

Ministry of the Environment, Conservation and Parks Ministère de l'Environnement, de la Protection de la nature et des Parcs

ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 4907-BTAJ6C Issue Date: September 21, 2020

Valard Construction 2008 Ltd. as general partner for and on behalf of Valard Construction LP 4209 99 Street Edmonton, Alberta T6E 5V7

Site Location: Pipestone Temporary Construction Camp Nort Road, approximately 100 km north of Pickle Lake, District of Kenora at UTM Zone 15U at Easting 665780 and Northing 5798640

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

interim domestic sanitary sewage treatment works and final subsurface disposal works, rated at an average daily sewage flow rate of 34,100 L/day, proposed for the Pipestone temporary construction camp, located at Nort Road, approximately 170 m west of the junction of North Road and Musselwhite Road, northwest of Pipestone Provincial Park in District of Kenora comprising;

One packaged pre-treatment plant CWT100, rated at 22,700 L/day, located above ground at 140m north and 230m west of the junction of Nort Road and Muselwhite Road, receiving raw sewage from Dorm 1, Dorm 2 and Kitchen, all discharging at a maximum average daily flow rate of 22,700 L/day, comprising;

CWT100 Pre-treatment Unit

Two primary collection tanks (Trash Tanks 1 and 2), each having a capacity of 8000 Litres, designed to provide primary clarification of settleable solids and floatables and equalization, connected in series, and discharging to a primary tank, on demand at a constant rate of 22,700 L/day;

One primary aeration tank, having a capacity of 8000 Litres, designed to provide aeration to primary sewage for the purpose of aerobic pre-treatment of primary sewage, complete with two blowers, each rated at 255 m^3 /hour, discharging the effluent to a primary settling tank;

One primary settling tank, having a capacity of 8000 Litres, designed for a overflow rate of 30,000 L/day, discharging to an equalization tank by gravity;

One equalization tank, having a capacity of 8000 Litres, designed for an Hydraulic Retention Time HRT of 8.5 hours, discharging to the first tank of the treatment plant/reactor unit, through two effluent pumps, each rated at 270 L/min under a TDH of 6 m;

One CWT100 Packaged Treatment Unit, located above ground at 140m north and 230m west of the junction of Nort Road and Muselwhite Road, rated for a daily sewage flow rate of 22,700 L/day, receiving the pumped sewage flow from equalization tank of the pre-treatment system, consisting of four staged Ecopod treatment system having (4) fixed film reactor chambers, each tank having a capacity of 5,680 L, with submerged engineered plastic media 1 m³, complete with air blowers rated at 255 m³/hour, to provide oxygen to the reactor chambers, and discharging the treated effluent to an effluent Pump Chamber; the package plant is complete with UV disinfection system and a pump chamber having a capacity of 8000 L, complete with two submersible pumps, operated on timed dose basis of at least 75% of the internal volume of the distribution pipe within a time period not exceeding 15 minutes, each pump rated at 270 L/min at TDH of 6 m connected to a 75 mm diameter forcemain, pumping to distribute the effluent flow to the proposed shallow buried disposal trenches;

One packaged treatment plant CWT50, rated at 11,400 L/day, located above ground at 140m north and 260 m west of the junction of Nort Road and Muselwhite Road, receiving raw sewage from Dorm 3, Office and Rec Facility, all discharging at a maximum average daily flow rate of 11,400 L/day, comprising;

CWT50 Pre-treatment Unit

Two primary collection tanks (Trash Tanks 1 and 2), each having a capacity of 8000 Litres, designed to provide primary clarification of settleable solids, floatables and equalization, connected in series, and discharging to a primary aeration tank on demand;

One primary aeration tank, having a capacity of 8000 Litres, designed to provide aeration to primary sewage for the purpose of primary aeration of sewage, complete with two blowers, each rated at 255 m³/hour, discharging the effluent to a primary settling tank on demand;

One primary settling tank, having a capacity of 8000 Litres, designed for a overflow rate of 11,400 L/day, discharging to an equalization tank on demand;

One equalization tank, having a capacity of 8000 Litres, designed for a Hydraulic Retention Time HRT of 16.6 hours, discharging to the first tank of the treatment plant/reactor unit, through two effluent pumps, each rated at 270 L/min under a TDH of 6 m;

CWT50 Packaged Treatment Unit, located above ground at 140m north and 260 m west of the junction of Nort Road and Muselwhite Road, rated for a daily sewage flow rate of 11,400 L/day, receiving the pumped sewage flow from equalization tank of the pre-treatment system, consisting of an Ecopod treatment system having a fixed film reactor chamber, having a capacity of 8000 L, with submerged engineered plastic media 1 m³, complete with air blowers rated at 255 m³/hour, to provide oxygen to the reactor chambers, and discharging the treated effluent to an effluent Pump Chamber;

the package plant is complete with UV disinfection system and a pump chamber having a capacity of 8000 L, complete with two submersible pumps, operated on timed dose basis of at least 75% of the internal volume of the distribution pipe within a time period not exceeding 15 minutes, each pump rated at 270 L/min at TDH of 6 m connected to a 75 mm diameter forcemain, pumping to distribute the effluent flow to the proposed shallow buried disposal trenches;

Final Disposal Works/Shallow Buried Trench

One (1) proposed subsurface disposal beds, located at 140m north and 23 m west of the junction of Nort Road and Muselwhite Road, designed as a shallow buried trenches constructed in native soils, each bed consisting of four (4) cells, each cell having 16 runs of 30 m with a total length of 480 metre pressurized distribution piping (6 runs will be centred around the 50-man Canwest Treatment Unit and 10 runs will be centred around the 100-man Canwest Treatment Unit), buried absorption trench installed in native sandy substrate with percolation rate of 10 min/cm to an approximate depth of 3 to 5 m; type II leaching chamber with a 100 mm diameter perforated distribution pipe spaced 2.4 m;

including all other mechanical system, and control system, piping, valves and appurtenances essential for the proper, safe and reliable operation of the Works in accordance with this Approval, in the context of process performance and general principles of wastewater engineering only;

all in accordance with the submitted supporting documents listed in Schedule A.

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

- 1. "Approval" means this entire Approval document and any Schedules to it, including the application and Supporting Documentation;
- 2. "BOD₅" (also known as TBOD₅) means five day biochemical oxygen demand measured in an unfiltered sample and includes carbonaceous and nitrogenous oxygen demand;
- 3. "CBOD₅" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;
- 4. "Director" means a person appointed by the Minister pursuant to Section 5 of the EPA for the purposes of Part II.I of the EPA;
- 5. "District Manager" means the District Manager of the London District Office;
- 6. "EPA" means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended;

- 7. "Interim Works" means the interim or temporary sewage works, described in this Approval and that are to be used for short-term purposes only in accordance with this Approval, until otherwise approval for an extension of this period has been granted;
- 8. "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;
- 9. "OBC" means the Ontario Building Code;
- 10. "Owner" means Valard Construction 2008 Ltd. as general partner for and on behalf of Valard Construction LP., and its successors and assignees;
- 11. "OWRA" means the Ontario Water Resources Act, R.S.O. 1990, c. O.40, as amended;
- 12. "Rated Capacity" means design daily sewage flow for which the Works are approved to handle;
- 13. "Professional Engineer" means a person entitled to practice as a Professional Engineer in the Province of Ontario under a licence issued under the Professional Engineers Act;
- 14. "Supporting Documentation" means the documents listed in Schedule A of this Approval;
- 15. "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

- a. 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.
- b. 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, and the application for approval of the Works.

- c. Where there is a conflict between a provision of any document in the schedule 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 documents in the schedule, the document bearing the most recent date shall prevail.
- d. Where there is a conflict between the documents listed in the 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.
- e. The Conditions of this Approval are severable. If any Condition of this Approval, or the application of any requirement of this 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.

2. EXPIRY OF APPROVAL

- a. 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.
- b. This Approval for Interim Works shall expire and become null and void on December 31, 2025.

3. CHANGE OF OWNER

- a. 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 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 District Manager;
- 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 District Manager;
- b. 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 District Manager and the Director.

4. CONSTRUCTION

- a. The Owner shall ensure that the design and construction of the Works is supervised by a Professional Engineer.
- b. Upon construction 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 staff.
- c. Within **six (6) months** of the construction 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 revision undertaken from time to time and a copy shall be retained for the operational life of the Works.

5. DESIGN OBJECTIVES

- 1. The Owner shall use best efforts to design, construct and operate the Works with the objective that the concentrations of the materials named as effluent parameters in the Effluent Objectives Table listed in Schedule B are not exceeded in the effluent being discharged to the Subsurface Disposal System (Shallow Buried Trench).
- 2. The Owner shall design and undertake everything practicable to operate the Sewage Works such that Annual Average Daily Influent Flow to the Sewage works is within the Rated Capacity of the Sewage Works.

6. COMPLIANCE LIMITS

The Owner shall operate and maintain the Sewage Works such that compliance limits for the Effluent parameters listed in the table(s) included in **Schedule** C are met.

7. OPERATIONS AND MAINTENANCE

- 1. The Owner shall prepare an operations manual within six (6) months of the completion of construction of the Proposed Works, that includes, but not necessarily limited to the following information:
 - a. operating procedures for routine operation of all the Works;
 - b. inspection programs, including frequency of inspection, for all 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 all the Works; copies of maintenance contracts for any routine inspections & pump-outs should be included for all the tanks and treatment units;
- 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 District Manager; and
- f. procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken.
- 2. 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.
- 3. The Owner shall prepare and make available for inspection by Ministry staff, a maintenance agreement with the manufacturer for the treatment process/technology and a complete set of "as constructed" drawings within one (1) year of Substantial Completion of the Works. The maintenance agreement and drawings must be retained at the site and kept current.
- 4. The Owner shall ensure that grass-cutting is maintained regularly over all the subsurface disposal beds, and the drainage operations in all beds are visually observed on a monthly basis. In the event a break-out is observed from a subsurface disposal bed, the Owner shall ensure that the sewage discharge to the bed is discontinued and the incident immediately reported verbally to the District Manager, followed by a written report within one (1) week. The Owner shall ensure that during the time remedial actions are taking place the sewage generated at the site shall not be allowed to discharge to a surface water body or to the environment, and safely collected and disposed off through a licensed waste hauler to an approved waste disposal site.
- 5. The Owner shall ensure that adequate steps are taken to ensure that the area of the Works are protected from all forms of vehicle traffic.
- 6. The Owner shall employ for the overall operation of the Works a person who possesses the level of training and experience sufficient to allow safe and environmentally sound operation of the Works.

8. MONITORING AND RECORDING

- 1. The Owner shall carry out the Influent Sewage Monitoring and Effluent Monitoring Program as per **Schedule D** of this Approval.
- 2. For any change to the monitoring well location(s), included in the Schedule D, the Owner shall obtain a written approval of the District Manager.
- 3. The Owner shall, upon commencement of operation of the Works, carry out the following monitoring program:
 - a. 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.
 - b. The Owner shall employ any measurement devices to accurately measure quantity of effluent being discharged from treatment works to the subsurface disposal system, including but not limited to water/wastewater flow meters, event counters, running time clocks, or electronically controlled dosing, and shall record the daily volume of effluent being discharged to the subsurface disposal system.
 - c. If any flow measuring devices are installed, the Owner shall ensure that the said flow measuring devices are calibrated at regular intervals not exceeding one year to ensure their accuracy to within plus or minus 15% of actual flow from 10% to 100% of sewage flow range.
 - d. 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 Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only), as amended from time to time by more recently published editions;
 - b. the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (January 1999), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions; and
 - c. the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions.

e. 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 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. In addition to the obligations under Part X of the *Environmental Protection Act*, the Owner shall, within 10 working days of the occurrence of any reportable spill as defined in Ontario Regulation 675/98, 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.
- 3. The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.
- 4. The Owner shall prepare performance reports on a calendar year basis and submit to the District Manager by March 31 of the calendar year following 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 including an overview of the success and adequacy of the Works;
 - b. a review and assessment of performance of sewage works, including treatment units and disposal beds;
 - c. a description of any operating problems encountered and corrective actions taken at all sewage Works located at the property;
 - d. a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of all Works located at the property;
 - e. a summary of any effluent quality assurance or control measures undertaken in the reporting period;
 - f. a summary and description of efforts made and results achieved in meeting the Effluent Objectives of Condition 6;

- g. a summary and interpretation of all flow data and results achieved in not exceeding the maximum daily flow discharged into the subsurface disposal system;
- i. a summary of any complaints received during the reporting period and any steps taken to address the complaints;
- j. a summary of all spill or abnormal discharge events;
- k. a report on decommissioning of all components of the existing sewage works;
- 1. any other information the District Manager requires from time to time;

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

- 1. Condition 1 is included 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.
- 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, and may be operated and maintained such that the environment is protected and deterioration, loss, injury or damage to any person or property is prevented.
- 5. Condition 5 regarding design objectives is included to establish non-enforceable design objectives to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs.
- 6. Condition 6 regarding compliance limits is included to ensure that the Final Effluent discharged from the Works to the environment meets the Ministry's effluent quality requirements.

- 7. Condition 7 is included to require that the Works be properly operated, maintained, and equipped such that the environment is protected. As well, the inclusion of an operations manual, maintenance agreement with the manufacturer for the treatment process/technology and a complete set of "as constructed" drawings 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 information 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 work.
- 8. Condition 8 regarding monitoring and recording is included to enable the Owner to evaluate and demonstrate the performance of the Works, on a continual basis, so that the Works are properly operated and maintained at a level which is consistent with the design objectives and compliance limits.
- 9. Condition 9 is included to provide a performance record for future references, to ensure that the Ministry is made aware of problems as they arise, and to provide a compliance record for all the terms and conditions outlined in this Approval, so that the Ministry can work with the Owner in resolving any problems in a timely manner.

Schedule A

1. Application for Approval of Municipal and Private Water and Sewage Works dated June 12, 2020 and received on June 12, 2020.

Schedule B

CWT100 Effluent Design Objectives

Concentration Objectives upon completion of construction of all Proposed CWT100 Works (measured at the CWT100 Effluent Pump Chamber)

Final Effluent Parameter	Calculation	Objective (milligrams per litre unless otherwise indicated)	
CBOD5	Monthly Effluent Concentration*	15 mg/L	
Total Suspended Solids	Monthly Effluent Concentration*	15 mg/L	

CWT50 Effluent Design Objectives

Concentration Objectives upon completion of construction of all Proposed CWT50 Works (measured at the CWT50 Effluent Pump Chamber)

Final Effluent Parameter	Calculation	Objective (milligrams per litre unless otherwise indicated)	
CBOD5	Monthly Effluent Concentration*	15 mg/L	
Total Suspended Solids	Monthly Effluent Concentration*	15 mg/L	

Schedule C

CWT100 Effluent Compliance Limits

Concentration Limits upon completion of construction of all Proposed CWT100 Works (measured at the CWT100 Effluent Pump Chamber)

Final Effluent Parameter	Calculation	Limit (maximum unless otherwise indicated)
CBOD5	Monthly Effluent Concentration*	20 mg/L
Total Suspended Solids	Monthly Effluent Concentration*	20 mg/L

* Monthly means once every month

CWT50 Effluent Compliance Limits

Concentration Limits upon completion of construction of all Proposed CWT50 Works (measured at the CWT50 Effluent Pump Chamber)

Final Effluent Parameter	Calculation	Limit (maximum unless otherwise indicated)
CBOD5	Monthly Effluent Concentration*	20 mg/L
Total Suspended Solids	Monthly Effluent Concentration*	20 mg/L

Schedule D

Monitoring Program

Influent Monitoring Table

Sampling Location	Collection system Lift Station		
Frequency	Semi-Annualy (two times every 12 months)		
Sample Type	Grab		
Parameters	TBOD5, Total Suspended Solids, TKN, TP, Total Coliforms, Oil and		
	Grease, Temperature, Flow rate		

CWT100 Effluent Monitoring Table

Sampling	CWT100 Effluent Pump Chamber
Location	
Frequency	Monthly*
Sample Type	Grab
Parameters	Total Suspended Solids, CBOD, Total Coliforms, pH, Flow rate

* Monthly means once every month

CWT50 Effluent Monitoring Table

Sampling Location	CWT50 Effluent Pump Chamber		
Frequency	Monthly*		
Sample Type	Grab		
Parameters	Total Suspended Solids, CBOD, Total Coliforms, pH, Flow rate		

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of <u>Rights, 1993</u>, the Minister of the Environment, Conservation and Parks, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Minister of the Environment, Conservation and Parks will place notice of your appeal on the Environmental Registry. 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 Director appointed for the purposes of
The Secretary*		The Minister of the Environment,		Part II.1 of the Environmental Protection Act
Environmental Review Tribunal		Conservation and Parks		Ministry of the Environment,
655 Bay Street, Suite 1500	AND	777 Bay Street, 5th Floor	AND	Conservation and Parks
Toronto, Ontario		Toronto, Ontario		135 St. Clair Avenue West, 1st Floor
M5G 1E5		M7A 2J3		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

This instrument is subject to Section 38 of the Environmental Bill of Rights, 1993, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at https://ero.ontario.ca/, you can determine when the leave to appeal period ends.

The Director appointed for the nurposes of

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

DATED AT TORONTO this 21st day of September, 2020

Fariha Parnu.

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

KH/

- c: Area Manager, MECP Kenora Area Office
- c: District Manager, MECP Thunder Bay District. Scott Peterson, TBT Engineering Limited.