

**ENVIRONMENTAL COMPLIANCE APPROVAL**

NUMBER 3246-D9PQ2S  
Issue Date: November 4, 2024

R. W. Tomlinson Limited  
100 Citigate Dr  
Ottawa, Ontario  
K2J 6K7

Site Location: Sustainable Asphalt Research Plant  
3500 Rideau Rd  
Ottawa City,  
K1G 3N4

*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:*

A pilot project to operate one (1) batch-type hot mixing asphalt research plant, having a maximum production rate of 1,200 tonnes of hot mix asphalt per day, consisting of the following equipment:

- one (1) pyrolysis and gasification system using Clean Wood consisting of:
  - one (1) vertical down-feed updraft pyrolysis and gasification unit
  - one (1) secondary combustion chamber, firing pyrolysis gas, to provide heat to the dryer and venting through the dryer baghouse dust collection system.
- one (1) dryer, equipped with:
  - baghouse dust collection system to control emissions from the dryer and a hot mix asphalt production process, equipped with a pulse jet air cleaning system and differential pressure monitoring system, discharging into to the atmosphere at a nominal volumetric flow rate of 26.0 actual cubic metres per second and approximate temperature of 204 degrees Celsius through a stack, having an exit diameter of 1.1 metres, extending 11.3 meters above grade;
  - one (1) natural gas fired hot oil system to maintain the temperature of liquid asphalt storage tanks, having a maximum heat input of 528,000 kilojoules per hour;

- aggregate and sand screeners, each equipped with a dust sealing systems, to support daily hot mix asphalt production;
- conveyors and other associated equipment to support daily hot mix asphalt production;
- two (2) horizontal insulated liquid asphalt storage tanks, each having a nominal volume of 53 cubic metres and operating at the maximum temperature of 165 degrees Celsius; each equipped with a vent, each having an exit diameter of 0.1 metre , each extending 3.35 metres above grade;
- hot mix asphalt load out operations from the batch-type hot mixing asphalt research plant, and
- one (1) bottom ash storage silo controlled by a cyclone.
- one (1) baghouse dust storage silo (mineral silo), discharging back to the baghouse; baghouse dust transfer operations from the mineral silo to the trucks at the maximum daily rate of 15 tonnes, controlled by an adjustable loading sock and chute.

all in accordance with the Application for Approval (Air & Noise), dated June 5, 2024 and signed by Lee Timmins, R. W. Tomlinson Limited, and all information and documentation associated with the application, including the Emission Summary and Dispersion Modelling (ESDM) Report prepared by Northern Applied Sciences Inc. dated June 14, 2024; the Acoustic Assessment Report, prepared by Northern Applied Sciences Inc., dated May 31, 2024 and signed by Stephen Kuchma and Chris Scullion; and email updates provided by Chris Scullion of Northern Applied Sciences Inc. on October 15, 2024.

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

1. "Approval" means this Environmental Compliance Approval, including the application and supporting documentation listed above;\
2. "Best Management Practices Plan or BMPP" means the document entitled "Best Management Practices Plan for the Control of Fugitive Dust Emissions. Rideau Asphalt Plant" dated May 2023, as amended and forms the part of this Approval.
3. "CAN/CSA-ISO 17225-4:15" means the standard CAN/CSA-ISO 17225-4:15, published by the Canada National Standard/Canadian Standards – International Organization for Standardization on March 1, 2015 and entitled “Solid Biofuels – Fuel specifications and classes – Part 4: Graded wood chips;
4. "Clean Wood" means wood chips that meet the chemical requirements detailed in CAN/CSA ISO 17225-4:15 Solid Biofuels – Fuel specifications and classes - Part 4: Graded wood chips;

5. "Company" means R. W. Tomlinson Limited that is responsible for the construction or operation of the Facility and includes any successors and assigns in accordance with section 19 of the EPA;
6. "Director" means a person appointed for the purpose of section 20.3 of the EPA by the Minister pursuant to section 5 of the EPA;
7. "District Manager" means the District Manager of the appropriate local district office of the Ministry, where the Facility is geographically located;
8. "EPA" means the *Environmental Protection Act*, R.S.O. 1990, c.E.19;
9. "Equipment" means the equipment described in the Company's application, this Approval and in the supporting documentation submitted with the application, to the extent approved by this Approval;
10. "ESDM Report" means the Emission Summary and Dispersion Modelling Report which was prepared in accordance with section 26 of O. Reg. 419/05 and the Procedure Document by Northern Applied Sciences Inc. dated June 14, 2024 submitted in support of the application, and includes any changes to the report made up to the date of issuance of this Approval;
11. "Facility" means the entire operation located on the property where the Equipment is located;
12. "Fugitive dust" means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.
13. "Manager" means the Manager, Technology Standards Section, Technical Assessment and Standards Development Branch, or any other person who represents and carries out the duties of the Manager, Technology Standards Section, Technical Assessment and Standards Development Branch, as those duties relate to the conditions of this Approval;
14. "Manual" means a document or a set of documents that provide written instructions to staff of the Company;
15. "Method 22" means US EPA Method 22 - Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares
16. "Ministry" means the ministry of the government of Ontario responsible for the EPA and includes all officials, employees or other persons acting on its behalf;
17. "O. Reg. 419/05" means Ontario Regulation 419/05: Air Pollution – Local Air Quality, made under the EPA;
18. "Point of Impingement" has the same meaning as in section 2 of O. Reg. 419/05;

19. "Pre-Test Plan" means a plan for the Source Testing including the information required in Section 5 of the Source Testing Code;
20. "Procedure Document" means Ministry guidance document titled "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated March 2018, as amended;
21. "Publication NPC-300" means the Ministry Publication NPC-300, "Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning, Publication NPC-300", August 2013, as amended.
22. "Source Testing" means site-specific sampling and testing to measure emissions resulting from operating the Equipment under operating conditions that will derive an emission rate that, for the relevant averaging period of the contaminant, is at least as high as the maximum emission rate that the source of contaminant is reasonably capable of, or a rate approved by the Manager within the approved operating range of the Equipment which satisfies paragraph 1 of subsection 11(1) of O. Reg. 419/05;
23. "Source Testing Code" means the Ontario Source Testing Code, dated June 2010, prepared by the Ministry, as amended; and
24. "Test Contaminants" means the contaminants listed in Schedule B.
25. "Start-up Date" means the date when the Company start to fire pyrolysis gas to provide heat to the dryer.
26. "Targeted Source" means the dryer, while firing pyrolysis gas, described in the Company's application, this Approval and in the supporting documentation submitted with the application, to the extent approved by this Approval;
27. "Technical Bulletin: Management Approaches for Industrial Fugitive Dust Sources" means the Ministry publication "Technical Bulletin: management approaches for industrial fugitive dust sources", March 8, 2017, as amended.

*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. OPERATION AND MAINTENANCE**

1. The Company shall ensure that the Equipment is properly operated and maintained at all times.  
The Company shall:

- a. prepare, before commencement of operation of the Equipment, and update, as necessary, a Manual outlining the operating procedures and a maintenance program for the Equipment, including:
    - i. routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the Equipment suppliers;
    - ii. emergency procedures, including spill clean-up procedures;
    - iii. procedures for any record keeping activities relating to operation and maintenance of the Equipment;
    - iv. all appropriate measures to minimize noise and odorous emissions from all potential sources; and
    - v. the frequency of inspection and replacement of the filter material in the Equipment;
  - b. implement the recommendations of the Manual.
2. Only Clean Wood as defined by this Approval may be used in the pyrolysis and gasification system.
  3. The Company shall ensure that the Equipment does not operate between the hours of 7 pm and 7 am.

## **2. RECORD RETENTION**

1. The Company shall retain, for a minimum of two (2) years from the date of their creation, all records and information related to or resulting from the recording activities required by this Approval, and make these records available for review by staff of the Ministry upon request. The Company shall retain:
  - a. all records on the maintenance, repair and inspection of the Equipment; and
  - b. all records of any environmental complaints, including:
    - i. a description, time and date of each incident to which the complaint relates;
    - ii. wind direction at the time of the incident to which the complaint relates; and
    - iii. a description of the measures taken to address the cause of the incident to which the complaint relates and to prevent a similar occurrence in the future.

### **3. NOTIFICATION OF COMPLAINTS**

1. If, at any time, the Company receives an environmental complaint from the public regarding the operation of the Equipment approved by this Approval, the Company shall take the following steps:
  - a. Record and number each complaint, either electronically or in a log book. The record shall include the following information: the time and date of the complaint and incident to which the complaint relates, the nature of the complaint, wind direction at the time and date of the incident to which the complaint relates and, if known, the address of the complainant.
  - b. Notify the District Manager of the complaint within two (2) business days after the complaint is received, or in a manner acceptable to the District Manager.
  - c. Initiate appropriate steps to determine all possible causes of the complaint and take the necessary actions to appropriately deal with the cause of the subject matter of the complaint.
  - d. Complete and retain on-site a report written within five (5) business days of the complaint date. The report shall list the actions taken to appropriately deal with the cause of the complaint and set out steps to be taken to avoid the recurrence of similar incidents.

### **4. VISIBLE FUGITIVE DUST EMISSIONS**

1. The Company shall operate at or below the maximum daily production limits as presented in the ESDM Report.
2. The facility operations shall be performed to ensure that visible fugitive dust plume from activities where material is dropped:
  - a. will not exceed more than 30 metres in any direction from the activities, excluding no more than 6 minutes in any hour; and
  - b. will not extend beyond the property lines at any time.
3. The company shall determine visible fugitive dust emissions, referred in Condition 4.2.a and 4.2.b as per Method 22, at the shortest practical observation distance as described in the Method 22.

### **5. FUGITIVE DUST CONTROL**

1. The Company shall review and update in consultation with the District Manager, a BMPP for the control of fugitive dust emissions. This BMPP shall:

- a. at minimum, be prepared in accordance with Ministry Technical Bulletin: Management Approaches for Industrial Fugitive Dust Sources;
  - b. include a list of all Ministry comments received, if any, on the development of the BMPP, and a description of how each Ministry comment was addressed in the Best Management Practices Plan; and
  - c. include a list of all necessary procedures and undertaken control measures to ensure compliance with Condition No. 4.2 of this Approval.
2. The Company shall submit the updated BMPP to the District Manager not later than 3 (three) months after the date of this Approval or as otherwise indicated by the District Manager.
  3. Upon acceptance of the BMPP by the District Manager, the Company shall immediately implement the BMPP for the control of fugitive dust emissions from any potential sources of fugitive dust emissions resulting from the operation of the Facility.
  4. The Company shall update the BMPP as necessary or at the direction of the District Manager.
  5. The Company shall retain on-site the latest version of the BMPP and shall provide it to any employee or agent of the Ministry upon request

## **6. SOURCE TESTING**

1. The Company shall perform Source Testing in accordance with the procedures in Schedule A to determine the rates of emissions of the Test Contaminants from the Targeted Source while firing pyrolysis gas.

## **7. NOTIFICATION OF MINISTRY**

1. The Company shall notify the District Manager in writing the Start-up Date of the Equipment not later than five (5) business days prior to the Start-up Date and confirm in writing five (5) business days after the Start-up Date.

## **8. APPROVAL EXPIRY DATE**

1. The Approval shall expire 24 months from the date of this Approval.

## **9. NOISE**

1. The Company shall, at all times, ensure that the noise emissions from the Facility comply with the limits set out in Ministry Publication NPC-300.

## 10. CHANGE OF OWNERSHIP

1. The Company shall notify the Director in writing, and forward a copy of the notification to the District Manager, within thirty (30) days of the occurrence of any of the following changes to Facility operations:
  - a. the ownership of the Facility;
  - b. the operator of the Facility;
  - c. the address of the Company;
  - d. the partners, where the Company is or 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, shall be included in the notification; or
  - e. the name of the corporation where the Company is or at any time becomes a corporation, other than a municipal corporation, and a copy of the most current information filed under the Corporations Information Act, R.S.O. 1990, c. C.39, shall be included in the notification.
2. In the event of any change in ownership of the Facility, the Company shall notify the successor of the existence of this Approval and provide the successor with a copy of this Approval, and the Company shall provide a copy of the notification to the District Manager and the Director.



## SCHEDULE A

### Source Testing Procedures

1. The Company shall submit, not later than three (3) months after the Start-up Date, to the Manager a Pre-Test Plan for the Source Testing required under this Approval.
2. The Company shall finalize the Pre-Test Plan in consultation with the Manager.
3. The Company shall not commence the Source Testing required under this Approval until the Manager has accepted the Pre-Test Plan.
4. The Company shall complete the Source Testing, no later than three (3) months after the Manager has approved the Pre-Test Plan or a date agreed upon in consultation with the District Manager.
5. The Company shall notify the Manager, the District Manager and the Director in writing of the location, date and time of any impending Source Testing required by this Approval, at least fifteen (15) days prior to the Source Testing.
6. The Company shall submit a report (electronic format) on the Source Testing to the Manager, the District Manager and the Director not later than three (3) months after completing the Source Testing. The report shall be in the format described in the Source Testing Code, and shall also include, but not be limited to:
  1. an executive summary;
  2. all records of the operating conditions at the time of Source Testing, including but not limited to the following:
    - a. all records of the operating conditions, including the feed rate, Clean Wood verification, and the operating capacities, of the pyrolysis and gasification system and the secondary combustion chamber;
    - b. production data;
    - c. Equipment/process information related to the operation of the Targeted Source;
    - d. description of the emission sources controlled by the Targeted Source at the time of testing; and
    - e. summary of any notifications made under Condition 3 of this Approval.
  3. the results of Source Testing, including the emission rate and emission concentration of the Test Contaminants;

4. a tabular comparison of calculated emission rates based on Source Testing results for the Test Contaminants to relevant estimates described in the ESDM Report; and
  5. recommendations for optimizing the operation of the Equipment to minimize the emissions from the Equipment.
7. The Director may not accept the results of the Source Testing if:
1. the Source Testing Code or the requirements of the Manager were not followed; or
  2. the Company did not notify the Manager, the District Manager and the Director of the Source Testing; or
  3. the Company failed to provide a complete report on the Source Testing.
8. If the Director does not accept the results of the Source Testing, the Director may require re-testing. If re-testing is required, the Pre-Test Plan strategies need to be revised and submitted to the Manager for approval. The actions taken to minimize the possibility of the Source Testing results not being accepted by the Director must be noted in the revision.
9. The Company shall update their ESDM Report in accordance with Section 26 of O. Reg. 419/05 and the Procedure Document with the results from the Source Testing if any of the calculated emission factors or calculated emission rates are higher than the predicted rates in the ESDM Report, not later than three (3) months after the submission of the Source Testing report and make these records available for review by staff of the Ministry upon request.

## **SCHEDULE B**

### **Test Contaminants**

- Total Suspended Particulate Matter
- Total Hydrocarbon Compounds
- Nitrogen Oxides
- Carbon Monoxide
- Sulphur Dioxide

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

1. Condition No. 1 is included to emphasize that the Equipment must be maintained and operated according to a procedure that will result in compliance with the EPA, the Regulations and this Approval.

2. Condition No. 2 is included to require the Company to keep records and to provide information to staff of the Ministry so that compliance with the EPA, the Regulations and this Approval can be verified.
3. Condition No. 3 and No. 7 are included to require the Company to notify staff of the Ministry so as to assist the Ministry with the review of the site's compliance.
4. Condition No. 6 is included to require the Company to gather accurate information so that the environmental impact and subsequent compliance with the EPA, the regulations and this Approval can be verified.
5. Condition No. 8 is included to require the Company to operate the Facility and complete the works in accordance with the requirements of this Approval on or before the date specified in the condition.
6. Conditions No. 4, No. 5 and No. 9 is included to provide the minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of the Facility.
7. Condition No. 10 is included to require the Company to notify/report to the Ministry so that compliance with the EPA, the regulations and this Approval can be verified.

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

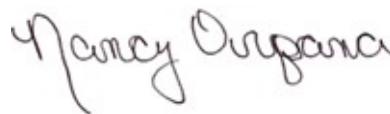
\* Further information on the Ontario Land Tribunal's requirements for an appeal can be obtained directly from the Tribunal

at: Tel: (416) 212-6349 or 1 (866) 448-2248, or [www.olt.gov.on.ca](http://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 4th day of November, 2024



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Nancy E Orpana, P.Eng.  
Director  
appointed for the purposes of Part II.1 of the  
*Environmental Protection Act*

SM/

c: District Manager, MECP Ottawa  
Chris Scullion, Northern Applied Sciences Inc.