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Ministry of the Environment
Ministère de l'Environnement

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 1093-9MCLU6

Issue Date: July 31, 2014

The Corporation of the City of Waterloo
265 Lexington Court
P.O.Box 337
Waterloo, Ontario
N2J 4A8

Site Location: Beaver Creek Sewage Pumping Station
325 Laurelwood Drive
City of Waterloo, Regional Municipality of Waterloo

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:

existing works, sanitary sewers and upgrades to the existing sanitary sewage pumping station (Beaver Creek Sewage Pumping Station) located at 325 Laurelwood Drive on the Municipal Land, in the City of Waterloo, having design flow capacity of 439 L/s, consisting of the following:

Sanitary Sewers

- approximately 95 m long, 200 mm diameter sanitary sewer to be constructed from the existing 200 mm diameter sanitary sewer located on the Laurelwood Drive to the existing 750 mm diameter sanitary trunk sewer located approximately 10 m south of the wet well of the Beaver Creek Sewage Pumping Station;

Beaver Creek Sewage Pumping Station

- modification of the existing wet well including replacement of all three (3) inlet slide gates, benching and piping;
- replacement of the existing four (4) Flygt submersible pumps with four (4) submersible pumps, three (3) for duty and one (1) for stand-by, each pump capable of handling 220 L/s at a total dynamic head (TDH) of 26 m;
- a valve chamber located downstream of the wet well, housing fittings, valves and two (2) electro-magnetic flow meters;
- one (1) 15.25 m diameter and 5 m deep cast-in-place reinforced concrete storage chamber, having an approximate storage capacity of 905 m³, housing one (1) duplex pump package, capable of handling 10 L/s at a total dynamic head (TDH) of 10 m, complete with a 525 mm diameter tank inlet pipe and a 100 mm diameter outlet sewer, discharging from and to the existing upstream manhole;

all in accordance with the application dated February 21, 2014 and received on February 21, 2014, including the design report titled "Beaver Creek sewage pumping Station and Forcemain, Design Brief" dated February 18, 2014, final plans and specifications prepared by Gamsby and Mannerow Limited.

Existing Works

Sanitary forcemain to be constructed in the City of Waterloo, Regional Municipality of Waterloo as follows:

- on Laurelwood Drive from Beaver Creek Pumping Station to Baringer Road, on Baringer Road from Laurelwood Drive to Westmount Road North and on Laurel Creek Road from station 11 + 660 to station 11 + 680, discharging to the City of Waterloo Sewage Treatment Plant through a 600 mm diameter gravity sewer;

all in accordance with the application from The Corporation of the City of Waterloo, dated July 15, 2013, including final plans and specifications prepared by Gamsby and Mannerow Limited.

- sewage pumping station to be constructed on Beaver Creek Road, approximately 300 m west of Fischer-Hallman Road in the City of Waterloo serving future developments in the north west portion of the City of Waterloo consisting of a concrete wet well equipped with two (2) submersible fixed speed pumps each rated at 80 l/s at a TDH of 15.2 m with provision for future upgrades to four (4) submersible variable frequency drive pumps each rated at 192 l/s at a TDH of 26.0 m including an ultrasonic level transmitter and float controls, interconnecting piping and valves, 125 kW diesel stand by generator, odour control facilities, by-pass pumping facilities, flow metering chamber, 300 mm, 350 mm, 400 mm and 500 mm diameter forcemains, electrical equipment and controls, together with storm and sanitary sewers to be constructed as follows:

Sanitary Sewer

Street	From	To
Approx. 300 m west of Fischer-Hallman Road at Beaver Creek Sewage Pumping Station (Part 1 of Reference Plan 58R-8994)	Beaver Creek Road	Approx. 90 m south of Beaver Creek Road

Storm Sewers

Street	From	To
Parallel to Beaver Creek Road (Grand River Conservation Authority lands)	Beaver Creek Sewage Pumping Station (approx. 28 m south of Beaver Creek Road)	Approx. 45 m southwesterly to Outfall

including appurtenances, all in accordance with drawings no. G1, G2, A1, A2, A3, S1 through S5, M1 through M6, ME1, E1 and E2 and sewage pumping station design brief prepared by Paragon Engineering Limited, Consulting Engineers.

- sanitary forcemain and appurtenances to be constructed in the City of Waterloo, as follows:

Street	From	To
Beaver Creek Road	Approximately 400 m west of future Fischer-Hallman Road	Future Fischer-Hallman Road
Beaver Creek Road	Future Fischer-Hallman Road	

		Westmount Road North
Bearinger Road	Westmount Road North	Approximately 105 m east of Westmount Road North
Townhouse Site Easement (Approx. 100m E. of Westmount Road North)	Bearinger Road	Approximately 100 m north of Bearinger Road

all in accordance with drawings no. PP1 thru PP7, CS1, CS2, CS3, D1 and D2 dated July 30, 1994 and a design brief dated May 1994 prepared by Paragan Engineering Limited, consulting engineers.

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

1. "Approval" means this entire document and any schedules attached to it, and the application;
2. "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;
3. "District Manager" means the District Manager of the Guelph District Office of the Ministry;
4. "EPA" means the Environmental Protection Act , R.S.O. 1990, c.E.19, as amended;
5. "Equivalent equipment" means a substituted equipment that meets the required quality and performance standards of a named equipment;
6. "Limited Operational Flexibility" (LOF) means the Modifications that the Owner is permitted to make to the Works under this Approval;
7. "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;
8. "Modifications" means any addition, replacement, alteration, expansion or optimization for the Works as specified under Limited Operational Flexibility;
9. "Notice of Modifications" means the form entitled "Notice of Modifications to Sewage Works" included in Schedule 'A';
10. "Owner" means The Corporation of the City of Waterloo and includes its successors and assignees;
11. "Professional Engineer" means a person entitled to practise as a Professional Engineer in the Province of Ontario under a licence issued under the Professional Engineers Act ;
12. "Source Protection Plan" means a drinking water source protection plan prepared under the Clean Water Act , 2006;
13. "Substantial Completion" has the same meaning as "substantial performance" in the Construction Lien Act ;
14. "Water Supervisor" means the Water Supervisor of the Guelph District Office of the Ministry; and
15. "Works" means the sewage works described in the Owner's application, and this Approval, and includes both Proposed Works and Previous Works.

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

1.1 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 conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

1.2 Except as otherwise provided by these Conditions, the Owner shall design, build, install, operate and maintain the Works in accordance with the description given in this Approval, the application for approval of the works and the submitted supporting documents and plans and specifications as listed in this Approval.

1.3 Where there is a conflict between a provision of any submitted document referred to in this Approval and the Conditions of this Approval, the Conditions in this Approval shall take precedence, and where there is a conflict between the listed submitted documents, the document bearing the most recent date shall prevail.

1.4 Where there is a conflict between the listed submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

1.5 The requirements of this Approval are severable. If any requirement of this Approval, or the application of any requirement of this Approval to any circumstance, is held invalid or unenforceable, the application of such requirement to other circumstances and the remainder of this Approval shall not be affected thereby.

1.6 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. EXPIRY OF APPROVAL

The approval issued by this Approval will cease to apply to those parts of the Works which have not been constructed within **five (5) years** of the date of this Approval.

3. CHANGE OF OWNER

3.1 The Owner shall notify the Water Supervisor and the Director, in writing, of any of the following changes within thirty (30) days of the change occurring:

(a) change of Owner.

(b) change of address of the 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.B17 shall be included in the notification to the Water Supervisor.

(d) change of name of the corporation where the Owner is or at any time becomes a corporation, and a copy of the most current information filed under the Corporations Informations Act, R.S.O. 1990, c. C39 shall be included in the notification to the Water Supervisor.

3.2 In the event of any change in ownership of the Works, other than a change to a successor municipality, 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 Water Supervisor and the Director.

4. UPON THE SUBSTANTIAL COMPLETION OF THE WORKS

4.1 Upon the Substantial Completion of the Works, the Owner shall prepare a statement, certified by a Professional Engineer, that the Works are constructed in accordance with this Approval, and upon request, shall make the written statement available for inspection by Ministry personnel.

4.2 Within **one (1) year** of the Substantial Completion of the Works, a set of as-built drawings showing the Works "as constructed" shall be prepared. These drawings shall be kept up to date through revisions undertaken from time to time and a copy shall be retained at the Works for the operational life of the Works.

5. OPERATION AND MAINTENANCE

5.1 The Owner shall exercise due diligence in ensuring that, at all times, the Works and the related equipment and appurtenances used to achieve compliance with this Approval are properly operated and maintained. Proper operation and maintenance shall include effective performance, adequate funding, adequate operator staffing and training, including training in all procedures and other requirements of this Approval and the Act and regulations, adequate laboratory facilities, process controls and alarms and the use of process chemicals and other substances used in the Works.

5.2 The Owner shall prepare an operations manual within **six (6) months** of Substantial Completion of the Works, that includes, but not necessarily limited to, the following information:

(a) operating procedures for routine operation of the Works;

(b) inspection programs, including frequency of inspection, for the Works and the methods or tests employed to detect when maintenance is necessary;

(c) repair and maintenance programs, including the frequency of repair and maintenance for the Works;

(d) procedures for the inspection and calibration of monitoring equipment;

(e) a spill prevention control and countermeasures plan, consisting of contingency plans and procedures for dealing with equipment breakdowns, potential spills and any other abnormal situations, including notification of the Water Supervisor; and

(f) procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken.

5.3 The Owner shall maintain the operations manual current and retain a copy at the location of the

Works for the operational life of the Works. Upon request, the Owner shall make the manual available to Ministry staff.

5.4 The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.

6. REPORTING

In addition to the obligations under Part X of the Environmental Protection Act, 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 Water Supervisor 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.

7. LIMITED OPERATIONAL FLEXIBILITY

7.1 The Owner may make modifications to the Works in accordance with the Terms and Conditions of this Approval and subject to the Ministry's "Limited Operational Flexibility Criteria for Modifications to Sewage Works", included under Schedule A of this Approval, as amended.

7.2 Sewage works proposed under Limited Operational Flexibility shall adhere to the design guidelines contained within the Ministry's publication "Design Guidelines for Sewage Works 2008", as amended.

7.3 The Owner shall ensure at all times, that the Works, related equipment and appurtenances which are installed or used to achieve compliance are operated in accordance with all Terms and Conditions of this Approval.

7.4 For greater certainty, the following are not permitted as part of Limited Operational Flexibility:

- (a) Modifications to the Works that result in an increase of the Rated Capacity of the Works;
- (b) Modifications to the Works that may adversely affect the approved effluent quality criteria or the location of the discharge/outfall;
- (c) Modifications to the Works approved under s.9 of the EPA, and
- (d) Modifications to the Works pursuant to an order issued by the Ministry.

7.5 Implementation of Limited Operational Flexibility is not intended to be used for piecemeal measures that result in major alterations or expansions.

7.6 If the implementation of Limited Operational Flexibility requires changes to be made to the Emergency Response, Spill Reporting and Contingency Plan, the Owner shall, as deemed necessary in consultation with the Water Supervisor, provide a revised copy of this plan for approval to the local fire services authority prior to implementing Limited Operational Flexibility.

7.7 For greater certainty, any alteration made under the Limited Operational Flexibility may only be carried out after other legal obligations have been complied with including those arising from the Environmental Protection Act, Niagara Escarpment Planning and Development Act, Oak Ridges Moraine Conservation Act, Lake Simcoe Protection Act and Greenbelt Act.

7.8 Prior to implementing Limited Operational Flexibility, the Owner shall complete a Notice of Modifications describing any proposed modifications to the Works and submit it to the Water

Supervisor.

8. SOURCE WATER PROTECTION

The Owner shall, within sixty (60) calendar days of the Minister of the Environment posting approval of a Source Protection Plan on the environmental registry established under the Environmental Bill of Rights, 1993 for the area in which this Approval is applicable, apply to the Director for an amendment to this Approval that includes submission of a plan for action to comply with all applicable policies in the approved Source Protection Plan.

SCHEDULE 'A'

Limited Operational Flexibility Criteria for Modifications to Sewage Works

1. The modifications to sewage works approved under an Environmental Compliance Approval (Approval) that are permitted under the Limited Operational Flexibility (LOF), are outlined below and are subject to the LOF conditions in the Approval, and require the submission of the Notice of Modifications. If there is a conflict between the sewage works listed below and the Terms and Conditions in the Approval, the Terms and Conditions in the Approval shall take precedence.

1.1 Sewage Pumping Stations

- a. Adding or replacing equipment where new equipment is located within an existing sewage pumping station site, provided that the facility Rated Capacity is not exceeded and the existing flow process and/or treatment train are maintained, as applicable.
- b. Forcemain relining and replacement with similar pipe size within the pumping station site, where the nominal diameter is not greater than 1,200mm.

1.2 Pilot Systems

- a. Installation of pilot systems for new or existing technologies provided that:
 - i. any effluent from the pilot system is discharged to the inlet of the sewage pumping station or hauled off-site for proper disposal,
 - ii. any effluent from the pilot system discharged to the inlet of the sewage pumping station or sewage conveyance system does not significantly alter the composition/concentration of the influent sewage to be treated in the downstream process; and that it does not add any inhibiting substances to the downstream process, and
 - iii. the pilot system's duration does not exceed a maximum of two years; and a report with results is submitted to the Director and Water Supervisor three months after completion of the pilot project.

2. Sewage works that are exempt from section 53 of the OWRA by O. Reg. 525/98 continue to be exempt and are not required to follow the notification process under this Limited Operational Flexibility.

3. Normal or emergency operational modifications, such as repairs, reconstructions, or other improvements that are part of maintenance activities, including cleaning, renovations to existing approved sewage works equipment, provided that the modification is made with Equivalent Equipment, are considered pre-approved.

4. The modifications noted in section (3) above are not required to follow the notification protocols under Limited Operational Flexibility, provided that the number of pieces and description of the equipment as described in the Approval does not change.

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. The condition also advises the Owners their responsibility to notify any person they authorized to carry out work pursuant to this Approval the existence of this Approval. 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, when the Works are constructed, the Works will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment.

3. Condition 3 is included to ensure that the Ministry records are kept accurate and current with respect to the 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.

4. Condition 4 is included to ensure that the Works are constructed in accordance with the Approval and that record drawings of the Works "as constructed" are maintained for future references.

5. Condition 5 is 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.

6. Condition 6 is included to provide a performance record for future references, to ensure that the Ministry is made aware of problems as they arise, so that the Ministry can work with the Owner in resolving any problems in a timely manner.

7. Condition 7 is included to ensure that the Works are operated in accordance with the application and supporting documentation submitted by the Owner, and not in a manner which the Director has not been asked to consider. These conditions are also included to ensure that a Professional Engineer has reviewed the proposed Modifications and attests that the Modifications are in line with that of Limited Operational Flexibility, and provide assurance that the proposed Modifications comply with the Ministry's requirements stipulated in the terms and conditions of this Approval, MOE policies, guidelines, and industry engineering standards and best management practices.

8. Condition 8 is included to ensure that the Works covered by this Approval will conform to the significant threat policies and designated Great Lakes policies in the Source Protection Plan.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 3-0690-94-006 issued on June 22, 1994 and 5681-9BDKA8 issued on September 19, 2013.

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:

1. 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;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. 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
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** 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) 314-4506 or 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 31st day of July, 2014

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

SN/

c: DWMD Supervisor, MOE Guelph District Office
Colin Wiebe P. Eng., Gamsby and Mannerow Limited