

## Report Transmission Cover Page

|                           |                                    |                             |
|---------------------------|------------------------------------|-----------------------------|
| Bill To: Town of Inuvik   | Project:                           | Lot ID: <b>721174</b>       |
| Report To: Town of Inuvik | ID: SNP 0036-1                     | Control Number: A 067535    |
| Box 1160                  | Name: East Channel Treatment Plant | Date Received: Jan 13, 2010 |
| 2 Firth Street            | Location: Treated Water            | Date Reported: Jan 21, 2010 |
| Inuvik, NT, Canada        | LSD:                               | Report Number: 1290254      |
| X0E 0T0                   | P.O.: 100104                       |                             |
| Attn: Rick Campbell       | Acct code:                         |                             |
| Sampled By:               |                                    |                             |
| Company: T.O.I.           |                                    |                             |

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| Contact & Affiliation              | Address   | Delivery Commitments  |
|------------------------------------|---|---|
| Rick Campbell<br>Town of Inuvik    | 2 Firth Street, Box 1160<br>Inuvik, Northwest Territories X0E 0T0<br>Phone: (867) 777-8615<br>Fax: (867) 777-8601<br>Email: rcampbell@town.inuvik.nt.ca | On [Report Approval] send<br>(COC, Test Report) by Email - Merge Reports<br>On [Lot Approval and Final Test Report Approval] send<br>(COC, Invoice) by Post M<br>On [Lot Approval and Final Test Report Approval] send<br>(COC, Test Report, Invoice) by Post M |
| Richard Feilden<br>AECOM - Calgary | 17203 - 103 Avenue<br>Edmonton, Alberta T5S 1J4<br>Phone: (780) 488-6800<br>Fax: (780) 488-2121<br>Email: richard.feilden@aecom.com                     | On [Lot Verification] send<br>(COA) by Email - Single Report  |

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### Notes To Clients:

- Temp = -43°C

**Sample Custody**

|                           |                                    |                             |
|---------------------------|------------------------------------|-----------------------------|
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| XOE 0T0                   | P.O.: 100104                       |                             |
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| Sampled By:               |                                    |                             |
| Company: T.O.I.           |                                    |                             |

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**Sample Disposal Date: February 20, 2010**

All samples will be stored until this date unless other instructions are received. Please indicate other requirements below and return this form to the address or fax number on the top of this page.

Extend Sample Storage Until \_\_\_\_\_ (MM/DD/YY)

The following charges apply to extended sample storage:

|                                   |                    |
|-----------------------------------|--------------------|
| Storage for an additional 30 days | \$ 2.50 per sample |
| Storage for an additional 60 days | \$ 5.00 per sample |
| Storage for an additional 90 days | \$ 7.50 per sample |

Return Sample, collect, to the address below via:

Greyhound

DHL

Purolator

Other (specify) \_\_\_\_\_

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

Fax \_\_\_\_\_

Signature \_\_\_\_\_

## Analytical Report

|                           |                                    |                             |
|---------------------------|------------------------------------|-----------------------------|
| Bill To: Town of Inuvik   | Project:                           | Lot ID: <b>721174</b>       |
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| Inuvik, NT, Canada        | LSD:                               | Report Number: 1290254      |
| XOE 0T0                   | P.O.: 100104                       |                             |
| Attn: Rick Campbell       | Acct code:                         |                             |
| Sampled By:               |                                    |                             |
| Company: T.O.I.           |                                    |                             |

|                           |                      |
|---------------------------|----------------------|
| <b>Reference Number</b>   | 721174-1             |
| <b>Sample Date</b>        | January 12, 2010     |
| <b>Sample Time</b>        | NA                   |
| <b>Sample Location</b>    |                      |
| <b>Sample Description</b> | ECTP / Treated Water |
| <b>Sample Matrix</b>      | Water                |

| Analyte                                 | Units      | Result   | Nominal Detection Limit | Guideline Limit | Guideline Comments |
|---|------------|----------|-------------------------|-----------------|--------------------|
| <b>Aggregate Organic Constituents</b>   |            |          |                         |                 |                    |
| Biochemical Oxygen Demand               | 5 Day mg/L | <4       | 4                       |                 |                    |
| <b>Inorganic Nonmetallic Parameters</b> |            |          |                         |                 |                    |
| Phosphorus                              | Total mg/L | <0.05    | 0.05                    |                 |                    |
| Sulfide                                 | Total mg/L | <0.005   | 0.005                   | 0.05            | Below AO           |
| Cyanide                                 | Total mg/L | 0.001    | 0.001                   | 0.2             | Below MAC          |
| <b>Metals Total</b>                     |            |          |                         |                 |                    |
| Calcium                                 | Total mg/L | 47.2     | 0.2                     |                 |                    |
| Iron                                    | Total mg/L | 0.10     | 0.05                    | 0.3             | Below AO           |
| Magnesium                               | Total mg/L | 12.4     | 0.1                     |                 |                    |
| Manganese                               | Total mg/L | <0.005   | 0.005                   | 0.05            | Below AO           |
| Potassium                               | Total mg/L | 1.1      | 0.4                     |                 |                    |
| Silicon                                 | Total mg/L | 2.19     | 0.05                    |                 |                    |
| Sodium                                  | Total mg/L | 11.3     | 0.4                     | 200             | Below AO           |
| Sulfur                                  | Total mg/L | 16.5     | 0.3                     |                 |                    |
| Aluminum                                | Total mg/L | 0.112    | 0.005                   | 0.1             | Above OG           |
| Antimony                                | Total mg/L | <0.0002  | 0.0002                  | 0.006           | Below MAC          |
| Arsenic                                 | Total mg/L | 0.0005   | 0.0002                  | 0.01            | Below MAC          |
| Barium                                  | Total mg/L | 0.062    | 0.001                   | 1.0             | Below MAC          |
| Beryllium                               | Total mg/L | <0.0001  | 0.0001                  |                 |                    |
| Bismuth                                 | Total mg/L | <0.0005  | 0.0005                  |                 |                    |
| Boron                                   | Total mg/L | 0.017    | 0.002                   | 5.0             | Below MAC          |
| Cadmium                                 | Total mg/L | 0.00001  | 0.00001                 | 0.005           | Below MAC          |
| Chromium                                | Total mg/L | <0.0005  | 0.0005                  | 0.05            | Below MAC          |
| Cobalt                                  | Total mg/L | <0.0001  | 0.0001                  |                 |                    |
| Copper                                  | Total mg/L | 0.071    | 0.001                   | 1.0             | Below AO           |
| Lead                                    | Total mg/L | 0.0005   | 0.0001                  | 0.01            | Below MAC          |
| Lithium                                 | Total mg/L | 0.007    | 0.001                   |                 |                    |
| Molybdenum                              | Total mg/L | 0.001    | 0.001                   |                 |                    |
| Nickel                                  | Total mg/L | 0.0017   | 0.0005                  |                 |                    |
| Selenium                                | Total mg/L | 0.0002   | 0.0002                  | 0.01            | Below MAC          |
| Silver                                  | Total mg/L | 0.00001  | 0.00001                 |                 |                    |
| Strontium                               | Total mg/L | 0.315    | 0.001                   |                 |                    |
| Thallium                                | Total mg/L | <0.00005 | 0.00005                 |                 |                    |
| Tin                                     | Total mg/L | <0.001   | 0.001                   |                 |                    |
| Titanium                                | Total mg/L | <0.0005  | 0.0005                  |                 |                    |

## Analytical Report

|                           |                                    |                             |
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| Box 1160                  | Name: East Channel Treatment Plant | Date Received: Jan 13, 2010 |
| 2 Firth Street            | Location: Treated Water            | Date Reported: Jan 21, 2010 |
| Inuvik, NT, Canada        | LSD:                               | Report Number: 1290254      |
| XOE 0T0                   | P.O.: 100104                       |                             |
| Attn: Rick Campbell       | Acct code:                         |                             |
| Sampled By:               |                                    |                             |
| Company: T.O.I.           |                                    |                             |

|                           |                      |
|---------------------------|----------------------|
| <b>Reference Number</b>   | 721174-1             |
| <b>Sample Date</b>        | January 12, 2010     |
| <b>Sample Time</b>        | NA                   |
| <b>Sample Location</b>    |                      |
| <b>Sample Description</b> | ECTP / Treated Water |
| <b>Sample Matrix</b>      | Water                |

| Analyte                                     | Units                          | Result | Nominal Detection Limit | Guideline Limit | Guideline Comments |
|---|--------------------------------|--------|-------------------------|-----------------|--------------------|
| <b>Metals Total - Continued</b>             |                                |        |                         |                 |                    |
| Uranium                                     | Total mg/L                     | 0.0009 | 0.0005                  | 0.02            | Below MAC          |
| Vanadium                                    | Total mg/L                     | 0.0004 | 0.0001                  |                 |                    |
| Zinc  | Total mg/L                     | 0.013  | 0.001                   | 5.0             | Below AO           |
| Zirconium                                   | Total mg/L                     | <0.001 | 0.001                   |                 |                    |
| <b>Microbiological Analysis</b>             |                                |        |                         |                 |                    |
| Total Coliforms                             | Membrane Filtration CFU/100 mL | <1     | 1                       | 0               | Below MAC          |
| Fecal Coliforms                             | Membrane Filtration CFU/100 mL | <1     | 1                       |                 |                    |
| <b>Physical and Aggregate Properties</b>    |                                |        |                         |                 |                    |
| Solids                                      | Total Suspended mg/L           | <1     | 1                       |                 |                    |
| <b>Routine Water</b>                        |                                |        |                         |                 |                    |
| pH  |                                | 7.70   |                         | 6.5 - 8.5       | Within AO          |
| Electrical Conductivity                     | µS/cm at 25 C                  | 377    | 1                       |                 |                    |
| <b>Trihalomethanes Screen - Water</b>       |                                |        |                         |                 |                    |
| Chloroform                                  | mg/L                           | 0.036  | 0.001                   | 0.1             | Below MAC          |
| Bromodichloromethane                        | mg/L                           | 0.002  | 0.001                   | 0.1             | Below MAC          |
| Dibromochloromethane                        | mg/L                           | <0.001 | 0.001                   | 0.1             | Below MAC          |
| Bromoform                                   | mg/L                           | <0.001 | 0.001                   | 0.1             | Below MAC          |
| Total Trihalomethanes                       | mg/L                           | 0.038  | 0.001                   | 0.1             | Below MAC          |
| <b>Trihalomethanes - Surrogate Recovery</b> |                                |        |                         |                 |                    |
| Dibromofluoromethane                        | EPA Surrogate %                | 96     | 86-118                  |                 |                    |
| Toluene-d8                                  | EPA Surrogate %                | 97     | 85-115                  |                 |                    |
| Bromofluorobenzene                          | EPA Surrogate %                | 101    | 86-115                  |                 |                    |

Approved by:   
Darlene Lintott, MSc  
Consulting Scientist

## Methodology and Notes

|                           |                                    |                             |
|---------------------------|------------------------------------|-----------------------------|
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| Inuvik, NT, Canada        | LSD:                               | Report Number: 1290254      |
| XOE 0T0                   | P.O.: 100104                       |                             |
| Attn: Rick Campbell       | Acct code:                         |                             |
| Sampled By:               |                                    |                             |
| Company: T.O.I.           |                                    |                             |

## Method of Analysis

| Method Name                                     | Reference | Method  | Date Analysis Started | Location       |
|---|-----------|---|-----------------------|----------------|
| Alkalinity, pH, and EC in water                 | APHA      | * Conductivity, 2510  | 14-Jan-10             | Exova Edmonton |
| Alkalinity, pH, and EC in water                 | APHA      | * Electrometric Method, 4500-H+ B                                       | 14-Jan-10             | Exova Edmonton |
| BOD in water                                    | APHA      | * 5 Day, 5210 B   | 13-Jan-10             | Exova Edmonton |
| Coliforms - Membrane Filtration                 | APHA      | Fecal Coliform Membrane Filter Procedure, 9222 D                        | 13-Jan-10             | Exova Calgary  |
| Coliforms - Membrane Filtration                 | APHA      | Standard Total Coliform Membrane Filter Procedure, 9222 B               | 13-Jan-10             | Exova Calgary  |
| Cyanide (Total) in water                        | US EPA    | * US EPA method, 335.3  | 14-Jan-10             | Exova Edmonton |
| Kjeldahl Nitrogen & Phosphorus (Total) in Water | APHA      | * Automated Ascorbic Acid Reduction Method, 4500-P F                    | 14-Jan-10             | Exova Edmonton |
| Metals ICP-MS (Total) in water                  | US EPA    | * Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8 | 13-Jan-10             | Exova Edmonton |
| Metals Trace (Total) in water                   | APHA      | * Inductively Coupled Plasma (ICP) Method, 3120 B                       | 13-Jan-10             | Exova Edmonton |
| Solids Suspended (Total, Fixed and Volatile)    | APHA      | * Total Suspended Solids Dried at 103-105°C, 2540 D                     | 18-Jan-10             | Exova Edmonton |
| Sulfide in water                                | APHA      | * Gas Dialysis, Automated Methylene Blue Method, 4500-S2- E             | 14-Jan-10             | Exova Edmonton |
| THM - Water                                     | US EPA    | * US EPA method, 8260B/5035   | 15-Jan-10             | Exova Calgary  |

\* Reference Method Modified

## References

|        |  |
|--------|--|
| APHA   | Standard Methods for the Examination of Water and Wastewater |
| US EPA | US Environmental Protection Agency Test Methods              |

## Guidelines

|                       |   |
|-----------------------|---|
| Guideline Description | Health Canada GCDWQ   |
| Guideline Source      | Guidelines for Canadian Drinking Water Quality, Health Canada, May 2008   |
| Guideline Comments    | MAC = Maximum Acceptable Concentration<br>AO = Aesthetic Objective<br>OG = Operational Guideline for Water Treatment Plants<br>Refer to Health Canada GCDWQ for complete guidelines and additional drinking water information at <a href="http://www.hc-sc.gc.ca">www.hc-sc.gc.ca</a> |

## Comments:

- Temp = -43°C

## Methodology and Notes

|             |                    |            |                              |                 |               |
|-------------|--------------------|------------|------------------------------|-----------------|---------------|
| Bill To:    | Town of Inuvik     | Project:   |                              | Lot ID:         | <b>721174</b> |
| Report To:  | Town of Inuvik     | ID:        | SNP 0036-1                   | Control Number: | A 067535      |
|             | Box 1160           | Name:      | East Channel Treatment Plant | Date Received:  | Jan 13, 2010  |
|             | 2 Firth Street     | Location:  | Treated Water                | Date Reported:  | Jan 21, 2010  |
|             | Inuvik, NT, Canada | LSD:       |                              | Report Number:  | 1290254       |
|             | XOE 0T0            | P.O.:      | 100104                       |                 |               |
| Attn:       | Rick Campbell      | Acct code: |                              |                 |               |
| Sampled By: |                    |            |                              |                 |               |
| Company:    | T.O.I.             |            |                              |                 |               |

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The comparison of test results to guideline limits is provided for information purposes only. This is not to be taken as a statement of conformance / nonconformance to any guideline, regulation or limit. The data user is responsible for all conclusions drawn with respect to the data and is advised to consult official regulatory references when evaluating compliance.

Please direct any inquiries regarding this report to our Client Services group.

Results relate only to samples as submitted.

The test report shall not be reproduced except in full, without the written approval of the laboratory.

Exova  
7217 Roper Road NW  
Edmonton, AB  
Canada, T6B 3J4

T: (780) 438-5522  
F: (780) 438-0396  
E: Edmonton@exova.com  
W: www.exova.com



## Internal Sublet Request

Lot: 721174

Number of Samples: 1

Printed Date: Jan 13, 2010

Page 1 of 1

**Sublet request to:**

**Exova Calgary**

Control Number: A 067535

**Primary Administrator Contact:**

Attn: Rick Campbell  
Town of Inuvik  
Box 1160  
2 Firth Street  
Inuvik, NT X0E 0T0  
Fax: (867) 777-8601  
Phone: (867) 777-8615

|                                |                                     |                         |                      |                   |               |
|--------------------------------|-------------------------------------|-------------------------|----------------------|-------------------|---------------|
| <b>Agreement Id</b>            | <u>2909</u>                         | <b>Project Id #</b>     | <u>SNP 0036-1</u>    | <b>Project PO</b> | <u>100104</u> |
| <b>Project Name</b>            | <u>East Channel Treatment Plant</u> | <b>Project Location</b> | <u>Treated Water</u> |                   |               |
| <b>Project Accounting Code</b> |                                     | <b>Project LSD</b>      |                      |                   |               |

Report ID & Due Date:

1290254 21-Jan-2010

| <b><u>Sample Id</u></b>    | <b><u>Sample Descriptors</u></b>  | <b><u>Service</u></b>        | <b><u>Service Name</u></b>                                    |
|----------------------------|---|------------------------------|---|
| <b>1</b><br><b>3232957</b> | <i>Date Sampled:</i> Jan 12, 2010<br><br><i>Site I.D.:</i> ECTP<br><i>Sample Description:</i> Treated Water | <b>THM B</b><br><b>WW1 B</b> | <b>THMs in water</b><br><b>Total and Fecal Coliforms (MF)</b> |

**Lot Notes**

Temp = -43°C

Used same analysis as lot 664320

**Special Instructions:**

**Shipped by:** \_\_\_\_\_

**Received by:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Date:** \_\_\_\_\_