

Client: City of Iqaluit  
PO Box 460  
Iqaluit, NU  
X0A 0H0  
Attention: Mr. Pat Wolfe  
PO#:  
Invoice to: City of Iqaluit

Report Number: 1220664  
Date Submitted: 2012-09-21  
Date Reported: 2012-09-27  
Project: Test E (WWTP Eff)  
COC #: 154601

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**Dear Pat Wolfe:**

**Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).**

Report Comments:

APPROVAL: \_\_\_\_\_

Lorna Wilson  
Inorganic Laboratory Supervisor

Exova (Ottawa) is certified and accredited for specific parameters by:

CALA, Canadian Association for Laboratory Accreditation (to ISO 17025), OMAF, Ontario Ministry of Agriculture, Food and Rural Affairs (for farm soils), Licensed by Ontario MOE for specific tests in drinking water.

Exova (Mississauga) is accredited for specific parameters by:

SCC, Standards Council of Canada (to ISO 17025)

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only.

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|                   |                   |        |       | Lab I.D.<br>Sample Matrix<br>Sample Type<br>Sampling Date<br>Sample I.D. | 986519<br>Wastewater<br><br>2012-09-19<br>Test E (WWTP Eff) |
|-------------------|-------------------|--------|-------|--------------------------------------------------------------------------|-------------------------------------------------------------|
| Group             | Analyte           | MRL    | Units | Guideline                                                                |                                                             |
| General Chemistry | Conductivity      | 5      | uS/cm |                                                                          | 594                                                         |
|                   | N-NO2             | 0.10   | mg/L  |                                                                          | <0.10                                                       |
|                   | N-NO3             | 0.10   | mg/L  |                                                                          | <0.10                                                       |
| Mercury           | Hg                | 0.0001 | mg/L  |                                                                          | <0.0001                                                     |
| Metals            | Ag                | 0.01   | mg/L  |                                                                          | <0.01                                                       |
|                   | Al                | 0.1    | mg/L  |                                                                          | 0.5                                                         |
|                   | Aqua-Regia Digest |        | mg/L  |                                                                          | y                                                           |
|                   | As                | 0.05   | mg/L  |                                                                          | <0.05                                                       |
|                   | B                 | 0.1    | mg/L  |                                                                          | <0.1                                                        |
|                   | Ba                | 0.01   | mg/L  |                                                                          | <0.01                                                       |
|                   | Be                | 0.01   | mg/L  |                                                                          | <0.01                                                       |
|                   | Ca                | 1      | mg/L  |                                                                          | 23                                                          |
|                   | Cd                | 0.01   | mg/L  |                                                                          | <0.01                                                       |
|                   | Co                | 0.01   | mg/L  |                                                                          | <0.01                                                       |
|                   | Cr                | 0.05   | mg/L  |                                                                          | <0.05                                                       |
|                   | Cu                | 0.01   | mg/L  |                                                                          | 0.30                                                        |
|                   | Fe                | 0.1    | mg/L  |                                                                          | 0.6                                                         |
|                   | K                 | 1      | mg/L  |                                                                          | 9                                                           |
|                   | Mg                | 1      | mg/L  |                                                                          | 4                                                           |
|                   | Mn                | 0.01   | mg/L  |                                                                          | 0.15                                                        |
|                   | Mo                | 0.01   | mg/L  |                                                                          | <0.01                                                       |
|                   | Na                | 2      | mg/L  |                                                                          | 21                                                          |
|                   | Ni                | 0.01   | mg/L  |                                                                          | 0.01                                                        |
|                   | Pb                | 0.01   | mg/L  |                                                                          | <0.01                                                       |
|                   | Sb                | 0.01   | mg/L  |                                                                          | <0.01                                                       |
|                   | Se                | 0.05   | mg/L  |                                                                          | <0.05                                                       |

Guideline = \* = Guideline Exceedence

\*\* = Analysis completed at Mississauga, Ontario.

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|           |         |      |       |           | Lab I.D.<br>Sample Matrix<br>Sample Type<br>Sampling Date<br>Sample I.D. |
|-----------|---------|------|-------|-----------|--------------------------------------------------------------------------|
| Group     | Analyte | MRL  | Units | Guideline | 986519<br>Wastewater<br>2012-09-19<br>Test E (WWTP Eff)                  |
| Metals    | Si      | 0.1  | mg/L  |           | 1.5                                                                      |
|           | Sr      | 0.05 | mg/L  |           | <0.05                                                                    |
|           | Ti      | 0.1  | mg/L  |           | <0.1                                                                     |
|           | Tl      | 0.01 | mg/L  |           | <0.01                                                                    |
|           | V       | 0.05 | mg/L  |           | <0.05                                                                    |
|           | Zn      | 0.05 | mg/L  |           | 0.14                                                                     |
| Nutrients | BOD5    | 1    | mg/L  |           | 169                                                                      |
|           | N-NH3   | 2.0  | mg/L  |           | 42.8                                                                     |
|           | O-PO4   | 0.03 | mg/L  |           | 13.8                                                                     |
|           | Total P | 0.01 | mg/L  |           | 6.89                                                                     |

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### QC Summary

| Analyte                                                                            | Blank        | QC<br>% Rec | QC<br>Limits |
|------------------------------------------------------------------------------------|--------------|-------------|--------------|
| <b>Run No</b> 237231 <b>Analysis Date</b> 2012-09-24 <b>Method</b> M SM3112B-3500B |              |             |              |
| Hg                                                                                 | <0.0001 mg/L | 107         | 70-130       |
| <b>Run No</b> 238799 <b>Analysis Date</b> 2012-09-27 <b>Method</b> SM 5210B        |              |             |              |
| BOD5                                                                               | <1 mg/L      | 82          | 75-125       |
| <b>Run No</b> 238857 <b>Analysis Date</b> 2012-09-24 <b>Method</b> C SM4500-NO3-F  |              |             |              |
| N-NO2                                                                              | <0.10 mg/L   | 107         | 80-120       |
| N-NO3                                                                              | <0.10 mg/L   | 90          | 80-120       |
| <b>Run No</b> 238910 <b>Analysis Date</b> 2012-09-25 <b>Method</b> C SM4500-PF     |              |             |              |
| O-PO4                                                                              | <0.03 mg/L   | 100         | 89-111       |
| <b>Run No</b> 238911 <b>Analysis Date</b> 2012-09-25 <b>Method</b> C SM4500-PF     |              |             |              |
| Total P                                                                            | <0.01 mg/L   | 107         | 85-115       |
| <b>Run No</b> 238913 <b>Analysis Date</b> 2012-09-24 <b>Method</b> C SM2510B       |              |             |              |
| Conductivity                                                                       | <5 uS/cm     | 101         | 95-105       |
| <b>Run No</b> 238968 <b>Analysis Date</b> 2012-09-25 <b>Method</b> EPA 200.8       |              |             |              |
| B                                                                                  | <0.1 mg/L    | 92          | 81-119       |

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| Analyte                                                                      | Blank      | QC<br>% Rec | QC<br>Limits |
|------------------------------------------------------------------------------|------------|-------------|--------------|
| Ti                                                                           | <0.1 mg/L  | 90          | 88-112       |
| <b>Run No</b> 238991 <b>Analysis Date</b> 2012-09-26 <b>Method</b> EPA 200.8 |            |             |              |
| Ag                                                                           | <0.01 mg/L | 115         | 70-130       |
| Al                                                                           | <0.1 mg/L  | 121         | 70-130       |
| Aqua-Regia Digest                                                            |            |             |              |
| As                                                                           | <0.05 mg/L | 121         | 70-130       |
| Ba                                                                           | <0.01 mg/L | 107         | 70-130       |
| Be                                                                           | <0.01 mg/L | 111         | 70-130       |
| Cd                                                                           | <0.01 mg/L | 117         | 70-130       |
| Co                                                                           | <0.01 mg/L | 119         | 70-130       |
| Cr                                                                           | <0.05 mg/L | 122         | 70-130       |
| Cu                                                                           | <0.01 mg/L | 117         | 70-130       |
| Fe                                                                           | <0.1 mg/L  | 112         | 70-130       |
| Mn                                                                           | <0.01 mg/L | 113         | 70-130       |
| Mo                                                                           | <0.01 mg/L | 111         | 70-130       |
| Ni                                                                           | <0.01 mg/L | 122         | 70-130       |
| Pb                                                                           | <0.01 mg/L | 115         | 70-130       |

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### QC Summary

| Analyte                                                                            | Blank      | QC<br>% Rec | QC<br>Limits |
|------------------------------------------------------------------------------------|------------|-------------|--------------|
| Sb                                                                                 | <0.01 mg/L | 100         | 70-130       |
| Se                                                                                 | <0.05 mg/L | 122         | 70-130       |
| Sr                                                                                 | <0.05 mg/L | 111         | 70-130       |
| Tl                                                                                 | <0.01 mg/L | 113         | 70-130       |
| V                                                                                  | <0.05 mg/L | 120         | 70-130       |
| Zn                                                                                 | <0.05 mg/L | 116         | 70-130       |
| <b>Run No</b> 239000 <b>Analysis Date</b> 2012-09-26 <b>Method</b> C SM4500-NH3E   |            |             |              |
| N-NH3                                                                              | <2.0 mg/L  | 98          | 95-105       |
| <b>Run No</b> 239038 <b>Analysis Date</b> 2012-09-26 <b>Method</b> M SM3120B-3500C |            |             |              |
| Si                                                                                 | <0.1 mg/L  | 87          | 70-130       |
| <b>Run No</b> 239097 <b>Analysis Date</b> 2012-09-27 <b>Method</b> SM 3111B-3500B  |            |             |              |
| Ca                                                                                 | <1 mg/L    | 99          | 90-110       |
| K                                                                                  | <1 mg/L    | 92          | 87-113       |
| Mg                                                                                 | <1 mg/L    | 99          | 76-124       |
| Na                                                                                 | <2 mg/L    | 105         | 82-118       |

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### Sample Comment Summary

Sample ID: 986519 Test E (WWTP Eff) Metals analysis performed on aqua-regia digest of sample material except for Boron, Titanium and Silicon.

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