

**Established 1868**

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The Corporation of the Township of Pelee is required to provide an *Annual Report*for its Ministry of the Environment regulated drinking water system (DWS) under Drinking Water Systems Regulation *O. Reg. 170/03.*  The purpose of this letter and its attachments is to satisfy this requirement and report the on the dates from January 1, 2011 until December 31, 2011.

The Township of Pelee owns and operates the *Pelee West Shore Well Supply* which is a *Class 1 Water Treatment Subsystem* having a DWS registration number of 220008177.  The *Treatment Subsystem* supplies two additional systems within the Township; *Pelee West Shore Distribution, Pelee East Shore Distribution*.  All of the Township of Pelee’s water systems mentioned above remained on a “Boil Water Advisory” issued by the Windsor Essex County Health Unit in 2010.  This report outlines the sampling and direct connections to the *Pelee West Shore Distribution System*.

The *Pelee West Shore Well Supply* and *Pelee West Shore Distribution System* are classed as a *Small-Municipal, Non-Residential*DWS and serves a population of 7, having 4 residential connections and 1 designated facility. There are 18 total service connections.  The *Pelee West Shore Well Supply* system utilizes ultra-membrane filtration, Ultraviolet Light and Sodium Hypochlorite (12% solution) injection as its methods of treatment.  The treatment system utilizes continuous monitors for turbidity, Chlorine, temperature, pH and Ultraviolet dose to monitor the water entering, being treated and sent to the distribution systems.  The *Pelee West Shore Well Supply* does not include fluoridation in its process.

Under *Schedule 12*of *O. Reg. 170/03* the Township is required to complete microbiological testing of its raw intake, treatment and distribution systems.  Table 1 outlines these analytical results.  The Township is also required to take distribution samples for various inorganic parameters.  Table 2 outlines the inorganic analytical results.

**Table 1**

**Schedule 12 Sampling Completed**

**January 1, 2011 – December 31, 2011**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sample Type** | **# of Samples** | **Range of E. Coli Results min # – max #** | **Range of TotalColiform Results min # – max #** | **Number of HPC Samples** | **Range of HPC Results min # – max #** |
| Raw | 24 | <2 – 86 | <2 – >200 | 0 | NP |
| Treated | 24 | 0 – 0 | 0 – 0 | 0 | NP |
| Distribution | 24 | 0 – 0 | 0 – 0 | 24 | <10 - <10 |

HPC – Heterotrophic Plate Count

NP – Not Performed

Note – All analysis results in CFU’s (Colony Forming Units)

**Table 2**

**Inorganic Sampling Completed**

**January 1, 2011 – December 31, 2010**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter** | **Sample Date** | **Result** | **Unit of Measure** | **Exceedance** |
| Lead | Aug 9 | 0.00024 | Mg/L | No |
| Nitrate | March 8 | 2.2 | Mg/L | No |
|   | June 21 | 0.8 | Mg/L | No |
|   | Sept. 27 | 0.7 | Mg/L | No |
|   | Dec. 20 | <0.1 | Mg/L | No |
| Nitrite | March 8 | <0.1 | Mg/L | No |
|   | June 21 | 0.8 | Mg/L | No |
|   | Sept. 27 | <0.1 | Mg/L | No |
|   | Dec. 20 | <0.1 | Mg/L | No |

Mg/L – milligrams / Litre

Ug/L – micrograms / Litre

Under *Schedule 9*of *O. Reg. 170/03* the Township is required to report the distribution grab samples and treatment operations continuous samples in this Annual Report.  These results are listed below in Table 3.

**Table 3**

**Schedule 9 Sampling Results**

**January 1, 2011 – December 31, 2011**

|  |  |  |
| --- | --- | --- |
| **Analysis** | **Distribution****(grab sample)** | **Treated****(Continuous Sample)** |
| **# taken** | **Min – Max** | **# taken** | **Min – Max** |
| Free Chlorine (mg/L) | 101 | 0.48 – 2.14 | 353 | 0.00 – 2.89 |
| Turbidity (NTU) | NP | NP | 353 | 0.010 – 0.091 |

NTU – Nephlometric Turbidity Units

NP – Not Performed

Note – Continuous Samples taken from Daily observation at Treatment Plant

The township of Pelee is required to include in the annual report for the year 2011 any notices submitted under *subsection 18(1) of the Safe Drinking Water Act*or *section 16-4 of Schedule 16*of*O. Reg. 170/03*and reported to the Ministry of the Environments Spills Action Center.  Table 4 below includes details on all notices submitted.

**Table 4**

**Submissions to Spills Action Center for**

**Incidents Possible to Cause an**

**Adverse Drinking Water Quality Incident**

**January 1, 2011 – December 31, 2011**

|  |  |  |  |
| --- | --- | --- | --- |
| **Incident Date** | **Indicator** | **Corrective Action** | **Corrective Action Notice Submitted** |
| Feb. 2 | None, Power Failure, Operator Could Not Respondto reset Data alarm system | Reset alarm system once water plant could be reached safely by operator | Feb. 2 |
| Apr. 4 | No Data Logging Capabilities | Sent and Received rebuilt computer system | Apr. 7 |
| Apr. 6 | Increased Ammonia in Raw Water possibly to causenon-measurable Free Chlorine levels | Daily Sampling of Free and Total Chlorine of treated water leaving west plant.  Corrective action completed once Free Chlorine level became measurable by on-line instrumentation. | Apr. 13 |

Attached to this report is a copy of the notice provided to the west shore distribution system customer and the *Boil Water Advisory* issued by the Windsor Essex County Health Unit.

The Corporation of the Township of Pelee

Environmental Services