

**ENVIRONMENTAL COMPLIANCE APPROVAL**

NUMBER 5932-BF2L3H  
Issue Date: August 28, 2019

Milestone Environmental Contracting Inc.  
1550 Laperriere Avenue, No. 200  
Ottawa, Ontario  
K1Z 7T2

Site Location: Port Hope Centre Pier Remediation Project  
Municipality of Port Hope  
County of Northumberland

*You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:*

one (1) sewage Works for the collection, transmission, treatment and disposal of surface water, dredge water, and/or groundwater impacted with metals, radionuclides, total suspended solids, petroleum hydrocarbons, volatile organic compounds, polycyclic aromatic hydrocarbons, having a rated hydraulic capacity of up to 5,670 litres per minute on the effluent, with treated effluent to be disposed through discharge to the Port Hope Harbour.

**Dredging System(s)**

- one (1) or more optional **dredging system(s)** (i.e. hydraulic dredge(s), mechanical dredge(s), material barge(s), moonpool(s), filtrate recycle unit(s), hydraulic jet ring (s), etc.).

**Sediment Solidification System(s)**

- one (1) or more optional **sediment solidification system(s)** (i.e. geotube sediment dewatering units(s), sediment solidification units(s), free water drainage unit(s), etc.).

**Pre-treatment System(s)**

- one (1) or more optional **pre-treatment system(s)** (i.e. equalization tank(s), chemical addition unit(s), powder media addition unit(s), chemical reaction unit(s), pipe flocculator unit(s), oil-water separator unit(s), settling / separation tank(s), clarifier(s), geotube

unit(s), flocculator(s), etc.).

### **Clarification System(s)**

- one (1) or more optional **clarification system(s)** (i.e. settling / separation tank(s), clarifier(s), geotube unit(s), etc.).

### **Polishing-treatment System(s)**

- one (1) or more optional **polishing-treatment system(s)** (i.e. multimedia filter(s), bag filter(s), cartridge filter(s), organo clay filter(s), activated carbon filter(s), specialty adsorption media filter(s), ion exchange media filter(s), pH adjustment unit(s), treated water tank(s), etc).

### **Miscellaneous System(s)**

- including instrumentation, piping, valves and appurtenances essential for the proper operation of the aforementioned sewage Works temporarily located on-site.

- additional pumping system(s) as required to transfer water to the equalization tanks and transfer treated water to the discharge point.

including pressure gauges, flow meter and flow regulators, sample ports, and all other controls, electrical equipment, instrumentation, piping, pumps, valves and appurtenances essential for the proper operation of the aforementioned Works all temporarily located on site.

all in accordance with supporting documents listed in Schedule 'A'.

*For the purpose of this environmental compliance approval, the following definitions apply:*

"Application" means the application for an environmental compliance approval submitted to the Ministry for approval by or on behalf of the Owner and dated July 23, 2019.

"Approval" means this environmental compliance approval, any schedules attached to it, and the Application;

"Director" means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;

"District Manager" means the District Manager of the appropriate local District Office of the Ministry, where the Works are geographically located;

"EPA" means the *Environmental Protection Act, R.S.O 1990, c.E.19* , as amended;

"Ministry" means the ministry of the government of Ontario responsible for the EPA and OWRA

and includes all officials, employees or other persons acting on its behalf;

"Owner" means Milestone Environmental Contracting Inc., and includes its successors and assignees;

"OWRA" means the *Ontario Water Resources Act, R.S.O. 1990, c. O.40* , as amended;

"Works" means the sewage works described in the Owner's application, and this Approval.

*You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:*

## **TERMS AND CONDITIONS**

### **1. GENERAL PROVISIONS**

- (1) The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the terms and conditions herein and shall take all reasonable measures to ensure any such person complies with the same.
- (2) Except as otherwise provided by these terms and conditions, the Owner shall design, build, install, operate and maintain the Works in accordance with this Approval.
- (3) Where there is a conflict between a provision of this environmental compliance approval and any document submitted by the Owner, the conditions in this environmental compliance approval shall take precedence. Where there is a conflict between one or more of the documents submitted by the Owner, the Application shall take precedence unless it is clear that the purpose of the document was to amend the Application
- (4) Where there is a conflict between the documents listed in the Schedule A, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.
- (5) The terms and conditions of this Approval are severable. If any term and condition of this environmental compliance approval, or the application of any requirement of this environmental compliance approval to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this Approval shall not be affected thereby.
- (6) The issuance of, and compliance with the conditions of, this Approval does not:
  - (a) relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including, but not limited to, the obligation to obtain approval from the local conservation authority

necessary to construct or operate the sewage Works; or

- (b) limit in any way the authority of the Ministry to require certain steps be taken to require the Owner to furnish any further information related to compliance with this Approval.

## **2. CHANGE OF OWNER**

- (1) The Owner shall notify the District Manager and the Director, in writing, of any of the following changes within **thirty (30) days** of the change occurring:
  - (a) change of address of Owner;
  - (b) change of Owner, including address of new Owner;
  - (c) change of partners where the Owner is or at any time becomes a partnership, and a copy of the most recent declaration filed under the *Business Names Act, R.S.O. 1990, c. B.17* ; and
  - (d) change of name of the corporation where the Owner is or at any time becomes a corporation, and a copy of the “Initial Return” or “Notice of Change” filed under the *Corporations Information Act, R.S.O. 1990, c. C.39* , shall be included in the notification to the District Manager.
- (2) In the event of any change in ownership of the Works, the Owner shall notify in writing the succeeding owner of the existence of this Approval, and a copy of such notice shall be forwarded to the District Manager.
- (3) The Owner shall ensure that all communications made pursuant to this condition refer to the number at the top of this environmental compliance approval.

## **3. NOTIFICATION OF CHANGES IN PROCESSES OR PROCESS MATERIALS**

- (1) The Owner shall give written notice to the Director of any plans to change the processes or process materials forming a part of the Works (and any plans to change the processes or process materials in the Owner's enterprise serviced by the Works) where the change may significantly alter the quantity or quality of the influent to or effluent from the Works, and no such change(s) shall be made unless and until the Owner applies for and receives the written approval of the Director pursuant to section 20.2 of the EPA for the purposes of Part

## **4. OPERATIONS AND MAINTENANCE**

- (1) The Owner shall ensure that at all times, the Works and related equipment and appurtenances which are installed or used to achieve compliance with this Approval are

properly operated and maintained in accordance with manufacturer's specifications.

- (2) In furtherance of, but without limiting the generality of, the obligation imposed by condition 6.(1), the Owner shall ensure that:
- (a) funding, staffing, training of staff, laboratory and process controls, quality assurance and quality control procedures of or in relation to the Works are adequate to achieve compliance with this Approval; and
  - (b) equipment and material are kept on hand and in good repair for immediate use in the event of:
    - (i) upset;
    - (ii) bypass;
    - (iii) abnormal loss of any product, by-product, intermediate product, oil, solvent, waste material or any other polluting substance into the environment or interior of any building; or
    - (iv) spill within the meaning of Part X of the EPA.

and staff are trained in the use of said equipment and material and in the methods and procedures to be employed upon the occurrence of such an event.

- (3) The Owner shall prepare an **operations manual** of the Works prior to the commencement of the operation of the Works. The operations manual shall include, but not necessarily limited to, the following information:
- (a) Treatment configuration proposed;
  - (b) Operating procedures for routine operation of the Works;
  - (c) Inspection programs, including frequency of inspection, for the Works and the methods or tests employed to detect when maintenance is necessary;
  - (d) Repair and maintenance programs, including the frequency of repair and maintenance for the Works;
  - (e) **Contingency Plans and Procedures** for dealing with upset, bypasses and any other abnormal situations, and for notifying the District Manager; and
  - (f) Complaint procedures for receiving and responding to public complaints, including a reporting system which records what steps the Owner took to determine the cause of the complaint and what corrective measures were taken to

alleviate the cause and prevent its recurrence.

- (4) The Owner shall maintain the operations manual up to date through revisions undertaken from time to time and retain a copy at the location of the Works. Upon request, the Owner shall make the manual available for inspection and copying by Ministry personnel.

## 5. SPECIAL OPERATION AND MAINTENANCE

- (1) The Owner shall ensure that the following analysis is undertaken by a qualified professional(s) and the information submitted to the local District Office of the Ministry for review and acceptance:
  - (a) a detailed characterization of the groundwater from the Site is carried out through sampling and analysis for organic parameter groups of petroleum hydrocarbons, polycyclic-aromatic hydrocarbons, chlorinated solvents, radionuclide, and/or volatile organic compounds and other potential parameters of concern including a scan for metals and metal-hydrides.
    - (i) This characterization is to be completed to determine the contaminants present at the Site and their quantities during **Dredging Phase** of the project.
    - (ii) This characterization is to be completed to determine the contaminants present at the Site and their quantities during **Excavation Phase** of the project.
  - (b) an environmental study report is completed to determine the suitability of the Works to complete the proposed remedial work and to meet the effluent limits stipulated in condition 6 of this Approval. In addition, the report is also to evaluate the assimilative capacity of the effluent receiver if needed in consultation with the District Manager and the Ministry's Regional Surface Water Specialist, to evaluate the maximum treatment capacity that can be deployed at a given time ensuring that the effluent receiver is not adversely impacted; and
  - (c) information/documentation requested in (a) and (b) should be submitted along with the operations manual requested by condition 4.(3).
- (2) Notwithstanding condition 8, the Owner shall undertake the appropriate monitoring to determine when breakthrough will occur in any of the absorption/adsorption vessels and shall terminate operation upon breakthrough until the filter media in the vessel(s) or the vessel(s) itself has been replaced.

## 6. EFFLUENT LIMITS

- (1) The Owner shall design, construct and operate the Works such that the concentrations of

the materials named below as effluent parameters are not exceeded in the effluent from the Works.

<b>Table 1 - Effluent Limits</b>	
Column 1	Column 2
<b>Effluent Parameters</b>	<b>Effluent Concentration</b> (micrograms per litre unless otherwise indicated)
Metals	
Chromium (VI)	1
Total Aluminum (Al)	75
Total Arsenic (As)	75
Total Boron (B)	1500
Total Chromium (Cr)	9
Total Cobalt (Co)	4.5
Total Copper (Cu)	2 to 4
Total Lead (Pb)	1 to 7
Total Nickel (Ni)	25 to 150
Total Uranium (U)	333
Total Vanadium (V)	30
Total Zinc (Zn)	30

<b>Table 2 - Effluent Limits</b>	
Column 1	Column 2
<b>Effluent Parameters</b>	<b>Effluent Concentration</b> (becquerels per litre unless otherwise indicated)
Radionuclide	
Thorium-230	0.4
Radium-226	0.37



<b>Table 3 - Effluent Limits</b>	
Column 1	Column 2
<b>Effluent Parameters</b>	<b>Effluent Concentration</b> (micrograms per litre unless otherwise indicated)
Polyaromatic Hydrocarbons	
Acenaphthene	5.8
Acenaphthylene	0.14
Anthracene	0.0012
Benzo(a)anthracene	0.018
Benzo(a)pyrene	0.015
Benzo(b/j)fluoranthene	0.075
Benzo(g,h,i)perylene	0.02
Benzo(k)fluoranthene	0.04
Chrysene	0.07
Dibenz(a,h)anthracene	0.04
Fluoranthene	0.04
Fluorene	0.2
Indeno(1,2,3-cd)pyrene	0.02
Naphthalene	1.1
Phenanthrene	0.4
Pyrene	0.025

<b>Table 4 - Effluent Limits</b>	
Column 1	Column 2
<b>Effluent Parameters</b>	<b>Effluent Concentration</b> (micrograms per litre unless otherwise indicated)
Volatile Organics	
Acetone (2-Propanone)	2700
Chloroform	2.4

<b>Table 5 - Effluent Limits</b>	
Column 1	Column 2
<b>Effluent Parameters</b>	<b>Effluent Concentration</b> (micrograms per litre unless otherwise indicated)
BTEX & F1 Hydrocarbons	
Benzene	100
Toluene	0.8
Ethylbenzene	8
o-Xylene	40
p+m-Xylene	32
F1 (C6-C10)	150
F2 (C10-C16)	110
F3 (C16-C34)	500
F4 (C34-C50)	500

<b>Table 6 - Effluent Limits</b>
pH of the effluent maintained between 6.0 to 9.0, inclusive, at all times

- (2) For the purposes of determining compliance with and enforcing subsection (1):
- (a) non-compliance with respect to a Concentration Limit is deemed to have occurred when any single (composite, grab) sample analyzed for a parameter named in Column 1 of subsection (1) is greater than the corresponding maximum concentration set out in Column 2 of subsection (1).
  - (b) non-compliance with respect to pH is deemed to have occurred when any single measurement is outside of the indicated range.

## **7. EFFLUENT - VISUAL OBSERVATIONS**

Notwithstanding any other condition in this Approval, the Owner shall ensure that the effluent from the Works is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen or foam on the receiving waters.

## **8. MONITORING AND RECORDING**

The Owner shall, upon commencement of operation of the sewage works, carry out the following monitoring program:

- (1) All samples and measurements taken for the purposes of this Approval are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream

over the time period being monitored.

- (2) Samples shall be collected and analyzed at the following sampling point(s), at the sampling frequencies and using the sample type specified for each parameter listed:
- (3) The Owner shall collect samples at the sampling points named below, in accordance with the measurement frequency and sample type specified for each parameter named below, unless otherwise required in writing by this Approval or by the District Manager:

<b>TABLE 7 - Effluent Monitoring</b>	
Sampling Port (Location #1): sampling port at the system inlet.	
Sampling Port (Location #2): effluent discharged from the Work.	
<b>FREQUENCY</b>	Location # 1: Once a day for the first week of operation then once a week thereafter. Location #2: in accordance with condition 8.(5)
<b>SAMPLE TYPE</b>	Grab
<b>PARAMETERS</b>	All parameters identified pursuant to condition 5.(1)(a)

<b>TABLE 8 - Turbidity Monitoring</b>	
Monitoring Station (Location #1): located upstream of the Harbour in the Ganaraska River.	
Monitoring Station (Location #2): located immediately south of the south most wave attenuator.	
Monitoring Station (Location #3): located located 150 metres south of the north wave attenuator (please note that this station would not be monitored once the south wave attenuator is installed during the project).	
Monitoring Station (Location #4): located immediately outside the harbour breakwater.	
<b>FREQUENCY</b>	Monitoring Stations #1, #2, #3 and #4: Once a day during in water construction work with the north wave attenuator in operation.  Monitoring Stations #1, #2, #3 and #4: Once a day during in water construction work with the north wave attenuator in operation.  Please note that in the event of inclement weather that would make boat access a health and safety risk, interim readings will be collected from onshore access points as close as possible to the monitoring stations #1, #2, #3 and #4.
<b>SAMPLE TYPE</b>	Grab
<b>PARAMETERS</b>	Turbidity

<b>TABLE 9 - Receiver Monitoring</b>	
Monitoring Station (Location #4): Receiver monitoring point located immediately outside the Harbour breakwater.	
<b>FREQUENCY</b>	Once a week for the first week of operation then once a month thereafter.  Please note that in the event of inclement weather that would make boat access a health and safety risk, interim readings will be collected from onshore access points as close as possible to the Monitoring Station (Location #4).
<b>SAMPLE TYPE</b>	Grab
<b>PARAMETERS</b>	Arsenic, Cobalt, Uranium and Vanadium.

- (4) The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following:
  - (a) the Ministry's publication "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario" (December 1996), ISBN 0-7778-4056-1, as

amended from time to time by more recently published editions;

- (b) the Ministry's publication "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the *Environmental Protection Act* " (March 9, 2004), as amended from time to time by more recently published editions;
  - (c) the publication "Standard Methods for the Examination of Water and Wastewater" (22<sup>nd</sup> edition) as amended from time to time by more recently published editions; and
  - (d) for any parameters not mentioned in the documents referenced in (a), (b) and (c), the written approval of the District Manager shall be obtained prior to sampling.
- (5) The sampling frequency for Locations #2:
- (a) shall be once each day for the first **one (1) week** of operation at a site and may be reduced to once a week thereafter, if no exceedance of the criteria in condition 6 has been observed during the **one (1) week** daily sampling; and
  - (b) shall revert to daily followed by weekly, as outlined in paragraph (a), following replacement of treatment media.
- (6) The Owner shall measure, record and calculate the daily volume of flow discharged from the Works.
- (7) The Owner shall maintain a log book to record:
- (a) all analytical and monitoring information;
  - (b) a tabulation and description of any operating problems encountered and corrective actions taken;
  - (c) a summary of any maintenance carried out on any equipment; and
- keep the log book at the site.
- (8) The Owner shall retain for a minimum of **five (5) years** from the date of their creation, all records and information related to or resulting from the monitoring activities required by this Approval.

## 9. REPORTING

- (1) **One (1) week** prior to the start up of the operation of the Works, the Owner shall notify

the District Manager (in writing) of the pending start up date.

- (2) The Owner shall report to the District Manager or designate, any exceedance of any parameter specified in condition 5 orally, as soon as reasonably possible, and in writing within **seven (7) days** of the exceedance.
- (3) In addition to the obligations under Part X of the EPA, the Owner shall, within **ten (10) working days** of the occurrence of any reportable spill as defined in Ontario Regulation 675/98, bypass or loss of any product, by-product, intermediate product, oil, solvent, waste material or any other polluting substance into the environment, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill or loss, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation.
- (4) The Owner shall prepare and submit a performance report to the District Manager on an annual basis within ninety days (90) days following the end of the period being reported upon. The first such report shall cover the first annual period following the commencement of operation of the Works and subsequent reports shall be submitted to cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:
  - (a) a summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in condition 5, including an overview of the success and adequacy of the sewage Works;
  - (b) a description of any operating problems encountered and corrective actions taken;
  - (c) a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the sewage works;
  - (d) a summary of any effluent quality assurance or control measures undertaken in the reporting period;
  - (e) a summary of the calibration and maintenance carried out on all effluent monitoring equipment; and
  - (f) any other information the District Manager requires from time to time.

**Schedule 'A'**

1. Environmental Compliance Approval Application for Industrial Sewage Work submitted by Jason Downey, of Milestone Environmental Contracting Ltd., and signed by Mark Seaman, Managing Partner, Milestone Environmental Contracting Ltd., dated July 23, 2019, and all supporting documentation and information.

*The reasons for the imposition of these terms and conditions are as follows:*

1. Condition 1 is imposed to ensure that the Works are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. Condition 1.(6) is included to emphasize that the issuance of this Approval does not diminish any other statutory and regulatory obligations to which the Owner is subject in the construction, maintenance and operation of the Works. The condition specifically highlights the need to obtain any necessary conservation authority approvals. The condition also emphasizes the fact that this Approval doesn't limit the authority of the Ministry to require further information.
2. Condition 2 is included to ensure that the Ministry records are kept accurate and current with respect to approved Works and to ensure that subsequent owners of the Works are made aware of the Approval and continue to operate the Works in compliance with it.
3. Condition 3 is included to ensure that the Works is operated in accordance with the information submitted by the Owner relating to the process and materials which are served by the Works, and to ensure that any contemplated changes in them which could potentially affect the characteristics of effluent from the Works will be properly reviewed and approved.
4. Conditions 4 and 5 are included to require that the Works be properly operated, maintained, funded, staffed and equipped such that the environment is protected and deterioration, loss, injury or damage to any person or property is prevented. As well, the inclusion of a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the Owner and made available to the Ministry. Such a manual is an integral part of the operation of the Works. Its compilation and use should assist the Owner in staff training, in proper plant operation and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a benchmark for Ministry staff when reviewing the Owner's operation of the Works.
5. Conditions 6 and 7 are imposed to ensure that the effluent discharged from the Works to Port Hope Harbour meets the Ministry's effluent quality requirements thus minimizing environmental impact on the receiver.
6. Condition 8 is included to require the Owner to demonstrate on a continual basis that the quality and quantity of the effluent from the approved works is consistent with the effluent limits specified in the Approval and that the approved Works does not cause any impairment to the receiving watercourse.
7. Condition 9 is included to provide a performance record for future references and to ensure that



the Ministry is made aware of problems as they arise, so that the Ministry can work with the Owner in resolving the problems in a timely manner.

*In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:*

- a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
- b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

*The Notice should also include:*

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

*And the Notice should be signed and dated by the appellant.*

*This Notice must be served upon:*

The Secretary\*  
Environmental Review Tribunal  
655 Bay Street, Suite 1500  
Toronto, Ontario  
M5G 1E5

AND

The Director appointed for the purposes of  
Part II.1 of the Environmental Protection Act  
Ministry of the Environment,  
Conservation and Parks  
135 St. Clair Avenue West, 1st Floor  
Toronto, Ontario  
M4V 1P5

**\* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or [www.ert.gov.on.ca](http://www.ert.gov.on.ca)**

*The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.*

DATED AT TORONTO this 28th day of August, 2019



---

Youssof Kalogo, P.Eng.  
Director  
appointed for the purposes of Part II.1 of the  
*Environmental Protection Act*

AA/

c: District Manager, MECP Peterborough District Office