

SWCRR Wetland 06 - Spring 2022 Monitoring Data Results

Project 102604-01
ReportTo HEMMERA ENVIROCHEM INC.
Maxxam Job No. C235503
Date Received 26-05-2022
Report Date 06-06-2022

RESULTS OF ANALYSIS

| Sample ID | WQ2 | WQ3 | WQ6 | WQ4B | WQ4C | WQ4D |
|-------------------------|---|------------|------------|------------|------------|------------|
| Date Sampled | 26-05-2022 | 26-05-2022 | 26-05-2022 | 26-05-2022 | 26-05-2022 | 26-05-2022 |
| Time Sampled | 10:30 | 9:50 | 11:10 | 14:10 | 14:40 | 15:00 |
| Maxxam Sample ID | ATS399 | ATS400 | ATS401 | ATS402 | ATS403 | ATS404 |
| Nature | SOIL | SOIL | SOIL | SOIL | SOIL | SOIL |
| Chain Of Custody Number | 1 of 1 | 1 of 1 | 1 of 1 | 1 of 1 | 1 of 1 | 1 of 1 |
| CAS# | Hexavalent Chromium | | | | | |
| 18540-29-9 | Hex. Chromium (Cr 6+) | | | | | |
| | <0.080 | <0.080 | <0.18 | <0.30 | <0.080 | <0.080 |
| | Elements by ICPMS - Soils | | | | | |
| 7440-47-3 | Chromium (Cr) | | | | | |
| | 15 | 10 | 14 | 13 | 19 | 40 |
| 7440-48-4 | Cobalt (Co) | | | | | |
| | 6.6 | 4.3 | 6.6 | 5.9 | 6.2 | 6.3 |
| 7440-50-8 | Copper (Cu) | | | | | |
| | 17 | 9.5 | 18 | 16 | 14 | 15 |
| 7439-97-6 | Mercury (Hg) | | | | | |
| | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| 7439-92-1 | Lead (Pb) | | | | | |
| | 10 | 7.0 | 11 | 9.0 | 9.9 | 9.4 |
| 7440-36-0 | Antimony (Sb) | | | | | |
| | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| 7439-98-7 | Molybdenum (Mo) | | | | | |
| | 0.88 | 0.50 | 1.6 | 0.68 | 0.57 | 0.90 |
| 7440-02-0 | Nickel (Ni) | | | | | |
| | 20 | 12 | 21 | 17 | 21 | 30 |
| 7782-49-2 | Selenium (Se) | | | | | |
| | 2.3 | 1.2 | 1.7 | 2.7 | 1.8 | 2.0 |
| 7440-22-4 | Silver (Ag) | | | | | |
| | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| 7440-38-2 | Arsenic (As) | | | | | |
| | 5.4 | 2.9 | 7.5 | 4.8 | 3.3 | 3.5 |
| 7440-28-0 | Thallium (Tl) | | | | | |
| | 0.17 | <0.10 | 0.17 | 0.14 | 0.18 | 0.16 |
| 7440-31-5 | Tin (Sn) | | | | | |
| | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| 7440-61-1 | Uranium (U) | | | | | |
| | 1.5 | 0.90 | 2.7 | 0.80 | 0.84 | 0.83 |
| 7440-62-2 | Vanadium (V) | | | | | |
| | 25 | 14 | 24 | 22 | 28 | 27 |
| 7440-66-6 | Zinc (Zn) | | | | | |
| | 80 | 50 | 82 | 420 | 140 | 180 |
| 7440-39-3 | Barium (Ba) | | | | | |
| | 230 | 160 | 220 | 200 | 160 | 170 |
| 7440-41-7 | Beryllium (Be) | | | | | |
| | 0.63 | <0.40 | 0.64 | 0.54 | 0.64 | 0.62 |
| 7440-43-9 | Cadmium (Cd) | | | | | |
| | 0.49 | 0.36 | 0.47 | 0.45 | 0.41 | 0.40 |
| | Moisture | | | | | |
| 0 | Moisture | | | | | |
| | 47 | 33 | 56 | 73 | 47 | 34 |
| | Soluble Ions | | | | | |
| 0 | Soluble Boron | | | | | |
| | 0.11 | <0.10 | <0.10 | 0.11 | <0.10 | <0.10 |
| | Soluble Paste | | | | | |
| 0 | Percent Saturation | | | | | |
| | 79 | 60 | 97 | 100 | 56 | 56 |
| | Soluble Boron Calculation | | | | | |
| 7440-42-8 | Boron (B) | | | | | |
| | 0.085 | <0.060 | <0.097 | 0.12 | <0.056 | <0.056 |
| | Total Organic Carbon LECO Method | | | | | |
| 0 | Total Organic Carbon | | | | | |
| | 5.5 | 4.3 | 6.1 | 8.8 | 2.1 | 2.4 |

AT1 REGULATED METALS - SOILS (SOIL)

| Bureau Veritas ID | ATS399 | ATS400 | ATS401 | ATS402 | ATS403 | ATS404 | | | | | | | | | | | | |
|------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|---------|-----------|----------|---------|-----------|----------|---------|--------|----------|--------|-------|---------|
| Sampling Date | 2022-05-26 10:30 | 2022-05-26 09:50 | 2022-05-26 11:10 | 2022-05-26 14:10 | 2022-05-26 14:40 | 2022-05-26 15:00 | | | | | | | | | | | | |
| COC Number | 1 of 1 | 1 of 1 | 1 of 1 | 1 of 1 | 1 of 1 | 1 of 1 | | | | | | | | | | | | |
| UNITS | WQ2 | RDL | QC Batch | WQ3 | RDL | QC Batch | WQ4B | RDL | QC Batch | WQ4C | RDL | QC Batch | WQ4D | RDL | QC Batch | | | |
| Calculated Parameters | | | | | | | | | | | | | | | | | | |
| Calculated Boron (B) | mg/kg | 0.085 | 0.080 | A591185 | <0.060 | 0.060 | A591185 | <0.097 | 0.097 | A591185 | 0.12 | 0.10 | A591185 | <0.056 | A591185 | <0.056 | 0.056 | A591185 |
| Elements | | | | | | | | | | | | | | | | | | |
| Hex. Chromium (Cr 6+) | mg/kg | <0.080 | 0.080 | A592841 | <0.080 | 0.080 | A592841 | <0.18 (1) | 0.18 | A592841 | <0.30 (1) | 0.30 | A592841 | <0.080 | A592841 | <0.080 | 0.080 | A592841 |
| Soluble Parameters | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | |
|-----------------------|-------|--------|-------|---------|--------|-------|---------|--------|-------|---------|--------|-------|---------|--------|---------|--------|-------|---------|
| Soluble Boron (B) | mg/L | 0.11 | 0.10 | A595345 | <0.10 | 0.10 | A595859 | <0.10 | 0.10 | A595345 | 0.11 | 0.10 | A595345 | <0.10 | A595345 | <0.10 | 0.10 | A595345 |
| Saturation % | % | 79 | N/A | A593463 | 60 | N/A | A592720 | 97 | N/A | A593463 | 100 | N/A | A593463 | 56 | A593463 | 56 | N/A | A593463 |
| Elements | | | | | | | | | | | | | | | | | | |
| Total Antimony (Sb) | mg/kg | <0.50 | 0.50 | A593632 | <0.50 | 0.50 | A593523 | <0.50 | 0.50 | A594284 | <0.50 | 0.50 | A593632 | <0.50 | A595344 | <0.50 | 0.50 | A593632 |
| Total Arsenic (As) | mg/kg | 5.4 | 1.0 | A593632 | 2.9 | 1.0 | A593523 | 7.5 | 1.0 | A594284 | 4.8 | 1.0 | A593632 | 3.3 | A595344 | 3.5 | 1.0 | A593632 |
| Total Barium (Ba) | mg/kg | 230 | 1.0 | A593632 | 160 | 1.0 | A593523 | 220 | 1.0 | A594284 | 200 | 1.0 | A593632 | 160 | A595344 | 170 | 1.0 | A593632 |
| Total Beryllium (Be) | mg/kg | 0.63 | 0.40 | A593632 | <0.40 | 0.40 | A593523 | 0.64 | 0.40 | A594284 | 0.54 | 0.40 | A593632 | 0.64 | A595344 | 0.62 | 0.40 | A593632 |
| Total Cadmium (Cd) | mg/kg | 0.49 | 0.050 | A593632 | 0.36 | 0.050 | A593523 | 0.47 | 0.050 | A594284 | 0.45 | 0.050 | A593632 | 0.41 | A595344 | 0.40 | 0.050 | A593632 |
| Total Chromium (Cr) | mg/kg | 15 | 1.0 | A593632 | 10 | 1.0 | A593523 | 14 | 1.0 | A594284 | 13 | 1.0 | A593632 | 19 | A595344 | 40 | 1.0 | A593632 |
| Total Cobalt (Co) | mg/kg | 6.6 | 0.50 | A593632 | 4.3 | 0.50 | A593523 | 6.6 | 0.50 | A594284 | 5.9 | 0.50 | A593632 | 6.2 | A595344 | 6.3 | 0.50 | A593632 |
| Total Copper (Cu) | mg/kg | 17 | 1.0 | A593632 | 9.5 | 1.0 | A593523 | 18 | 1.0 | A594284 | 16 | 1.0 | A593632 | 14 | A595344 | 15 | 1.0 | A593632 |
| Total Lead (Pb) | mg/kg | 10 | 0.50 | A593632 | 7.0 | 0.50 | A593523 | 11 | 0.50 | A594284 | 9.0 | 0.50 | A593632 | 9.9 | A595344 | 9.4 | 0.50 | A593632 |
| Total Mercury (Hg) | mg/kg | <0.050 | 0.050 | A593632 | <0.050 | 0.050 | A593523 | <0.050 | 0.050 | A594284 | <0.050 | 0.050 | A593632 | <0.050 | A595344 | <0.050 | 0.050 | A593632 |
| Total Molybdenum (Mo) | mg/kg | 0.88 | 0.40 | A593632 | 0.50 | 0.40 | A593523 | 1.6 | 0.40 | A594284 | 0.68 | 0.40 | A593632 | 0.57 | A595344 | 0.90 | 0.40 | A593632 |
| Total Nickel (Ni) | mg/kg | 20 | 1.0 | A593632 | 12 | 1.0 | A593523 | 21 | 1.0 | A594284 | 17 | 1.0 | A593632 | 21 | A595344 | 30 | 1.0 | A593632 |
| Total Selenium (Se) | mg/kg | 2.3 | 0.50 | A593632 | 1.2 | 0.50 | A593523 | 1.7 | 0.50 | A594284 | 2.7 | 0.50 | A593632 | 1.8 | A595344 | 2.0 | 0.50 | A593632 |
| Total Silver (Ag) | mg/kg | <0.20 | 0.20 | A593632 | <0.20 | 0.20 | A593523 | <0.20 | 0.20 | A594284 | <0.20 | 0.20 | A593632 | <0.20 | A595344 | <0.20 | 0.20 | A593632 |
| Total Thallium (Tl) | mg/kg | 0.17 | 0.10 | A593632 | <0.10 | 0.10 | A593523 | 0.17 | 0.10 | A594284 | 0.14 | 0.10 | A593632 | 0.18 | A595344 | 0.16 | 0.10 | A593632 |
| Total Tin (Sn) | mg/kg | <1.0 | 1.0 | A593632 | <1.0 | 1.0 | A593523 | <1.0 | 1.0 | A594284 | <1.0 | 1.0 | A593632 | <1.0 | A595344 | <1.0 | 1.0 | A593632 |
| Total Uranium (U) | mg/kg | 1.5 | 0.20 | A593632 | 0.90 | 0.20 | A593523 | 2.7 | 0.20 | A594284 | 0.80 | 0.20 | A593632 | 0.84 | A595344 | 0.83 | 0.20 | A593632 |
| Total Vanadium (V) | mg/kg | 25 | 1.0 | A593632 | 14 | 1.0 | A593523 | 24 | 1.0 | A594284 | 22 | 1.0 | A593632 | 28 | A595344 | 27 | 1.0 | A593632 |
| Total Zinc (Zn) | mg/kg | 90 | 10 | A593632 | 50 | 10 | A593523 | 82 | 10 | A594284 | 420 | 10 | A593632 | 140 | A595344 | 180 | 10 | A593632 |

PHYSICAL TESTING (SOIL)

| | | | | | | | | | |
|---------------------|--------------|------------------|------------------|------------------|------------------|------------------|------------------|------------|-----------------|
| Bureau Veritas ID | | ATS399 | ATS400 | ATS401 | ATS402 | ATS403 | ATS404 | | |
| Sampling Date | | 2022-05-26 10:30 | 2022-05-26 09:50 | 2022-05-26 11:10 | 2022-05-26 14:10 | 2022-05-26 14:40 | 2022-05-26 15:00 | | |
| COC Number | | 1 of 1 | 1 of 1 | 1 of 1 | 1 of 1 | 1 of 1 | 1 of 1 | | |
| | UNITS | WQ2 | WQ3 | WQ6 | WQ4B | WQ4C | WQ4D | RDL | QC Batch |
| Physical Properties | | | | | | | | | |
| Moisture | % | 47 | 33 | 56 | 73 | 47 | 34 | 0.30 | A591828 |

RESULTS OF CHEMICAL ANALYSES OF WATER

| Bureau Veritas ID | | ATS352 | ATS353 | | ATS354 | | ATS355 | | ATS356 | | ATS357 | ATS358 | ATS359 | | | | |
|------------------------------|-------|------------------|------------------|--------|------------------|---------|------------------|---------|------------------|----------|------------------|------------------|------------------|--------|---------|--------|----------|
| Sampling Date | | 2022-05-26 10:30 | 2022-05-26 09:50 | | 2022-05-26 14:10 | | 2022-05-26 14:40 | | 2022-05-26 15:00 | | 2022-05-26 13:50 | 2022-05-26 11:10 | 2022-05-26 11:30 | | | | |
| COC Number | | 664716-01-01 | 664716-01-01 | | 664716-01-01 | | 664716-01-01 | | 664716-01-01 | | 664716-01-01 | 664716-01-01 | 664716-01-01 | | | | |
| | UNITS | WQ2 | WQ3 | RDL | QC Batch | WQ4B | QC Batch | WQ4C | RDL | QC Batch | WQ4D | RDL | WQ5B | WQ6 | WQ7 | RDL | QC Batch |
| Calculated Parameters | | | | | | | | | | | | | | | | | |
| Nitrate (N) | mg/L | | | | | <0.010 | A590668 | <0.010 | 0.010 | A590668 | <0.050 | 0.050 | 0.013 | <0.010 | <0.010 | 0.010 | A590668 |
| Nitrate (NO3) | mg/L | | | | | <0.044 | A590667 | <0.044 | 0.044 | A590667 | <0.22 | 0.22 | 0.058 | <0.044 | <0.044 | 0.044 | A590667 |
| Demand Parameters | | | | | | | | | | | | | | | | | |
| Biochemical Oxygen Demand | mg/L | <3.3 | <2.2 | 2.0 | A590819 | | | | | | | | | | | | |
| Chemical Oxygen Demand | mg/L | 21 | 35 | 10 | A591335 | | | | | | | | | | | | |
| Misc. Inorganics | | | | | | | | | | | | | | | | | |
| Dissolved Oxygen (O2) | mg/L | 12 | 8.0 | 0.10 | A589940 | | | | | | | | | | | | |
| Total Dissolved Solids | mg/L | 830 | 570 | 10 | A591082 | 580 | A591082 | 430 | 10 | A591082 | 420 | 10 | 550 | 660 | 660 | 10 | A591082 |
| Total Suspended Solids | mg/L | 110 | 31 | 1.0 | A590996 | | | | | | | | | | | | |
| Nutrients | | | | | | | | | | | | | | | | | |
| Total Ammonia (N) | mg/L | <0.015 | 0.031 | 0.015 | A597327 | | | | | | | | | | | | |
| Orthophosphate (P) | mg/L | 0.0045 | 0.0050 | 0.0030 | A596041 | <0.0030 | A591718 | <0.0030 | 0.0030 | A591718 | 0.0031 | 0.0030 | <0.0030 | 0.0035 | <0.0030 | 0.0030 | A591718 |
| Dissolved Phosphorus (P) | mg/L | 0.0047 | 0.011 | 0.0030 | A592765 | | | | | | | | | | | | |
| Total Phosphorus (P) | mg/L | 0.013 | 0.027 | 0.0030 | A593816 | | | | | | | | | | | | |
| Nitrate plus Nitrite (N) | mg/L | | | | | <0.010 | A593159 | <0.010 | 0.010 | A593175 | <0.050 (1) | 0.050 | 0.013 | <0.010 | <0.010 | 0.010 | A593174 |
| Physical Properties | | | | | | | | | | | | | | | | | |
| Turbidity | NTU | 40 | 15 | 0.10 | A590807 | 12 | A590807 | 18 | 0.10 | A590807 | 18 | 0.10 | 8.0 | 3.6 | 4.0 | 0.10 | A590807 |

RDL = Reportable Detection Limit

(1) Detection limits raised due to matrix interference.

ROUTINE WATER & DISS. REGULATED METALS (WATER)

| Bureau Veritas ID | | ATS352 | | ATS353 | | | |
|-----------------------------------|-------|------------------|---------|------------------|------------|---------|----------|
| Sampling Date | | 2022-05-26 10:30 | | 2022-05-26 09:50 | | | |
| COC Number | | 664716-01-01 | | 664716-01-01 | | | |
| | UNITS | WQ2 | RDL | QC Batch | WQ3 | RDL | QC Batch |
| Calculated Parameters | | | | | | | |
| Anion Sum | meq/L | 17 | N/A | A590803 | 11 | N/A | A590803 |
| Cation Sum | meq/L | 17 | N/A | A590803 | 11 | N/A | A590803 |
| Hardness (CaCO3) | mg/L | 630 | 0.50 | A590664 | 470 | 0.50 | A590664 |
| Ion Balance (% Difference) | % | 0.41 | N/A | A590802 | 0.96 | N/A | A590802 |
| Nitrate (N) | mg/L | <0.010 | 0.010 | A590668 | <0.050 | 0.050 | A590668 |
| Nitrate (NO3) | mg/L | <0.044 | 0.044 | A590667 | <0.044 | 0.044 | A590667 |
| Nitrite (NO2) | mg/L | <0.033 | 0.033 | A590667 | <0.033 | 0.033 | A590667 |
| Calculated Total Dissolved Solids | mg/L | 890 | 10 | A590804 | 600 | 10 | A590804 |
| Elements | | | | | | | |
| Dissolved Cadmium (Cd) | mg/L | <0.00020 | 0.00020 | A590663 | <0.00020 | 0.00020 | A590663 |
| Misc. Inorganics | | | | | | | |
| Conductivity | uS/cm | 1400 | 2.0 | A591076 | 950 | 2.0 | A591076 |
| pH | pH | 7.64 | N/A | A591071 | 8.15 | N/A | A591071 |
| Anions | | | | | | | |
| Alkalinity (PP as CaCO3) | mg/L | <1.0 | 1.0 | A591069 | <1.0 | 1.0 | A591069 |
| Alkalinity (Total as CaCO3) | mg/L | 580 | 1.0 | A591069 | 340 | 1.0 | A591069 |
| Bicarbonate (HCO3) | mg/L | 710 | 1.0 | A591069 | 420 | 1.0 | A591069 |
| Carbonate (CO3) | mg/L | <1.0 | 1.0 | A591069 | <1.0 | 1.0 | A591069 |
| Hydroxide (OH) | mg/L | <1.0 | 1.0 | A591069 | <1.0 | 1.0 | A591069 |
| Chloride (Cl) | mg/L | 22 | 1.0 | A595051 | 18 | 1.0 | A595051 |
| Sulphate (SO4) | mg/L | 230 | 5.0 | A595051 | 180 | 5.0 | A595051 |
| Nutrients | | | | | | | |
| Nitrite (N) | mg/L | <0.010 | 0.010 | A599916 | <0.010 | 0.010 | A599916 |
| Nitrate plus Nitrite (N) | mg/L | <0.010 | 0.010 | A599916 | <0.050 (1) | 0.050 | A599916 |
| Elements | | | | | | | |
| Dissolved Aluminum (Al) | mg/L | 0.0030 | 0.0030 | A597450 | 0.0052 | 0.0030 | A597450 |
| Dissolved Antimony (Sb) | mg/L | <0.00060 | 0.00060 | A597450 | <0.00060 | 0.00060 | A597450 |
| Dissolved Arsenic (As) | mg/L | 0.00080 | 0.00020 | A597450 | 0.0013 | 0.00020 | A597450 |
| Dissolved Barium (Ba) | mg/L | 0.081 | 0.010 | A594451 | 0.14 | 0.010 | A594453 |
| Dissolved Beryllium (Be) | mg/L | <0.0010 | 0.0010 | A597450 | <0.0010 | 0.0010 | A597450 |
| Dissolved Boron (B) | mg/L | 0.069 | 0.020 | A594451 | 0.057 | 0.020 | A594453 |
| Dissolved Calcium (Ca) | mg/L | 88 | 0.30 | A594451 | 90 | 0.30 | A594453 |
| Dissolved Chromium (Cr) | mg/L | <0.0010 | 0.0010 | A597450 | <0.0010 | 0.0010 | A597450 |
| Dissolved Cobalt (Co) | mg/L | 0.00051 | 0.00030 | A597450 | <0.00030 | 0.00030 | A597450 |
| Dissolved Copper (Cu) | mg/L | 0.0012 | 0.0010 | A597450 | 0.0031 | 0.0010 | A597450 |
| Dissolved Iron (Fe) | mg/L | <0.060 | 0.060 | A594451 | <0.060 | 0.060 | A594453 |
| Dissolved Lead (Pb) | mg/L | <0.00020 | 0.00020 | A597450 | <0.00020 | 0.00020 | A597450 |
| Dissolved Lithium (Li) | mg/L | 0.037 | 0.020 | A594451 | <0.020 | 0.020 | A594453 |
| Dissolved Magnesium (Mg) | mg/L | 100 | 0.20 | A594451 | 60 | 0.20 | A594453 |

| | | | | | | | |
|---------------------------|------|----------|---------|---------|----------|---------|---------|
| Dissolved Manganese (Mn) | mg/L | 0.072 | 0.0040 | A594451 | 0.040 | 0.0040 | A594453 |
| Dissolved Molybdenum (Mo) | mg/L | 0.0022 | 0.00020 | A597450 | 0.0083 | 0.00020 | A597450 |
| Dissolved Nickel (Ni) | mg/L | 0.0013 | 0.00050 | A597450 | 0.0021 | 0.00050 | A597450 |
| Dissolved Phosphorus (P) | mg/L | <0.10 | 0.10 | A594451 | <0.10 | 0.10 | A594453 |
| Dissolved Potassium (K) | mg/L | 1.8 | 0.30 | A594451 | 8.0 | 0.30 | A594453 |
| Dissolved Selenium (Se) | mg/L | 0.00030 | 0.00020 | A597450 | 0.00071 | 0.00020 | A597450 |
| Dissolved Silicon (Si) | mg/L | 4.4 | 0.10 | A594451 | 0.90 | 0.10 | A594453 |
| Dissolved Silver (Ag) | mg/L | <0.00010 | 0.00010 | A597450 | <0.00010 | 0.00010 | A597450 |
| Dissolved Sodium (Na) | mg/L | 98 | 0.50 | A594451 | 38 | 0.50 | A594453 |
| Dissolved Strontium (Sr) | mg/L | 1.1 | 0.020 | A594451 | 0.69 | 0.020 | A594453 |
| Dissolved Sulphur (S) | mg/L | 61 | 0.20 | A594451 | 61 | 0.20 | A594453 |
| Dissolved Thallium (Tl) | mg/L | <0.00020 | 0.00020 | A597450 | <0.00020 | 0.00020 | A597450 |
| Dissolved Tin (Sn) | mg/L | <0.0010 | 0.0010 | A597450 | <0.0010 | 0.0010 | A597450 |
| Dissolved Titanium (Ti) | mg/L | <0.0010 | 0.0010 | A597450 | <0.0010 | 0.0010 | A597450 |
| Dissolved Uranium (U) | mg/L | 0.013 | 0.00010 | A597450 | 0.016 | 0.00010 | A597450 |
| Dissolved Vanadium (V) | mg/L | <0.0010 | 0.0010 | A597450 | 0.0011 | 0.0010 | A597450 |
| Dissolved Zinc (Zn) | mg/L | <0.0030 | 0.0030 | A597450 | <0.0030 | 0.0030 | A597450 |

RDL = Reportable Detection Limit

TOTAL KJELDAHL NITROGEN (TOTAL)

| | | | | | | | |
|--------------------------------------|-------|------------------|-------|------------------|-------|----------|--|
| Bureau Veritas ID | | ATS352 | | ATS353 | | | |
| Sampling Date | | 2022-05-26 10:30 | | 2022-05-26 09:50 | | | |
| COC Number | | 664716-01-01 | | 664716-01-01 | | | |
| | UNITS | WQ2 | RDL | WQ3 | RDL | QC Batch | |
| Calculated Parameters | | | | | | | |
| Total Total Kjeldahl Nitrogen (Calc) | mg/L | 0.427 | 0.020 | 1.10 | 0.050 | A590708 | |
| Nutrients | | | | | | | |
| Total Nitrogen (N) | mg/L | 0.43 | 0.020 | 1.1 | 0.020 | A594000 | |

REGULATED METALS (CCME/AT1) - DISSOLVED

| | | | | | | | | | | |
|---------------------------|-------|------------------|----------|------------------|------------------|------------------|------------------|------------------|---------|----------|
| Bureau Veritas ID | | ATS354 | | ATS355 | ATS356 | ATS357 | ATS358 | ATS359 | | |
| Sampling Date | | 2022-05-26 14:10 | | 2022-05-26 14:40 | 2022-05-26 15:00 | 2022-05-26 13:50 | 2022-05-26 11:10 | 2022-05-26 11:30 | | |
| COC Number | | 664716-01-01 | | 664716-01-01 | 664716-01-01 | 664716-01-01 | 664716-01-01 | 664716-01-01 | | |
| | UNITS | WQ4B | QC Batch | WQ4C | WQ4D | WQ5B | WQ6 | WQ7 | RDL | QC Batch |
| Elements | | | | | | | | | | |
| Dissolved Cadmium (Cd) | mg/L | <0.00020 | A596663 | <0.00020 | <0.00020 | <0.00020 | <0.00020 | <0.00020 | 0.00020 | A590663 |
| Dissolved Aluminum (Al) | mg/L | <0.0030 | A597450 | 0.014 | 0.0060 | 0.012 | 0.0090 | 0.0030 | 0.0030 | A597450 |
| Dissolved Antimony (Sb) | mg/L | <0.00060 | A597450 | <0.00060 | <0.00060 | <0.00060 | <0.00060 | <0.00060 | 0.00060 | A597450 |
| Dissolved Arsenic (As) | mg/L | 0.0010 | A597450 | 0.00070 | 0.00063 | 0.0015 | 0.0014 | 0.0015 | 0.00020 | A597450 |
| Dissolved Barium (Ba) | mg/L | 0.19 | A591379 | 0.094 | 0.099 | 0.14 | 0.14 | 0.010 | 0.010 | A594453 |
| Dissolved Beryllium (Be) | mg/L | <0.0010 | A597450 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | 0.0010 | 0.0010 | A597450 |
| Dissolved Boron (B) | mg/L | 0.078 | A591379 | 0.073 | 0.067 | 0.045 | 0.084 | 0.085 | 0.020 | A594453 |
| Dissolved Calcium (Ca) | mg/L | 85 | A591379 | 70 | 67 | 78 | 56 | 58 | 0.30 | A594453 |
| Dissolved Chromium (Cr) | mg/L | <0.0010 | A597450 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | 0.0010 | A597450 |
| Dissolved Cobalt (Co) | mg/L | 0.00056 | A597450 | <0.00030 | <0.00030 | 0.00034 | 0.00031 | 0.00031 | 0.00030 | A597450 |
| Dissolved Copper (Cu) | mg/L | <0.0010 | A597450 | 0.0012 | 0.0024 | 0.0028 | 0.0029 | 0.0011 | 0.0010 | A597450 |
| Dissolved Iron (Fe) | mg/L | <0.060 | A591379 | <0.060 | <0.060 | <0.060 | 0.074 | 0.17 | 0.060 | A594453 |
| Dissolved Lead (Pb) | mg/L | <0.00020 | A597450 | <0.00020 | <0.00020 | <0.00020 | <0.00020 | <0.00020 | 0.00020 | A597450 |
| Dissolved Lithium (Li) | mg/L | 0.033 | A591379 | 0.022 | 0.022 | 0.025 | 0.027 | 0.020 | 0.020 | A594453 |
| Dissolved Magnesium (Mg) | mg/L | 100 | A591379 | 50 | 48 | 75 | 84 | 82 | 0.20 | A594453 |
| Dissolved Manganese (Mn) | mg/L | 0.12 | A591379 | 0.035 | 0.036 | 0.055 | 0.042 | 0.073 | 0.0040 | A594453 |
| Dissolved Molybdenum (Mo) | mg/L | 0.0011 | A597450 | 0.0018 | 0.0019 | 0.0039 | 0.0052 | 0.0053 | 0.00020 | A597450 |
| Dissolved Nickel (Ni) | mg/L | 0.0018 | A597450 | 0.0010 | 0.00070 | 0.0018 | 0.0023 | 0.0021 | 0.00050 | A597450 |
| Dissolved Phosphorus (P) | mg/L | <0.10 | A591379 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | 0.10 | A594453 |
| Dissolved Potassium (K) | mg/L | 2.1 | A591379 | 4.2 | 4.0 | 5.8 | 7.1 | 7.1 | 0.30 | A594453 |
| Dissolved Selenium (Se) | mg/L | 0.00038 | A597450 | 0.0011 | 0.0012 | 0.0024 | 0.00057 | 0.00058 | 0.00020 | A597450 |
| Dissolved Silicon (Si) | mg/L | 7.8 | A591379 | 4.3 | 4.1 | 1.4 | 0.23 | 0.22 | 0.10 | A594453 |
| Dissolved Silver (Ag) | mg/L | <0.00010 | A597450 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | <0.00010 | 0.00010 | A597450 |
| Dissolved Sodium (Na) | mg/L | 46 | A591379 | 47 | 45 | 41 | 66 | 66 | 0.50 | A594453 |
| Dissolved Strontium (Sr) | mg/L | 1.1 | A591379 | 0.73 | 0.72 | 0.67 | 0.81 | 0.81 | 0.020 | A594453 |
| Dissolved Sulphur (S) | mg/L | 19 | A591379 | 17 | 16 | 48 | 100 | 110 | 0.20 | A594453 |
| Dissolved Thallium (Tl) | mg/L | <0.00020 | A597450 | <0.00020 | <0.00020 | <0.00020 | <0.00020 | <0.00020 | 0.00020 | A597450 |
| Dissolved Tin (Sn) | mg/L | <0.0010 | A597450 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | 0.0010 | A597450 |
| Dissolved Titanium (Ti) | mg/L | <0.0010 | A597450 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | 0.0010 | A597450 |
| Dissolved Uranium (U) | mg/L | 0.0058 | A597450 | 0.0042 | 0.0045 | 0.014 | 0.0099 | 0.0098 | 0.00010 | A597450 |
| Dissolved Vanadium (V) | mg/L | 0.0011 | A597450 | 0.0010 | 0.0011 | 0.0012 | <0.0010 | 0.0010 | 0.0010 | A597450 |
| Dissolved Zinc (Zn) | mg/L | <0.0030 | A597450 | 0.015 | 0.015 | <0.0030 | <0.0030 | <0.0030 | 0.0030 | A597450 |

RDL = Reportable Detection Limit

Flow Data For May26, 2022

| Site | Channel Width (m) | Depth*(m) | | | Velocity* (m/sec) | | | Discharge (m3/sec) | Comments |
|------|-------------------|-----------|------|------|-------------------|------|------|--------------------|---|
| | | RMID | MID | LMID | RMID | MID | LMID | | |
| FL 1 | 0.60 | 0.05 | 0.05 | 0.05 | 0.02 | 0.05 | 0.05 | - | Channel had water present but minimal flow. |
| FL 2 | 17.00 | 1.25 | 2.00 | 2.00 | 0.00 | 0.00 | 0.00 | - | Channel had water present but no measurable velocity in the channel. Large beaver dam impounding surface flow is located immediately downstream of FL 02. |
| FL 3 | 0.00 | - | - | - | - | - | - | - | Channel was dry at the time of the survey |
| FL 4 | 0.00 | - | - | - | - | - | - | - | Channel was dry at the time of the survey |

* RMID= right mid channel, MID= mid channel, LMID= left mid channel
 (-)= null result

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In-situ Water Quality Parameters - May 26, 2022

| Site | Temperature | Dissolved Oxygen (mg/l) | pH | Conductivity (µS/cm) | Depth (m) | Date Sampled |
|-------|-------------|-------------------------|------|----------------------|-----------|--------------|
| WQ1 | - | - | - | - | 0.00 | 26-05-2022 |
| WQ2 | 17.85 | 10.94 | 7.69 | 867.00 | 0.55 | 26-05-2022 |
| WQ3 | 12.22 | 11.35 | 8.08 | 712.00 | 0.45 | 26-05-2022 |
| WQ4a | - | - | - | - | 0.00 | 26-05-2022 |
| WQ4b | 9.11 | 2.03 | 7.17 | 770.00 | 0.10 | 26-05-2022 |
| WQ4c | 8.45 | 2.55 | 7.25 | 689 | 0.06 | 26-05-2022 |
| WQ4d | 8.55 | 2.68 | 7.34 | 701 | 0.06 | 26-05-2022 |
| WQ5a | - | - | - | - | 0.00 | 26-05-2022 |
| WQ5b | 18.91 | 12.70 | 8.56 | 831.00 | 0.50 | 26-05-2022 |
| WQ5c* | N/A | N/A | N/A | N/A | N/A | 26-05-2022 |
| WQ06 | 18.97 | 9.30 | 8.66 | 874.00 | 0.45 | 26-05-2022 |
| WQ07 | 19.06 | 9.35 | 8.54 | 856.00 | 0.45 | 26-05-2022 |

(-)= null result due to site being dry

(*) = site has been encompassed by the construction area and is permanently dry