

**C.O.C.: G35604**

**REPORT No. B13-18916**

**Report To:**

**Hamlet of Resolute Bay**

Government Office,  
NU X0A 0V0 Canada

**Attention:** Rick Goulton

**Caduceon Environmental Laboratories**

2378 Holly Lane  
Ottawa Ontario K1V 7P1  
Tel: 613-526-0123  
Fax: 613-526-1244

DATE RECEIVED: 23-Jul-13

JOB/PROJECT NO.:

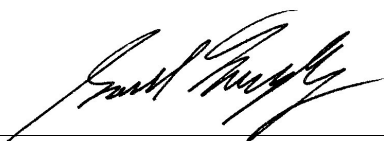
DATE REPORTED: 01-Aug-13

P.O. NUMBER:

SAMPLE MATRIX: Waste Water

WATERWORKS NO.

|                                         |           |         | Client I.D.      |                    | Leachate    |  |  |  |
|-----------------------------------------|-----------|---------|------------------|--------------------|-------------|--|--|--|
|                                         |           |         | Sample I.D.      |                    | B13-18916-1 |  |  |  |
|                                         |           |         | Date Collected   |                    | 23-Jul-13   |  |  |  |
| Parameter                               | Units     | M.D.L.  | Reference Method | Date/Site Analyzed |             |  |  |  |
| Fecal Coliform                          | cfu/100mL | 1       | MOE E3371        | 23-Jul-13/O        | 20          |  |  |  |
| BOD                                     | mg/L      | 3       | SM 5210B         | 25-Jul-13/O        | 12          |  |  |  |
| Hardness (as CaCO <sub>3</sub> )        | mg/L      | 1       | SM 3120          | 24-Jul-13/O        | 431         |  |  |  |
| Alkalinity(CaCO <sub>3</sub> ) to pH4.5 | mg/L      | 5       | SM 2320B         | 24-Jul-13/O        | 179         |  |  |  |
| Conductivity @25°C                      | µmho/cm   | 1       | SM 2510B         | 24-Jul-13/O        | 1070        |  |  |  |
| pH @25°C                                | pH Units  |         | SM 4500H         | 24-Jul-13/O        | 7.83        |  |  |  |
| Total Organic Carbon                    | mg/L      | 0.2     | EPA 415.1        | 24-Jul-13/O        | 21.5        |  |  |  |
| Total Suspended Solids                  | mg/L      | 3       | SM 2540D         | 24-Jul-13/O        | 6           |  |  |  |
| Chloride                                | mg/L      | 0.5     | SM4110C          | 23-Jul-13/O        | 75.4        |  |  |  |
| Nitrite (N)                             | mg/L      | 0.1     | SM4110C          | 23-Jul-13/O        | < 0.1       |  |  |  |
| Nitrate (N)                             | mg/L      | 0.1     | SM4110C          | 23-Jul-13/O        | 0.2         |  |  |  |
| Sulphate                                | mg/L      | 1       | SM4110C          | 24-Jul-13/O        | 264         |  |  |  |
| Ammonia (N)-Total                       | mg/L      | 0.01    | MOEE 3364        | 25-Jul-13/O        | 2.25        |  |  |  |
| Phosphorus-Total                        | mg/L      | 0.01    | MOEE 3367        | 25-Jul-13/O        | 0.20        |  |  |  |
| Phenolics                               | mg/L      | 0.001   | MOEE 3179        | 25-Jul-13/O        | 0.004       |  |  |  |
| Aluminum (total)                        | mg/L      | 0.01    | SM 3120          | 24-Jul-13/O        | 0.10        |  |  |  |
| Arsenic                                 | mg/L      | 0.0005  | EPA 200.8        | 26-Jul-13/O        | 0.0021      |  |  |  |
| Calcium                                 | mg/L      | 0.02    | SM 3120          | 24-Jul-13/O        | 140         |  |  |  |
| Cadmium                                 | mg/L      | 0.005   | SM 3120          | 24-Jul-13/O        | < 0.005     |  |  |  |
| Cobalt                                  | mg/L      | 0.005   | SM 3120          | 24-Jul-13/O        | < 0.005     |  |  |  |
| Copper                                  | mg/L      | 0.002   | SM 3120          | 24-Jul-13/O        | 0.039       |  |  |  |
| Chromium                                | mg/L      | 0.002   | SM 3120          | 24-Jul-13/O        | 0.002       |  |  |  |
| Iron (Total)                            | mg/L      | 0.005   | SM 3120          | 24-Jul-13/O        | 0.546       |  |  |  |
| Lead                                    | mg/L      | 0.02    | SM 3120          | 24-Jul-13/O        | < 0.02      |  |  |  |
| Magnesium                               | mg/L      | 0.01    | SM 3120          | 24-Jul-13/O        | 19.5        |  |  |  |
| Manganese (Total)                       | mg/L      | 0.001   | SM 3120          | 24-Jul-13/O        | 0.170       |  |  |  |
| Mercury                                 | mg/L      | 0.00002 | SM 3112 B        | 24-Jul-13/O        | < 0.00002   |  |  |  |
| Nickel                                  | mg/L      | 0.01    | SM 3120          | 24-Jul-13/O        | < 0.01      |  |  |  |



Gord Murphy  
Lab Supervisor

M.D.L. = Method Detection Limit

Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill

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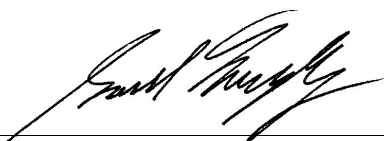
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|                         |       |        | Client I.D.      |                    | Leachate    |  |  |  |
|-------------------------|-------|--------|------------------|--------------------|-------------|--|--|--|
|                         |       |        | Sample I.D.      |                    | B13-18916-1 |  |  |  |
|                         |       |        | Date Collected   |                    | 23-Jul-13   |  |  |  |
| Parameter               | Units | M.D.L. | Reference Method | Date/Site Analyzed |             |  |  |  |
| Sodium                  | mg/L  | 0.2    | SM 3120          | 24-Jul-13/O        | 45.4        |  |  |  |
| Potassium               | mg/L  | 0.1    | SM 3120          | 24-Jul-13/O        | 17.5        |  |  |  |
| Zinc                    | mg/L  | 0.005  | SM 3120          | 24-Jul-13/O        | 0.233       |  |  |  |
| Acenaphthene            | µg/L  | 0.05   | EPA 8270         | 29-Jul-13/K        | < 0.05      |  |  |  |
| Acenaphthylene          | µg/L  | 0.05   | EPA 8270         | 29-Jul-13/K        | < 0.05      |  |  |  |
| Anthracene              | µg/L  | 0.05   | EPA 8270         | 29-Jul-13/K        | < 0.05      |  |  |  |
| Benzo(a)anthracene      | µg/L  | 0.05   | EPA 8270         | 29-Jul-13/K        | < 0.05      |  |  |  |
| Benzo(a)pyrene          | µg/L  | 0.01   | EPA 8270         | 29-Jul-13/K        | < 0.01      |  |  |  |
| Benzo(b)fluoranthene    | µg/L  | 0.05   | EPA 8270         | 29-Jul-13/K        | < 0.05      |  |  |  |
| Benzo(g,h,i)perylene    | µg/L  | 0.05   | EPA 8270         | 29-Jul-13/K        | < 0.05      |  |  |  |
| Benzo(k)fluoranthene    | µg/L  | 0.05   | EPA 8270         | 29-Jul-13/K        | < 0.05      |  |  |  |
| Fluoranthene            | µg/L  | 0.05   | EPA 8270         | 29-Jul-13/K        | < 0.05      |  |  |  |
| Fluorene                | µg/L  | 0.05   | EPA 8270         | 29-Jul-13/K        | < 0.05      |  |  |  |
| Indeno(1,2,3,-cd)pyrene | µg/L  | 0.05   | EPA 8270         | 29-Jul-13/K        | < 0.05      |  |  |  |
| Methylnaphthalene,1-    | µg/L  | 0.05   | EPA 8270         | 29-Jul-13/K        | < 0.05      |  |  |  |
| Methylnaphthalene,2-    | µg/L  | 0.05   | EPA 8270         | 29-Jul-13/K        | < 0.05      |  |  |  |
| Naphthalene             | µg/L  | 0.05   | EPA 8270         | 29-Jul-13/K        | < 0.05      |  |  |  |
| Phenanthrene            | µg/L  | 0.05   | EPA 8270         | 29-Jul-13/K        | < 0.05      |  |  |  |
| Pyrene                  | µg/L  | 0.05   | EPA 8270         | 29-Jul-13/K        | < 0.05      |  |  |  |
| Benzene                 | µg/L  | 0.5    | EPA 8260         | 24-Jul-13/O        | < 0.5       |  |  |  |
| Toluene                 | µg/L  | 0.5    | EPA 8260         | 24-Jul-13/O        | < 0.5       |  |  |  |
| Ethylbenzene            | µg/L  | 0.5    | EPA 8260         | 24-Jul-13/O        | < 0.5       |  |  |  |
| Xylene, m,p-            | µg/L  | 1.0    | EPA 8260         | 24-Jul-13/O        | < 1.0       |  |  |  |
| Styrene                 | µg/L  | 0.5    | EPA 8260         | 24-Jul-13/O        | < 0.5       |  |  |  |
| Xylene, o-              | µg/L  | 0.5    | EPA 8260         | 24-Jul-13/O        | < 0.5       |  |  |  |
| PHC F1 (C6-C10)         | µg/L  | 50     | MOE E3421        | 25-Jul-13/O        | < 50        |  |  |  |
| PHC F2 (>C10-C16)       | µg/L  | 50     | MOE E3421        | 31-Jul-13/O        | 100         |  |  |  |
| PHC F3 (>C16-C34)       | µg/L  | 400    | MOE E3421        | 31-Jul-13/O        | < 400       |  |  |  |



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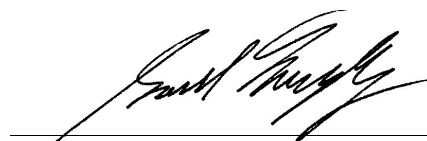
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|---------------------|--------------|---------------|-------------------------|---------------------------|-------------|--|--|--|
|                     |              |               | <b>Sample I.D.</b>      |                           | B13-18916-1 |  |  |  |
|                     |              |               | <b>Date Collected</b>   |                           | 23-Jul-13   |  |  |  |
| <b>Parameter</b>    | <b>Units</b> | <b>M.D.L.</b> | <b>Reference Method</b> | <b>Date/Site Analyzed</b> |             |  |  |  |
| PHC F4 (>C34-C50)   | µg/L         | 400           | MOE E3421               | 31-Jul-13/O               | < 400       |  |  |  |
| Comment-purgeable   | -            |               | -                       | 25-Jul-13/O               | -           |  |  |  |
| Comment-extractable | -            |               | -                       | 31-Jul-13                 | NDP         |  |  |  |
| Oil & Grease-Total  | mg/L         | 1.0           | SM 5520                 | 26-Jul-13/K               | < 1.0       |  |  |  |



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