.000059	0.00005	0.00112	0.0012	6.90	16.51	0.00005
Iron	mg/L	0.001	0.001	0.001	0.0063	0.01	**45.40**	0.00	0.001
Lead	mg/L	0.000005	0.000005	0.000005	0.0000347	0.00004	14.19	0.00	0.0000102
Lithium	mg/L	0.0005	0.0005	0.0005	0.00177	0.00183	3.33	0.00	0.0005
Manganese	mg/L	0.00005	0.000058	0.00005	0.0148	0.0147	0.68	14.81	0.00005
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.0206	0.0205	0.49	0.00	0.00005
Nickel	mg/L	0.00002	0.000029	0.00002	0.00208	0.00228	9.17	**36.73**	0.000036
Selenium	mg/L	0.00004	0.00004	0.00004	0.000192	0.000199	3.58	0.00	0.00004
Strontium	mg/L	0.00005	0.00005	0.00005	0.199	0.2	0.50	0.00	0.00009
Thallium	mg/L	0.000002	0.000002	0.000002	0.0000096	0.0000103	7.04	0.00	0.0000034
Tin	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002
Titanium	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005
Uranium	mg/L	0.000002	0.000002	0.000002	0.0043	0.00419	2.59	0.00	0.000002
Vanadium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002
Zinc	mg/L	0.0001	0.0003	0.0001	0.00122	0.00046	*90.48*	**100.00**	0.00036
% Exceedance*							4%	0%	

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-18 Meadowbank 2024 West Extension Pool WEP 1 QAQC (ST-30)

Parameter	Sample date		5/12/2024					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters								
Turbidity	NTU	0.1	0.1	0.1	9.4	9.5	1.06	0.00
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	72.2	75.1	3.94	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	42	42	0.00	0.00
TDS	mg/L	10	10	10	125	105	17.39	0.00
TSS	mg/L	1	1	1	17	19	11.11	0.00
Major Ions								
Chloride	mg/L	1	5.5	1	4	3.3	19.18	**138.46**
Cyanide	mg/L	0.0005	0.0005	0.0005	0.00381	0.00404	5.86	0.00
Cyanide (free)	mg/L	0.002	0.002	0.002	0.0023	0.0021	9.09	0.00
Cyanide (WAD)	mg/L	0.0005	0.0005	0.0005	0.0018	0.0018	0.00	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	44	44	0.00	0.00
Nutrients								
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.079	0.088	10.78	0.00
Nitrate	mg N/L	0.1	0.1	0.1	3.15	3.11	1.28	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.013	**26.09**	0.00
Total Metals								
Aluminum	mg/L	0.003	0.003	0.003	0.385	0.306	22.87	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.103	0.108	4.74	0.00
Barium	mg/L	0.001	0.001	0.001	0.0108	0.0107	0.93	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000022	0.000023	4.44	0.00
Chromium	mg/L	0.001	0.001	0.001	0.0071	0.0059	18.46	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00393	0.00406	3.25	0.00
Iron	mg/L	0.01	0.01	0.01	0.879	0.752	15.57	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0036	0.00376	4.35	0.00
Manganese	mg/L	0.001	0.001	0.001	0.14	0.146	4.20	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0076	0.0078	2.60	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0206	0.0209	1.45	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.00018	0.00018	0.00	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*							3%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-19 Meadowbank 2024 West Extension Pool WEP 2 QAQC (ST-31)

Parameter	Sample date		5/12/2024						9/1/2024						
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters															
Turbidity	NTU	0.1	0.1	0.1	8.5	12	34.15	0.00	0.1	0.1	0.1	0.8	0.8	0.00	0.00
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	53.1	57	7.08	-	3.54	0.5	-	141	137	2.88	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	31	32	3.17	0.00	1	1	1	97	98	1.03	0.00
TDS	mg/L	10	10	10	85	85	0.00	0.00	10	10	10	200	225	11.76	0.00
TSS	mg/L	1	1	1	19	18	5.41	0.00	1	1	1	3	5	**50.00**	0.00
Major Ions															
Chloride	mg/L	1	1	1	15	3.2	*129.67*	0.00	1	1	1	2.1	1.7	**21.05**	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.00117	0.00099	16.67	0.00	0.0005	0.0005	0.0005	0.0012	0.00135	11.76	0.00
Cyanide (free)	mg/L	0.002	0.002	0.002	0.002	0.002	0.00	0.00	0.002	0.002	0.002	0.002	0.0022	9.52	0.00
Cyanide (WAD)	mg/L	0.0005	0.0005	0.0005	0.00052	0.00052	0.00	0.00	0.0005	0.0005	0.0005	0.0016	0.0015	6.45	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.1	0.21	0.2	4.88	0.00
Sulfate	mg/L	0.5	0.5	0.5	34	39	13.70	0.00	0.5	0.5	0.5	54	54	0.00	0.00
Nutrients															
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.055	0.08	**37.04**	0.00	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	1.46	1.46	0.00	0.00	0.1	0.1	0.1	1.52	1.52	0.00	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.011	0.012	8.70	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals															
Aluminum	mg/L	0.003[1] / 0.0005	0.003	0.003	0.425	0.365	15.19	0.00	0.0288	0.00055	0.0005	0.0213	0.0739	110.50	9.52
Arsenic	mg/L	0.0001[1] / 0.00002	0.0001	0.0001	0.0163	0.0171	4.79	0.00	0.00005	0.00002	0.00002	0.00167	0.00189	12.36	0.00
Barium	mg/L	0.001[1] / 0.00002	0.001	0.001	0.0101	0.0075	*29.55*	0.00	0.000491	0.000027	0.00005	0.016	0.0157	1.89	**59.74**
Cadmium	mg/L	0.00001[1] / 0.000005	0.00001	0.00001	0.000012	0.000012	0.00	0.00	0.000005	0.000005	0.000005	0.000005	0.0000059	16.51	0.00
Chromium	mg/L	0.001[1] / 0.0001	0.001	0.001	0.0086	0.0072	17.72	0.00	0.0001	0.0001	0.0001	0.00025	0.00087	**110.71**	0.00
Copper	mg/L	0.0005[1] / 0.00005	0.0005	0.0005	0.00209	0.00198	5.41	0.00	0.00261	0.00005	0.00005	0.00139	0.00223	46.41	0.00
Iron	mg/L	0.01[1] / 0.001	0.01	0.01	0.892	0.702	23.84	0.00	0.0057	0.001	0.001	0.0988	0.196	65.94	0.00
Lead	mg/L	0.0002[1] / 0.000005	0.0002	0.0002	0.0014	0.00133	5.13	0.00	0.0000577	0.000005	0.000005	0.0000413	0.000165	*119.92*	0.00
Manganese	mg/L	0.001[1] / 0.00005	0.001	0.001	0.0608	0.0581	4.54	0.00	0.000812	0.00005	0.00005	0.0253	0.0271	6.87	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001[1] / 0.00005	0.001	0.001	0.0066	0.0072	8.70	0.00	0.000428	0.00005	0.00005	0.00369	0.00355	3.87	0.00
Nickel	mg/L	0.001[1] / 0.00002	0.001	0.001	0.0084	0.0082	2.41	0.00	0.000487	0.00002	0.00002	0.00209	0.00262	22.51	0.00
Selenium	mg/L	0.0001[1] / 0.00004	0.0001	0.0001	0.00012	0.0001	18.18	0.00	0.00004	0.00004	0.00004	0.000189	0.00015	**23.01**	0.00
Silver	mg/L	0.00002[1] / 0.000005	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.000005	0.000005	0.000005	0.000005	0.0000099	**65.77**	0.00
Thallium	mg/L	0.00001[1] / 0.000002	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.000002	0.000002	0.000002	0.0000028	0.0000038	**30.30**	0.00
Zinc	mg/L	0.005[1] / 0.0001	0.005	0.005	0.005	0.005	0.00	0.00	0.00352	0.0001	0.0001	0.00365	0.00689	61.48	0.00
% Exceedance*							7%	0%						13%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.
[1] Different MDL used for this parameter.

Table 1-20 Meadowbank 2024 Saddle Dam 3 QAQC (ST-32)

Parameter	Sample date		5/27/2024						6/17/2024						
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters															
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	68.1	66.2	2.83	-	0.5	0.5	-	121	122	0.82	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	36	45	22.22	0.00	1	1	1	44	46	4.44	0.00
TDS	mg/L	10	10	10	105	100	4.88	0.00	10	10	10	235	225	4.35	0.00
TSS	mg/L	1	1	1	49	54	9.71	0.00	1	1	1	14	12	15.38	0.00
Major Ions															
Chloride	mg/L	1	1	1	1	1	0.00	0.00	1	1	1	2.4	2.5	4.08	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.00988	0.0104	5.13	0.00	0.0005	0.0005	0.0005	0.00678	0.00725	6.70	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.1	0.11	0.11	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	44	44	0.00	0.00	0.5	0.61	0.5	100	100	0.00	19.82
Nutrients															
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.06	0.06	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.29	0.28	3.51	0.00	0.1	0.1	0.1	1.4	1.38	1.44	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.016	0.026	**47.62**	0.00
Total Metals															
Aluminum	mg/L	0.003	0.003	0.003	1.33	1.37	2.96	0.00	0.003	0.003	0.003	0.181	0.139	26.25	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0191	0.0209	9.00	0.00	0.0001	0.0001	0.0001	0.00916	0.00906	1.10	0.00
Barium	mg/L	0.001	0.001	0.001	0.0155	0.0161	3.80	0.00	0.001	0.001	0.001	0.0185	0.0188	1.61	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000053	0.000042	**23.16**	0.00	0.00001	0.00001	0.00001	0.000033	0.000035	5.88	0.00
Chromium	mg/L	0.001	0.001	0.001	0.0211	0.0222	5.08	0.00	0.001	0.001	0.001	0.003	0.0025	18.18	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00764	0.00791	3.47	0.00	0.0005	0.0005	0.0005	0.0033	0.00325	1.53	0.00
Iron	mg/L	0.01	0.01	0.01	2.97	2.89	2.73	0.00	0.01	0.01	0.01	0.535	0.458	15.51	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.00862	0.00853	1.05	0.00	0.0002	0.0002	0.0002	0.00339	0.00338	0.30	0.00
Manganese	mg/L	0.001	0.001	0.001	0.0958	0.0973	1.55	0.00	0.001	0.001	0.001	0.0767	0.0762	0.65	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0021	0.0021	0.00	0.00	0.001	0.001	0.001	0.0038	0.0038	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0187	0.0201	7.22	0.00	0.001	0.001	0.001	0.0191	0.019	0.52	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0002	0.00018	10.53	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.000029	0.000027	7.14	0.00	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.000025	0.000025	0.00	0.00	0.00001	0.00001	0.00001	0.000015	0.000015	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.008	0.0071	11.92	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*							4%	0%						4%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-21 Meadowbank 2024 Phaser Pit Lake QAQC (ST-41 Lake)

Parameter	Sample date		9/10/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	97.8	102	4.20	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	58	54	7.14	0.00
Carbonate, as $CaCO_3$	mg/L	1	1	1	-	1	1	0.00	-
Bicarbonate, as $CaCO_3$	mg/L	1	1	1	-	57	54	5.41	-
TDS	mg/L	10	10	10	10	190	185	2.67	0.00
TSS	mg/L	1	1	1	1	1	1	0.00	0.00
Total organic carbon	mg/L	0.4	0.4	0.4	0.4	1.8	1.8	0.00	0.00
Dissolved organic carbon	mg/L	0.4	0.4	0.4	0.4	1.8	1.8	0.00	0.00
Major Ions									
Chloride	mg/L	1	1	1	1	3.7	3.8	2.67	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Cyanide (free)	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.00	0.00
Silica	mg/L	0.05	0.05	0.05	0.05	1.9	1.9	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	45	46	2.20	0.00
Nutrients									
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.6	0.59	1.68	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Kjeldahl nitrogen	mg N/L	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Orthophosphate	mg P/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals									
Aluminum	mg/L	0.0005	0.0005	0.00351	0.0005	0.0284	0.0312	9.40	**150.12**
Antimony	mg/L	0.00002	0.00002	0.00002	0.00002	0.000728	0.000735	0.96	0.00
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00002	0.0015	0.00149	0.67	0.00
Barium	mg/L	0.00002	0.000046	0.000102	0.00002	0.016	0.0157	1.89	**134.43**
Beryllium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Boron	mg/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000067	**29.06**	0.00
Calcium (total)	mg/L	0.01	0.05	0.197	-	30.3	31.5	3.88	-
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Copper	mg/L	0.00005	0.00005	0.000138	0.00005	0.0023	0.00234	1.72	**93.62**
Iron	mg/L	0.001	0.001	0.0011	0.001	0.0215	0.026	18.95	9.52
Lead	mg/L	0.000005	0.000005	0.0000393	0.000005	0.000112	0.000174	43.36	**154.85**
Lithium	mg/L	0.0005	0.0005	0.0005	0.0005	0.00155	0.00157	1.28	0.00
Magnesium (total)	mg/L	0.01	0.05	0.05	-	5.36	5.64	5.09	-
Manganese	mg/L	0.00005	0.00005	0.000113	0.00005	0.0013	0.00143	9.52	**77.30**
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.000109	0.00005	0.0116	0.0126	8.26	**74.21**
Nickel	mg/L	0.00002	0.00002	0.000056	0.00002	0.00109	0.00115	5.36	**94.74**
Potassium (total)	mg/L	0.01	0.05	0.05	-	1.8	1.76	2.25	-
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.000183	0.000184	0.54	0.00
Sodium (total)	mg/L	0.01	0.05	0.338	-	1.42	1.33	6.55	-
Strontium	mg/L	0.00005	0.00005	0.000276	0.00005	0.157	0.159	1.27	**138.65**
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.0000065	0.0000078	18.18	0.00
Tin	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Titanium	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Uranium	mg/L	0.000002	0.000002	0.000002	0.000002	0.00436	0.0044	0.91	0.00
Vanadium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Zinc	mg/L	0.0001	0.00031	0.00117	0.0001	0.00052	0.00156	*100.00*	*168.50*
Dissolved Metals									
Aluminum	mg/L	0.0005	0.00053	0.0005	0.0005	0.0135	0.0317	80.53	0.00
Antimony	mg/L	0.00002	0.00002	0.00002	0.00002	0.000719	0.000724	0.69	0.00
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00002	0.00166	0.00167	0.60	0.00
Barium	mg/L	0.00002	0.000124	0.000064	0.00002	0.0158	0.0153	3.22	**104.76**
Beryllium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000011	0.00001	9.52	0.00
Boron	mg/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.0000079	0.0000069	13.51	0.00
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Copper	mg/L	0.00005	0.00005	0.00005	0.00005	0.00277	0.00276	0.36	0.00
Iron	mg/L	0.001	0.001	0.001	0.001	0.0057	0.0043	**28.00**	0.00
Lead	mg/L	0.000005	0.000005	0.000005	0.000005	0.0000251	0.000071	*95.53*	0.00
Lithium	mg/L	0.0005	0.0005	0.0005	0.0005	0.0015	0.00157	4.56	0.00
Manganese	mg/L	0.00005	0.00005	0.00005	0.00005	0.019	0.0192	1.05	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.00005	0.0113	0.0117	3.48	0.00
Nickel	mg/L	0.00002	0.00002	0.00002	0.00002	0.00131	0.00142	8.06	0.00
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.00021	0.000212	0.95	0.00
Strontium	mg/L	0.00005	0.000052	0.00005	0.00005	0.159	0.16	0.63	0.00
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.0000052	0.0000062	17.54	0.00
Tin	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Titanium	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00067	**29.06**	0.00
Uranium	mg/L	0.000002	0.000002	0.000002	0.000002	0.00506	0.00511	0.98	0.00
Vanadium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0004	**66.67**	0.00
Zinc	mg/L	0.0001	0.00015	0.0001	0.0001	0.00121	0.00189	43.87	0.00
% Exceedance*								4%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-22 Meadowbank 2024 BB Phaser Pit Lake QAQC (ST-42 Lake)

Parameter	Sample date		9/10/2024							10/20/2024	
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Original
Conventional Parameters											
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	77.9	71.7	8.29	-	0.71	89.2
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	42	40	4.88	0.00	1	45
Carbonate, as $CaCO_3$	mg/L	1	1	1	-	1	1	0.00	-	1	1
Bicarbonate, as $CaCO_3$	mg/L	1	1	1	-	41	40	2.47	-	1	45
TDS	mg/L	10	10	10	10	100	115	13.95	0.00	10	85
TSS	mg/L	1	1	1	1	7	2	**111.11**	0.00	1	1
Total organic carbon	mg/L	0.4	0.4	0.4	0.4	2.7	2.7	0.00	0.00	0.4	3.8
Dissolved organic carbon	mg/L	0.4	0.4	0.4	0.4	2.7	2.7	0.00	0.00	0.4	3.6
Major Ions											
Chloride	mg/L	1	1	1	1	2.3	2.3	0.00	0.00	1	2.4
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.00054	0.00074	**31.25**	0.00	0.0005	0.0005
Cyanide (free)	mg/L	0.002	0.002	0.002	0.002	0.0022	0.0024	8.70	0.00	0.002	0.002
Silica	mg/L	0.05	0.05	0.05	0.05	2.4	2.5	4.08	0.00	0.05	3.2
Sulfate	mg/L	0.5	0.5	0.5	0.5	37	37	0.00	0.00	0.5	45
Nutrients											
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.6	0.6	0.00	0.00	0.1	0.62
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01
Total Kjeldahl nitrogen	mg N/L	0.1	0.1	0.1	0.1	0.1	0.12	18.18	0.00	0.1	0.11
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.0035	0.001	**111.11**	0.00	0.001	0.001
Orthophosphate	mg P/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01
Total Metals											
Aluminum	mg/L	0.0005	0.0005	0.00581	0.0005	0.0358	0.0269	**28.39**	*168.30*	0.0185	0.0387
Antimony	mg/L	0.00002	0.00002	0.00002	0.00002	0.000546	0.000486	11.63	0.00	0.000035	0.000529
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00002	0.00154	0.00143	7.41	0.00	0.00002	0.00132
Barium	mg/L	0.00002	0.000069	0.000138	0.00005	0.0135	0.0112	18.62	**93.62**	0.00025	0.0142
Beryllium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001
Boron	mg/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.0000107	0.00001	6.76	0.00	0.0000226	0.0000181
Calcium (total)	mg/L	0.01	0.051	0.157	-	23.8	22	7.86	-	0.286	27.1
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00011	0.0001	9.52	0.00	0.00011	0.00015
Copper	mg/L	0.00005	0.00005	0.00005	0.00005	0.0031	0.00277	11.24	0.00	0.148	0.00383
Iron	mg/L	0.001	0.001	0.002	0.001	0.0568	0.0297	**62.66**	**66.67**	0.0146	0.0659
Lead	mg/L	0.000005	0.000005	0.0000176	0.000005	0.000113	0.000112	0.89	**111.50**	0.000742	0.0001
Lithium	mg/L	0.0005	0.0005	0.0005	0.0005	0.00151	0.00125	18.84	0.00	0.0005	0.00156
Magnesium (total)	mg/L	0.01	0.05	0.05	-	4.48	4.08	9.35	-	0.05	5.21
Manganese	mg/L	0.00005	0.00005	0.00005	0.00005	0.00275	0.00242	12.77	0.00	0.000376	0.00788
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001
Molybdenum	mg/L	0.00005	0.00005	0.000095	0.00005	0.00531	0.00481	9.88	**62.07**	0.000109	0.00492
Nickel	mg/L	0.00002	0.00002	0.000061	0.00002	0.00235	0.00216	8.43	**101.23**	0.00164	0.0034
Potassium (total)	mg/L	0.01	0.05	0.05	-	1.48	1.32	11.43	-	0.05	1.58
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.000111	0.000097	13.46	0.00	0.00004	0.000123
Sodium (total)	mg/L	0.01	0.05	0.12	-	1.26	1.13	10.88	-	0.151	1.5
Strontium	mg/L	0.00005	0.00005	0.000217	0.00005	0.118	0.105	11.66	**125.09**	0.000331	0.125
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.0000073	0.000007	4.20	0.00	0.000002	0.0000086
Tin	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.00256	0.0002
Titanium	mg/L	0.0005	0.0005	0.0005	0.0005	0.00069	0.0002	**110.11**	0.00	0.00053	0.00068
Uranium	mg/L	0.000002	0.000002	0.0000047	0.0000021	0.00361	0.00353	2.24	**76.47**	0.0000022	0.00382
Vanadium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002
Zinc	mg/L	0.0001	0.0001	0.00122	0.0001	0.00067	0.001	**39.52**	*169.70*	0.121	0.00102
Dissolved Metals											
Aluminum	mg/L	0.0005	0.00119	0.00125	0.0005	0.0131	0.0182	32.59	**85.71**	0.00487	0.0186
Antimony	mg/L	0.00002	0.00002	0.00002	0.00002	0.000538	0.000527	2.07	0.00	0.00002	0.000547
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00002	0.00155	0.00162	4.42	0.00	0.00002	0.00214
Barium	mg/L	0.00002	0.000109	0.0001	0.00002	0.0125	0.0119	4.92	**133.33**	0.000309	0.0132
Beryllium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.000016
Boron	mg/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.0000096	0.0000097	1.04	0.00	0.0000055	0.0000225
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.00011	0.00013
Copper	mg/L	0.00005	0.000181	0.00005	0.00005	0.00367	0.00448	19.88	0.00	0.000097	0.00537
Iron	mg/L	0.001	0.001	0.001	0.001	0.0048	0.0096	**66.67**	0.00	0.0084	0.0226
Lead	mg/L	0.000005	0.0000056	0.000005	0.000005	0.0000151	0.0000442	**98.15**	0.00	0.00003	0.0000865
Lithium	mg/L	0.0005	0.0005	0.0005	0.0005	0.00118	0.0012	1.68	0.00	0.0005	0.00151
Manganese	mg/L	0.00005	0.000092	0.000057	0.00005	0.00199	0.00238	17.85	13.08	0.000569	0.0113
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.00005	0.00514	0.00508	1.17	0.00	0.000092	0.00517
Nickel	mg/L	0.00002	0.000122	0.00002	0.00002	0.0024	0.00257	6.84	0.00	0.000067	0.00447
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.000129	0.000139	7.46	0.00	0.00004	0.00018
Strontium	mg/L	0.00005	0.000073	0.000076	0.00005	0.114	0.11	3.57	**41.27**	0.000746	0.127
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.0000068	0.0000067	1.48	0.00	0.000002	0.0000053
Tin	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002
Titanium	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005	0.0005
Uranium	mg/L	0.000002	0.000002	0.0000049	0.000002	0.00385	0.00377	2.10	**84.06**	0.0000054	0.00392
Vanadium	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002
Zinc	mg/L	0.0001	0.00052	0.00016	0.0001	0.00084	0.00355	*123.46*	**46.15**	0.0006	0.00317
% Exceedance*								1%	0%		

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-23 Meadowbank 2024 Phaser Attenuation Pond QAQC (ST-43)

Parameter	Sample date		9/10/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
Hardness, as $CaCO_3$	mg/L	0.5	0.5	2.28	-	88.5	78.7	11.72	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	45	46	2.20	0.00
TDS	mg/L	10	10	10	10	120	125	4.08	0.00
TSS	mg/L	1	1	1	1	2	2	0.00	0.00
Major Ions									
Chloride	mg/L	1	1	1	1	3.9	4	2.53	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.11	0.12	8.70	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	47	46	2.15	0.00
Nutrients									
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals									
Aluminum	mg/L	0.003[1] / 0.0005	0.00102	0.012	0.0005	0.0267	0.0358	*29.12*	*184.00*
Arsenic	mg/L	0.00002	0.00002	0.000062	0.00002	0.000637	0.000615	3.51	**102.44**
Barium	mg/L	0.00002	0.000111	0.000445	0.00005	0.0141	0.0115	20.31	*159.60*
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.0000125	0.000014	11.32	0.00
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00012	18.18	0.00
Copper	mg/L	0.0001[1] / 0.00005	0.00005	0.000088	0.00005	0.00276	0.00246	11.49	**55.07**
Iron	mg/L	0.005[1] / 0.001	0.001	0.005	0.001	0.0965	0.0941	2.52	**133.33**
Lead	mg/L	0.00002[1] / 0.000005	0.000005	0.0000373	0.000005	0.0000986	0.000114	14.49	**152.72**
Manganese	mg/L	0.0001[1] / 0.00005	0.00005	0.000241	0.00005	0.00862	0.00853	1.05	**131.27**
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.000147	0.00005	0.00167	0.00166	0.60	**98.48**
Nickel	mg/L	0.0001[1] / 0.00002	0.00002	0.000141	0.00002	0.00219	0.00205	6.60	**150.31**
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.000072	0.000079	9.27	0.00
Silver	mg/L	0.00001[1] / 0.000005	0.000005	0.000005	0.000005	0.0000055	0.00001	**58.06**	0.00
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.0000077	0.000007	9.52	0.00
Zinc	mg/L	0.001[1] / 0.0001	0.0001	0.0048	0.0001	0.00084	0.0016	**62.30**	*191.84*
% Exceedance*								4%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.
[1] Different MDL used for this parameter.

Table 1-24 Meadowbank 2024 KM 87 Water Quality Monitoring (ST-44)

Parameter	Sample date		5/26/2024							6/16/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																
TSS	mg/L	1	1	1	1	10	11	9.52	0.00	1	1	1	3	3	0.00	0.00
General Organics																
Total oil and grease	mg/L	0.5	0.5	0.5	0.5	0.8	0.9	11.76	0.00	0.5	0.5	0.5	0.5	0.5	0.00	0.00
Volatile Organics																
Benzene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Ethylbenzene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Toluene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Xylenes	mg/L	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.00	0.00	0.0004	0.0004	0.0004	0.0004	0.0004	0.00	0.00
% Exceedance*								0%	0%						0%	0%

Parameter	Sample date		9/2/2024						9/9/2024		10/6/2024					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Original	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																
TSS	mg/L	1	1	1	26	22	16.67	0.00	1	3	1	1	5	6	18.18	0.00
General Organics																
Total oil and grease	mg/L	0.5	0.5	0.5	0.6	0.9	**40.00**	0.00	0.5	0.5	0.5	0.5	0.5	0.5	0.00	0.00
Volatile Organics																
Benzene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Ethylbenzene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Toluene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Xylenes	mg/L	0.0004	0.0004	0.0004	0.0004	0.0004	0.00	0.00	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.00	0.00
% Exceedance*							0%	0%							0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-25 Meadowbank 2024 East Dike Seepage QAQC (ST-S-1)

Parameter	Sample date		3/4/2024						9/1/2024						
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters															
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	34.5	34.1	1.17	-	2.1	0.5	-	52.6	51.9	1.34	-
Total alkalinity, as $CaCO_3$	mg/L	1	1.1	1	32	30	6.45	9.52	1	1	1	33	33	0.00	0.00
TDS	mg/L	10	10	10	95	85	11.11	0.00	25	10	10	90	65	**32.26**	0.00
TSS	mg/L	1	1	1	8	7	13.33	0.00	1	1	1	1	1	0.00	0.00
Major Ions															
Chloride	mg/L	1	1	1	1	1.1	9.52	0.00	1	1	1	1.2	1	18.18	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.11	0.1	9.52	0.00	0.1	0.1	0.1	0.11	0.11	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	7	7.9	12.08	0.00	0.5	0.5	0.5	24	24	0.00	0.00
Nutrients															
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.1	0.41	0.42	2.41	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals															
Aluminum	mg/L	0.003[1] / 0.0005	0.0112	0.003	0.088	0.082	7.06	**115.49**	0.0215	0.0005	0.0005	0.0397	0.03	27.83	0.00
Arsenic	mg/L	0.0001[1] / 0.00002	0.0001	0.0001	0.00102	0.00102	0.00	0.00	0.00002	0.00002	0.00002	0.00208	0.00207	0.48	0.00
Barium	mg/L	0.001[1] / 0.00002	0.001	0.001	0.0079	0.0081	2.50	0.00	0.00043	0.000058	0.00005	0.0111	0.0109	1.82	14.81
Cadmium	mg/L	0.00001[1] / 0.000005	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.000005	0.000005	0.000005	0.000005	0.000005	0.00	0.00
Chromium	mg/L	0.001[1] / 0.0001	0.001	0.001	0.001	0.001	0.00	0.00	0.0001	0.0001	0.0001	0.00035	0.00018	**64.15**	0.00
Copper	mg/L	0.0005[1] / 0.00005	0.0005	0.0005	0.00289	0.00307	6.04	0.00	0.00105	0.00005	0.00005	0.00206	0.00183	11.83	0.00
Iron	mg/L	0.01[1]/ 0.001	0.01	0.01	0.122	0.161	27.56	0.00	0.0065	0.001	0.001	0.0682	0.0424	46.65	0.00
Lead	mg/L	0.0002[1] / 0.000005	0.0002	0.0002	0.00035	0.00032	8.96	0.00	0.0000691	0.000005	0.000005	0.000174	0.0000461	*116.22*	0.00
Manganese	mg/L	0.001[1] / 0.00005	0.001	0.001	0.0032	0.0035	8.96	0.00	0.000615	0.00005	0.00005	0.00674	0.00591	13.12	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001[1] / 0.00005	0.001	0.001	0.001	0.001	0.00	0.00	0.000063	0.00005	0.00005	0.000845	0.000795	6.10	0.00
Nickel	mg/L	0.001[1] / 0.00002	0.001	0.001	0.001	0.001	0.00	0.00	0.000444	0.00002	0.00002	0.0019	0.00176	7.65	0.00
Selenium	mg/L	0.0001[1] / 0.00004	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.00004	0.00004	0.00004	0.000063	0.000063	0.00	0.00
Silver	mg/L	0.00002[1] / 0.000005	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.000005	0.000005	0.000005	0.000005	0.000005	0.00	0.00
Thallium	mg/L	0.00001[1] / 0.000002	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.000002	0.000002	0.000002	0.0000033	0.0000038	14.08	0.00
Zinc	mg/L	0.005[1] / 0.0001	0.005	0.005	0.0066	0.0205	**102.58**	0.00	0.0111	0.0001	0.0001	0.00253	0.00194	26.40	0.00
% Exceedance*							4%	0%						11%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.
[1] Different MDL used for this parameter.

Table 1-26 Meadowbank 2024 Saddle Dam 1 QAQC (ST-S-2)

Parameter	Sample date		7/21/2024						9/29/2024		10/20/2024	
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Original	Trip Blank	Original
Conventional Parameters												
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	251	252	0.40	-	0.5	589	0.5	598
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	69	68	1.46	0.00	1.1	79	5.5	100
TDS	mg/L	10	10	10	410	420	2.41	0.00	10	1070	10	965
TSS	mg/L	1	1	1	11	8	*31.58*	0.00	1	270	1	2
Major Ions												
Chloride	mg/L	1	1	1	3.6	2.9	**21.54**	0.00	1	13	1	12
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0102	0.00966	5.44	0.00	0.0005	0.0153	0.0005	0.00627
Cyanide (free)	mg/L	0.002	0.0022	0.002	0.003	0.0027	10.53	9.52	0.002	0.002	0.002	0.0023
Cyanide (WAD)	mg/L	0.0005	0.0005	0.0005	0.002	0.0022	9.52	0.00	0.0005	0.0032	0.0005	0.0024
Fluoride	mg/L	0.1	0.1	0.1	0.19	0.18	5.41	0.00	0.1	0.23	0.1	0.21
Sulfate	mg/L	0.5	0.6	0.57	190	190	0.00	5.13	0.5	580	0.5	510
Nutrients												
Ammonia Nitrogen	mg N/L	0.05	0.41	0.05	0.05	0.05	0.00	**156.52**	0.05	0.62	0.05	0.12
Nitrate	mg N/L	0.1	0.1	0.1	12.9	12.8	0.78	0.00	0.1	15.1	0.1	14.7
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.057	0.01	0.025
Total Metals												
Aluminum	mg/L	0.003	0.003	0.003	0.19	0.0862	75.16	0.00	0.003	4.69	0.003	0.0246
Arsenic	mg/L	0.0001	0.0001	0.0001	0.017	0.0145	15.87	0.00	0.0001	0.0815	0.0001	0.0236
Barium	mg/L	0.001	0.001	0.001	0.0226	0.0217	4.06	0.00	0.001	0.0418	0.001	0.0287
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000023	0.000023	0.00	0.00	0.00001	0.00017	0.00001	0.000102
Chromium	mg/L	0.001	0.001	0.001	0.004	0.0017	**80.70**	0.00	0.001	0.0637	0.001	0.001
Copper	mg/L	0.0005	0.0005	0.0005	0.00235	0.00185	**23.81**	0.00	0.0005	0.0172	0.0005	0.00268
Iron	mg/L	0.01	0.01	0.01	0.532	0.221	82.60	0.00	0.01	13.1	0.01	0.078
Lead	mg/L	0.0002	0.0002	0.0002	0.00159	0.00078	**68.35**	0.00	0.0002	0.0235	0.0002	0.0002
Manganese	mg/L	0.001	0.001	0.001	0.0286	0.0243	16.26	0.00	0.001	0.803	0.001	0.495
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001
Molybdenum	mg/L	0.001	0.001	0.001	0.011	0.0108	1.83	0.00	0.001	0.023	0.001	0.019
Nickel	mg/L	0.001	0.001	0.001	0.0145	0.0128	12.45	0.00	0.001	0.129	0.001	0.0878
Selenium	mg/L	0.0001	0.0001	0.0001	0.00125	0.00124	0.80	0.00	0.0001	0.00224	0.0001	0.00216
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.000171	0.00002	0.00002
Thallium	mg/L	0.00001	0.00001	0.00001	0.000011	0.00001	9.52	0.00	0.00001	0.000077	0.00001	0.000019
Zinc	mg/L	0.005	0.005	0.005	0.182	0.209	13.81	0.00	0.005	0.163	0.005	2.53
% Exceedance*							10%	0%				

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-27 Meadowbank 2024 Central Dike Seepage QAQC (ST-S-5)

Parameter	Sample date		3/31/2024						6/10/2024		10/13/2024					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Original	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	802	765	4.72	-	0.5	129	0.5	-	570	548	3.94	-
Total alkalinity, as $CaCO_3$	mg/L	1	1.5	1	180	190	5.41	**40.00**	1	50	1	1	130	130	0.00	0.00
TDS	mg/L	10	10	10	2240	2280	1.77	0.00	10	290	20	10	1350	1330	1.49	**66.67**
TSS	mg/L	1	1	1	7	8	13.33	0.00	1	13	1	1	3	4	**28.57**	0.00
Major Ions																
Chloride	mg/L	1	1	1	160	170	6.06	0.00	1	11	1	1	76	74	2.67	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0566	0.0521	8.28	0.00	0.0005	0.00737	0.0005	0.0005	0.0243	0.0238	2.08	0.00
Cyanide (free)	mg/L	0.002	0.002	0.002	0.027	0.027	0.00	0.00	0.002	0.0062	0.002	0.002	0.0088	0.0083	5.85	0.00
Cyanide (WAD)	mg/L	0.0005	0.0005	0.0005	0.035	0.033	5.88	0.00	0.0005	0.0056	0.0005	0.0005	0.013	0.013	0.00	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.47	0.47	0.00	0.00	0.1	0.11	0.1	0.1	0.38	0.39	2.60	0.00
Sulfate	mg/L	0.5	0.5	0.5	1400	1500	6.90	0.00	0.5	120	0.5	0.5	750	780	3.92	0.00
Nutrients																
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	21	21	0.00	0.00	0.05	1.4	0.05	0.05	10	10	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.32	0.1	0.1	2.42	2.39	1.25	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.015	0.01	0.01	0.113	0.112	0.89	0.00
Total Metals																
Aluminum	mg/L	0.003	0.003	0.003	0.006	0.006	0.00	0.00	0.003	0.282	0.003	0.003	0.0132	0.0128	3.08	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.111	0.103	7.48	0.00	0.0001	0.0181	0.0001	0.0001	0.0253	0.0247	2.40	0.00
Barium	mg/L	0.001	0.001	0.001	0.0196	0.0186	5.24	0.00	0.001	0.0104	0.001	0.001	0.0194	0.0188	3.14	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00002	0.00002	0.00	0.00	0.00001	0.000037	0.00001	0.00001	0.000095	0.000087	8.79	0.00
Chromium	mg/L	0.001	0.001	0.001	0.002	0.002	0.00	0.00	0.001	0.0035	0.001	0.001	0.001	0.001	0.00	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.001	0.001	0.00	0.00	0.0005	0.00269	0.0005	0.0005	0.0009	0.00082	9.30	0.00
Iron	mg/L	0.01	0.01	0.01	2.91	2.72	6.75	0.00	0.01	0.859	0.01	0.01	0.702	0.688	2.01	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0004	0.0004	0.00	0.00	0.0002	0.00501	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Manganese	mg/L	0.001	0.001	0.001	1.74	1.67	4.11	0.00	0.001	0.227	0.001	0.001	1.06	1	5.83	0.00
Mercury	mg/L	0.0001[1] / 0.00001	0.00001	0.00001	0.0001	0.0001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.0001	0.0001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0741	0.0683	8.15	0.00	0.001	0.0111	0.001	0.001	0.0412	0.0398	3.46	0.00
Nickel	mg/L	0.001	0.001	0.001	0.002	0.002	0.00	0.00	0.001	0.0113	0.001	0.001	0.0333	0.0312	6.51	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.00084	0.0008	4.88	0.00	0.0001	0.00022	0.0001	0.0001	0.00097	0.00089	8.60	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00004	0.00004	0.00	0.00	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00002	0.00002	0.00	0.00	0.00001	0.000011	0.00001	0.00001	0.000012	0.00001	18.18	0.00
Zinc	mg/L	0.005	0.005	0.005	0.01	0.01	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Dissolved Metals																
Aluminum	mg/L	0.003	0.003	0.003	0.006	0.006	0.00	0.00	0.003	0.0068	0.003	0.003	0.0048	0.005	4.08	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.107	0.108	0.93	0.00	0.0001	0.00607	0.0001	0.0001	0.014	0.0143	2.12	0.00
Barium	mg/L	0.001	0.001	0.001	0.0222	0.0219	1.36	0.00	0.001	0.0088	0.001	0.001	0.0211	0.0212	0.47	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00002	0.00002	0.00	0.00	0.00001	0.000021	0.00001	0.00001	0.000086	0.000089	3.43	0.00
Chromium	mg/L	0.001	0.001	0.001	0.002	0.002	0.00	0.00	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Copper	mg/L	0.0002	0.0002	0.0002	0.0004	0.0004	0.00	0.00	0.00072	0.00329	0.0002	0.0002	0.00151	0.00153	1.32	0.00
Iron	mg/L	0.005	0.005	0.005	2.75	2.7	1.83	0.00	0.005	0.005	0.005	0.005	0.0063	0.0083	**27.40**	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0004	0.0005	**22.22**	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Manganese	mg/L	0.001	0.001	0.001	2.08	2.05	1.45	0.00	0.001	0.224	0.001	0.001	1.18	1.16	1.71	0.00
Mercury	mg/L	0.0001[1] / 0.00001	0.00001	0.00001	0.0001	0.0001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.0001	0.0001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0878	0.0835	5.02	0.00	0.001	0.0116	0.001	0.001	0.0439	0.0429	2.30	0.00
Nickel	mg/L	0.001	0.001	0.001	0.002	0.002	0.00	0.00	0.001	0.0102	0.001	0.001	0.037	0.0376	1.61	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0013	0.00162	21.92	0.00	0.0001	0.00025	0.0001	0.0001	0.00109	0.00112	2.71	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.000308	0.000314	1.93	0.00	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00002	0.00002	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.000014	0.000012	15.38	0.00
Zinc	mg/L	0.005	0.005	0.005	0.01	0.01	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*							2%	0%							2%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.
[1] Different MDL used for this parameter.

Table 1-28 Meadowbank 2024 Assay Road Seepage QAQC (TPL-Assay)

Parameter	Sample date		7/21/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	44	42.8	2.76	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	29	28	3.51	0.00
Carbonate, as $CaCO_3$	mg/L	1	1	1	-	1	1	0.00	-
Bicarbonate, as $CaCO_3$	mg/L	1	1	1	-	29	28	3.51	-
TDS	mg/L	10	10	10	10	100	95	5.13	0.00
TSS	mg/L	1	1	1	1	1	1	0.00	0.00
Total organic carbon	mg/L	0.4	0.4	0.4	0.4	2.2	2.2	0.00	0.00
Dissolved organic carbon	mg/L	0.4	0.4	0.4	0.4	2	2	0.00	0.00
Colour	TCU	2	2	2	2	2	2	0.00	0.00
Major Ions									
Bromide	mg/L	1	1	1	1	1	1	0.00	0.00
Chloride	mg/L	1	1	1	1	6.1	6.1	0.00	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Cyanide (free)	mg/L	0.002	0.002	0.0022	0.002	0.0047	0.0045	4.35	9.52
Cyanide (WAD)	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.13	0.1	**26.09**	0.00
Silica	mg/L	0.05	0.05	0.05	0.05	0.69	0.69	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.63	0.57	15	15	0.00	10.00
Thiocyanate	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.00	0.00
Thiosulphates	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.00	0.00
Nutrients									
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Kjeldahl nitrogen	mg N/L	0.1	0.1	0.1	0.1	0.1	0.15	**40.00**	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Orthophosphate	mg P/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals									
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.003	0.0069	**78.79**	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.00085	0.00077	9.88	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0055	0.005	9.52	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Calcium (total)	mg/L	0.05	0.05	0.05	-	12.5	12.2	2.43	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00173	0.0006	**97.00**	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	0.011	0.04	**113.73**	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.00	0.00
Magnesium (total)	mg/L	0.05	0.05	0.05	-	3.1	2.97	4.28	-
Manganese	mg/L	0.001	0.001	0.001	0.001	0.0075	0.0067	11.27	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Potassium (total)	mg/L	0.05	0.05	0.05	-	1.53	1.47	4.00	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Sodium (total)	mg/L	0.05	0.05	0.05	-	1.76	1.66	5.85	-
Strontium	mg/L	0.001	0.001	0.001	0.001	0.0628	0.0596	5.23	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00025	0.00021	17.39	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Dissolved Metals									
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.0073	0.0032	**78.10**	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.00078	0.00084	7.41	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0054	0.0057	5.41	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Copper	mg/L	0.0002	0.0002	0.0002	0.0002	0.00065	0.00194	**99.61**	0.00
Iron	mg/L	0.005	0.005	0.005	0.005	0.0363	0.0123	**98.77**	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.00	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.0072	0.0084	15.38	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Strontium	mg/L	0.001	0.001	0.001	0.001	0.0641	0.0642	0.16	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00022	0.00025	12.77	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-29 Meadowbank 2024 Assay Road Seepage Trench QAQC (MILL-TRENCH)

Parameter	Sample date		6/10/2024			7/20/2024						
	Unit	MDL	Duplicate	Original	RPD (FD/N)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Major Ions												
Cyanide	mg/L	0.0005	0.0725	0.0704	2.94	0.0005	0.0005	0.0005	0.0368	0.0365	0.82	0.00
Cyanide (free)	mg/L	0.002	0.064	0.065	1.55	0.002	0.002	0.002	0.015	0.015	0.00	0.00
Total Metals												
Copper	mg/L	0.0005	0.0118	0.0121	2.51	0.0005	0.0005	0.0005	0.00176	0.00179	1.69	0.00
Iron	mg/L	0.01	0.478	0.515	7.45	0.01	0.01	0.01	4.63	5.39	15.17	0.00
% Exceedance*					0%						0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-30 Meadowbank 2024 Landfarm QAQC (ST-14b)

Parameter	Sample date		5/26/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
TSS	mg/L	1	1	1	1	9	8	11.76	0.00
Total Metals									
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.0574	0.0604	5.09	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.0019	0.00208	9.05	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.00057	0.00061	6.78	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0176	0.0189	7.12	0.00
Volatile Organics									
Benzene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Ethylbenzene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Toluene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Xylenes	mg/L	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.00	0.00
F2 (C10-C16)	mg/L	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00
F3 (C16-C34)	mg/L	0.2	0.2	0.2	0.2	0.22	0.2	9.52	0.00
F4 (C34-C50)	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.00	0.00
% Exceedance*								0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-31 Meadowbank 2024 Sewage Treatment Plan QAQC (STP-IN, STP-LJ-MIX, STP-SEP)

STP-IN Parameter	Sample date		6/3/2024				7/2/2024				10/8/2024			
	Unit	MDL	Trip Blank	Duplicate	Original	RPD (FD/N)	Trip Blank	Duplicate	Original	RPD (FD/N)	Field Blank	Lab Blank	Original	RPD (FB/LB)
Conventional Parameters														
TSS	mg/L	1	1	95	90	5.41	1	230	80	96.77	1	1	100	0.00
Nutrients														
Ammonia Nitrogen	mg N/L	0.05	0.05	72	71	1.40	0.05	81	81	0.00	0.05	0.05	62	0.00
Un-Ionized Ammonia, calculated	mg N/L	-	-	0.12	0.12	0.00	-	1.9	2	5.13	-	-	0.15	-
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.00	0.1	0.1	0.1	0.00	0.1	0.1	< 0.10	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.013	**26.09**	0.01	0.01	0.01	0.00	0.01	0.01	< 0.010	0.00
Total Kjeldahl nitrogen	mg N/L	0.1	0.1	96	91	5.35	0.1	100	97	3.05	0.73	0.1	95	**151.81**
Biochemical Oxygen Demand, 5 Day	mg/L	2	2	110	120	8.70	3	130	170	**26.67**	2	2	80	0.00
Chemical oxygen demand	mg/L	4	4	320	310	3.17	1.2	340	310	9.23	4	4	290	0.00
Total phosphorus	mg P/L	0.001	0.001	11	10	9.52	0.001	9.6	11	13.59	0.001	0.001	8.5	0.00
% Exceedance*						0%				0%				0%

STP-LJ-MIX Parameter	Sample date		3/4/2024			10/8/2024						
	Unit	MDL	Duplicate	Original	RPD (FD/N)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters												
TSS	mg/L	1	16	15	6.45	1	1	1	12	5	*82.35*	0.00
Nutrients												
Ammonia Nitrogen	mg N/L	0.05	17	18	5.71	0.05	0.05	0.05	16	16	0.00	0.00
Un-Ionized Ammonia, calculated	mg N/L	-	0.05	0.05	0.00	-	-	-	0.0031	0.0031	0.00	-
Nitrate	mg N/L	0.1	25.5	24.9	2.38	0.1	0.1	0.1	14	13.4	4.38	0.00
Nitrite	mg N/L	0.01	0.185	0.183	1.09	0.01	0.01	0.01	0.403	0.392	2.77	0.00
Total Kjeldahl nitrogen	mg N/L	0.1	18	17	5.71	0.25	0.28	0.1	23	23	0.00	**94.74**
Biochemical Oxygen Demand, 5 Day	mg P/L	2	6	9	**40.00**	2	2	2	12	15	**22.22**	0.00
Chemical oxygen demand	mg P/L	4	36	37	2.74	4	4	4	33	43	*26.32*	0.00
% Exceedance*					0%						0%	0%

STP-SEP Parameter	Sample date		3/4/2024			10/8/2024						12/2/2024			
	Unit	MDL	Duplicate	Original	RPD (FD/N)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Original	RPD (FB/LB)
Conventional Parameters															
TSS	mg/L	1	9	7	**25.00**	1	1	7	6	15.38	0.00	1	1	8	0.00
Nutrients															
Ammonia Nitrogen	mg N/L	0.05	52	52	0.00	0.05	0.05	40	40	0.00	0.00	0.05	0.05	72	0.00
Un-Ionized Ammonia, calculated	mg N/L	-	0.16	0.16	0.00	-	-	0.27	0.27	0.00	-	-	-	0.24	-
Nitrate	mg N/L	0.1	3.2	2.25	34.86	0.1	0.1	5.29	5.76	8.51	0.00	0.1	0.1	0.85	0.00
Nitrite	mg N/L	0.01	1.18	1.28	8.13	0.01	0.01	1.64	1.34	20.13	0.00	0.01	0.01	0.975	0.00
Total Kjeldahl nitrogen	mg N/L	0.1	52	52	0.00	0.41	0.1	57	59	3.45	**121.57**	0.1	0.1	76	0.00
Biochemical Oxygen Demand, 5 Day	mg/L	2	11	13	16.67	2	2	8	6	**28.57**	0.00	2	2	9	0.00
Chemical oxygen demand	mg/L	4	54	54	0.00	4	4	40	39	2.53	0.00	13	4	69	**105.88**
% Exceedance*					13%					13%	0%				0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-32 Meadowbank 2024 Bulk Fuel QAQC (ST-40.1, ST-40.2, ST-40.3)

ST-40.1 Parameter	Sample date		5/27/2024			9/11/2024		
	Unit	MDL	Duplicate	Original	RPD (FD/N)	Field Blank	Lab Blank	RPD (FD/N)
Conventional Parameters								
TSS	mg/L	1	7	10	**35.29**	1	1	0.00
Nutrients								
Total Ammonia (NH_3)	mg N/L	0.061	0.061	0.061	0.00	0.061	-	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.00	0.05	0.05	0.00
General Organics								
Total oil and grease	mg/L	0.5	0.5	0.5	0.00	0.5	0.5	0.00
Total Metals								
Arsenic	mg/L	0.0001	0.00046	0.00048	4.26	0.0001	0.0001	0.00
Copper	mg/L	0.0005	0.00573	0.00553	3.55	0.0005	0.0005	0.00
Lead	mg/L	0.0002	0.00036	0.00036	0.00	0.0002	0.0002	0.00
Nickel	mg/L	0.001	0.001	0.001	0.00	0.001	0.001	0.00
Volatile Organics								
Benzene	mg/L	0.0002	0.0002	0.0002	0.00	0.0002	0.0002	0.00
Ethylbenzene	mg/L	0.0002	0.0002	0.0002	0.00	0.0002	0.0002	0.00
Toluene	mg/L	0.0002	0.0002	0.0002	0.00	0.0002	0.0002	0.00
Xylenes	mg/L	0.0004	0.0004	0.0004	0.00	0.0004	0.0004	0.00
% Exceedance*					0%			0%

ST-40.2 Parameter	Sample date		9/11/2024					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters								
TSS	mg/L	1	1	1	3	2	**40.00**	0.00
Nutrients								
Total Ammonia (NH_3)	mg N/L	0.061	0.061	-	0.061	0.061	0.00	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00
General Organics								
Total oil and grease	mg/L	0.5	0.5	0.5	0.5	0.5	0.00	0.00
Total Metals								
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00064	0.00065	1.55	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00284	0.00293	3.12	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Volatile Organics								
Benzene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Ethylbenzene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Toluene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Xylenes	mg/L	0.0004	0.0004	0.0004	0.0004	0.0004	0.00	0.00
% Exceedance*							0%	0%

ST-40.3 Parameter	Sample date		5/27/2024			9/11/2024		
	Unit	MDL	Duplicate	Original	RPD (FD/N)	Field Blank	Lab Blank	RPD (FB/LB)
Conventional Parameters								
TSS	mg/L	1	10	7	**35.29**	1	1	0.00
Nutrients								
Total Ammonia (NH_3)	mg N/L	0.061	0.061	0.061	0.00	0.061	-	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.00	0.05	0.05	0.00
General Organics								
Total oil and grease	mg/L	0.5	0.5	0.5	0.00	0.5	0.5	0.00
Total Metals								
Arsenic	mg/L	0.0001	0.00104	0.00094	10.10	0.0001	0.0001	0.00
Copper	mg/L	0.0005	0.00205	0.0019	7.59	0.0005	0.0005	0.00
Lead	mg/L	0.0002	0.00074	0.00068	8.45	0.0002	0.0002	0.00
Nickel	mg/L	0.001	0.0013	0.0011	16.67	0.001	0.001	0.00
Volatile Organics								
Benzene	mg/L	0.0002	0.0002	0.0002	0.00	0.0002	0.0002	0.00
Ethylbenzene	mg/L	0.0002	0.0002	0.0002	0.00	0.0002	0.0002	0.00
Toluene	mg/L	0.0002	0.0002	0.0002	0.00	0.0002	0.0002	0.00
Xylenes	mg/L	0.0004	0.0004	0.0004	0.00	0.0004	0.0004	0.00
% Exceedance*					0%			0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.
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1.2 WHALE TAIL SITE

In 2024, 273 samples were collected (excluding Groundwater and CREMP monitoring programs), 62 duplicates, 62 field blanks, and 49 trip blanks, which represents 23% of duplicates, 23% of field blanks, and 18% of trip blanks which is higher than the QA/QC duplicate and trip blank program objective of 10%.

The following presents the percentage of duplicate and field samples collected from each of the monitoring programs:

- MDMER and EEM monitoring programs: 20 duplicate samples, 20 field blanks, and 17 trip blanks were collected from a total of 53 samples, representing 38% of duplicates, 38% of field blanks, and 32% of trip blanks;

- Surface water monitoring programs: 40 duplicate samples, 40 field blanks, and 30 trip blanks were collected from a total of 208 samples, representing 19% of duplicates, 19% of field blanks, and 14% of trip blanks;

- Sewage Treatment Plant (STP) monitoring program: 2 duplicate samples, 2 field blanks, and 2 trip blanks were collected from a total of 12 samples, representing 17% of duplicates, 17% of field blanks, and 17% of trip blanks.

- Groundwater Monitoring Program: 2 duplicates, 1 field blank and 1 trip blank were collected (refer to the 2024 Whale Tail Groundwater report – Appendix 36 of the 2024 Annual Report), which aligns with the frequency outlined in the current QAQC Management Plan (Appendix 44 of the 2024 Annual Report); and

- Core Receiving Environment Monitoring Program (CREMP): A combined total of 20 duplicates were collected between the Meadowbank Lakes, Baker Lake, and the Whale Tail Lakes. Travel blanks (TB), de-ionized (DI) blanks and Equipment Blanks were submitted for all sampling events (refer to Appendix 26 of the 2024 Annual Report for the 2024 CREMP Report), which aligns with the frequency outlined in the current QAQC Management Plan (Appendix 44 of the 2024 Annual Report).

Analytical precision is a measurement of the variability associated with duplicate analyses of the same sample in the laboratory. Duplicate results were assessed using the relative percent difference (RPD) between measurements. The equation used to calculate a RPD is:

RPD = (A-B)/ ((A+B)/2)*100; where: A = field sample; B = duplicate sample.

Large variations in RPD values are often observed between duplicate samples when the concentrations of analytes are low and approaching the detection limit. Consequently, a RPD of 20% for concentrations of field and duplicates samples that both exceed 10x the method detection limit (MDL) is considered notable. The analytical precision of one QAQC sampling event is characterized as:

- High, when less than 10% of the parameters have variations that are notable;

- Medium, when 10 to 30% of the parameters have variations that are notable;

- Low, when more than 30% of the parameters have variations that are notable.

Results of the QA/QC data are presented in Table 1-33 to Table 1-62 for the MDMER and EEM, Surface Water, STP, respectively. The following is a brief summary of the QA/QC results, per sampling program:

- MDMER and EEM (Table 1-33 to Table 1-39): All the duplicate samples collected were considered as having high analytical precision except for five (5) samples having a medium analytical precision of 11%, 15%, 22% (x2), and 26%.

- Surface Water (Table 1-40 to Table 1-61): All QAQC sampling events conducted within the surface water quality program are rated as having high analytical precision except for one (1) sample having a medium analytical precision of 15%.

- Sewage Treatment Plant (STP) (Table 1-62): All the duplicate samples collected were considered as having high analytical precision.

RPD values were also calculated for field blanks (FB) and lab blanks (LB) in 2024 as per the QA/QC Plan. All field blank samples are considered to have high analytical precision.

The QA/QC plan was followed, and samples were collected by qualified technicians. It is common to have some RPD exceedances as a result of the discrete differences in the original and field duplicates. Given the variability of these exceedances (occurring with different parameters, on different dates for different sampling programs) and the high number of successful samples, it is evident that field QA/QC standards during water sampling were maintained during sampling in 2024. Agnico Eagle technicians will continue to follow standard QA/QC procedures for surface water sampling that requires the use of sample bottles that are provided by an accredited laboratory, proper handling and storage of bottles to prevent cross-contamination between areas and, if appropriate, thoroughly rinsing the sample containers with sample water prior to sample collection.

Each equipment used for field measurement are calibrated prior each usage. Calibration datasheets are kept for future reference, if needed.

Table 1-33 Whale Tail 2024 MDMER QAQC (ST-MDMER-8)

Parameter	Sample date		7/8/2024							9/2/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																
TSS	mg/L	1	1	1	1	2	1	**66.67**	0.00	1	1	1	1	1	0.00	0.00
Major Ions																
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.00246	0.00252	2.41	0.00	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Nutrients																
Un-Ionized Ammonia, calculated	mg N/L	0.0001	-	-	-	0.0013	0.0017	26.67	-	-	-	-	0.0004	0.0004	0.00	-
Total Metals																
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.0193	0.0151	24.42	0.00	0.0001	0.0001	0.0001	0.0151	0.0123	20.44	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00069	0.00071	2.86	0.00	0.0005	0.0005	0.0005	0.0008	0.00129	**46.89**	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00032	**46.15**	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0119	0.0124	4.12	0.00	0.001	0.001	0.001	0.0093	0.009	3.28	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.0059	0.0059	0.00	0.00	0.005	0.005	0.005	0.0066	0.0066	0.00	0.00
Radionuclides																
Radium-226	Bq/l	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.006	0.008	**28.57**	0.00
% Exceedance*								22%	0%						11%	0%

Parameter	Sample date		9/16/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
TSS	mg/L	1	1	1	1	8	7	13.33	0.00
Major Ions									
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.0011	0.00122	10.34	0.00
Nutrients									
Un-Ionized Ammonia, calculated	mg N/L	0.0001	0.0004	0.0004	-	0.0007	0.0005	**33.33**	-
Total Metals									
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.176	0.171	2.88	0.00
Copper	mg/L	0.0005	0.00051	0.0005	0.0005	0.00107	0.00094	12.94	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0146	0.0146	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.0069	0.0077	10.96	0.00
Radionuclides									
Radium-226	Bq/l	0.005	0.005	0.005	0.005	0.009	0.011	20.00	0.00
% Exceedance*								0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-34 Whale Tail 2024 MDMER QAQC (ST-MDMER-11)

Parameter	Sample date		4/15/2024						5/6/2024		5/13/2024		10/1/2024					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Original	Trip Blank	Original	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																		
TSS	mg/L	1	1	1	1	1	0.00	0.00	1	1	1	2	1	1	3	4	**28.57**	0.00
Major Ions																		
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0128	0.0125	2.37	0.00	0.0005	0.0102	0.0005	0.00858	0.0005	0.0005	0.0131	0.0128	2.32	0.00
Nutrients																		
Un-Ionized Ammonia, calculated	mg N/L	0.0001	-	-	0.003	0.003	0.00	-	-	0.0034	-	0.0009	-	-	0.0052	0.0051	1.94	-
Total Metals																		
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00329	0.00386	15.94	0.00	0.0001	0.0023	0.0001	0.0044	0.0001	0.0001	0.0277	0.0297	6.97	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00134	0.00148	9.93	0.00	0.0005	0.00115	0.0005	0.00081	0.0005	0.0005	0.00119	0.00144	19.01	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00033	0.00045	**30.77**	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0048	0.0044	8.70	0.00	0.001	0.0079	0.001	0.0104	0.001	0.001	0.0238	0.026	8.84	0.00
Zinc	mg/L	0.005	0.005	0.005	0.0066	0.0089	**29.68**	0.00	0.005	0.0094	0.005	0.0078	0.005	0.005	0.005	0.005	0.00	0.00
Radionuclides																		
Radium-226	Bq/l	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.014	0.005	0.008	0.005	0.005	0.012	0.012	0.00	0.00
% Exceedance*							0%	0%									0%	0%

Parameter	Sample date		10/22/2024						11/11/2024			
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters												
TSS	mg/L	1	1	1	3	2	**40.00**	0.00	1	1	**40.00**	0.00
Major Ions												
Cyanide	mg/L	0.0005	0.0005	0.0005	0.00275	0.00269	2.21	0.00	0.0005	0.0005	8.71	0.00
Nutrients												
Un-Ionized Ammonia, calculated	mg N/L	0.0001	0.0004	-	0.0004	0.0004	0.00	-	-	-	13.33	-
Total Metals												
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0278	0.031	10.88	0.00	0.0001	0.0001	7.52	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00103	0.00088	15.71	0.00	0.0005	0.0005	4.83	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.019	0.0196	3.11	0.00	0.001	0.001	2.37	0.00
Zinc	mg/L	0.005	0.005	0.005	0.011	0.0061	**57.31**	0.00	0.005	0.005	**27.81**	0.00
Radionuclides												
Radium-226	Bq/l	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	**75.00**	0.00
% Exceedance*							0%	0%			0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-35 Whale Tail 2024 EEM QAQC Effluent Characterization (ST-MDMER-EEM-8)

Parameter	Sample date		7/8/2024							9/9/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	111	99.2	11.23	-	0.5	0.5	-	175	157	10.84	-
Total alkalinity, as $CaCO_3$	mg/L	1	2	2.6	1	47	43	8.89	**88.89**	4.2	4.4	1	46	47	2.15	**125.93**
Major Ions																
Chloride	mg/L	1	1	1	1	39	40	2.53	0.00	1	1	1	64	62	3.17	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	46	51	10.31	0.00	0.5	0.5	0.5	64	64	0.00	0.00
Nutrients																
Nitrate	mg N/L	0.1	0.1	0.1	0.1	2.78	2.74	1.45	0.00	0.1	0.1	0.1	3	3.04	1.32	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.0035	0.004	13.33	0.00
Total Metals																
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.0071	0.005	**34.71**	0.00	0.003	0.003	0.003	0.003	0.0042	**33.33**	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.0002	0.00104	0.00093	11.17	0.00	0.0002	0.0002	0.0002	0.00092	0.0008	13.95	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	0.345	0.266	25.86	0.00	0.01	0.01	0.01	0.247	0.232	6.26	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.115	0.103	11.01	0.00	0.001	0.001	0.001	0.0721	0.0639	12.06	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0067	0.0059	12.70	0.00	0.001	0.001	0.001	0.0079	0.0075	5.19	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00019	0.00018	5.41	0.00	0.0001	0.0001	0.0001	0.00024	0.00021	13.33	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00002	0.000018	10.53	0.00	0.00001	0.00001	0.00001	0.00002	0.000017	16.22	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00075	0.00067	11.27	0.00	0.0001	0.0001	0.0001	0.00168	0.00142	16.77	0.00
% Exceedance*								6%	0%						0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-36 Whale Tail 2024 EEM QAQC Effluent Characterization (ST-MDMER-EEM-11)

Parameter	Sample date		4/15/2024						10/7/2024						
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters															
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	99.7	104	4.22	-	0.5	0.5	-	202	196	3.02	-
Total alkalinity, as $CaCO_3$	mg/L	1	2.7	1	53	57	7.27	**91.89**	1	1	1	45	44	2.25	0.00
Major Ions															
Chloride	mg/L	1	1	1	33	33	0.00	0.00	1	1	1	74	73	1.36	0.00
Sulfate	mg/L	0.5	0.5	0.5	47	47	0.00	0.00	0.5	0.5	0.5	120	120	0.00	0.00
Nutrients															
Nitrate	mg N/L	0.1	0.1	0.1	1.44	1.45	0.69	0.00	0.1	0.1	0.1	6.14	6.16	0.33	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.0019	0.0027	**34.78**	0.00
Total Metals															
Aluminum	mg/L	0.003	0.003	0.003	0.009	0.0066	**30.77**	0.00	0.003	0.003	0.003	0.0119	0.012	0.84	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.000013	0.00001	**26.09**	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Cobalt	mg/L	0.0002	0.0002	0.0002	0.00082	0.00084	2.41	0.00	0.0002	0.0002	0.0002	0.00143	0.00142	0.70	0.00
Iron	mg/L	0.01	0.01	0.01	0.305	0.261	15.55	0.00	0.01	0.01	0.01	0.425	0.392	8.08	0.00
Manganese	mg/L	0.001	0.001	0.001	0.251	0.255	1.58	0.00	0.001	0.001	0.001	0.108	0.107	0.93	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0072	0.0075	4.08	0.00	0.001	0.001	0.001	0.0068	0.0066	2.99	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.00038	0.00033	14.08	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000012	18.18	0.00	0.00001	0.00001	0.00001	0.000019	0.000017	11.11	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.00069	0.00069	0.00	0.00	0.0001	0.0001	0.0001	0.00239	0.00243	1.66	0.00
% Exceedance*							0%	0%						0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-37 Whale Tail 2024 EEM QAQC Exposure Area Mammoth Lake (EEM-7-MAME-2)

Parameter	Sample date		7/14/2024							9/17/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	58.4	57.7	1.21	-	0.5	1.89	-	79	79.5	0.63	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	17	24	34.15	0.00	1	1	1	44	43	2.30	0.00
TSS	mg/L	1	1	1	1	1	2	**66.67**	0.00	1	1	1	1	1	0.00	0.00
Major Ions																
Chloride	mg/L	1	1	1	1	18	19	5.41	0.00	1	1	1	25	24	4.08	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.00334	0.00242	**31.94**	0.00	0.0005	0.0005	0.0005	0.00055	0.00052	5.61	0.00
Sulfate	mg/L	0.5	0.53	0.52	0.5	22	22	0.00	3.92	0.5	0.5	0.5	31	31	0.00	0.00
Nutrients																
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.055	0.05	0.05	0.05	0.00	9.52
Un-Ionized Ammonia, calculated	mg N/L	0.0001	0.00065	0.00065	-	0.00065	0.00065	0.00	-	-	-	-	0.0004	0.0004	0.00	-
Nitrate	mg N/L	0.1	0.1	0.1	0.1	1.74	0.54	*105.26*	0.00	0.1	0.1	0.1	0.92	0.89	3.31	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.0017	0.001	**51.85**	0.00	0.001	0.001	0.001	0.0016	0.0022	**31.58**	0.00
Total Metals																
Aluminum	mg/L	0.0005	0.0005	0.0008	0.0005	0.0175	0.0128	31.02	**46.15**	0.0005	0.00248	0.0005	0.0064	0.00403	*45.45*	**132.89**
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00002	0.002	0.00192	4.08	0.00	0.00002	0.00002	0.00002	0.0174	0.0125	32.78	0.00
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00	0.00	0.000005	0.000005	0.000005	0.000005	0.000005	0.00	0.00
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00026	0.0002	**26.09**	0.00	0.0001	0.0001	0.0001	0.00013	0.00013	0.00	0.00
Cobalt	mg/L	0.000005	0.000005	0.000005	0.000005	0.000103	0.0000978	5.18	0.00	0.000005	0.000005	0.000005	0.000101	0.000075	29.55	0.00
Copper	mg/L	0.00005	0.00005	0.00005	0.00005	0.00053	0.000447	16.99	0.00	0.00005	0.00008	0.00005	0.000508	0.000491	3.40	**46.15**
Iron	mg/L	0.001	0.001	0.0012	0.001	0.0497	0.0404	20.64	18.18	0.001	0.002	0.001	0.0886	0.0511	53.69	**66.67**
Lead	mg/L	0.000005	0.000005	0.000005	0.000005	0.000137	0.0000533	87.97	0.00	0.000007	0.000051	0.000005	0.000025	0.000017	**38.10**	*164.29*
Manganese	mg/L	0.00005	0.00005	0.000053	0.00005	0.0101	0.0103	1.96	5.83	0.00005	0.000172	0.00005	0.00884	0.00566	43.86	**109.91**
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.00005	0.0011	0.00113	2.69	0.00	0.00005	0.000362	0.00005	0.00204	0.00196	4.00	**151.46**
Nickel	mg/L	0.00002	0.00002	0.00002	0.00002	0.00189	0.00187	1.06	0.00	0.000035	0.000407	0.00002	0.00321	0.00281	13.29	*181.26*
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.000053	0.000044	18.56	0.00	0.00004	0.00004	0.00004	0.000074	0.000077	3.97	0.00
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.0000054	0.0000048	11.76	0.00	0.000002	0.000002	0.000002	0.000004	0.000004	0.00	0.00
Uranium	mg/L	0.000002	0.000002	0.000002	0.000002	0.000193	0.000188	2.62	0.00	0.000026	0.000015	0.000003	0.000519	0.000469	10.12	**133.33**
Zinc	mg/L	0.0001	0.0001	0.0001	0.0001	0.00639	0.00095	*148.23*	0.00	0.0001	0.0012	0.0001	0.00052	0.00039	**28.57**	*169.23*
Radionuclides																
Radium-226	Bq/l	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								15%	0%						15%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-38 Whale Tail 2024 EEM QAQC Exposure Area WTSE (WTSE-1)

Parameter	Sample date		4/15/2024			5/20/2024					10/6/2024						
	Unit	MDL	Duplicate	Original	RPD (FD/N)	Trip Blank	Field Blank	Lab Blank	Original	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																	
Hardness, as $CaCO_3$	mg/L	0.5	51.6	51	1.17	0.5	0.5	-	64	-	0.5	2.77	-	48.3	49.5	2.45	-
Total alkalinity, as $CaCO_3$	mg/L	1	61	29	71.11	2.3	1	1	27	0.00	1	1	1	20	21	4.88	0.00
TSS	mg/L	1	1	1	0.00	1	1	1	1	0.00	1	1	1	6	6	0.00	0.00
Major Ions																	
Chloride	mg/L	1	16	17	6.06	1	1	1	19	0.00	1	1	1	14	14	0.00	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.00	0.00079	0.00081	0.0005	0.00185	**47.33**	0.0005	0.0005	0.0005	0.00073	0.0009	**20.86**	0.00
Sulfate	mg/L	0.5	18	18	0.00	0.5	0.5	0.5	21	0.00	0.5	0.5	0.5	18	18	0.00	0.00
Nutrients																	
Ammonia Nitrogen	mg N/L	0.05	0.08	0.063	**23.78**	0.05	0.05	0.05	0.17	0.00	0.05	0.05	0.05	0.083	0.072	14.19	0.00
Un-Ionized Ammonia, calculated	mg N/L	0.0001	0.0004	0.0004	0.00	-	-	-	0.0004	-	-	-	-	0.0004	0.0004	0.00	-
Nitrate	mg N/L	0.1	0.42	0.42	0.00	0.1	0.1	0.1	0.56	0.00	0.1	0.1	0.1	0.45	0.48	6.45	0.00
Total phosphorus	mg P/L	0.001	0.001	0.0013	**26.09**	0.001	0.001	0.001	0.0011	0.00	0.001	0.001	0.001	0.0012	0.0022	**58.82**	0.00
Total Metals																	
Aluminum	mg/L	0.0005	0.00266	0.00333	**22.37**	0.00052	0.0005	0.0005	0.0061	0.00	0.0005	0.114	0.0005	0.113	0.111	1.79	*198.25*
Arsenic	mg/L	0.00002	0.000536	0.000534	0.37	0.00002	0.00002	0.00002	0.00083	0.00	0.00002	0.000048	0.00002	0.00144	0.00162	11.76	**82.35**
Cadmium	mg/L	0.000005	0.000005	0.000005	0.00	0.000005	0.000005	0.000005	0.000005	0.00	0.000005	0.000005	0.000005	0.000005	0.000005	0.00	0.00
Chromium	mg/L	0.0001	0.00014	0.0001	**33.33**	0.0001	0.0001	0.0001	0.00021	0.00	0.0001	0.0001	0.0001	0.00047	0.00049	4.17	0.00
Cobalt	mg/L	0.000005	0.0000352	0.0000353	0.28	0.000005	0.000005	0.000005	0.000169	0.00	0.000005	0.0000133	0.000005	0.000206	0.000207	0.48	**90.71**
Copper	mg/L	0.00005	0.000529	0.000537	1.50	0.00005	0.00005	0.00005	0.000638	0.00	0.00005	0.000368	0.00005	0.000551	0.000572	3.74	**152.15**
Iron	mg/L	0.001	0.0177	0.0094	*61.25*	0.001	0.001	0.001	0.0404	0.00	0.001	0.0085	0.001	0.243	0.247	1.63	**157.89**
Lead	mg/L	0.000005	0.000005	0.0000524	*165.16*	0.000005	0.0000197	0.000005	0.000131	*119.03*	0.000005	0.0000953	0.000005	0.000134	0.00014	4.38	*180.06*
Manganese	mg/L	0.00005	0.000954	0.000951	0.31	0.00005	0.00005	0.00005	0.0312	0.00	0.00005	0.00112	0.000073	0.0144	0.0152	5.41	*175.52*
Mercury	mg/L	0.00001	0.00001	0.00001	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.00005	0.000712	0.00067	6.08	0.00005	0.00005	0.00005	0.00161	0.00	0.00005	0.000376	0.00005	0.000912	0.000932	2.17	**153.05**
Nickel	mg/L	0.00002	0.00152	0.00159	4.50	0.00002	0.00002	0.00002	0.00255	0.00	0.00002	0.000432	0.00002	0.00235	0.0025	6.19	*182.30*
Selenium	mg/L	0.00004	0.00004	0.00004	0.00	0.00004	0.00004	0.00004	0.000042	0.00	0.00004	0.00004	0.00004	0.000053	0.00004	**27.96**	0.00
Thallium	mg/L	0.000002	0.000002	0.000002	0.00	0.000002	0.000002	0.000002	0.000002	0.00	0.000002	0.000002	0.000002	0.0000049	0.0000049	0.00	0.00
Uranium	mg/L	0.000002	0.0000632	0.0000636	0.63	0.000002	0.0000025	0.0000027	0.000153	7.69	0.000002	0.0000068	0.000002	0.000213	0.000222	4.14	**109.09**
Zinc	mg/L	0.0001	0.00048	0.00076	**45.16**	0.00019	0.0001	0.0001	0.00293	0.00	0.00012	0.0125	0.0001	0.0007	0.00077	9.52	*196.83*
Radionuclides																	
Radium-226	Bq/l	0.005	0.005	0.005	0.00	0.005	0.005	0.005	0.005	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*					4%					0%						0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-39 Whale Tail 2024 EEM QAQC Reference Area Third Portage Lake (ST-MMER-1-EEM-TPS)

Parameter	Sample date		4/15/2024			5/20/2024					7/14/2024						
	Unit	MDL	Duplicate	Original	RPD (FD/N)	Trip Blank	Field Blank	Lab Blank	Original	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																	
Hardness, as $CaCO_3$	mg/L	0.5	11.7	11.2	4.37	0.5	0.5	-	11.1	-	10.8	0.5	-	13.2	9.19	35.82	-
Total alkalinity, as $CaCO_3$	mg/L	1	9.3	11	16.75	1	1	1	7.2	0.00	3.3	1	1	7.9	7.4	6.54	0.00
TSS	mg/L	1	1	1	0.00	1	1	1	1	0.00	1	1	1	1	1	0.00	0.00
Major Ions																	
Chloride	mg/L	1	1	1	0.00	1	1	1	1	0.00	1	1	1	1	1	0.00	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.00	0.0005	0.00057	0.0005	0.0005	13.08	0.0005	0.0005	0.0005	0.00296	0.00252	16.06	0.00
Sulfate	mg/L	0.5	5.6	5.6	0.00	0.5	0.5	0.5	5.1	0.00	0.5	0.5	0.5	4.4	4.3	2.30	0.00
Nutrients																	
Ammonia Nitrogen	mg N/L	0.05	0.085	0.078	8.59	0.05	0.05	0.05	0.05	0.00	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Un-Ionized Ammonia, calculated	mg N/L	-	0.0004	0.0004	0.00	-	-	-	0.0004	-	-	-	-	0.0004	0.0004	0.00	-
Nitrate	mg N/L	0.1	0.1	0.1	0.00	0.1	0.1	0.1	0.1	0.00	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.00	0.001	0.001	0.001	0.001	0.00	0.001	0.001	0.001	0.028	0.001	*186.21*	0.00
Total Metals																	
Aluminum	mg/L	0.0005	0.0113	0.00202	*139.34*	0.0005	0.00077	0.0005	0.00377	**42.52**	0.0727	0.00231	0.0005	0.0464	0.00568	156.37	**128.83**
Arsenic	mg/L	0.00002	0.000196	0.000178	9.63	0.00002	0.00002	0.00002	0.000201	0.00	0.000076	0.00002	0.00002	0.000269	0.000202	28.45	0.00
Cadmium	mg/L	0.000005	0.000005	0.000005	0.00	0.000005	0.000005	0.000005	0.000005	0.00	0.0000076	0.000005	0.000005	0.0000056	0.000005	11.32	0.00
Chromium	mg/L	0.0001	0.0001	0.0001	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.0001	0.0001	0.0001	0.00025	0.0001	**85.71**	0.00
Cobalt	mg/L	0.000005	0.0000107	0.000005	**72.61**	0.000005	0.000005	0.000005	0.0000065	0.00	0.0000209	0.000005	0.000005	0.0000286	0.0000118	**83.17**	0.00
Copper	mg/L	0.00005	0.000493	0.00039	**23.33**	0.00005	0.00005	0.00005	0.000441	0.00	0.0015	0.000518	0.00005	0.00085	0.000387	*74.86*	*164.79*
Iron	mg/L	0.001	0.0031	0.0013	**81.82**	0.001	0.001	0.001	0.002	0.00	0.0132	0.0037	0.001	0.0281	0.0102	93.47	**114.89**
Lead	mg/L	0.000005	0.0000925	0.0000188	*132.43*	0.000148	0.000005	0.000005	0.000221	0.00	0.00103	0.0000076	0.000005	0.000732	0.0000083	*195.52*	**41.27**
Manganese	mg/L	0.00005	0.000424	0.000253	**50.52**	0.00005	0.00005	0.00005	0.000322	0.00	0.00283	0.000117	0.00005	0.00342	0.00155	75.25	**80.24**
Mercury	mg/L	0.00001	0.00001	0.00001	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.00005	0.000115	0.000114	0.87	0.00005	0.00005	0.00005	0.00011	0.00	0.000721	0.00005	0.00005	0.000196	0.000105	**60.47**	0.00
Nickel	mg/L	0.00002	0.000622	0.000466	28.68	0.00002	0.00002	0.00002	0.000482	0.00	0.00148	0.000052	0.00002	0.0041	0.000491	157.22	**88.89**
Selenium	mg/L	0.00004	0.00004	0.00004	0.00	0.00004	0.00004	0.00004	0.00004	0.00	0.00004	0.00004	0.00004	0.00004	0.00004	0.00	0.00
Thallium	mg/L	0.000002	0.000002	0.000002	0.00	0.000002	0.000002	0.000002	0.000002	0.00	0.0000031	0.000002	0.000002	0.000002	0.000002	0.00	0.00
Uranium	mg/L	0.000002	0.0000426	0.0000421	1.18	0.000002	0.0000023	0.0000027	0.0000412	16.00	0.0000127	0.000002	0.000002	0.0000396	0.0000349	12.62	0.00
Zinc	mg/L	0.0001	0.00294	0.0002	*174.52*	0.0001	0.0001	0.0001	0.00064	0.00	0.01	0.00042	0.0001	0.00764	0.00028	*185.86*	**123.08**
Radionuclides																	
Radium-226	Bq/l	0.005	0.005	0.005	0.00	0.005	0.006	0.005	0.005	18.18	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*					4%					0%						22%	0%

Parameter	Sample date		8/13/2024							9/17/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	14.6	12.8	13.14	-	0.5	5.59	-	9.64	9.6	0.42	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1.3	1	7.4	6.6	11.43	**26.09**	1	1	1	9.7	6.7	**36.59**	0.00
TSS	mg/L	1	1	1	1	1	1	0.00	0.00	1	1	1	1	1	0.00	0.00
Major Ions																
Chloride	mg/L	1	1	1	1	1	1	0.00	0.00	1	1	1	1	1	0.00	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	3.6	3.7	2.74	0.00	0.5	0.5	0.5	4.1	4.2	2.41	0.00
Nutrients																
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Un-Ionized Ammonia, calculated	mg N/L	-	-	-	-	0.0004	0.0004	0.00	-	-	-	-	0.0004	0.0004	0.00	-
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Total phosphorus	mg P/L	0.001	0.0016	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.0016	0.001	**46.15**	0.00
Total Metals																
Aluminum	mg/L	0.0005	0.0005	0.00059	0.0005	0.0334	0.0414	21.39	16.51	0.00051	0.013	0.0005	0.00674	0.00641	5.02	*185.19*
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00002	0.000356	0.000225	45.09	0.00	0.00002	0.00002	0.00002	0.000179	0.00017	5.16	0.00
Cadmium	mg/L	0.000005	0.000005	0.0000096	0.000005	0.0000265	0.0000135	**65.00**	**63.01**	0.000005	0.000005	0.000005	0.000005	0.000005	0.00	0.00
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0003	0.00014	**72.73**	0.00	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Cobalt	mg/L	0.000005	0.000005	0.0000098	0.000005	0.0000545	0.0000369	*38.51*	**64.86**	0.000005	0.000007	0.000005	0.000014	0.000011	**24.00**	**33.33**
Copper	mg/L	0.00005	0.00005	0.00005	0.00005	0.00124	0.00117	5.81	0.00	0.00005	0.000201	0.00005	0.000367	0.00038	3.48	**120.32**
Iron	mg/L	0.001	0.001	0.001	0.001	0.0261	0.0197	27.95	0.00	0.001	0.0049	0.001	0.0113	0.0105	7.34	**132.20**
Lead	mg/L	0.000005	0.000005	0.000009	0.000005	0.000243	0.000128	61.99	**57.14**	0.000005	0.000048	0.000005	0.000009	0.00001	10.53	**162.26**
Manganese	mg/L	0.00005	0.00005	0.00005	0.00005	0.0036	0.00263	31.14	0.00	0.00005	0.000815	0.00005	0.0014	0.00136	2.90	*176.88*
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.00005	0.000283	0.000473	**50.26**	0.00	0.00005	0.000283	0.00005	0.00009	0.000085	5.71	**139.94**
Nickel	mg/L	0.00002	0.00002	0.00002	0.00002	0.00117	0.000916	24.35	0.00	0.00002	0.00248	0.00002	0.000416	0.000407	2.19	*196.80*
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00	0.00	0.00004	0.00004	0.00004	0.00004	0.00004	0.00	0.00
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.00	0.00	0.000003	0.000002	0.000002	0.000002	0.000002	0.00	0.00
Uranium	mg/L	0.000002	0.000002	0.000002	0.000002	0.0000456	0.0000415	9.41	0.00	0.000002	0.000007	0.000002	0.000039	0.000041	5.00	**111.11**
Zinc	mg/L	0.0001	0.00012	0.00013	0.0001	0.0163	0.0108	40.59	**26.09**	0.0001	0.00216	0.0001	0.00024	0.0003	**22.22**	*182.30*
Radionuclides																
Radium-226	Bq/l	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								26%	0%						0%	0%

Parameter	Sample date		11/24/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
Hardness, as CaCO3	mg/L	0.5	0.5	0.5	-	12	12	0.00	0.00
Total alkalinity, as $CaCO_3$	mg/L	1	1	1.9	1	7.8	7.5	3.92	**62.07**
TSS	mg/L	1	1	1	1	1	1	0.00	0.00
Major Ions									
Chloride	mg/L	1	1	1	1	1	1	0.00	0.00
Cyanide	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Sulfate	mg/L	0.5	0.88	0.5	0.5	4.3	4.3	0.00	0.00
Nutrients and Chlorophyll a									
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.2	**120.00**	0.00
Un-Ionized Ammonia, calculated	mg N/L	-	-	-	-	0.0004	0.0004	0.00	-
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Total Metals									
Aluminum	mg/L	0.0005	0.0005	0.00059	0.0005	0.0155	0.00902	52.85	16.51
Arsenic	mg/L	0.00002	0.00002	0.00002	0.00002	0.000222	0.00023	3.54	0.00
Cadmium	mg/L	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00	0.00
Chromium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00012	0.0001	18.18	0.00
Cobalt	mg/L	0.000005	0.000005	0.000005	0.000005	0.000032	0.000041	**24.66**	0.00
Copper	mg/L	0.00005	0.00005	0.00005	0.00005	0.000484	0.000489	1.03	0.00
Iron	mg/L	0.001	0.001	0.001	0.001	0.0131	0.0122	7.11	0.00
Lead	mg/L	0.000005	0.000005	0.000005	0.000005	0.00006	0.000012	*133.33*	0.00
Manganese	mg/L	0.00005	0.00005	0.00005	0.00005	0.00124	0.0012	3.28	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.00005	0.00005	0.00005	0.00005	0.000128	0.000105	19.74	0.00
Nickel	mg/L	0.00002	0.00002	0.00002	0.00002	0.000675	0.000644	4.70	0.00
Selenium	mg/L	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00	0.00
Thallium	mg/L	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.00	0.00
Uranium	mg/L	0.000002	0.000002	0.000002	0.000002	0.000058	0.000052	10.91	0.00
Zinc	mg/L	0.0001	0.0001	0.0001	0.0001	0.00042	0.00022	**62.50**	0.00
Radionuclides									
Radium-226	Bq/l	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								4%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-40 Whale Tail 2024 Attenuation Pond Pre-Treatment QAQC (ST-WT-1)

Parameter	Sample date		5/13/2024							7/8/2024					
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters															
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	78.7	78	0.89	-	0.5	-	115	108	6.28	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	47	47	0.00	0.00	1	1	63	60	4.88	0.00
TDS	mg/L	10	10	10	10	360	175	69.16	0.00	10	10	225	220	2.25	0.00
TSS	mg/L	1	1	1	1	19	22	14.63	0.00	1	1	13	15	14.29	0.00
Major Ions															
Chloride	mg/L	1	1	1	1	27	27	0.00	0.00	1	1	30	31	3.28	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.14	0.13	7.41	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	30	30	0.00	0.00	0.5	0.5	48	47	2.11	0.00
Nutrients															
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.53	0.56	5.50	0.00	0.05	0.05	1.1	1.1	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.84	0.83	1.20	0.00	0.1	0.1	2.63	2.61	0.76	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.04	0.035	13.33	0.00	0.01	0.01	0.109	0.109	0.00	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.017	0.016	6.06	0.00	0.001	0.001	0.019	0.018	5.41	0.00
Total Metals															
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.296	0.266	10.68	0.00	0.003	0.003	0.143	0.131	8.76	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.0113	0.0107	5.45	0.00	0.0001	0.0001	0.174	0.158	9.64	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0348	0.0351	0.86	0.00	0.001	0.001	0.0446	0.0405	9.64	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000016	0.000015	6.45	0.00	0.00001	0.00001	0.000027	0.000022	**20.41**	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.004	0.004	0.00	0.00	0.001	0.001	0.0018	0.0017	5.71	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00119	0.00135	12.60	0.00	0.0005	0.0005	0.00127	0.00114	10.79	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	0.809	0.864	6.58	0.00	0.01	0.01	0.425	0.397	6.81	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.00071	0.00069	2.86	0.00	0.0002	0.0002	0.00039	0.00036	8.00	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.19	0.189	0.53	0.00	0.001	0.001	0.137	0.124	9.96	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0045	0.0044	2.25	0.00	0.001	0.001	0.0102	0.009	12.50	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0048	0.0047	2.11	0.00	0.001	0.001	0.0237	0.0216	9.27	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.00014	0.00014	0.00	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000014	0.000016	13.33	0.00	0.00001	0.00001	0.000028	0.000026	7.41	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								4%	0%					0%	0%

Parameter	Sample date		9/2/2024							9/23/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	130	136	4.51	-	0.5	0.5	-	286	321	11.53	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	46	46	0.00	0.00	1	1	1	59	60	1.68	0.00
TDS	mg/L	10	10	10	10	265	275	3.70	0.00	10	10	10	730	750	2.70	0.00
TSS	mg/L	1	1	1	1	8	8	0.00	0.00	1	1	1	90	84	6.90	0.00
Major Ions																
Chloride	mg/L	1	1	1	1	41	41	0.00	0.00	1	1	1	98	99	1.02	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.13	0.13	0.00	0.00	0.1	0.1	0.1	0.13	0.13	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	53	54	1.87	0.00	0.5	0.5	0.5	170	170	0.00	0.00
Nutrients																
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.14	0.15	6.90	0.00	0.05	0.05	0.05	1.7	1.6	6.06	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	1.38	1.4	1.44	0.00	0.1	0.1	0.1	6.39	6.38	0.16	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.038	0.038	0.00	0.00	0.01	0.01	0.01	0.254	0.251	1.19	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.0066	0.0067	1.50	0.00	0.001	0.001	0.001	0.088	0.081	8.28	0.00
Total Metals																
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.105	0.0999	4.98	0.00	0.003	0.003	0.003	2.27	2.92	25.05	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.017	0.018	5.71	0.00	0.0001	0.0001	0.0001	0.0906	0.101	10.86	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0477	0.0505	5.70	0.00	0.001	0.001	0.001	0.0825	0.0931	12.07	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000025	0.000021	17.39	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.0011	0.001	9.52	0.00	0.001	0.001	0.001	0.0454	0.0564	21.61	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.0009	0.001	10.53	0.00	0.0005	0.0005	0.0005	0.00314	0.0036	13.65	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	0.446	0.449	0.67	0.00	0.01	0.01	0.01	4.08	4.98	19.87	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.00031	0.00036	14.93	0.00	0.0002	0.0002	0.0002	0.00188	0.00209	10.58	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.141	0.147	4.17	0.00	0.001	0.001	0.001	0.412	0.467	12.51	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0093	0.0095	2.13	0.00	0.001	0.001	0.001	0.0094	0.0107	12.94	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0066	0.0069	4.44	0.00	0.001	0.001	0.001	0.0506	0.0574	12.59	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00019	0.00019	0.00	0.00	0.0001	0.0001	0.0001	0.00047	0.00051	8.16	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000022	0.000022	0.00	0.00	0.00001	0.00001	0.00001	0.000075	0.000088	15.95	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.011	0.0125	12.77	0.00
% Exceedance*								0%	0%						7%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-41 Whale Tail 2024 WT/IVR Attenuation Pond Discharge to Kangislulik Lake Diffuser QAQC (ST-WT-2a)

Parameter	Sample date		7/8/2024							9/2/2024							9/16/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																							
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	110	114	3.57	-	0.5	0.5	-	160	156	2.53	-	0.52	0.5	-	185	186	0.54	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	2	1	44	48	8.70	**66.67**	1	1	1	44	44	0.00	0.00	1	4	1	50	57	13.08	**120.00**
Carbonate, as $CaCO_3$	mg/L	1	1	1	-	1	1	0.00	-	1	1	-	1	1	0.00	-	1	1	-	1	1	0.00	-
Bicarbonate, as $CaCO_3$	mg/L	1	1	2	-	44	47	6.59	-	1	1	-	44	44	0.00	-	1	4	-	50	56	11.32	-
TDS	mg/L	10	10	10	10	290	290	0.00	0.00	10	10	10	320	315	1.57	0.00	10	10	10	375	370	1.34	0.00
TSS	mg/L	1	1	1	1	2	1	**66.67**	0.00	1	1	1	1	1	0.00	0.00	1	1	1	8	7	13.33	0.00
Major Ions																							
Chloride	mg/L	1	1	1	1	39	39	0.00	0.00	1	1	1	63	63	0.00	0.00	1	1	1	65	67	3.03	0.00
Silica	mg/L	0.05	0.05	0.05	0.05	3.3	3.5	5.88	0.00	0.05	0.05	0.05	4.3	4.4	2.30	0.00	0.05	0.05	0.05	4.6	4.5	2.20	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	45	47	4.35	0.00	0.5	0.5	0.5	64	65	1.55	0.00	0.5	0.5	0.5	72	73	1.38	0.00
Nutrients																							
Ammonia (NH_3)	mg/L	0.061	0.061	0.061	-	0.39	0.52	**28.57**	-	0.061	0.061	-	0.11	0.11	0.00	-	0.061	0.061	-	0.16	0.13	**20.69**	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.32	0.43	**29.33**	0.00	0.05	0.05	0.05	0.087	0.095	8.79	0.00	0.05	0.05	0.05	0.13	0.11	16.67	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	2.86	2.84	0.70	0.00	0.1	0.1	0.1	2.77	2.7	2.56	0.00	0.1	0.1	0.1	3.42	3.4	0.59	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.055	0.054	1.83	0.00	0.01	0.01	0.01	0.029	0.027	7.14	0.00	0.01	0.01	0.01	0.043	0.044	2.30	0.00
Total Kjeldahl nitrogen	mg N/L	0.1	0.1	0.25	0.1	0.28	0.56	**66.67**	**85.71**	0.1	0.1	0.1	0.38	0.32	17.14	0.00	0.1	0.1	0.1	0.68	0.72	5.71	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.0011	0.001	9.52	0.00	0.001	0.001	0.001	0.0023	0.0027	16.00	0.00	0.001	0.001	0.001	0.023	0.021	9.09	0.00
Orthophosphate	mg P/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals																							
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.0077	0.0063	20.00	0.00	0.003	0.003	0.003	0.0045	0.0042	6.90	0.00	0.003	0.003	0.003	0.0923	0.0921	0.22	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.00733	0.00753	2.69	0.00	0.0005	0.0005	0.0005	0.00712	0.00684	4.01	0.00	0.0005	0.0005	0.0005	0.00954	0.00944	1.05	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.0193	0.0151	24.42	0.00	0.0001	0.0001	0.0001	0.0151	0.0123	20.44	0.00	0.0001	0.0001	0.0001	0.176	0.171	2.88	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0423	0.0438	3.48	0.00	0.001	0.001	0.001	0.0553	0.053	4.25	0.00	0.001	0.001	0.001	0.0575	0.057	0.87	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.00012	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.000011	9.52	0.00	0.000027	0.00001	0.00001	0.00002	0.000021	4.88	0.00
Calcium (total)	mg/L	0.05	0.05	0.05	-	31.2	32.5	4.08	-	0.05	0.05	-	47.3	46.5	1.71	-	0.209	0.05	-	53.5	54.5	1.85	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.0015	0.0015	0.00	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00069	0.00071	2.86	0.00	0.0005	0.0005	0.0005	0.0008	0.00129	**46.89**	0.00	0.00051	0.0005	0.0005	0.00107	0.00094	12.94	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	0.363	0.28	25.82	0.00	0.01	0.01	0.01	0.27	0.224	18.62	0.00	0.013	0.01	0.01	0.926	0.907	2.07	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00032	**46.15**	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.002	0.006	0.0063	4.88	0.00	0.002	0.002	0.002	0.0083	0.0079	4.94	0.00	0.002	0.002	0.002	0.0098	0.0095	3.11	0.00
Magnesium (total)	mg/L	0.05	0.05	0.05	-	7.7	7.97	3.45	-	0.05	0.05	-	10.1	9.6	5.08	-	0.05	0.05	-	12.4	12.2	1.63	-
Manganese	mg/L	0.001	0.001	0.001	0.001	0.102	0.111	8.45	0.00	0.001	0.001	0.001	0.0768	0.074	3.71	0.00	0.001	0.001	0.001	0.0722	0.0716	0.83	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	-	0.00001	-	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0066	0.0067	1.50	0.00	0.001	0.001	0.001	0.0074	0.0072	2.74	0.00	0.001	0.001	0.001	0.0072	0.0071	1.40	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0119	0.0124	4.12	0.00	0.001	0.001	0.001	0.0093	0.009	3.28	0.00	0.001	0.001	0.001	0.0146	0.0146	0.00	0.00
Potassium (total)	mg/L	0.05	0.05	0.05	-	8.23	8.3	0.85	-	0.05	0.05	-	9.67	9.47	2.09	-	0.05	0.05	-	10.2	10.1	0.99	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00015	0.00017	12.50	0.00	0.0001	0.0001	0.0001	0.00018	0.00018	0.00	0.00	0.0001	0.0001	0.0001	0.00024	0.00021	13.33	0.00
Sodium (total)	mg/L	0.05	0.05	0.05	-	8.99	9.16	1.87	-	0.05	0.05	-	7.89	7.89	0.00	-	0.05	0.05	-	8.72	8.75	0.34	-
Strontium	mg/L	0.001	0.001	0.001	0.001	0.31	0.323	4.11	0.00	0.001	0.001	0.001	0.483	0.469	2.94	0.00	0.001	0.001	0.001	0.493	0.492	0.20	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000018	0.00002	10.53	0.00	0.00001	0.00001	0.00001	0.000017	0.000018	5.71	0.00	0.00001	0.00001	0.00001	0.000017	0.000018	5.71	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.0054	0.0054	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00079	0.00076	3.87	0.00	0.0001	0.0001	0.0001	0.0015	0.00142	5.48	0.00	0.0001	0.0001	0.0001	0.00222	0.00219	1.36	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.0059	0.0059	0.00	0.00	0.005	0.005	0.005	0.0066	0.0066	0.00	0.00	0.005	0.005	0.005	0.0069	0.0077	10.96	0.00
Dissolved Metals																							
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.003	0.003	0.00	0.00	0.003	0.003	0.003	0.003	0.003	0.00	0.00	0.003	0.003	0.003	0.0047	0.0037	**23.81**	0.00

Parameter	Sample date		7/8/2024							9/2/2024							9/16/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0069	0.00685	0.73	0.00	0.0005	0.0005	0.0005	0.00805	0.00814	1.11	0.00	0.0005	0.0005	0.0005	0.0113	0.0115	1.75	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.00185	0.00191	3.19	0.00	0.0001	0.0001	0.0001	0.00217	0.00215	0.93	0.00	0.0001	0.0001	0.0001	0.0406	0.0399	1.74	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0465	0.0467	0.43	0.00	0.001	0.001	0.001	0.0613	0.0616	0.49	0.00	0.001	0.001	0.001	0.0649	0.0657	1.23	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.000011	0.00001	9.52	0.00	0.00001	0.00001	0.00001	0.000014	0.000011	**24.00**	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Copper	mg/L	0.0002	0.0002	0.0002	0.0002	0.00173	0.00169	2.34	0.00	0.0002	0.0002	0.0002	0.00089	0.00079	11.90	0.00	0.0002	0.0002	0.0002	0.00099	0.00124	**22.42**	0.00
Iron	mg/L	0.005	0.005	0.005	0.005	0.0144	0.0132	8.70	0.00	0.005	0.005	0.005	0.0148	0.0105	**33.99**	0.00	0.005	0.005	0.005	0.0247	0.024	2.87	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.002	0.0077	0.0075	2.63	0.00	0.002	0.002	0.002	0.0096	0.0097	1.04	0.00	0.002	0.002	0.002	0.0101	0.0102	0.99	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.119	0.118	0.84	0.00	0.001	0.001	0.001	0.0851	0.0851	0.00	0.00	0.001	0.001	0.001	0.0809	0.0787	2.76	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	-	0.00001	-	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.007	0.007	0.00	0.00	0.001	0.001	0.001	0.0083	0.0083	0.00	0.00	0.001	0.001	0.001	0.0081	0.0083	2.44	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0124	0.0125	0.80	0.00	0.001	0.001	0.001	0.0099	0.01	1.01	0.00	0.001	0.001	0.001	0.017	0.0169	0.59	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00015	0.00015	0.00	0.00	0.0001	0.0001	0.0001	0.00018	0.00021	15.38	0.00	0.0001	0.0001	0.0001	0.00029	0.00027	7.14	0.00
Strontium	mg/L	0.001	0.001	0.001	0.001	0.355	0.351	1.13	0.00	0.001	0.001	0.001	0.548	0.547	0.18	0.00	0.001	0.001	0.001	0.547	0.558	1.99	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000022	0.000022	0.00	0.00	0.00001	0.00001	0.00001	0.000021	0.00002	4.88	0.00	0.00001	0.00001	0.00001	0.000019	0.000019	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0007	0.0007	0.00	0.00	0.0001	0.0001	0.0001	0.00154	0.00154	0.00	0.00	0.0001	0.0001	0.0001	0.00254	0.00255	0.39	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.0079	0.0076	3.87	0.00	0.005	0.005	0.005	0.0071	0.006	16.79	0.00	0.005	0.005	0.005	0.005	0.0057	13.08	0.00
Volatile Organics																							
Petroleum Hydrocarbons F (C10-C50)	mg/L	0.2	0.2	0.2	-	0.2	0.2	0.00	-	0.2	0.2	-	0.2	0.2	0.00	-	0.2	0.2	-	0.2	0.2	0.00	-
% Exceedance*								3%	0%						1%	0%						0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-42 Whale Tail 2024 WRSF QAQC (ST-WT-3)

Parameter	Sample date		6/9/2024						9/22/2024	
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Original
Conventional Parameters										
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	38	38.1	0.26	-	0.5	142
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	25	27	7.69	0.00	1	22
TDS	mg/L	10	10	10	115	130	12.24	0.00	10	305
TSS	mg/L	1	1	1	5	5	0.00	0.00	1	4
Major Ions										
Chloride	mg/L	1	1	1	1	1	0.00	0.00	1	3.4
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1
Sulfate	mg/L	0.5	0.5	0.5	18	18	0.00	0.00	0.5	140
Nutrients										
Ammonia (NH_3)	mg/L	0.061	0.061	-	0.061	0.061	0.00	-	0.061	0.061
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05
Nitrate	mg N/L	0.1	0.1	0.1	0.37	0.37	0.00	0.00	0.1	3.68
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01
Total phosphorus	mg P/L	0.001	0.001	0.001	0.009	0.0088	2.25	0.00	0.001	0.0059
Total Metals										
Aluminum	mg/L	0.003	0.0063	0.003	0.271	0.294	8.14	**70.97**	0.003	0.149
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00772	0.00783	1.41	0.00	0.0001	0.00305
Barium	mg/L	0.001	0.001	0.001	0.0162	0.0162	0.00	0.00	0.001	0.0409
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.000019
Chromium	mg/L	0.001	0.001	0.001	0.0057	0.0062	8.40	0.00	0.001	0.0019
Copper	mg/L	0.0005	0.0005	0.0005	0.00146	0.00149	2.03	0.00	0.0005	0.00207
Iron	mg/L	0.01	0.01	0.01	0.497	0.525	5.48	0.00	0.01	0.409
Lead	mg/L	0.0002	0.0002	0.0002	0.0004	0.00041	2.47	0.00	0.0002	0.00026
Manganese	mg/L	0.001	0.001	0.001	0.0322	0.0306	5.10	0.00	0.001	0.0453
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001
Nickel	mg/L	0.001	0.001	0.001	0.0062	0.0062	0.00	0.00	0.001	0.0182
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.00072
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002
Thallium	mg/L	0.00001	0.00001	0.00001	0.000015	0.000014	6.90	0.00	0.00001	0.000018
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005
Dissolved Metals										
Aluminum	mg/L	0.003	0.003	0.003	0.0159	0.0172	7.85	0.00	0.003	0.0182
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00621	0.00603	2.94	0.00	0.0001	0.00172
Barium	mg/L	0.001	0.001	0.001	0.0142	0.0138	2.86	0.00	0.001	0.04
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.000013
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001
Copper	mg/L	0.0002	0.0002	0.0002	0.00136	0.00141	3.61	0.00	0.0002	0.00142
Iron	mg/L	0.005	0.005	0.005	0.0237	0.0293	**21.13**	0.00	0.005	0.0779
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.00026
Manganese	mg/L	0.001	0.001	0.001	0.0234	0.0232	0.86	0.00	0.001	0.0436
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	-	0.00001
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001
Nickel	mg/L	0.001	0.001	0.001	0.0037	0.0037	0.00	0.00	0.001	0.0168
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.00083
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.000014
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.0397
% Exceedance*							0%	0%		

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-43 Whale Tail 2024 WT Pit Sump QAQC (ST-WT-4)

Parameter	Sample date		4/16/2024							5/21/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	141	139	1.43	-	0.5	0.5	-	113	112	0.89	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	99	99	0.00	0.00	1	1	1	59	59	0.00	0.00
TDS	mg/L	10	10	10	10	295	285	3.45	0.00	10	10	10	175	170	2.90	0.00
TSS	mg/L	1	1	1	1	10	9	10.53	0.00	1	1	1	67	69	2.94	0.00
Major Ions																
Chloride	mg/L	1	1	1	1	40	39	2.53	0.00	1	1	1	31	30	3.28	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.17	0.17	0.00	0.00	0.1	0.1	0.1	0.17	0.19	11.11	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	34	33	2.99	0.00	0.5	0.5	0.5	44	45	2.25	0.00
Nutrients																
Ammonia (NH_3)	mg/L	0.061	0.061	0.061	-	11	11	0.00	-	0.23	0.061	-	0.53	0.54	1.87	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	8.8	9	2.25	0.00	0.19	0.05	0.05	0.43	0.45	4.55	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	7.44	7.49	0.67	0.00	0.1	0.1	0.1	0.5	0.5	0.00	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.308	0.305	0.98	0.00	0.01	0.01	0.01	0.068	0.064	6.06	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.01	0.0077	**25.99**	0.00	0.001	0.001	0.001	0.048	0.043	10.99	0.00
Total Metals																
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.279	0.278	0.36	0.00	0.003	0.003	0.003	2.31	2.24	3.08	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.0181	0.0175	3.37	0.00	0.0001	0.0001	0.0001	0.042	0.0414	1.44	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.056	0.0543	3.08	0.00	0.001	0.001	0.001	0.0566	0.0552	2.50	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000012	0.00001	18.18	0.00	0.00001	0.00001	0.00001	0.000117	0.000118	0.85	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.0034	0.0034	0.00	0.00	0.001	0.001	0.001	0.0465	0.0452	2.84	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00511	0.00502	1.78	0.00	0.0005	0.0005	0.0005	0.00177	0.00141	**22.64**	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	0.669	0.664	0.75	0.00	0.01	0.01	0.01	4.15	3.96	4.69	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.00088	0.00094	6.59	0.00	0.0002	0.0002	0.0002	0.0017	0.0017	0.00	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.0953	0.094	1.37	0.00	0.001	0.001	0.001	0.141	0.137	2.88	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0344	0.0331	3.85	0.00	0.001	0.001	0.001	0.0095	0.0091	4.30	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0086	0.0087	1.16	0.00	0.001	0.001	0.001	0.0183	0.018	1.65	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00014	0.00014	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000025	0.000025	0.00	0.00	0.00001	0.00001	0.00001	0.000051	0.000045	12.50	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.0289	0.0279	3.52	0.00
% Exceedance*								0%	0%						0%	0%

Parameter	Sample date		9/16/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	362	380	4.85	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	87	83	4.71	0.00
TDS	mg/L	10	10	10	10	770	800	3.82	0.00
TSS	mg/L	1	1	1	1	73	69	5.63	0.00
Major Ions									
Chloride	mg/L	1	1	1	1	81	79	2.50	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.27	0.24	11.76	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	250	240	4.08	0.00
Nutrients									
Ammonia (NH_3)	mg/L	0.061	0.061	0.061	-	8.6	8.9	3.43	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	7.1	7.3	2.78	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	16.6	16.9	1.79	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.94	0.951	1.16	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.15	0.16	6.45	0.00
Total Metals									
Aluminum	mg/L	0.003	0.003	0.003	0.003	1.84	2.13	14.61	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.48	0.495	3.08	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0902	0.0969	7.16	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000125	0.000139	10.61	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.0377	0.0461	20.05	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00507	0.00559	9.76	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	3.22	3.68	13.33	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.00137	0.00141	2.88	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.31	0.329	5.95	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0303	0.031	2.28	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.112	0.121	7.73	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00071	0.00065	8.82	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.000023	13.95	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00008	0.00009	11.76	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.0292	0.0323	10.08	0.00
% Exceedance*								4%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-44 Whale Tail 2024 South Whale Tail Channel (Lake A45) QAQC (ST-WT-13)

Parameter	Sample date		9/10/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
TSS	mg/L	1	1	1	1	3	2	**40.00**	0.00
Major Ions									
Sulfate	mg/L	1	1	1	1	9.5	9.2	3.21	0.00
Nutrients									
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Un-Ionized Ammonia, calculated	mg N/L	0.02	-	-	-	0.00061	0.00061	0.00	-
Total Metals									
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.242	0.246	1.64	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.00639	0.0065	1.71	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00093	0.00088	5.52	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.00022	0.00023	4.44	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0027	0.0027	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-45 Whale Tail 2024 Lake A16 Outlet QAQC (ST-WT-14)

Parameter	Sample date		7/14/2024						9/19/2024	
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Original
Conventional Parameters										
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	42.4	43.1	1.64	-	0.5	44.9
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	21	20	4.88	0.00	1	42
Carbonate, as $CaCO_3$	mg/L	1	1	-	1	1	0.00	-	1	1
Bicarbonate, as $CaCO_3$	mg/L	1	1	-	21	20	4.88	-	1	42
TDS	mg/L	10	10	10	75	80	6.45	0.00	10	75
TSS	mg/L	1	1	1	1	1	0.00	0.00	1	1
Total organic carbon	mg/L	0.4	0.42	0.4	2.6	2.4	8.00	4.88	0.4	2.2
Dissolved organic carbon	mg/L	0.4	0.52	0.4	2.6	2.2	16.67	**26.09**	0.4	2.2
Major Ions										
Chloride	mg/L	1	1	1	13	13	0.00	0.00	1	14
Silica	mg/L	0.05	0.05	0.05	0.38	0.43	12.35	0.00	0.05	0.51
Sulfate	mg/L	0.5	0.5	0.5	15	17	12.50	0.00	0.58	22
Nutrients										
Ammonia (NH_3)	mg N/L	0.061	0.061	-	0.061	0.061	0.00	-	0.061	0.061
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05
Nitrate	mg N/L	0.1	0.1	0.1	0.25	0.25	0.00	0.00	0.1	0.32
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01
Total Kjeldahl nitrogen	mg N/L	0.1	0.1	0.1	0.27	0.29	7.14	0.00	0.1	0.14
Total phosphorus	mg P/L	0.001	0.001	0.001	0.0015	0.0012	**22.22**	0.00	0.001	0.0013
Orthophosphate	mg P/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01
Total Metals										
Aluminum	mg/L	0.003	0.003	0.003	0.0058	0.005	14.81	0.00	0.003	0.0046
Antimony	mg/L	0.0005	0.0005	0.0005	0.00054	0.00053	1.87	0.00	0.0005	0.00059
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00074	0.00076	2.67	0.00	0.0001	0.00057
Barium	mg/L	0.001	0.001	0.001	0.0156	0.0158	1.27	0.00	0.001	0.0141
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001
Calcium (total)	mg/L	0.05	0.05	-	12.1	12.4	2.45	-	0.05	12.8
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00	0.0005	0.00112
Iron	mg/L	0.01	0.01	0.01	0.018	0.018	0.00	0.00	0.01	0.036
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002
Lithium	mg/L	0.002	0.002	0.002	0.002	0.002	0.00	0.00	0.002	0.002
Magnesium (total)	mg/L	0.05	0.05	-	2.94	2.98	1.35	-	0.05	3.13
Manganese	mg/L	0.001	0.001	0.001	0.0031	0.0031	0.00	0.00	0.001	0.0025
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001
Nickel	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.0028
Potassium (total)	mg/L	0.05	0.05	-	2.66	2.68	0.75	-	0.05	2.68
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001
Sodium (total)	mg/L	0.05	0.05	-	2.13	2.19	2.78	-	0.05	2.18
Strontium	mg/L	0.001	0.001	0.001	0.0887	0.0886	0.11	0.00	0.001	0.082
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005
Dissolved Metals										
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.0044	**37.84**	0.00	0.003	0.0051
Antimony	mg/L	0.0005	0.0005	0.0005	0.00054	0.00055	1.83	0.00	0.0005	0.0007
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00085	0.00089	4.60	0.00	0.0001	0.00154
Barium	mg/L	0.001	0.001	0.001	0.016	0.0161	0.62	0.00	0.001	0.0161
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000026	**88.89**	0.00	0.00001	0.00001
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001
Copper	mg/L	0.0002	0.0002	0.0002	0.00093	0.0012	**25.35**	0.00	0.0002	0.0006
Iron	mg/L	0.005	0.005	0.005	0.0052	0.0105	**67.52**	0.00	0.005	0.0083
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002
Lithium	mg/L	0.002	0.002	0.002	0.002	0.002	0.00	0.00	0.002	0.002
Manganese	mg/L	0.001	0.001	0.001	0.0016	0.0021	**27.03**	0.00	0.001	0.0015
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0011	9.52	0.00	0.001	0.0014
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001
Strontium	mg/L	0.001	0.001	0.001	0.0909	0.091	0.11	0.00	0.001	0.1
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005
Uranium	mg/L	0.0001	0.0001	0.0001	0.00012	0.00014	15.38	0.00	0.0001	0.00012
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005
% Exceedance*							0%	0%		

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-46 Whale Tail 2024 Lake A15 QAQC (ST-WT-15)

Parameter	Sample date		6/16/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	18.8	19.1	1.58	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	9	9.7	7.49	0.00
Carbonate, as $CaCO_3$	mg/L	1	1	1	-	1	1	0.00	-
Bicarbonate, as $CaCO_3$	mg/L	1	1	1	-	9	9.7	7.49	-
TDS	mg/L	10	10	10	10	25	20	**22.22**	0.00
TSS	mg/L	1	1	1	1	2	1	**66.67**	0.00
Total organic carbon	mg/L	0.4	0.45	0.61	0.4	2.3	2.3	0.00	**41.58**
Dissolved organic carbon	mg/L	0.4	0.56	1.1	0.4	2	2	0.00	**93.33**
Major Ions									
Chloride	mg/L	1	1	1	1	5.7	5.2	9.17	0.00
Silica	mg/L	0.05	0.05	0.05	0.05	0.7	0.85	19.35	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	7.1	7.1	0.00	0.00
Nutrients									
Total Ammonia (NH_3)	mg/L	0.061	0.061	0.061	-	0.061	0.061	0.00	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Kjeldahl nitrogen	mg N/L	0.1	0.1	0.1	0.1	0.12	0.11	8.70	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.0014	0.0016	13.33	0.00
Orthophosphate	mg P/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals									
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.0192	0.0218	12.68	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.00075	0.00077	2.63	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0103	0.0105	1.92	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Calcium (total)	mg/L	0.05	0.05	0.05	-	5.23	5.31	1.52	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	0.041	0.045	9.30	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.00	0.00
Magnesium (total)	mg/L	0.05	0.05	0.05	-	1.4	1.41	0.71	-
Manganese	mg/L	0.001	0.001	0.001	0.001	0.0063	0.0066	4.65	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0011	0.0011	0.00	0.00
Potassium (total)	mg/L	0.05	0.05	0.05	-	1.26	1.27	0.79	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Sodium (total)	mg/L	0.05	0.05	0.05	-	1.03	1.05	1.92	-
Strontium	mg/L	0.001	0.001	0.001	0.001	0.0361	0.0358	0.83	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Dissolved Metals									
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.0074	0.006	**20.90**	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.00079	0.0004	**65.55**	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0111	0.0098	12.44	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Copper	mg/L	0.0002	0.0002	0.0002	0.0002	0.00134	0.00138	2.94	0.00
Iron	mg/L	0.005	0.005	0.005	0.005	0.0104	0.0185	**56.06**	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.00	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.0067	0.0041	**48.15**	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0013	0.002	**42.42**	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Strontium	mg/L	0.001	0.001	0.001	0.001	0.0406	0.0384	5.57	0.00
Thallium	mg/L	0.00001	0.000014	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-47 Whale Tail 2024 Dike Seepage QAQC (ST-WT-17)

Parameter	Sample date		3/3/2024							9/1/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	59.4	61.2	2.99	-	0.5	0.5	-	59.3	59	0.51	-
Total alkalinity, as $CaCO_3$	mg/L	1	1.2	1	1	34	33	2.99	0.00	1	1	1	34	34	0.00	0.00
TDS	mg/L	10	10	10	10	125	110	12.77	0.00	10	10	10	70	95	**30.30**	0.00
TSS	mg/L	1	1	1	1	2	2	0.00	0.00	1	1	1	18	16	11.76	0.00
Major Ions																
Chloride	mg/L	1	1	1	1	15	15	0.00	0.00	1	1	1	13	13	0.00	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.1	0.11	0.1	9.52	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	24	23	4.26	0.00	0.5	0.5	0.5	21	21	0.00	0.00
Nutrients																
Ammonia (NH_3)	mg/L	0.061	0.061	0.061	-	0.061	0.061	0.00	-	0.061	0.061	-	0.061	0.061	0.00	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.32	0.32	0.00	0.00	0.1	0.1	0.1	0.22	0.22	0.00	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.0024	0.0026	8.00	0.00	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Total Metals																
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.0308	0.0294	4.65	0.00	0.003	0.003	0.003	0.029	0.0168	**53.28**	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.00469	0.00483	2.94	0.00	0.0001	0.0001	0.0001	0.00475	0.00455	4.30	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0299	0.0307	2.64	0.00	0.001	0.001	0.001	0.0291	0.0289	0.69	0.00
Cadmium	mg/L	0.00001	0.00001	0.000022	0.00001	0.00001	0.00001	0.00	**75.00**	0.00001	0.00001	0.00001	0.000018	0.000018	0.00	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00109	0.00089	**20.20**	0.00	0.0005	0.0005	0.0005	0.00103	0.00097	6.00	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	0.714	0.727	1.80	0.00	0.01	0.01	0.01	0.496	0.457	8.18	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.136	0.139	2.18	0.00	0.001	0.001	0.001	0.122	0.121	0.82	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0013	0.0013	0.00	0.00	0.001	0.001	0.001	0.0015	0.0014	6.90	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.0011	0.001	9.52	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Strontium	mg/L	0.001	0.001	0.001	0.001	0.192	0.2	4.08	0.00	0.001	0.001	0.001	0.188	0.188	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								0%	0%						0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-48 Whale Tail 2024 IVR Pit Sump QAQC (ST-WT-18)

Parameter	Sample date		2/19/2024							9/10/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	103	103	0.00	-	0.5	0.5	-	168	166	1.20	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	2.1	1	50	54	7.69	**70.97**	1	1	1	61	61	0.00	0.00
TDS	mg/L	10	10	10	10	165	145	12.90	0.00	10	10	10	375	380	1.32	0.00
TSS	mg/L	1	1	1	1	2	2	0.00	0.00	1	1	1	12	9	*28.57*	0.00
Major Ions																
Chloride	mg/L	1	1	1	1	34	34	0.00	0.00	1	1	1	62	63	1.60	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.14	0.17	19.35	0.00	0.1	0.1	0.1	0.15	0.17	12.50	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	36	35	2.82	0.00	0.55	0.5	0.5	79	86	8.48	0.00
Nutrients																
Ammonia (NH_3)	mg/L	0.061	0.061	0.061	-	0.77	0.76	1.31	-	0.061	0.097	-	1.5	1.3	14.29	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.64	0.63	1.57	0.00	0.05	0.08	0.05	1.3	1.1	16.67	**46.15**
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.77	0.78	1.29	0.00	0.1	0.1	0.1	5.15	4.98	3.36	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.014	0.014	0.00	0.00	0.01	0.01	0.01	0.103	0.1	2.96	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.0057	0.0042	**30.30**	0.00	0.001	0.001	0.001	0.1	0.082	19.78	0.00
Total Metals																
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.0437	0.0458	4.69	0.00	0.003	0.003	0.003	0.458	0.163	95.01	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.0344	0.0343	0.29	0.00	0.0001	0.0001	0.0001	0.932	0.901	3.38	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0446	0.0446	0.00	0.00	0.001	0.001	0.001	0.0613	0.0576	6.22	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00002	0.000021	4.88	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.0012	0.0013	8.00	0.00	0.001	0.001	0.001	0.0135	0.0054	*85.71*	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00103	0.00108	4.74	0.00	0.0005	0.0005	0.0005	0.001	0.001	0.00	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	0.387	0.394	1.79	0.00	0.01	0.01	0.01	0.753	0.282	91.01	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.00026	0.00029	10.91	0.00	0.0002	0.0002	0.0002	0.0004	0.0004	0.00	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.212	0.212	0.00	0.00	0.001	0.001	0.001	0.123	0.112	9.36	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0105	0.0106	0.95	0.00	0.001	0.001	0.001	0.0116	0.0115	0.87	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0086	0.0085	1.17	0.00	0.001	0.001	0.001	0.07	0.0643	8.49	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.00036	0.00037	2.74	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00002	0.00004	0.00004	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.000035	0.000038	8.22	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.01	0.01	0.00	0.00
% Exceedance*								0%	0%						7%	0%

Parameter	Sample date		9/16/2024							10/8/2024					
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters															
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	179	164	8.75	-	0.5	-	214	227	5.90	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	65	60	8.00	0.00	1	1	67	64	4.58	0.00
TDS	mg/L	10	10	10	10	390	375	3.92	0.00	10	10	335	340	1.48	0.00
TSS	mg/L	1	1	1	1	4	3	**28.57**	0.00	1	1	4	5	**22.22**	0.00
Major Ions															
Chloride	mg/L	1	1	1	1	53	54	1.87	0.00	1	1	58	57	1.74	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.14	0.13	7.41	0.00	0.1	0.1	0.15	0.14	6.90	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	73	72	1.38	0.00	0.5	0.5	120	110	8.70	0.00
Nutrients															
Ammonia (NH_3)	mg/L	0.061	0.061	0.061	-	1.3	1.4	7.41	-	0.061	-	1.2	1.2	0.00	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	1	1.1	9.52	0.00	0.05	0.05	0.98	0.96	2.06	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	5.27	5.25	0.38	0.00	0.1	0.1	6.87	6.7	2.51	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.109	0.114	4.48	0.00	0.01	0.01	0.194	0.189	2.61	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.065	0.058	11.38	0.00	0.001	0.001	0.057	0.059	3.45	0.00
Total Metals															
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.0838	0.0778	7.43	0.00	0.003	0.003	0.127	0.125	1.59	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	1.08	1.01	6.70	0.00	0.0001	0.0001	1.47	1.6	8.47	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0632	0.0599	5.36	0.00	0.001	0.001	0.0651	0.07	7.25	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00	0.00	0.00001	0.00001	0.00002	0.00002	0.00	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.0026	0.0024	8.00	0.00	0.001	0.001	0.0033	0.0034	2.99	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.00	0.00	0.0005	0.0005	0.001	0.0019	**62.07**	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	0.147	0.134	9.25	0.00	0.01	0.01	0.184	0.176	4.44	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0004	0.0004	0.00	0.00	0.0002	0.0002	0.0004	0.0004	0.00	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.122	0.12	1.65	0.00	0.001	0.001	0.128	0.134	4.58	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0121	0.0121	0.00	0.00	0.001	0.001	0.0126	0.0131	3.89	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0653	0.0605	7.63	0.00	0.001	0.001	0.0827	0.0879	6.10	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00036	0.00037	2.74	0.00	0.0001	0.0001	0.00066	0.00071	7.30	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00004	0.00004	0.00	0.00	0.00002	0.00002	0.00004	0.00004	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000031	0.000033	6.25	0.00	0.00001	0.00001	0.000041	0.000043	4.76	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.01	0.01	0.00	0.00	0.005	0.005	0.01	0.01	0.00	0.00
% Exceedance*								0%	0%					0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-49 Whale Tail 2024 Groundwater Storage Pond Effluent – GSP-1 QAQC (ST-WT-20)

Parameter	Sample date		3/24/2024							10/8/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	4670	4470	4.38	-	0.5	0.5	-	3880	4060	4.53	-
Total alkalinity, as $CaCO_3$	mg/L	1	1.4	1	1	91	82	10.40	0.00	1	1	1	41	42	2.41	0.00
TDS	mg/L	10	10	10	10	7090	7050	0.57	0.00	10	10	10	5610	5510	1.80	0.00
TSS	mg/L	1	1	1	1	6	5	18.18	0.00	1	1	1	14	19	30.30	0.00
Major Ions																
Chloride	mg/L	1	1	1	1	3700	3800	2.67	0.00	1	1	1	2800	3000	6.90	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.16	0.16	0.00	0.00	0.1	0.1	0.1	0.19	0.2	5.13	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	140	150	6.90	0.00	0.5	0.5	0.5	150	140	6.90	0.00
Nutrients																
Ammonia (NH_3)	mg/L	0.061	0.061	0.061	-	35	35	0.00	-	0.061	0.061	-	17	17	0.00	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	29	29	0.00	0.00	0.05	0.05	0.05	14	14	0.00	0.00
Un-Ionized Ammonia, calculated	mg N/L	0.02	-	-	-	22	22	0.00	-	-	-	-	9.3	9.4	1.07	-
Nitrate	mg N/L	0.1	0.1	0.1	0.1	101	102	0.99	0.00	0.1	0.1	0.1	75.5	75.9	0.53	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	4.18	4.09	2.18	0.00	0.01	0.01	0.01	2.91	2.86	1.73	0.00
Total Metals																
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.03	0.03	0.00	0.00	0.003	0.003	0.003	0.322	0.268	18.31	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.004	0.0039	2.53	0.00	0.0001	0.0001	0.0001	0.0046	0.0051	10.31	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.676	0.641	5.32	0.00	0.001	0.001	0.001	0.538	0.558	3.65	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.0001	0.0001	0.00	0.00	0.00001	0.00001	0.00001	0.0001	0.0001	0.00	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.016	0.015	6.45	0.00	0.001	0.001	0.001	0.029	0.028	3.51	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.005	0.005	0.00	0.00	0.0005	0.0005	0.0005	0.005	0.005	0.00	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	0.1	0.1	0.00	0.00	0.01	0.01	0.01	0.4	0.35	13.33	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.002	0.002	0.00	0.00	0.0002	0.0002	0.0002	0.002	0.002	0.00	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.046	0.044	4.44	0.00	0.001	0.001	0.001	0.023	0.024	4.26	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.01	0.01	0.00	0.00	0.001	0.001	0.001	0.015	0.016	6.45	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.032	0.031	3.17	0.00	0.001	0.001	0.001	0.01	0.01	0.00	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0011	0.001	9.52	0.00	0.0001	0.0001	0.0001	0.001	0.0012	18.18	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.0002	0.0002	0.00	0.00	0.00002	0.00002	0.00002	0.0002	0.0002	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00026	0.00025	3.92	0.00	0.00001	0.00001	0.00001	0.00019	0.00019	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.05	0.05	0.00	0.00	0.005	0.005	0.005	0.05	0.05	0.00	0.00
% Exceedance*								0%	0%						4%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-50 Whale Tail 2024 IVR Attenuation Pond QAQC (ST-WT-23)

Parameter	Sample date		5/13/2024							7/8/2024					
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters															
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	106	106	0.00	-	0.5	-	117	120	2.53	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	50	52	3.92	0.00	2.2	1	52	51	1.94	**75.00**
TDS	mg/L	10	10	10	10	195	195	0.00	0.00	10	10	250	235	6.19	0.00
TSS	mg/L	1	1	1	1	9	10	10.53	0.00	1	1	3	4	**28.57**	0.00
Major Ions															
Chloride	mg/L	1	1	1	1	41	40	2.47	0.00	1	1	42	42	0.00	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.11	0.11	0.00	0.00	0.1	0.1	0.11	0.11	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	37	37	0.00	0.00	0.5	0.5	41	41	0.00	0.00
Nutrients															
Ammonia (NH_3)	mg/L	0.061	0.061	0.15	-	1	1.1	9.52	-	0.061	-	0.46	0.46	0.00	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.12	0.05	0.82	0.89	8.19	**82.35**	0.05	0.05	0.38	0.38	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	1.57	1.57	0.00	0.00	0.1	0.1	2.7	2.71	0.37	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.034	0.018	**61.54**	0.00	0.01	0.01	0.057	0.057	0.00	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.0079	0.0075	5.19	0.00	0.001	0.001	0.0087	0.0081	7.14	0.00
Total Metals															
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.142	0.141	0.71	0.00	0.003	0.003	0.0598	0.0648	8.03	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.0654	0.0657	0.46	0.00	0.0001	0.0001	0.147	0.157	6.58	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0438	0.0441	0.68	0.00	0.001	0.001	0.0444	0.0468	5.26	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000011	0.000011	0.00	0.00	0.00001	0.00001	0.000014	0.000013	7.41	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.0024	0.0024	0.00	0.00	0.001	0.001	0.001	0.0011	9.52	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00094	0.00091	3.24	0.00	0.0005	0.0005	0.00084	0.00091	8.00	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	0.453	0.44	2.91	0.00	0.01	0.01	0.178	0.177	0.56	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.00047	0.00038	**21.18**	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.182	0.184	1.09	0.00	0.001	0.001	0.0626	0.0662	5.59	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.009	0.0092	2.20	0.00	0.001	0.001	0.0077	0.008	3.82	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0117	0.0115	1.72	0.00	0.001	0.001	0.0131	0.0141	7.35	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.00014	0.00014	0.00	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000015	0.000014	6.90	0.00	0.00001	0.00001	0.00002	0.000021	4.88	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								0%	0%					0%	0%

Parameter	Sample date		9/2/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	165	166	0.60	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	52	50	3.92	0.00
TDS	mg/L	10	10	10	10	360	380	5.41	0.00
TSS	mg/L	1	1	1	1	2	2	0.00	0.00
Major Ions									
Chloride	mg/L	1	1	1	1	60	59	1.68	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.14	0.12	15.38	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	58	58	0.00	0.00
Nutrients									
Ammonia (NH_3)	mg/L	0.061	0.061	0.061	-	0.1	0.1	0.00	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.084	0.085	1.18	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	2.79	2.84	1.78	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.033	0.033	0.00	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.001	0.0094	0.01	6.19	0.00
Total Metals									
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.044	0.0353	21.94	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.141	0.142	0.71	0.00
Barium	mg/L	0.001	0.001	0.001	0.001	0.0593	0.06	1.17	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000012	0.000013	8.00	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00085	0.00084	1.18	0.00
Iron	mg/L	0.01	0.01	0.01	0.01	0.161	0.151	6.41	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Manganese	mg/L	0.001	0.001	0.001	0.001	0.0637	0.0644	1.09	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0083	0.0084	1.20	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0094	0.0096	2.11	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00022	0.00022	0.00	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000021	0.000019	10.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*								4%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-51 Whale Tail 2024 Discharge to Whale Tail South QAQC (ST-WT-24)

Parameter	Sample date		4/15/2024						5/6/2024		5/13/2024		10/1/2024					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Original	Trip Blank	Original	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																		
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	104	96.4	7.58	-	0.5	119	0.5	102	0.5	-	227	243	6.81	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	52	55	5.61	0.00	1.7	45	1	40	1	1	52	51	1.94	0.00
Carbonate, as $CaCO_3$	mg/L	1	1	-	1	1	0.00	-	1	1	1	1	1	-	1	1	0.00	-
Bicarbonate, as $CaCO_3$	mg/L	1	1	-	52	55	5.61	-	1.7	45	1	40	1	-	51	51	0.00	-
TDS	mg/L	10	10	10	190	195	2.60	0.00	35	200	10	195	10	10	485	495	2.04	0.00
TSS	mg/L	1	1	1	1	1	0.00	0.00	1	1	1	2	1	1	3	4	**28.57**	0.00
Total organic carbon	mg/L	0.4	0.42	0.4	2.2	2.2	0.00	4.88	0.4	2.3	0.56	2.6	0.4	0.4	3.9	2.9	**29.41**	0.00
Dissolved organic carbon	mg/L	0.4	0.77	0.4	2.2	2.1	4.65	**63.25**	0.4	2.1	0.77	2.4	0.66	0.4	2.5	2.5	0.00	**49.06**
Major Ions																		
Chloride	mg/L	1	1	1	31	31	0.00	0.00	1	38	1	40	1	1	77	77	0.00	0.00
Silica	mg/L	0.05	0.05	0.05	8.9	9	1.12	0.00	0.29	7.9	0.05	6.5	0.05	0.05	5.6	5.6	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	47	47	0.00	0.00	0.5	47	0.5	48	0.5	0.5	130	130	0.00	0.00
Nutrients																		
Ammonia (NH_3)	mg/L	0.061	0.061	-	1.3	1.3	0.00	-	0.061	0.98	0.075	1.6	0.061	-	1.2	1.2	0.00	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	1.1	1.1	0.00	0.00	0.05	0.8	0.062	1.3	0.05	0.05	0.96	0.95	1.05	0.00
Nitrate	mg N/L	0.1	0.1	0.1	1.42	1.4	1.42	0.00	0.1	1.23	0.1	1.72	0.1	0.1	6.22	6.2	0.32	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.035	0.036	2.82	0.00	0.01	0.015	0.01	0.021	0.01	0.01	0.136	0.135	0.74	0.00
Total Kjeldahl nitrogen	mg N/L	0.1	0.1	0.1	1.2	1.2	0.00	0.00	0.1	0.96	0.1	1.3	0.1	0.1	1.1	1.1	0.00	0.00
Total phosphorus	mg P/L	0.001	0.0026	0.002	0.001	0.001	0.00	**26.09**	0.001	0.001	0.0016	0.001	0.001	0.001	0.0017	0.0022	**25.64**	0.00
Orthophosphate	mg P/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals																		
Aluminum	mg/L	0.003	0.0044	0.003	0.0042	0.005	17.39	**37.84**	0.003	0.003	0.003	0.0075	0.003	0.003	0.0141	0.0167	16.88	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.00075	0.0007	6.90	0.00	0.0005	0.00103	0.0005	0.00165	0.0005	0.0005	0.0121	0.0128	5.62	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00329	0.00386	15.94	0.00	0.0001	0.0023	0.0001	0.0044	0.0001	0.0001	0.0277	0.0297	6.97	0.00
Barium	mg/L	0.001	0.001	0.001	0.0428	0.0397	7.52	0.00	0.001	0.0502	0.001	0.0412	0.001	0.001	0.0572	0.062	8.05	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.000018	0.000025	**32.56**	0.00
Calcium (total)	mg/L	0.05	0.05	-	31.6	29.4	7.21	-	0.05	36	0.05	31	0.05	-	65.3	70.5	7.66	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00134	0.00148	9.93	0.00	0.0005	0.00115	0.0005	0.00081	0.0005	0.0005	0.00119	0.00144	19.01	0.00
Iron	mg/L	0.01	0.01	0.01	0.26	0.308	16.90	0.00	0.01	0.178	0.01	0.327	0.01	0.01	0.519	0.513	1.16	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00033	0.00045	**30.77**	0.00
Lithium	mg/L	0.002	0.002	0.002	0.004	0.0037	7.79	0.00	0.002	0.0048	0.002	0.0053	0.002	0.002	0.0116	0.0122	5.04	0.00

Parameter	Sample date		4/15/2024						5/6/2024		5/13/2024		10/1/2024					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Original	Trip Blank	Original	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Magnesium (total)	mg/L	0.05	0.05	-	6.08	5.55	9.11	-	0.05	7.05	0.05	6.06	0.05	-	15.4	16.2	5.06	-
Manganese	mg/L	0.001	0.001	0.001	0.256	0.234	8.98	0.00	0.001	0.266	0.001	0.209	0.001	0.001	0.146	0.157	7.26	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.008	0.0072	10.53	0.00	0.001	0.01	0.001	0.0066	0.001	0.001	0.0087	0.0093	6.67	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0048	0.0044	8.70	0.00	0.001	0.0079	0.001	0.0104	0.001	0.001	0.0238	0.026	8.84	0.00
Potassium (total)	mg/L	0.05	0.05	-	4.71	4.28	9.57	-	0.05	5.5	0.05	5.87	0.05	-	13.5	14.2	5.05	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00038	0.00042	10.00	0.00
Sodium (total)	mg/L	0.05	0.05	-	5.67	5.16	9.42	-	0.05	6.84	0.05	5.37	0.05	-	12.9	13.5	4.55	-
Strontium	mg/L	0.001	0.001	0.001	0.24	0.219	9.15	0.00	0.001	0.289	0.001	0.28	0.001	0.001	0.638	0.672	5.19	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.000011	0.000012	8.70	0.00	0.00001	0.000011	0.00001	0.000014	0.00001	0.00001	0.000021	0.000024	13.33	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.00073	0.00068	7.09	0.00	0.0001	0.00077	0.0001	0.00054	0.0001	0.0001	0.00369	0.00367	0.54	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.0066	0.0089	**29.68**	0.00	0.005	0.0094	0.005	0.0078	0.005	0.005	0.005	0.005	0.00	0.00
Dissolved Metals																		
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.003	0.00	0.00	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.00	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.00082	0.00079	3.73	0.00	0.0005	0.00103	0.0005	0.00185	0.0005	0.0005	0.0143	0.0143	0.00	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00056	0.00056	0.00	0.00	0.0001	0.00114	0.0001	0.00167	0.0001	0.0001	0.00324	0.00329	1.53	0.00
Barium	mg/L	0.001	0.001	0.001	0.0492	0.0494	0.41	0.00	0.001	0.0495	0.001	0.047	0.001	0.001	0.0656	0.066	0.61	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.054	0.056	3.64	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.000012	0.000015	**22.22**	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Copper	mg/L	0.0002	0.0002	0.0002	0.00264	0.00286	8.00	0.00	0.0002	0.00118	0.0002	0.00155	0.0002	0.0002	0.00136	0.00131	3.75	0.00
Iron	mg/L	0.005	0.005	0.005	0.0332	0.0327	1.52	0.00	0.005	0.0325	0.005	0.126	0.005	0.005	0.0106	0.0111	4.61	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.0045	0.0044	2.25	0.00	0.002	0.0046	0.002	0.0057	0.002	0.002	0.0138	0.0147	6.32	0.00
Manganese	mg/L	0.001	0.001	0.001	0.295	0.288	2.40	0.00	0.001	0.277	0.001	0.239	0.001	0.001	0.163	0.162	0.62	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0087	0.0084	3.51	0.00	0.001	0.0096	0.001	0.0075	0.001	0.001	0.0102	0.0102	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0055	0.0057	3.57	0.00	0.001	0.008	0.001	0.0119	0.001	0.001	0.0265	0.026	1.90	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00043	0.00044	2.30	0.00
Strontium	mg/L	0.001	0.001	0.001	0.29	0.276	4.95	0.00	0.001	0.301	0.001	0.316	0.001	0.001	0.735	0.715	2.76	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.000011	0.000012	8.70	0.00	0.00001	0.000012	0.00001	0.000013	0.00001	0.00001	0.000026	0.000025	3.92	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00

Parameter	Sample date		4/15/2024						5/6/2024		5/13/2024		10/1/2024					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Original	Trip Blank	Original	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.0008	0.00076	5.13	0.00	0.0001	0.00067	0.0001	0.00056	0.0001	0.0001	0.00415	0.00417	0.48	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.0113	0.0109	3.60	0.00	0.005	0.052	0.005	0.0135	0.005	0.005	0.005	0.005	0.00	0.00
Volatile Organics																		
Petroleum Hydrocarbons F (C10-C50)	mg/L	0.2	0.2	-	0.2	0.2	0.00	-	0.2	0.2	0.2	0.2	0.2	-	0.2	0.2	0.00	-
% Exceedance*							0%	0%									0%	0%

Parameter	Sample date		10/22/2024						11/11/2024					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters														
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	219	231	5.33	-	0.5	-	228	232	1.74	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	41	41	0.00	0.00	1	1	61	59	3.33	0.00
Carbonate, as $CaCO_3$	mg/L	1	1	-	1	1	0.00	-	1	-	1	1	0.00	-
Bicarbonate, as $CaCO_3$	mg/L	1	1	-	41	41	0.00	-	1	-	61	58	5.04	-
TDS	mg/L	10	10	10	445	465	4.40	0.00	10	10	480	505	5.08	0.00
TSS	mg/L	1	1	1	3	2	**40.00**	0.00	1	1	2	3	**40.00**	0.00
Total organic carbon	mg/L	0.4	0.4	0.4	2.7	3	10.53	0.00	0.4	0.4	2.4	2.4	0.00	0.00
Dissolved organic carbon	mg/L	0.4	0.4	0.4	2.5	2.6	3.92	0.00	0.4	0.4	2.3	2.3	0.00	0.00
Major Ions														
Chloride	mg/L	1	1	1	72	72	0.00	0.00	1	1	71	70	1.42	0.00
Silica	mg/L	0.05	0.05	0.05	5.2	5.2	0.00	0.00	0.05	0.05	6.9	7.5	8.33	0.00
Sulfate	mg/L	0.5	0.5	0.5	140	130	7.41	0.00	0.5	0.5	150	140	6.90	0.00
Nutrients														
Ammonia (NH_3)	mg/L	0.061	0.061	-	0.31	0.29	6.67	-	0.061	-	0.82	0.92	11.49	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.25	0.24	4.08	0.00	0.05	0.05	0.68	0.75	9.79	0.00
Nitrate	mg N/L	0.1	0.1	0.1	6.7	6.71	0.15	0.00	0.1	0.1	6.24	6.23	0.16	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.051	0.051	0.00	0.00	0.01	0.01	0.099	0.098	1.02	0.00
Total Kjeldahl nitrogen	mg N/L	0.1	0.1	0.1	0.86	0.92	6.74	0.00	0.1	0.1	0.87	0.7	**21.66**	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.0013	0.0019	**37.50**	0.00	0.001	0.001	0.0024	0.0023	4.26	0.00
Orthophosphate	mg P/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals														
Aluminum	mg/L	0.003	0.003	0.003	0.0107	0.0119	10.62	0.00	0.003	0.003	0.0081	0.0084	3.64	0.00

Parameter	Sample date		10/22/2024						11/11/2024					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Antimony	mg/L	0.0005	0.0005	0.0005	0.0107	0.0111	3.67	0.00	0.0005	0.0005	0.02	0.0205	2.47	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0278	0.031	10.88	0.00	0.0001	0.0001	0.0857	0.0924	7.52	0.00
Barium	mg/L	0.001	0.001	0.001	0.0653	0.0675	3.31	0.00	0.001	0.001	0.0672	0.0677	0.74	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000016	0.000015	6.45	0.00	0.00001	0.00001	0.000016	0.000014	13.33	0.00
Calcium (total)	mg/L	0.05	0.05	-	62.9	65.9	4.66	-	0.05	-	63.9	64.7	1.24	-
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00103	0.00088	15.71	0.00	0.0005	0.0005	0.00106	0.00101	4.83	0.00
Iron	mg/L	0.01	0.01	0.01	0.527	0.561	6.25	0.00	0.01	0.01	0.731	0.754	3.10	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.0108	0.0113	4.52	0.00	0.002	0.002	0.0097	0.01	3.05	0.00
Magnesium (total)	mg/L	0.05	0.05	-	15.2	16.1	5.75	-	0.05	-	16.6	17	2.38	-
Manganese	mg/L	0.001	0.001	0.001	0.0926	0.0967	4.33	0.00	0.001	0.001	0.181	0.186	2.72	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0062	0.0065	4.72	0.00	0.001	0.001	0.0094	0.0097	3.14	0.00
Nickel	mg/L	0.001	0.001	0.001	0.019	0.0196	3.11	0.00	0.001	0.001	0.05	0.0512	2.37	0.00
Potassium (total)	mg/L	0.05	0.05	-	13	13.5	3.77	-	0.05	-	15	15.1	0.66	-
Selenium	mg/L	0.0001	0.0001	0.0001	0.00033	0.00037	11.43	0.00	0.0001	0.0001	0.00047	0.00049	4.17	0.00
Sodium (total)	mg/L	0.05	0.05	-	11.6	12.2	5.04	-	0.05	-	14	14.3	2.12	-
Strontium	mg/L	0.001	0.001	0.001	0.648	0.68	4.82	0.00	0.001	0.001	0.62	0.64	3.17	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.000018	0.000019	5.41	0.00	0.00001	0.00001	0.000033	0.000037	11.43	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.00232	0.00244	5.04	0.00	0.0001	0.0001	0.00298	0.00301	1.00	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.011	0.0061	**57.31**	0.00	0.005	0.005	0.0065	0.0086	**27.81**	0.00
Dissolved Metals														
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.003	0.00	0.00	0.003	0.003	0.0038	0.003	**23.53**	0.00
Antimony	mg/L	0.0005	0.0005	0.0005	0.0115	0.0114	0.87	0.00	0.0005	0.0005	0.0211	0.0209	0.95	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00275	0.00171	46.64	0.00	0.0001	0.0001	0.00597	0.00596	0.17	0.00
Barium	mg/L	0.001	0.001	0.001	0.0687	0.0683	0.58	0.00	0.001	0.001	0.072	0.0729	1.24	0.00
Beryllium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Boron	mg/L	0.05	0.05	0.05	0.05	0.052	3.92	0.00	0.05	0.05	0.05	0.05	0.00	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000022	0.000018	20.00	0.00	0.00001	0.00001	0.000014	0.000014	0.00	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.00	0.00

Parameter	Sample date		10/22/2024						11/11/2024					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Copper	mg/L	0.0002	0.0002	0.0002	0.00143	0.00111	**25.20**	0.00	0.0002	0.0002	0.00078	0.00076	2.60	0.00
Iron	mg/L	0.005	0.005	0.005	0.0653	0.0663	1.52	0.00	0.005	0.005	0.0594	0.0591	0.51	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Lithium	mg/L	0.002	0.002	0.002	0.0106	0.0107	0.94	0.00	0.002	0.002	0.0103	0.0104	0.97	0.00
Manganese	mg/L	0.001	0.001	0.001	0.106	0.103	2.87	0.00	0.001	0.001	0.192	0.19	1.05	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0065	0.0067	3.03	0.00	0.001	0.001	0.0101	0.01	1.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.021	0.0204	2.90	0.00	0.001	0.001	0.0514	0.0513	0.19	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.00039	0.00039	0.00	0.00	0.0001	0.0001	0.00047	0.00046	2.15	0.00
Strontium	mg/L	0.001	0.001	0.001	0.63	0.646	2.51	0.00	0.001	0.001	0.697	0.684	1.88	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00002	0.000018	10.53	0.00	0.00001	0.00001	0.000032	0.000033	3.08	0.00
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Titanium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Uranium	mg/L	0.0001	0.0001	0.0001	0.00237	0.00241	1.67	0.00	0.0001	0.0001	0.00296	0.00292	1.36	0.00
Vanadium	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.0084	0.0064	**27.03**	0.00	0.005	0.005	0.14	0.027	*135.33*	0.00
Volatile Organics														
Petroleum Hydrocarbons F (C10-C50)	mg/L	0.2	0.2	-	0.2	0.2	0.00	-	0.2	-	0.2	0.2	0.00	-
% Exceedance*							1%	0%					0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-52 Whale Tail 2024 Landfarm QAQC (ST-WT-27)

Parameter	Sample date		9/4/2024						
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters									
TSS	mg/L	1	1	1	1	10	12	18.18	0.00
Total Metals									
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.052	0.0514	1.16	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.00025	0.00026	3.92	0.00
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0093	0.0096	3.17	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	2.68	2.74	2.21	0.00
Volatile Organics									
Benzene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Ethylbenzene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Toluene	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Xylenes	mg/L	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.00	0.00
F2 (C10-C16)	mg/L	0.09	0.1	0.1	0.1	0.1	0.1	0.00	0.00
F3 (C16-C34)	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.00	0.00
F4 (C34-C50)	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.00	0.00
% Exceedance*								0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-53 Whale Tail 2024 IVR WRSF QAQC (ST-WT-28)

Parameter	Sample date		6/10/2024							10/8/2024	
	Unit	MDL	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Original
Conventional Parameters											
Hardness, as $CaCO_3$	mg/L	0.5	0.5	0.5	-	218	224	2.71	-	0.5	308
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	1	48	47	2.11	0.00	1	62
TDS	mg/L	10	10	10	10	490	440	10.75	0.00	10	480
TSS	mg/L	1	1	1	1	49	34	36.14	0.00	1	17
Major Ions											
Chloride	mg/L	1	1	1	1	110	120	8.70	0.00	1	74
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1
Sulfate	mg/L	0.5	0.5	0.5	0.5	14	15	6.90	0.00	0.5	160
Nutrients											
Total Ammonia (NH_3)	mg/L	0.061	0.061	0.061	-	0.2	0.17	16.22	-	0.061	0.061
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.16	0.14	13.33	0.00	0.05	0.05
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.91	0.98	7.41	0.00	0.1	10.1
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.022	0.018	20.00	0.00	0.01	0.041
Total Metals											
Aluminum	mg/L	0.003	0.003	0.003	0.003	0.553	0.567	2.50	0.00	0.003	0.305
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0001	0.164	0.164	0.00	0.00	0.0001	0.321
Barium	mg/L	0.001	0.001	0.001	0.001	0.118	0.118	0.00	0.00	0.001	0.106
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000101	0.000107	5.77	0.00	0.00001	0.000099
Chromium	mg/L	0.001	0.001	0.001	0.001	0.0163	0.0167	2.42	0.00	0.001	0.0088
Copper	mg/L	0.0005	0.0005	0.0005	0.0005	0.00144	0.00137	4.98	0.00	0.0005	0.00127
Iron	mg/L	0.01	0.01	0.01	0.01	1.05	1.05	0.00	0.00	0.01	0.548
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.00113	0.00115	1.75	0.00	0.0002	0.00049
Manganese	mg/L	0.001	0.001	0.001	0.001	0.182	0.189	3.77	0.00	0.001	0.506
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.0017	0.0017	0.00	0.00	0.001	0.0039
Nickel	mg/L	0.001	0.001	0.001	0.001	0.0306	0.0301	1.65	0.00	0.001	0.0445
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00021	0.00024	13.33	0.00	0.0001	0.00193
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.000021	4.88	0.00	0.00002	0.00002
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.000052	0.000059	12.61	0.00	0.00001	0.000055
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005
% Exceedance*								4%	0%		

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-54 Whale Tail 2024 Whale Tail WRSF QAQC (ST-WT-30)

Parameter	Sample date		6/9/2024					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters								
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	20.8	20.3	2.43	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	20	21	4.88	0.00
TDS	mg/L	10	10	10	20	25	**22.22**	0.00
TSS	mg/L	1	1	1	5	5	0.00	0.00
Major Ions								
Chloride	mg/L	1	1	1	1	1	0.00	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	3.8	3.9	2.60	0.00
Nutrients								
Ammonia (NH_3)	mg/L	5	0.061	-	0.061	0.061	0.00	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.25	0.24	4.08	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals								
Aluminum	mg/L	0.003	0.0038	0.003	0.279	0.283	1.42	**23.53**
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0104	0.0106	1.90	0.00
Barium	mg/L	0.001	0.001	0.001	0.0123	0.0126	2.41	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Chromium	mg/L	0.001	0.001	0.001	0.0066	0.0068	2.99	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00173	0.00136	**23.95**	0.00
Iron	mg/L	0.01	0.01	0.01	0.462	0.46	0.43	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.00039	0.00039	0.00	0.00
Manganese	mg/L	0.001	0.001	0.001	0.02	0.0201	0.50	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0054	0.0052	3.77	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.00011	0.00013	16.67	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.000011	0.000011	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*							0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-55 Whale Tail 2024 Whale Tail WRSF QAQC (ST-WT-31)

Parameter	Sample date		6/9/2024					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters								
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	7.46	7.83	4.84	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	7.5	7.2	4.08	0.00
TDS	mg/L	10	10	10	15	10	**40.00**	0.00
TSS	mg/L	1	1	1	5	4	**22.22**	0.00
Major Ions								
Chloride	mg/L	1	1	1	1	1	0.00	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	0.5	0.5	0.00	0.00
Nutrients								
Ammonia (NH_3)	mg/L	5	0.061	-	0.061	0.061	0.00	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals								
Aluminum	mg/L	0.003	0.003	0.003	0.184	0.193	4.77	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00875	0.00961	9.37	0.00
Barium	mg/L	0.001	0.001	0.001	0.0054	0.0059	8.85	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Chromium	mg/L	0.001	0.001	0.001	0.0043	0.0045	4.55	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.0009	0.00094	4.35	0.00
Iron	mg/L	0.01	0.01	0.01	0.283	0.305	7.48	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.00036	0.00037	2.74	0.00
Manganese	mg/L	0.001	0.001	0.001	0.0187	0.0196	4.70	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0028	0.003	6.90	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*							0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-56 Whale Tail 2024 Whale Tail WRSF QAQC (ST-WT-32)

Parameter	Sample date		6/16/2024					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters								
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	16.5	19.3	15.64	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	14	14	0.00	0.00
TDS	mg/L	10	10	10	35	35	0.00	0.00
TSS	mg/L	1	1	1	6	32	*136.84*	0.00
Major Ions								
Chloride	mg/L	1	1	1	1	1	0.00	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	3.9	3.7	5.26	0.00
Nutrients								
Ammonia (NH_3)	mg/L	0.061	0.061	-	0.11	0.17	**42.86**	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.088	0.14	**45.61**	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.11	0.1	9.52	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals								
Aluminum	mg/L	0.003	0.003	0.003	0.242	0.8	107.10	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0154	0.0188	19.88	0.00
Barium	mg/L	0.001	0.001	0.001	0.0148	0.0199	29.39	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000011	0.000021	**62.50**	0.00
Chromium	mg/L	0.001	0.001	0.001	0.006	0.0236	*118.92*	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00091	0.0014	**42.42**	0.00
Iron	mg/L	0.01	0.01	0.01	0.382	1.43	115.67	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0003	0.00101	**108.40**	0.00
Manganese	mg/L	0.001	0.001	0.001	0.046	0.0615	28.84	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0051	0.0099	**64.00**	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.00011	0.0001	9.52	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.000011	0.000021	**62.50**	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*							15%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-57 Whale Tail 2024 Whale Tail WRSF QAQC (ST-WT-33)

Parameter	Sample date		6/9/2024					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters								
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	37.9	40.8	7.37	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	34	34	0.00	0.00
TDS	mg/L	10	10	10	45	45	0.00	0.00
TSS	mg/L	1	1	1	60	86	35.62	0.00
Major Ions								
Chloride	mg/L	1	1	1	1	1	0.00	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	5.3	5.1	3.85	0.00
Nutrients								
Ammonia (NH_3)	mg/L	5	0.061	-	0.1	0.061	**48.45**	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.083	0.05	**49.62**	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.19	0.19	0.00	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Total Metals								
Aluminum	mg/L	0.003	0.003	0.003	1.69	1.9	11.70	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0467	0.0487	4.19	0.00
Barium	mg/L	0.001	0.001	0.001	0.0355	0.0378	6.28	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000017	0.000016	6.06	0.00
Chromium	mg/L	0.001	0.001	0.001	0.0488	0.0558	13.38	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00273	0.00291	6.38	0.00
Iron	mg/L	0.01	0.01	0.01	2.97	3.38	12.91	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0026	0.00295	12.61	0.00
Manganese	mg/L	0.001	0.001	0.001	0.0893	0.0959	7.13	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0014	0.0012	15.38	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0183	0.0207	12.31	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.00016	0.00015	6.45	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.000045	0.000049	8.51	0.00
Zinc	mg/L	0.005	0.005	0.005	0.0057	0.006	5.13	0.00
% Exceedance*							4%	0%

Footnotes:
RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-58 Whale Tail 2024 IVR WRSF QAQC (ST-WT-34)

Parameter	Sample date		6/10/2024						9/10/2024	
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Original
Conventional Parameters										
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	49.9	55.1	9.90	-	0.5	365
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	37	37	0.00	0.00	1	90
TDS	mg/L	10	10	10	95	95	0.00	0.00	10	820
TSS	mg/L	1	1	1	61	56	8.55	0.00	1	44
Major Ions										
Chloride	mg/L	1	1	1	11	11	0.00	0.00	1	180
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1
Sulfate	mg/L	0.5	0.5	0.5	11	11	0.00	0.00	0.5	140
Nutrients										
Ammonia (NH_3)	mg/L	0.061	0.061	-	0.11	0.088	**22.22**	-	0.061	0.4
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.092	0.072	**24.39**	0.00	0.05	0.33
Nitrate	mg N/L	0.1	0.1	0.1	0.35	0.38	8.22	0.00	0.1	3.67
Nitrite	mg N/L	0.01	0.01	0.01	0.011	0.01	9.52	0.00	0.01	0.038
Total Metals										
Aluminum	mg/L	0.003	0.003	0.003	1.37	1.5	9.06	0.00	0.003	0.961
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0329	0.0357	8.16	0.00	0.0001	0.0447
Barium	mg/L	0.001	0.001	0.001	0.0393	0.0425	7.82	0.00	0.001	0.104
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000015	0.000022	**37.84**	0.00	0.00001	0.000074
Chromium	mg/L	0.001	0.001	0.001	0.0274	0.0299	8.73	0.00	0.001	0.0233
Copper	mg/L	0.0005	0.0194	0.0005	0.00287	0.00312	8.35	*189.95*	0.0005	0.00284
Iron	mg/L	0.01	0.01	0.01	2.72	2.9	6.41	0.00	0.01	1.79
Lead	mg/L	0.0002	0.0002	0.0002	0.00211	0.00228	7.74	0.00	0.0002	0.00084
Manganese	mg/L	0.001	0.001	0.001	0.133	0.145	8.63	0.00	0.001	0.735
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.0018
Nickel	mg/L	0.001	0.001	0.001	0.0138	0.0147	6.32	0.00	0.001	0.0201
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.00012	18.18	0.00	0.0001	0.00044
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002
Thallium	mg/L	0.00001	0.00001	0.00001	0.000037	0.000043	15.00	0.00	0.00001	0.000037
Zinc	mg/L	0.005	0.005	0.005	0.0058	0.0062	6.67	0.00	0.005	0.005
% Exceedance*							0%	0%		

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-59 Whale Tail 2024 IVR WRSF QAQC (ST-WT-35)

Parameter	Sample date		6/10/2024						9/10/2024	
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Original
Conventional Parameters										
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	34.5	38.1	9.92	-	0.5	157
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	34	33	2.99	0.00	1	49
TDS	mg/L	10	10	10	60	60	0.00	0.00	10	325
TSS	mg/L	1	1	1	53	76	35.66	0.00	1	42
Major Ions										
Chloride	mg/L	1	1	1	1	3.3	**106.98**	0.00	1	28
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1
Sulfate	mg/L	0.5	0.5	0.5	4.8	5.4	11.76	0.00	0.5	99
Nutrients										
Ammonia (NH_3)	mg/L	0.061	0.061	-	0.061	0.12	**65.19**	-	0.061	0.14
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.099	**65.77**	0.00	0.05	0.12
Nitrate	mg N/L	0.1	0.1	0.1	0.26	0.26	0.00	0.00	0.1	8.2
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.036
Total Metals										
Aluminum	mg/L	0.003	0.003	0.003	1.28	1.46	13.14	0.00	0.003	1.1
Arsenic	mg/L	0.0001	0.0001	0.0001	0.0341	0.0361	5.70	0.00	0.0001	0.0107
Barium	mg/L	0.001	0.001	0.001	0.0369	0.0386	4.50	0.00	0.001	0.0552
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000015	0.00002	**28.57**	0.00	0.00001	0.000075
Chromium	mg/L	0.001	0.001	0.001	0.0352	0.0354	0.57	0.00	0.001	0.0251
Copper	mg/L	0.0005	0.0005	0.0005	0.00251	0.00258	2.75	0.00	0.0005	0.0022
Iron	mg/L	0.01	0.01	0.01	2.43	2.43	0.00	0.00	0.01	1.78
Lead	mg/L	0.0002	0.0002	0.0002	0.00183	0.00196	6.86	0.00	0.0002	0.00091
Manganese	mg/L	0.001	0.001	0.001	0.121	0.121	0.00	0.00	0.001	0.695
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.0021
Nickel	mg/L	0.001	0.001	0.001	0.0168	0.0166	1.20	0.00	0.001	0.0124
Selenium	mg/L	0.0001	0.0001	0.0001	0.00013	0.00014	7.41	0.00	0.0001	0.00065
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002
Thallium	mg/L	0.00001	0.00001	0.00001	0.000036	0.000045	**22.22**	0.00	0.00001	0.000036
Zinc	mg/L	0.005	0.005	0.005	0.0054	0.0053	1.87	0.00	0.005	0.005
% Exceedance*							4%	0%		

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-60 Whale Tail 2024 IVR WRSF QAQC (ST-WT-36)

Parameter	Sample date		6/10/2024					
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters								
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	51.1	52.7	3.08	-
Total alkalinity, as $CaCO_3$	mg/L	1	1.3	1	52	52	0.00	**26.09**
TDS	mg/L	10	10	10	95	85	11.11	0.00
TSS	mg/L	1	1	1	21	20	4.88	0.00
Major Ions								
Chloride	mg/L	1	1	1	2.6	2.2	16.67	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	13	13	0.00	0.00
Nutrients								
Ammonia (NH_3)	mg/L	5	0.061	-	0.15	0.085	**55.32**	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.12	0.07	**52.63**	0.00
Nitrate	mg N/L	0.1	0.1	0.1	0.51	0.49	4.00	0.00
Nitrite	mg N/L	0.01	0.02	0.01	0.019	0.024	**23.26**	**66.67**
Total Metals								
Aluminum	mg/L	0.003	0.003	0.003	0.53	0.5	5.83	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.325	0.324	0.31	0.00
Barium	mg/L	0.001	0.001	0.001	0.0326	0.0325	0.31	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000013	0.000011	16.67	0.00
Chromium	mg/L	0.001	0.001	0.001	0.0115	0.0105	9.09	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00187	0.00113	**49.33**	0.00
Iron	mg/L	0.01	0.01	0.01	0.999	0.97	2.95	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.00092	0.00094	2.15	0.00
Manganese	mg/L	0.001	0.001	0.001	0.116	0.116	0.00	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.0013	0.0013	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0173	0.0174	0.58	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0002	0.00021	4.88	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.000028	0.000029	3.51	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*							0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-61 Whale Tail 2024 IVR Diversion Channel QAQC (ST-WT-37)

Parameter	Sample date		6/10/2024						9/10/2024						
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters															
TSS	mg/L	1	1	1	2	2	0.00	0.00	1	1	1	2	1	**66.67**	0.00
Major Ions															
Sulfate	mg/L	1	1	1	4.7	4.7	0.00	0.00	1	1	1	19	20	5.13	0.00
Nutrients															
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Un-Ionized Ammonia, calculated	mg N/L	0.02	-	-	0.0012	0.0012	0.00	-	-	-	-	0.00061	0.00061	0.00	-
Total Metals															
Aluminum	mg/L	0.003	0.003	0.003	0.0981	0.101	2.91	0.00	0.003	0.003	0.003	0.0407	0.035	15.06	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00178	0.00182	2.22	0.00	0.0001	0.0001	0.0001	0.00246	0.00234	5.00	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00091	0.00108	17.09	0.00	0.0005	0.0005	0.0005	0.00114	0.00105	8.22	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00	0.0002	0.0002	0.0002	0.0002	0.0002	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0025	0.0023	8.33	0.00	0.001	0.001	0.001	0.0033	0.003	9.52	0.00
Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.00	0.00	0.005	0.005	0.005	0.005	0.005	0.00	0.00
% Exceedance*							0%	0%						0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.

Table 1-62 Whale Tail 2024 STP QAQC (ST-WT-11)

Parameter	Sample date		5/7/2024						7/2/2024		10/8/2024						
	Unit	MDL	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)	Trip Blank	Original	Trip Blank	Field Blank	Lab Blank	Duplicate	Original	RPD (FD/N)	RPD (FB/LB)
Conventional Parameters																	
Hardness, as $CaCO_3$	mg/L	0.5	0.5	-	83	84.3	1.55	-	0.5	84.2	0.5	0.5	-	49.3	46.1	6.71	-
Total alkalinity, as $CaCO_3$	mg/L	1	1	1	7.6	6.4	17.14	0.00	1.5	6.1	1	1	1	66	64	3.08	0.00
TDS	mg/L	10	10	10	335	340	1.48	0.00	10	380	10	10	10	345	295	15.63	0.00
TSS	mg/L	1	1	1	1	1	0.00	0.00	1	1	1	1	1	1	2	**66.67**	0.00
Major Ions																	
Chloride	mg/L	1	1	1	69	61	12.31	0.00	1	59	1	1	1	49	49	0.00	0.00
Fluoride	mg/L	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00
Sulfate	mg/L	0.5	0.5	0.5	100	92	8.33	0.00	0.5	47	0.5	0.5	0.5	55	54	1.83	0.00
Nutrients																	
Ammonia (NH_3)	mg N/L	0.061	0.061	-	0.061	0.11	**57.31**	-	0.061	0.061	0.061	0.061	-	0.061	0.061	0.00	-
Ammonia Nitrogen	mg N/L	0.05	0.05	0.05	0.05	0.089	**56.12**	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00
Un-Ionized Ammonia, calculated	mg N/L	0.0001	-	-	0.0004	0.0004	0.00	-	-	0.00071	-	-	-	0.0004	0.0004	0.00	-
Nitrate	mg N/L	0.1	0.1	0.1	7.92	8.1	2.25	0.00	0.1	21.6	0.1	0.1	0.1	10.2	10.4	1.94	0.00
Nitrite	mg N/L	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.023	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Biochemical Oxygen Demand, 5 Day	mg N/L	2	2	2	2	2	0.00	0.00	2	2	2	2	2	2	2	0.00	0.00
Total phosphorus	mg P/L	0.001	0.001	0.001	0.051	0.049	4.00	0.00	0.001	3.8	0.001	0.001	0.001	0.79	0.65	19.44	0.00
Orthophosphate	mg P/L	0.01	0.01	0.01	0.028	0.028	0.00	0.00	0.01	3.6	0.01	0.01	0.01	0.71	0.71	0.00	0.00
General Organics																	
Total oil and grease	mg/L	0.5	0.5	0.5	1	0.7	**35.29**	0.00	0.5	1.6	0.5	0.5	0.5	0.5	0.5	0.00	0.00
Total Metals																	
Aluminum	mg/L	0.003	0.0038	0.003	0.0414	0.0403	2.69	**23.53**	0.003	0.0313	0.003	0.003	0.003	0.0246	0.0203	19.15	0.00
Arsenic	mg/L	0.0001	0.0001	0.0001	0.00097	0.00112	14.35	0.00	0.0001	0.00835	0.0001	0.0001	0.0001	0.00751	0.00657	13.35	0.00
Barium	mg/L	0.001	0.001	0.001	0.0065	0.0065	0.00	0.00	0.001	0.0046	0.001	0.001	0.001	0.0016	0.0012	**28.57**	0.00
Cadmium	mg/L	0.00001	0.00001	0.00001	0.000044	0.000036	20.00	0.00	0.00001	0.000051	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Chromium	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Copper	mg/L	0.0005	0.0005	0.0005	0.00477	0.00473	0.84	0.00	0.0005	0.00567	0.0005	0.0005	0.0005	0.00166	0.00122	**30.56**	0.00
Iron	mg/L	0.01	0.01	0.01	0.025	0.027	7.69	0.00	0.01	0.041	0.01	0.01	0.01	0.026	0.02	**26.09**	0.00
Lead	mg/L	0.0002	0.0002	0.0002	0.00077	0.00059	**26.47**	0.00	0.0002	0.00033	0.0002	0.0002	0.0002	0.00021	0.0002	4.88	0.00
Manganese	mg/L	0.001	0.001	0.001	0.0559	0.0568	1.60	0.00	0.001	0.0632	0.001	0.001	0.001	0.0108	0.0123	12.99	0.00
Mercury	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Molybdenum	mg/L	0.001	0.001	0.001	0.001	0.001	0.00	0.00	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.00	0.00
Nickel	mg/L	0.001	0.001	0.001	0.0306	0.0165	59.87	0.00	0.001	0.0186	0.001	0.001	0.001	0.0049	0.0045	8.51	0.00
Selenium	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00	0.00
Silver	mg/L	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00	0.00
Thallium	mg/L	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00	0.00
Zinc	mg/L	0.005	0.005	0.005	0.143	0.122	15.85	0.00	0.005	0.178	0.005	0.005	0.005	0.0232	0.0206	11.87	0.00
% Exceedance*							3%	0%								0%	0%

RPD = Relative Percent Difference; MDL: Method Detection Limit
All values "<DL" have been replaced by "DL".
* Percentage of parameters exceeding the QAQC objectives for one sampling event which corresponds to grey shaded cells.
Bold values correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are within 10x the MDL.
Grey shaded cells correspond to a RPD higher than 20% and for which concentrations of parent and duplicate samples are above 10x the MDL.
Italic values correspond to a RPD higher than 20% and for which one of the results is within 10X the MDL and the other one exceeds 10x the MDL.