

ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 6334-CELL9A
Issue Date: June 10, 2022

Stern Laboratories Inc.
1590 Burlington Street East
Hamilton, Ontario
L8H 3L3

Site Location: 1590 Burlington Street East
City of Hamilton

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 non-contact cooling water system using water purchased from the City of Hamilton, serving a testing facility, with a number of individual test sections, to conduct reliability and safety experiments for utilities, nuclear reactor and fuel vendors, government agencies and nuclear equipment suppliers located at 1590 Burlington Street East, in the City of Hamilton, consisting of the following:

- One (1) Mezzanine Level Heat Exchanger (HX1) serving the Wash In/Wash Out (TS-E) and Horizontal CHF (TS-C) Test Sections, discharging to Drain Sump No. 9 and overflowing to the storm sewer;
- One (1) 2nd Floor Large Power Heat Exchanger (HX2) discharging to the cooling tower sump and overflowing to the storm sewer;
- One (1) Heat Exchanger (HX3) serving the Vertical CHF Test Section (TS-G), one (1) set of seals for the CPC (PWR) pump (P6), discharging to Drain Sump No. 10 and 11 and overflowing to the storm sewer;
- One (1) Heat Exchanger (HX4) discharging to Boiler Drain No.1, draining to the storm sewer;
- One (1) Heat Exchanger (HX5) discharging to Boiler Drain No.1, draining to the storm sewer;
- One (1) Heat Exchanger (HX6) discharging to Boiler Drain No.1, draining to the storm sewer;
- One (1) 2nd Level Heat Exchanger (HX7) discharging to Drain No.11, draining to the storm sewer;
- One (1) Heat Exchanger (HX8) serving the Single Element CHF Test Section (TS-O), pump seal cooling for one (1) United type pump (P7) discharging to Boiler Drain No.6, draining to the storm sewer;
- One (1) Secondary Heat Exchanger (HX9) discharging to the roof, draining to the storm sewer;
- One (1) Secondary Heat Exchanger (HX10) discharging to the roof, draining to the storm sewer;
- One (1) Secondary Heat Exchanger (HX11) discharging to the roof, draining to the storm sewer;
- One (1) Boiler House Mezzanine (HX12) discharging to the storm sewer;
- One (1) Secondary Heat Exchanger (HX14) discharging to the storm sewer;

- The Single Phase Pressure Drop Test Section (TS-A) discharging to Drain No. 7 and Drain No. 6a, draining to the storm sewer;
- The Flow Pipes for Horizontal Loop, WSP, Acoustics Test Section (TS-B) discharging to the storm sewer;
- The West Shift Plus Test Section (TS-F) discharging to Drain No. 1, pumped by one (1) 0.5 HP sump pump to the storm sewer;
- The Cold Water Injection Test Section (TS-H) discharging to Drain No. 7 and Drain No. 9, draining to the storm sewer;
- The Fuel Assembly Test System (TS-I), pump seal cooling for Pump #18, 19, 20 and 21 discharge to Drain No. 14, draining to the storm sewer;
- The High Bay Loop Test Loop (TS-J) draining to the storm sewer;
- The Burst Test Loop (TS-K) passing through the Ion Exchange Column (IEC) discharging to Boiler Drain No. 1, draining to the storm sewer;
- The Burst Test Loop (TS-L) is not associated with any drains. The IBIF Experiments Test Section (TS-M) discharging to the storm sewer;
- Pressure Tube Burst Test Section (TS-N) discharging to Drain No. 2 (Quad Plus Pit), pumped by one (1), 0.5 HP sump pump to the storm sewer; and
- The spent water from the above noted equipment, will be used for the purposes of cooling power supplies, pump seals, heat exchangers and for filling test loop piping, and will be passed through the cooling system, or drained from the loop piping, discharging to the municipal storm sewers system at no more than thirty (30) degrees Celcius, located at Burlington Street and ultimately to the Hamilton Harbour.

all other controls, electrical equipment, instrumentation, piping, valves and appurtenances essential for the proper operation of the aforementioned sewage Works;

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

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

1. "Approval" means this entire Environmental Compliance Approval and any Schedules attached to it;
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 appropriate local District Office of the Ministry, where the Works are geographically located;
4. "EPA" means the *Environmental Protection Act*, R.S.O. 1990, c.E.19, as amended;
5. "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;
6. "Owner" means Stern Laboratories Inc. and its successors and assignees;

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

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. The Owner shall design, construct, operate and maintain the Works in accordance with the conditions of this Approval.
3. Where there is a conflict between a provision of any document referred to in this Approval and the conditions of this Approval, the conditions in this Approval shall take precedence.
4. 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.B17 shall be included in the notification to the District Manager; or
 - 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 Information Act*,

R.S.O. 1990, c. C39 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 and the Director.
3. The Owner shall ensure that all communications made pursuant to this condition refer to the environmental compliance approval number.

3. OPERATION AND MAINTENANCE

1. The Owner shall make all necessary investigations, take all necessary steps and obtain all necessary approvals so as to ensure that the physical structure, siting and operations of the Works do not constitute a safety, health or flooding hazard to the general public.
2. The Owner shall prepare an operations manual prior to the commencement of operation of the Works that includes, but is not necessarily limited to, the following information:
 - a. operating and maintenance 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. contingency plans and procedures for dealing with potential abnormal situations and for notifying the District Manager; and
 - e. procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken.
3. The Owner shall maintain an up to date operations manual and make the manual readily accessible for reference at the Works for the operational life of the Works. Upon request, the Owner shall make the manual available to Ministry staff.
4. 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. The Owner shall use best effort to identify and clean-up any spill or loss of any product, by product, intermediate product, oils, solvents, waste material or any other polluting substance into

the environment, from the herein approved Works.

6. In furtherance of, but without limiting the generality of, the obligation imposed by Subsection (4), the Owner shall ensure that equipment and material for the containment, clean-up and disposal of process materials are kept on hand and in good repair for immediate use in the event of a spill within the meaning of Part X of the EPA.
7. The Owner shall maintain a logbook to record the results of these inspections and any cleaning and maintenance operations undertaken, and shall keep the logbook at the Works for inspection by the Ministry. The logbook shall include the following:
 - a. the name of the Works;
 - b. the date and results of each inspection, maintenance and cleaning, including an estimate of the quantity of any materials removed and method of clean-out of the Works; and
 - c. the date of each spill within the catchment area, including follow-up actions and remedial measures undertaken.
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 operation and maintenance activities required by this Approval.

4. REPORTING

1. The Owner shall, upon request, make all reports, manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.
2. In addition to the obligations under Part X of the EPA and O. Reg. 675/98 (Classification and Exemption Of Spills and Reporting of Discharges), the Owner shall, within fifteen (15) days of the occurrence of any reportable spill as provided in Part X of the EPA and Ontario Regulation 675/98, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill, clean-up and recovery measures taken, preventative measures to be taken and a schedule of implementation.

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

1. Condition 1 is imposed to ensure that the Works are constructed and operated in the manner in which they were described 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 1.4 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 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.
3. Condition 3 is included as regular inspection and necessary removal of sediment and excessive decaying vegetation from the Works are required to mitigate the impact of sediment, debris and/or decaying vegetation on the treatment capacity of the Works. The Condition also ensures that adequate storage is maintained in the Works at all times as required by the design. Furthermore, this Condition is included to ensure that the Works are operated and maintained to function as designed.
4. Condition 4 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 Environmental Compliance Approval submitted by Stern Laboratories Inc. dated October 26, 2021 and received on October 27, 2021 for the proposed Industrial Sewage Works, including design report, final plans, specifications and all supporting documentation.

In accordance with Section 139 of the *Environmental Protection Act*, you may by written notice served upon me, the Ontario Land Tribunal and in accordance with Section 47 of the *Environmental Bill of Rights*, 1993, 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 ("the Notice") 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:

Registrar*
Ontario Land Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5
OLT.Registrar@ontario.ca

and

The Minister of the Environment,
Conservation and Parks
777 Bay Street, 5th Floor
Toronto, Ontario
M7A 2J3

and

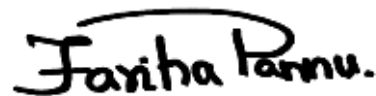
The Director appointed for the purposes of
Part II.1 of the *Environmental Protection Act*
Ministry of the Environment,
Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Ontario Land Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349 or 1 (866) 448-2248, or www.olt.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 above noted activity is approved under s.20.3 of Part II.1 of the *Environmental Protection Act*.

DATED AT TORONTO this 10th day of June, 2022



Fariha Pannu, P.Eng.
Director

appointed for the purposes of Part II.1 of the
Environmental Protection Act

RU/

c: District Manager, MECP Hamilton - District
Timothy Reyes, Pinchin Ltd.
Ian Hutcheson, Pinchin Ltd.