



Ministry
of the
Environment

Ministère
de
l'Environnement

AMENDED CERTIFICATE OF APPROVAL
AIR
NUMBER 7263-4P6RDR

The Murray Group Ltd.
83 Muir Street, P.O. Box 40
Mapleton, Ontario
N0G 2K0

Site Location: 83 Muir Street, P.O. Box 40
Mapleton Township, County Of Wellington
N0G 2K0

You have applied in accordance with Section 9 of the Environmental Protection Act for approval of:

- one (1) batch type hot asphalt mixing plant, for a maximum production rate of 150 tonnes per hour, consisting of:
 - one (1) aggregate dryer, equipped with one (1) natural gas fired burner, having a maximum heat input of 103.65 million kilojoules per hour, with particulate emissions controlled by one (1) settling chamber type primary dust collector and one (1) baghouse dust collector, having 919 square metres of Nomex filter bags, a filtering velocity of 2.9 centimetres per second and a pulse jet cleaning mechanism, exhausting into the atmosphere at a volumetric flow rate of 26.9 cubic metres per second through a rectangular stack, measuring 1.0 metre by 1.4 metres, extending **13.6** metres above grade;
 - one (1) asphalt cement heater, equipped with one (1) natural gas fired burner, having a maximum heat input of 2,650,000 kilojoules per hour, exhausting into the atmosphere through a stack, having an exit diameter of 0.8 metre and extending 4.1 metres above grade;
 - one (1) 10 metres high and 50 metres long acoustic barrier in the form of an earth berm, aggregate stockpile, an acoustic fence or a combination of the above, erected at a distance of 50 metres east of the asphalt plant equipment and centered on the line from the plant to the nearest Point of Reception to the east. The acoustic fence shall be continuous without holes, gaps and other penetrations and have a surface mass of at least 20 kilograms per square metre;
 - noise control equipment as described in Schedule "A";

all in accordance with the application dated May 9, 1994 and signed by Stephen Murray, for a Certificate of Approval (Air), the application dated April 20, 1999 and signed by Stephen Murray, for amendment to Certificate of Approval (Air) No. 8-2095-94-007, the recommendations and drawings, included in the report prepared by Aercoustics Engineering Limited, dated June 17, 1999, and the supporting documentation submitted by The Murray Group Limited. The Environmental Appeal Board Minutes of Settlement, dated January 17, 2000, signed by Harry Dahme, Gowling, Strathy & Hendersen Solicitor for the Applicant, Peter Pickfield, Turkstra Mazza Associates Solicitor for the residents adjacent to the Facility, and James Flagal, Legal counsel for the Ministry of Environment.

Schedule "A"

This Schedule "A" forms part of Certificate of Approval (Air)

- one (1) shroud (partial acoustic enclosure) for the asphalt plant burner, extending from the burner discharge to 1 meter beyond the burner discharge duct/dryer drum junction, consisting of 0.76 mm thick perforated stainless steel sheet metal, 100 mm thick ceramic wool, and 1.22 mm thick sheet metal exterior;

- one (1) duct silencer for the burner air intake, capable of providing the following values of Insertion-Loss in 1/1 octave frequency bands:

Centre Frequency (Hertz) 63 125 250 500 1000 2000 4000 8000
Insertion-Loss (decibel) 1 4 8 10 10 10 10 10

- one (1) exhaust silencer for the baghouse dust collector, capable of providing the following values of Insertion-Loss in 1/1 octave frequency bands:

Centre Frequency (Hertz) 63 125 250 500 1000 2000 4000 8000
Insertion-Loss (decibel) 1 3 5 5 5 5 5 5

Schedule “B”

This Schedule “B” forms part of Certificate of Approval (Air)

PROCEDURES FOR THE CALCULATION OF 10-MINUTE AVERAGE POINT OF IMPINGEMENT CONCENTRATION OF ODOUR FROM THE EQUIPMENT/FACILITY:

1. Calculate one-hour average Point of Impingement concentration of odour in accordance with SCREEN3 or any other dispersion model proposed by the Company and accepted by the Ministry that provides the Point of Impingement concentrations at all atmospheric stabilities.
2. Use the following formula to convert the one-hour average Point of Impingement concentration to the 10-minute average Point of Impingement concentration:

$$X_s = X_t(t/t_s)^p$$

where

X_s= 10-minute average concentration

X_t= one-hour average concentration

t_t= 60

t_s= 10

p= exponent, as follows:

Atmospheric Stability Exponent

A-convective 0.5

B 0.5

C 0.33
D-neutral 0.2
E 0.167
F-very stable 0.167

For the purpose of this Certificate of Approval and the terms and conditions specified below, the following definitions apply:

- (1) "Act" means the *Environmental Protection Act*;
- (2) "Certificate" means this Certificate of Approval issued in accordance with Section 9 of the Act;
- (3) "Class 3 Area" means a rural area with an acoustical environment that is dominated by natural sounds having little or no road traffic, such as the following:
 - (a) a small community with less than 1000 population;
 - (b) agricultural area;
 - (c) a rural recreational area such as a cottage or a resort area; or
 - (d) a wilderness area;
- (4) "Company" means The Murray Group Limited;
- (5) "Director" means any Ministry employee appointed by the Minister pursuant to Section 5 of the Act;
- (6) "District Manager" means the District Manager, Cambridge District Office, West Central Region of the Ministry;
- (7) "Equipment" means the settling chamber type primary dust collector and the baghouse dust collector described in the Company's application, this Certificate and in the supporting documentation referred to herein, to the extent approved by this Certificate;
- (8) "Independent Acoustical Consultant" means an acoustical consultant not representing the Company, and not involved in the noise impact assessment or the design/implementation of noise control measures for the Plant. The Independent acoustical consultant shall not be retained by the Acoustic Consultant involved in the noise/vibration impact assessment or the design/implementation of noise/vibration control measures for the Plant.
- (9) "Manager" means the Manager, Technology Standards Section, Standards Development Branch, or any other person who represents and carries out the duties of the Manager, as those duties relate to the conditions of this Certificate;
- (10) "Manual" means a document or a set of documents that provide written instructions to staff of the Company;
- (11) "Ministry" means Ontario Ministry of the Environment;
- (12) "Plant" means the batch type hot asphalt mixing plant described in the Company's application, this Certificate and in the supporting documentation referred to herein, to the extent approved by this Certificate;
- (13) "Point of Reception" means any point in the natural environment. The point of reception for the purposes of verifying compliance with the Act shall be chosen as the point located outside the Company's property boundaries and on any of the following existing or zoned for future use premises: permanent or seasonal residences, hotels/motels, nursing/retirement homes, rental residences, hospitals, camp grounds, schools, places of worship, commercial and industrial buildings at which the highest off-site concentration of odour is expected to occur, when that concentration is calculated in accordance with SCREEN3 or any other method accepted by the Director;
- (14) "Pre-test Information" means the information outlined in Section 1. of the Source Testing Code;
- (15) "Publication NPC-103" means Publication NPC-103 of the Model Municipal Noise Control By-Law, Final Report,

August, 1978, as amended;

(16) "Publication NPC-232" means Publication NPC-232, Sound Level Limits for Stationary Sources in Class 3 Areas (Rural), October, 1995.

(17) "Publication NPC-233" means the Ministry Publication NPC-233, Information to be Submitted for Approval of Stationary Sources of Sound, October 1995;

(18) "SCREEN3" means the dispersion model set out in U.S. Environmental Protection Agency Publication Number EPA-454/B-95-004, used to calculate one-hour average concentration of a contaminant at a Point of Impingement;

(19) "Source Testing Code" means the Source Testing Code, Version 2, Report No. ARB-66-80, dated November 1980, prepared by the Ministry, as amended;

(20) "Source Testing" means sampling and testing to measure emissions resulting from operating the equipment at a level of maximum production under conditions which yield the worst case emissions within the approved operating range of the Plant.

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

TERMS AND CONDITIONS

PERFORMANCE

1. The Company shall ensure that the noise emissions from the Plant comply with the limits set in Publication NPC-232;
- 2. The Company shall use reasonable efforts to operate the Plant with the objective that the ten minute average concentration of odour at a Point of Reception, resulting from the operation of the Plant and calculated in accordance with Schedule "B", does not exceed 1.0 odour unit per cubic metre.**
3. The Company shall provide effective dust suppression measures to any potential sources of fugitive dust emissions resulting from the operation of the Plant.
4. The Company shall construct the acoustic barrier not later than thirty (30) days after the date of this certificate and notify the District Manager in writing within two (2) days of completion of the acoustic barrier construction.

OPERATION AND MAINTENANCE

5. The Company shall restrict operation of the Plant to day-time hours from 07:00 am to 7:00 pm.
6. The Company shall ensure that the Equipment is properly operated and maintained at all times. The Company shall:
 - (1) prepare, not later than three (3) months after the date of this Certificate, and update, as necessary, a Manual outlining the operating procedures and a maintenance program for the Equipment, including:
 - (a) routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the Equipment suppliers;
 - (b) emergency procedures;
 - (c) procedures for any record keeping activities relating to operation and maintenance of the Equipment;
 - (d) all appropriate measures to minimize dust and odorous emissions from all potential sources;
 - (2) implement the recommendations of the operating and maintenance Manual; and

(3) retain, for a minimum of two (2) years from the date of their creation, all records on the maintenance, repair and inspection of the Equipment, and make these records available for review by staff of the Ministry upon request.

MONITORING

7. The Company shall monitor the emissions and operation of the Equipment follows:

- (1) The Company shall perform Source Testing to determine the total emission rate of odour from the baghouse dust collector stack of the Plant.
- (2) The Company shall submit, not later than three (3) months after the date of this Certificate, to the Manager a test protocol, including the Pre-Test Information for the Source Testing required by the Source Testing Code. The Company shall finalize the test protocol in consultation with the Manager.
- (3) The Company shall not commence the Source Testing until the Manager has accepted the test protocol.
- (4) The Company shall complete the Source Testing not later than three (3) months after the Manager has accepted the test protocol.
- (5) The Company shall notify the District Manager and the Manager in writing of the location, date and time of any impending Source Testing required by this Certificate, at least fifteen (15) days prior to the Source Testing.
- (6) The Company shall submit a report on the Source Testing to the District Manager and the Manager not later than two (2) 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:

(a) an executive summary;

(b) records of operating conditions; and

(c) the results of dispersion calculations indicating the maximum 10-minute average Point of Reception concentration for odour calculated in accordance with the procedure outlined in attached Schedule "B".

8. 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 District Manager and the Manager of the Source Testing; or
- (3) the Company failed to provide a complete report on the Source Testing.

9. If the Director does not accept the results of the Source Testing, the Director may require re-testing.

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

PERFORMANCE

1. Conditions No. 1, 2, 3 and 4 are included to outline the minimum performance requirement considered necessary to

prevent an adverse effect resulting from the operation of the Plant.

OPERATION AND MAINTENANCE

2. Condition No. 5 is included to ensure that the Plant is not operated beyond the stated hours. Operation outside these hours, when ambient sound levels are significantly lower, may result in non-compliance with the established sound level limits.

3. Condition No. 6 is included to emphasize that the Equipment must be maintained and operated according to a procedure that will result in compliance with the Act, the regulations and this Certificate. The Company is required to keep records to assist the Director in determining whether or not the Equipment is being inspected and maintained as required by the Act, the regulations and this Certificate.

MONITORING

4. Conditions No. 7, 8 and 9 are included to require the Company to gather accurate information so that compliance with the Act, the regulations and this Certificate can be verified.

This Certificate of Approval revokes and replaces Certificate(s) of Approval No. 8-2088-99-006 and the Notice issued on June 29, 1999 and February 24, 2000, respectively.

In accordance with Section 139 of the Environmental Protection Act, R.S.O. 1990, Chapter E-19, as amended, you may by written notice served upon me and the Environmental Appeal Board within 15 days after receipt of this Notice, require a hearing by the Board. Section 142 of the Environmental Protection Act, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the 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.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

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

This Notice must be served upon:

The Secretary*
Environmental Appeal Board
2300 Yonge St., 12th Floor
P.O. Box 2382
Toronto, Ontario
M4P 1E4

AND

The Director
Section 9, *Environmental Protection Act*
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

* Further information on the Environmental Appeal Board's requirements for an appeal can be obtained directly from the Board at:
Tel: (416) 314-4600, Fax: (416) 314-4506 or www.ert.gov.on.ca

The above noted works are approved under Section 9 of the Environmental Protection Act.

DATED AT TORONTO this 15th day of September, 2000

Steve Klose, P.Eng.
Director
Section 9, *Environmental Protection Act*

AH/

c: District Manager, MOE Guelph

Richard Seibel, The Murray Group

C. A. Krajewski, Environmental Assessment and Approvals Branch, MOE

Guillermo Azocar, Standards Development Branch, MOE

S. Dunn, Environmental Appeal Board

W. Fairbrother, Templeman Menninga