Appendix C:

Sewage and Solid Waste Sample Results: 2013

Cambridge Bay Water Licence 3BM-CAM0914



4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3 Tel: (867)-669-2788 Fax: (867)-669-2718

- PRELIMINARY REPORT -

Prepared For: Hamlet of Cambridge Bay

Municipal Works

Address: P.O. Box 16

Cambridge Bay, NU

X0B 0C0

Attn: Wayne Weese Facsimile: (867) 983-2186

Final report has been reviewed and approved by:

Judy Mah

Client Service Officer

NOTES:

- > Test methods and data are validated by the laboratory's Quality Assurance Program. Taiga Environmental Laboratory is accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) as a testing laboratory for specific tests registered with CALA.
- > Routine methods are based on recognized procedures from sources such as
 - o Standard Methods for the Examination of Water and Wastewater APHA AWWA WEF;
 - o Environment Canada
 - o USEPA
- Samples shall be kept for thirty (30) days after the final report is issued. All microbiological samples shall be disposed of immediately upon completion of analysis to minimize biohazardous risks to laboratory personnel. Please contact the laboratory if you have any special requirements.
- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.

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4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3 Tel: (867)-669-2788 Fax: (867)-669-2718

- CERTIFICATE OF ANALYSIS -

Client Sample ID: CAM-3 Taiga Sample ID: 001

Client Project:

Sample Type: Sewage Received Date: 26-Jun-13 Sampling Date: 25-Jun-20 Sampling Time: 9:30

Location: Cambridge Bay

Report Status: Preliminary

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifer |
|---------------------------------|--------|--------------------|----------|------------------|------------------------|----------|
| Inorganics - Physicals | | | | | | |
| Alkalinity, Total (as CaCO3) | 301 | 0.4 | mg/L | 26-Jun-13 | SM2320:B | |
| Conductivity, Specific (@ 25°C) | 964 | 0.4 | μS/cm | 26-Jun-13 | SM2510:B | |
| рН | 7.53 | | pH units | 26-Jun-13 | SM4500-H:B | |
| Solids, Total Suspended | 36 | 3 | mg/L | 27-Jun-13 | SM2540:D | |
| <u>Inorganics - Nutrients</u> | | | | | | |
| Ammonia as Nitrogen | 31.5 | 0.005 | mg/L | 28-Jun-13 | SM4500-NH3: | |
| Biochemical Oxygen Demand | 30 | 2 | mg/L | 26-Jun-13 | SM5210:B | |
| Organic Carbon, Total | 51.6 | 0.5 | mg/L | 27-Jun-13 | SM5310:B | |
| Major Ions | | | | | | |
| Calcium | 41.1 | 0.1 | mg/L | 26-Jun-13 | SM4110:B | |
| Chloride | 106 | 0.7 | mg/L | 26-Jun-13 | SM4110:B | |
| Hardness | 225 | 0.7 | mg/L | 26-Jun-13 | SM2340:B | |
| Magnesium | 29.8 | 0.1 | mg/L | 26-Jun-13 | SM4110:B | |
| Nitrate as Nitrogen | < 0.01 | 0.01 | mg/L | 26-Jun-13 | SM4110:B | |

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- CERTIFICATE OF ANALYSIS -

| Nitrite as Nitrogen < 0.01 | Client Sample ID: CAM-3 | | | Taiga | a Sample II | D: 001 |
|--|--------------------------|-------------|------|-----------|-------------|-------------|
| Sodium 73.0 0.1 mg/L 26-Jun-13 SM4110:B Sulphate 21 1 mg/L 26-Jun-13 SM4110:B Microbiology Coliforms, Fecal (other) 5300 100 CFU/100mL 26-Jun-13 SM9222:D Organics Oil and Grease, visible Non-visible 10-Jul-13 Visual Exam Trace Metals, Total Aluminum 31 5 μg/L 06-Jul-13 EPA200.8 Arsenic 1.6 0.2 μg/L 06-Jul-13 EPA200.8 Cadmium < 0.1 | Nitrite as Nitrogen | < 0.01 | 0.01 | mg/L | 26-Jun-13 | SM4110:B |
| Sulphate 21 1 mg/L 26-Jun-13 SM4110·B Microbiology Coliforms, Fecal (other) 5300 100 CFU/100mL 26-Jun-13 SM9222·D Organics Oil and Grease, visible Non-visible 10-Jul-13 Visual Exam Trace Metals, Total Aluminum 31 5 µg/L 06-Jul-13 EPA200.8 Arsenic 1.6 0.2 µg/L 06-Jul-13 EPA200.8 Cadmium < 0.1 | Potassium | 18.1 | 0.1 | mg/L | 26-Jun-13 | SM4110:B |
| Microbiology Coliforms, Fecal (other) 5300 100 CFU/100mL 26-Jun-13 SM9222:D Organics Oil and Grease, visible Non-visible 10-Jul-13 Visual Exam Trace Metals, Total Aluminum 31 5 μg/L 06-Jul-13 EPA200.8 Arsenic 1.6 0.2 μg/L 06-Jul-13 EPA200.8 Cadmium < 0.1 | Sodium | 73.0 | 0.1 | mg/L | 26-Jun-13 | SM4110:B |
| Coliforms, Fecal (other) 5300 100 CFU/100mL 26-Jun-13 SM9222:D Organics Oil and Grease, visible Non-visible 10-Jul-13 Visual Exam Trace Metals, Total Aluminum 31 5 μg/L 06-Jul-13 EPA200.8 Arsenic 1.6 0.2 μg/L 06-Jul-13 EPA200.8 Cadmium < 0.1 | Sulphate | 21 | 1 | mg/L | 26-Jun-13 | SM4110:B |
| Organics Oil and Grease, visible Non-visible 10-Jul-13 Visual Exam Trace Metals, Total Aluminum 31 5 μg/L 06-Jul-13 EPA200.8 Arsenic 1.6 0.2 μg/L 06-Jul-13 EPA200.8 Cadmium < 0.1 | Microbiology | | | | | |
| Oil and Grease, visible 10-Jul-13 Visual Exam Trace Metals, Total Aluminum 31 5 μg/L 06-Jul-13 EPA200.8 Arsenic 1.6 0.2 μg/L 06-Jul-13 EPA200.8 Cadmium < 0.1 | Coliforms, Fecal (other) | 5300 | 100 | CFU/100mL | 26-Jun-13 | SM9222:D |
| Trace Metals, Total Aluminum 31 5 μg/L 06-Jul-13 EPA200.8 Arsenic 1.6 0.2 μg/L 06-Jul-13 EPA200.8 Cadmium < 0.1 | Organics | | | | | |
| Trace Metals, Total Aluminum 31 5 μg/L 06-Jul-13 EPA200.8 Arsenic 1.6 0.2 μg/L 06-Jul-13 EPA200.8 Cadmium < 0.1 | Oil and Grease, visible | Non-visible | | | 10-Jul-13 | Visual Exam |
| Aluminum 31 5 μg/L 06-Jul-13 EPA200.8 Arsenic 1.6 0.2 μg/L 06-Jul-13 EPA200.8 Cadmium < 0.1 | Trace Metals, Total | | | | | |
| Arsenic 1.6 0.2 μg/L 06-Jul-13 EPA200.8 Cadmium < 0.1 | | 31 | 5 | μg/L | 06-Jul-13 | EPA200.8 |
| Cadmium < 0.1 0.1 μg/L 06-Jul-13 EPA200.8 Chromium 0.5 0.1 μg/L 06-Jul-13 EPA200.8 Cobalt 0.4 0.1 μg/L 06-Jul-13 EPA200.8 Copper 29.3 0.2 μg/L 06-Jul-13 EPA200.8 Iron 827 5 μg/L 06-Jul-13 EPA200.8 Lead 0.4 0.1 μg/L 06-Jul-13 EPA200.8 Manganese 120 0.1 μg/L 06-Jul-13 EPA200.8 Mercury < 0.01 | Arsenic | 1.6 | 0.2 | _ | • | |
| Chromium 0.5 0.1 μg/L 06-Jul-13 EPA200.8 Cobalt 0.4 0.1 μg/L 06-Jul-13 EPA200.8 Copper 29.3 0.2 μg/L 06-Jul-13 EPA200.8 Iron 827 5 μg/L 06-Jul-13 EPA200.8 Lead 0.4 0.1 μg/L 06-Jul-13 EPA200.8 Manganese 120 0.1 μg/L 06-Jul-13 EPA200.8 Mercury < 0.01 | Cadmium | < 0.1 | 0.1 | | 06-Jul-13 | EPA200.8 |
| Copper 29.3 0.2 $\mu g/L$ 06-Jul-13 EPA200.8 Iron 827 5 $\mu g/L$ 06-Jul-13 EPA200.8 Lead 0.4 0.1 $\mu g/L$ 06-Jul-13 EPA200.8 Manganese 120 0.1 $\mu g/L$ 06-Jul-13 EPA200.8 Mercury < 0.01 | Chromium | 0.5 | 0.1 | | 06-Jul-13 | EPA200.8 |
| Iron8275μg/L06-Jul-13EPA200.8Lead0.40.1μg/L06-Jul-13EPA200.8Manganese1200.1μg/L06-Jul-13EPA200.8Mercury< 0.01 | Cobalt | 0.4 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | Copper | 29.3 | 0.2 | μg/L | 06-Jul-13 | EPA200.8 |
| Manganese 120 0.1 μg/L 06-Jul-13 EPA200.8 Mercury < 0.01 | Iron | 827 | 5 | μg/L | 06-Jul-13 | EPA200.8 |
| Mercury < 0.01 0.01 $\mu g/L$ 06-Jul-13 EPA200.8 Nickel 2.3 0.1 $\mu g/L$ 06-Jul-13 EPA200.8 | Lead | 0.4 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| Nickel 2.3 0.1 $\mu g/L$ 06-Jul-13 EPA200.8 | Manganese | 120 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| | Mercury | < 0.01 | 0.01 | μg/L | 06-Jul-13 | EPA200.8 |
| Zinc 14 5 μ g/L 06-Jul-13 EPA200.8 | Nickel | 2.3 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| - | Zinc | 14 | 5 | μg/L | 06-Jul-13 | EPA200.8 |

ReportDate:



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- CERTIFICATE OF ANALYSIS -

Client Sample ID: CAM-4 Taiga Sample ID: 002

Client Project:

Sample Type: Wastewater Received Date: 26-Jun-13 Sampling Date: 25-Jun-20 Sampling Time: 9:30

Location: Cambridge Bay

Report Status: Preliminary

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifer |
|-------------------------------|--------|--------------------|----------|------------------|------------------------|----------|
| <u>Inorganics - Physicals</u> | | | | | | |
| pН | 7.18 | | pH units | 26-Jun-13 | SM4500-H:B | |
| Solids, Total Suspended | 114 | 3 | mg/L | 27-Jun-13 | SM2540:D | |
| Inorganics - Nutrients | | | | | | |
| Biochemical Oxygen Demand | 294 | 2 | mg/L | 26-Jun-13 | SM5210:B | |
| Phosphorous, Total | | | mg/L | | SM4500-P:D | |
| Major Ions | | | | | | |
| Chloride | 265 | 0.7 | mg/L | 26-Jun-13 | SM4110:B | |
| Floride | 12.8 | 0.1 | mg/L | 26-Jun-13 | SM4110:B | |
| Sulphate | 1140 | 1 | mg/L | 26-Jun-13 | SM4110:B | |
| <u>Organics</u> | | | | | | |
| Hexane Extractable Material | 2.2 | 2.0 | mg/L | 03-Jul-13 | EPA1664A | |
| Trace Metals, Total | | | | | | |
| Aluminum | 176 | 5 | μg/L | 06-Jul-13 | EPA200.8 | |
| Arsenic | 7.8 | 0.2 | μg/L | 06-Jul-13 | EPA200.8 | |
| | | | | | | |

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- CERTIFICATE OF ANALYSIS -

| Client Sample ID: CAM-4 | | | Tai | ga Sample II | D: 002 |
|-------------------------|-------|-------|------|--------------|-------------|
| Barium | 76.2 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| Cadmium | 0.6 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| Chromium | 6.2 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| Copper | 69.0 | 0.2 | μg/L | 06-Jul-13 | EPA200.8 |
| Iron | 25300 | 5 | μg/L | 06-Jul-13 | EPA200.8 |
| Lead | 21.1 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| Mercury | 0.06 | 0.01 | μg/L | 06-Jul-13 | EPA200.8 |
| Nickel | 42.8 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| Silver | 0.2 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| Tin | 3.3 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| Zinc | 455 | 5 | μg/L | 06-Jul-13 | EPA200.8 |
| Subcontracted Organics | | | | | |
| Cyanide, Total | 0.033 | 0.002 | mg/L | 28-Jun-13 | EPA335.3 |
| Phenols, Total | 0.030 | 0.002 | mg/L | 03-Jul-13 | APHA 5530D |
| Subcontracted Nutrients | | | | | |
| Sulphide | 4.60 | 0.005 | mg/L | 03-Jul-13 | SM4500-S2-E |

ReportDate:



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- CERTIFICATE OF ANALYSIS -

Client Sample ID: CAM-5 Taiga Sample ID: 003

Client Project:

Sample Type: Sewage Received Date: 26-Jun-13 Sampling Date: 25-Jun-20 Sampling Time: 9:30

Location: Cambridge Bay

Report Status: Preliminary

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifer |
|---------------------------------|---------|--------------------|----------|------------------|------------------------|----------|
| <u>Inorganics - Physicals</u> | | | | | | |
| Alkalinity, Total (as CaCO3) | 215 | 0.4 | mg/L | 26-Jun-13 | SM2320:B | |
| Conductivity, Specific (@ 25°C) | 775 | 0.4 | μS/cm | 26-Jun-13 | SM2510:B | |
| pН | 9.12 | | pH units | 26-Jun-13 | SM4500-H:B | |
| Solids, Total Suspended | 54 | 3 | mg/L | 27-Jun-13 | SM2540:D | |
| <u>Inorganics - Nutrients</u> | | | | | | |
| Ammonia as Nitrogen | < 0.005 | 0.005 | mg/L | 28-Jun-13 | SM4500-NH3: | |
| Biochemical Oxygen Demand | 33 | 2 | mg/L | 26-Jun-13 | SM5210:B | |
| Organic Carbon, Total | 54.2 | 0.5 | mg/L | 27-Jun-13 | SM5310:B | |
| Major Ions | | | | | | |
| Calcium | 39.0 | 0.1 | mg/L | 26-Jun-13 | SM4110:B | |
| Chloride | 113 | 0.7 | mg/L | 26-Jun-13 | SM4110:B | |
| Hardness | 253 | 0.7 | mg/L | 26-Jun-13 | SM2340:B | |
| Magnesium | 37.7 | 0.1 | mg/L | 26-Jun-13 | SM4110:B | |
| Nitrate as Nitrogen | < 0.01 | 0.01 | mg/L | 26-Jun-13 | SM4110:B | |
| Nitrite as Nitrogen | < 0.01 | 0.01 | mg/L | 26-Jun-13 | SM4110:B | |

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- CERTIFICATE OF ANALYSIS -

| Client Sample ID: CAM-5 | | | Taig | a Sample II | D: 003 |
|--------------------------|-------------|------|-----------|-------------|-------------|
| Potassium | 13.7 | 0.1 | mg/L | 26-Jun-13 | SM4110:B |
| Sodium | 72.1 | 0.1 | mg/L | 26-Jun-13 | SM4110:B |
| Sulphate | 35 | 1 | mg/L | 26-Jun-13 | SM4110:B |
| Microbiology | | | | | |
| Coliforms, Fecal (other) | < 10 | 10 | CFU/100mL | 26-Jun-13 | SM9222:D |
| <u>Organics</u> | | | | | |
| Oil and Grease, visible | Non-visible | | | 10-Jul-13 | Visual Exam |
| Trace Metals, Total | | | | | |
| Aluminum | 83 | 5 | μg/L | 06-Jul-13 | EPA200.8 |
| Arsenic | 3.0 | 0.2 | μg/L | 06-Jul-13 | EPA200.8 |
| Cadmium | < 0.1 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| Chromium | 0.6 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| Cobalt | 0.5 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| Copper | 4.4 | 0.2 | μg/L | 06-Jul-13 | EPA200.8 |
| Iron | 427 | 5 | μg/L | 06-Jul-13 | EPA200.8 |
| Lead | 1.9 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| Manganese | 40.3 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| Mercury | 0.01 | 0.01 | μg/L | 06-Jul-13 | EPA200.8 |
| Nickel | 3.6 | 0.1 | μg/L | 06-Jul-13 | EPA200.8 |
| Zinc | 8 | 5 | μg/L | 06-Jul-13 | EPA200.8 |
| | | | | | |

ReportDate:



Taiga Batch No.: 130421

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- CERTIFICATE OF ANALYSIS -

Client Sample ID: CAM-5 Taiga Sample ID: 003

* Taiga analytical methods are based on the following standard analytical methods

SM - Standard Methods for the Examination of Water and Wastewater EPA - United States Environmental Protection Agency

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4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3 Tel: (867)-669-2788 Fax: (867)-669-2718

- FINAL REPORT -

Prepared For: Hamlet of Cambridge Bay

Municipal Works

Address: P.O. Box 16

Cambridge Bay, NU

X0B 0C0

Attn: Wayne Weese Facsimile: (867) 983-2186

Final report has been reviewed and approved by:

Angelique Ruzindana Quality Assurance Officer

NOTES:

- > Test methods and data are validated by the laboratory's Quality Assurance Program. Taiga Environmental Laboratory is accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) as a testing laboratory for specific tests registered with CALA.
- ➤ Routine methods are based on recognized procedures from sources such as
 - o Standard Methods for the Examination of Water and Wastewater APHA AWWA WEF;
 - o Environment Canada
 - o USEPA
- Samples shall be kept for thirty (30) days after the final report is issued. All microbiological samples shall be disposed of immediately upon completion of analysis to minimize biohazardous risks to laboratory personnel. Please contact the laboratory if you have any special requirements.
- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.





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- CERTIFICATE OF ANALYSIS -

Client Sample ID: CAM-3 Taiga Sample ID: 001

Client Project: CAM 0813
Sample Type: Water
Received Date: 02-Aug-13
Sampling Date: 01-Aug-13
Sampling Time: 9:30

Location: Cambridge Bay

Report Status: Final

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifer |
|---------------------------------|--------|--------------------|----------|------------------|------------------------|----------|
| Inorganics - Physicals | | | | | | |
| Alkalinity, Total (as CaCO3) | 232 | 0.4 | mg/L | 02-Aug-13 | SM2320:B | |
| Conductivity, Specific (@ 25°C) | 858 | 0.4 | μS/cm | 02-Aug-13 | SM2510:B | |
| pН | 8.78 | | pH units | 02-Aug-13 | SM4500-H:B | |
| Solids, Total Suspended | 114 | 3 | mg/L | 06-Aug-13 | SM2540:D | |
| <u>Inorganics - Nutrients</u> | | | | | | |
| Ammonia as Nitrogen | 0.388 | 0.005 | mg/L | 14-Aug-13 | SM4500-NH3: | |
| Biochemical Oxygen Demand | 45 | 2 | mg/L | 02-Aug-13 | SM5210:B | 6 |
| Organic Carbon, Total | 59.8 | 0.5 | mg/L | 14-Aug-13 | SM5310:B | |
| Major Ions | | | | | | |
| Calcium | 45.4 | 0.1 | mg/L | 02-Aug-13 | SM4110:B | |
| Chloride | 118 | 0.7 | mg/L | 02-Aug-13 | SM4110:B | |
| Hardness | 252 | 0.7 | mg/L | 02-Aug-13 | SM2340:B | |
| Magnesium | 33.6 | 0.1 | mg/L | 02-Aug-13 | SM4110:B | |
| Nitrate as Nitrogen | 2.56 | 0.01 | mg/L | 02-Aug-13 | SM4110:B | |

ReportDate: Sunday, August 18, 2013 **Print Date:** Sunday, August 18, 2013 Page 2 of 8



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- CERTIFICATE OF ANALYSIS -

| Client Sample ID: CAM-3 | Taiga Sample ID: 001 | | | | | |
|--------------------------|----------------------|------|-----------|-----------|-------------|--|
| Nitrite as Nitrogen | 0.34 | 0.01 | mg/L | 02-Aug-13 | SM4110:B | |
| Potassium | 19.0 | 0.1 | mg/L | 02-Aug-13 | SM4110:B | |
| Sodium | 81.9 | 0.1 | mg/L | 02-Aug-13 | SM4110:B | |
| Sulphate | 24 | 1 | mg/L | 02-Aug-13 | SM4110:B | |
| Microbiology | | | | | | |
| Coliforms, Fecal (other) | 1000 | 100 | CFU/100mL | 02-Aug-13 | SM9222:D 6 | |
| Organics | | | | | | |
| Oil and Grease, visible | Non-visible | | | 14-Aug-13 | Visual Exam | |
| Trace Metals, Total | | | | | | |
| Aluminum | 77 | 5 | μg/L | 15-Aug-13 | EPA200.8 | |
| Arsenic | 2.2 | 0.2 | μg/L | 15-Aug-13 | EPA200.8 | |
| Cadmium | < 0.1 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Chromium | 0.5 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Cobalt | 0.4 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Copper | 13.7 | 0.2 | μg/L | 15-Aug-13 | EPA200.8 | |
| Iron | 718 | 5 | μg/L | 15-Aug-13 | EPA200.8 | |
| Lead | 0.2 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Manganese | 98.7 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Mercury | < 0.01 | 0.01 | μg/L | 15-Aug-13 | EPA200.8 | |
| Nickel | 2.5 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Zinc | 12 | 5 | μg/L | 15-Aug-13 | EPA200.8 | |



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- CERTIFICATE OF ANALYSIS -

Client Sample ID: CAM-5 Taiga Sample ID: 002

Client Project: CAM 0813
Sample Type: Water
Received Date: 02-Aug-13
Sampling Date: 01-Aug-13
Sampling Time: 9:30

Location: Cambridge Bay

Report Status: Final

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifer |
|---------------------------------|--------|--------------------|----------|------------------|------------------------|----------|
| <u>Inorganics - Physicals</u> | | | | | | |
| Alkalinity, Total (as CaCO3) | 236 | 0.4 | mg/L | 02-Aug-13 | SM2320:B | |
| Conductivity, Specific (@ 25°C) | 864 | 0.4 | μS/cm | 02-Aug-13 | SM2510:B | |
| рН | 9.41 | | pH units | 02-Aug-13 | SM4500-H:B | |
| Solids, Total Suspended | 100 | 3 | mg/L | 06-Aug-13 | SM2540:D | |
| <u>Inorganics - Nutrients</u> | | | | | | |
| Ammonia as Nitrogen | 0.104 | 0.005 | mg/L | 14-Aug-13 | SM4500-NH3: | |
| Biochemical Oxygen Demand | 52 | 2 | mg/L | 02-Aug-13 | SM5210:B | 6 |
| Organic Carbon, Total | 69.1 | 0.5 | mg/L | 14-Aug-13 | SM5310:B | |
| Phosphorous, Dissolved | 0.870 | 0.002 | mg/L | 10-Aug-13 | SM4500-P:D | |
| Phosphorous, Total | 2.66 | 0.002 | mg/L | 09-Aug-13 | SM4500-P:D | |
| Major Ions | | | | | | |
| Calcium | 45.4 | 0.1 | mg/L | 02-Aug-13 | SM4110:B | |
| Chloride | 128 | 0.7 | mg/L | 02-Aug-13 | SM4110:B | |
| Hardness | 264 | 0.7 | mg/L | 02-Aug-13 | SM2340:B | |
| Magnesium | 36.5 | 0.1 | mg/L | 02-Aug-13 | SM4110:B | |

ReportDate: Sunday, August 18, 2013 **Print Date:** Sunday, August 18, 2013 Page 4 of 8



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- CERTIFICATE OF ANALYSIS -

| Client Sample ID: CAM-5 | Taiga Sample ID: 002 | | | | | |
|--------------------------|----------------------|------|-----------|-----------|-------------|---|
| Nitrate as Nitrogen | 0.84 | 0.01 | mg/L | 02-Aug-13 | SM4110:B | |
| Nitrite as Nitrogen | 0.54 | 0.01 | mg/L | 02-Aug-13 | | |
| Potassium | 18.7 | 0.1 | mg/L | 02-Aug-13 | | |
| Sodium | 87.9 | 0.1 | mg/L | 02-Aug-13 | SM4110:B | |
| Sulphate | 32 | 1 | mg/L | 02-Aug-13 | SM4110:B | |
| Microbiology | | | | | | |
| Coliforms, Fecal (other) | < 10 | 10 | CFU/100mL | 02-Aug-13 | SM9222:D | 6 |
| Organics | | | | | | |
| Oil and Grease, visible | Non-visible | | | 14-Aug-13 | Visual Exam | |
| Trace Metals, Total | | | | | | |
| Aluminum | 85 | 5 | μg/L | 15-Aug-13 | EPA200.8 | |
| Arsenic | 3.1 | 0.2 | μg/L | 15-Aug-13 | EPA200.8 | |
| Cadmium | < 0.1 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Chromium | 0.5 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Cobalt | 0.5 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Copper | 11.1 | 0.2 | μg/L | 15-Aug-13 | EPA200.8 | |
| Iron | 918 | 5 | μg/L | 15-Aug-13 | EPA200.8 | |
| Lead | 0.8 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Manganese | 81.4 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Mercury | < 0.01 | 0.01 | μg/L | 15-Aug-13 | EPA200.8 | |
| Nickel | 3.7 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Zinc | 12 | 5 | μg/L | 15-Aug-13 | EPA200.8 | |
| | | | | | | |



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- CERTIFICATE OF ANALYSIS -

Client Sample ID: CAM-6 Taiga Sample ID: 003

Client Project: CAM 0813
Sample Type: Water
Received Date: 02-Aug-13
Sampling Date: 01-Aug-13
Sampling Time: 9:30

Location: Cambridge Bay

Report Status: Final

| Test Parameter | Result | Detection Limit | Units | Analysis Date | Analytical Method * | Qualifer |
|---------------------------------|--------|--------------------|----------|------------------|------------------------|----------|
| <u>Inorganics - Physicals</u> | | | | | | |
| Alkalinity, Total (as CaCO3) | 271 | 0.4 | mg/L | 02-Aug-13 | SM2320:B | |
| Conductivity, Specific (@ 25°C) | 979 | 0.4 | μS/cm | 02-Aug-13 | SM2510:B | |
| pН | 8.23 | | pH units | 02-Aug-13 | SM4500-H:B | |
| Solids, Total Suspended | 50 | 3 | mg/L | 06-Aug-13 | SM2540:D | |
| <u>Inorganics - Nutrients</u> | | | | | | |
| Ammonia as Nitrogen | 0.137 | 0.005 | mg/L | 14-Aug-13 | SM4500-NH3: | |
| Biochemical Oxygen Demand | 32 | 2 | mg/L | 02-Aug-13 | SM5210:B | 6 |
| Organic Carbon, Total | 57.6 | 0.5 | mg/L | 14-Aug-13 | SM5310:B | |
| Phosphorous, Dissolved | 1.15 | 0.002 | mg/L | 10-Aug-13 | SM4500-P:D | |
| Phosphorous, Total | 2.16 | 0.002 | mg/L | 09-Aug-13 | SM4500-P:D | |
| Major Ions | | | | | | |
| Calcium | 53.6 | 0.1 | mg/L | 02-Aug-13 | SM4110:B | |
| Chloride | 128 | 0.7 | mg/L | 02-Aug-13 | SM4110:B | |
| Hardness | 308 | 0.7 | mg/L | 02-Aug-13 | SM2340:B | |
| Magnesium | 42.3 | 0.1 | mg/L | 02-Aug-13 | SM4110:B | |

ReportDate: Sunday, August 18, 2013 **Print Date:** Sunday, August 18, 2013 Page 6 of 8



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- CERTIFICATE OF ANALYSIS -

| Client Sample ID: CAM-6 | | | Taiga | a Sample II | D: 003 | |
|--------------------------|-------------|------|-----------|-------------|-------------|---|
| Nitrate as Nitrogen | 0.21 | 0.01 | mg/L | 02-Aug-13 | SM4110:B | |
| Nitrite as Nitrogen | < 0.01 | 0.01 | mg/L | 02-Aug-13 | SM4110:B | |
| Potassium | 17.0 | 0.1 | mg/L | 02-Aug-13 | SM4110:B | |
| Sodium | 89.0 | 0.1 | mg/L | 02-Aug-13 | SM4110:B | |
| Sulphate | 43 | 1 | mg/L | 02-Aug-13 | SM4110:B | |
| Microbiology | | | | | | |
| Coliforms, Fecal (other) | 10 | 10 | CFU/100mL | 02-Aug-13 | SM9222:D | 6 |
| <u>Organics</u> | | | | | | |
| Oil and Grease, visible | Non-visible | | | 14-Aug-13 | Visual Exam | |
| Trace Metals, Total | | | | | | |
| Aluminum | 26 | 5 | μg/L | 15-Aug-13 | EPA200.8 | |
| Arsenic | 4.0 | 0.2 | μg/L | 15-Aug-13 | EPA200.8 | |
| Cadmium | < 0.1 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Chromium | 0.6 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Cobalt | 0.8 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Copper | 5.3 | 0.2 | μg/L | 15-Aug-13 | EPA200.8 | |
| Iron | 1140 | 5 | μg/L | 15-Aug-13 | EPA200.8 | |
| Lead | 0.2 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Manganese | 113 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Mercury | < 0.01 | 0.01 | μg/L | 15-Aug-13 | EPA200.8 | |
| Nickel | 3.7 | 0.1 | μg/L | 15-Aug-13 | EPA200.8 | |
| Zinc | 5 | 5 | μg/L | 15-Aug-13 | EPA200.8 | |



Taiga Batch No.: 130610

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- CERTIFICATE OF ANALYSIS -

Client Sample ID: CAM-6 Taiga Sample ID: 003

- DATA QUALIFERS -

Data Qualifier Descriptions:

6 Sample received above the recommended temperature

* Taiga analytical methods are based on the following standard analytical methods

SM - Standard Methods for the Examination of Water and Wastewater EPA - United States Environmental Protection Agency