



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Central Regional Office • 627 Main Street, Worcester MA 01608 • 508-792-7650

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Commissioner

September 14, 2012

Mr. Remi Fleurette
P.J. Keating Company
998 Reservoir Road
Lunenburg, MA 01462

RE: Transmittal No.: X252037
Application No.: CE-12-019
Class: SM79-7
FMF No.: 131040
AIR QUALITY PLAN APPROVAL

Dear Mr. Fleurette:

The Massachusetts Department of Environmental Protection (“MassDEP”), Bureau of Waste Prevention, has reviewed your Limited Plan Application (“Application”) listed above. This Application concerns the proposed operation of an asphalt shingle grinder at your asphalt plant located at 998 Reservoir Road in Lunenburg, Massachusetts (“Facility”).

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 “Air Pollution Control,” regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-J, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP’s review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator (“Permittee”) must comply in order for the Facility to be operated in compliance with this Plan Approval.

1. DESCRIPTION OF FACILITY AND APPLICATION

On July 15, 2002, MassDEP issued an Air Quality approval for an asphalt shingle grinding operation at this facility under Transmittal Number 21004468. The approval included an expiration date of December 31, 2003. The expiration date was later extended until December 31, 2005. On November 18, 2011, MassDEP issued a Provisional Solid Waste Approval for the modification of a Beneficial Use Determination ("BUD") for the asphalt shingle recycling at this Facility and also at the Permittee's facility in Acushnet, Massachusetts under Transmittal Number X239191. MassDEP determined that in order for the Permittee to continue with this BUD-approved activity at this Lunenburg facility, the Permittee would be required to file for a new Air Quality approval. The Permittee accordingly submitted the present Limited Plan Application ("LPA") on July 19, 2012.

The shingle recycling operation (described in greater detail in the BUD) includes testing, receipt, storage, grinding, and incorporating of the shingles into bituminous asphalt blends. The shingles are received throughout the year and stored until they are ground. The grinding is done intermittently with a portable shingle grinder powered by an internal combustion engine ("ICE"). This grinding has the potential to generate emissions of particulate matter ("PM"). PM emissions are controlled by the use of water sprays.

The shingle recycling operation, as described in the BUD, includes both pre-consumer off-specification ("PC-OS") shingles from shingle manufacturers and post-consumer tear-off ("PC-TO") shingles from old roofs. PC-OS shingles are expected to be free of asbestos. Some PC-TO shingles might contain asbestos because in the past, asbestos-containing materials were used in roof construction. Only non-asbestos containing PC-TO (and PC-OS) shingles may be recycled. To ensure that the PC-TO shingles do not constitute Asbestos-Containing Waste Material, MassDEP instituted asbestos testing procedures beginning in 2002 both for this Facility and the Permittee's Acushnet facility. The asbestos testing procedures currently in place will not be changed by this Approval. As indicated in the BUD, the PC-OS shingles are not required to be tested for asbestos.

As indicated in the BUD, the PC-OS shingles will be provided from Certainteed Corporation of Norwood, Massachusetts; and the PC-TO shingles will be provided from Rooftop Recycling, Inc., of Boxborough, Massachusetts. General Condition VI.G. of the BUD describes the conditions the Permittee must meet for any proposed change in suppliers of shingles.

On June 9, 2011, MassDEP issued a Plan Approval Transmittal #X236203 to the Permittee for asphalt plant equipment replacement at this Facility. That Plan Approval covered the new and existing emission units #1 through #8 at this Facility and did not address the shingle grinding operation. This Plan Approval #X252037, which covers the shingle grinding operation designated as emission unit #9, does not change any of the conditions or requirements of Plan Approval Transmittal #X236203.

2. EMISSION UNIT (EU) IDENTIFICATION

The Emission Unit (EU) #9 identified in Table 1 is subject to and regulated by this Plan Approval. (Emission Units #1-8 were described in Plan Approval Transmittal #X236203 and remain unchanged by this Plan Approval.)

Table 1			
EU#	Description	Design Capacity	Pollution Control Device (PCD)
9	Shingle Pro XL 406 (or equivalent) Shingle Grinder	n/a	Water Sprays

Table 1 Key:

EU# = Emission Unit Number
 PCD = Pollution Control Device

3. APPLICABLE REQUIREMENTS

A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2:

Table 2			
EU#	Operational / Production Limit	Air Contaminant	Emission Limit
9	1. 30,000 TPM of shingles	PM	0.02 TPM
	2. 100,000 TPY of shingles	PM	0.07 TPY
		Visible Emissions	Visible emissions from receiving, handling, and processing of the shingles shall not exceed 5% opacity at any time. There shall be no visible emissions from the storage of PC-TO.

Table 2 Key:

EU# = Emission Unit Number
 PM = Total Particulate Matter (includes PM2.5 and PM10)
 TPM = tons per month

TPY = tons per consecutive 12-month period
 % = percent
 PC-TO = Post-Consumer Tear-Off shingles

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5:

Table 3	
EU#	Monitoring and Testing Requirements
9	<p>1. Post Consumer Tear-Off ("PC-TO") Waste Asphalt Shingle material supplied to the Permittee shall be sampled and tested for asbestos content by the PC-TO supplier at the time of delivery to their facility. The PC-TO supplier shall test a "pre-grind" sample representative of each consolidated shipping container not to exceed 25 tons.</p> <p>2. The Permittee shall obtain from the PC-TO supplier a copy of the results of the aforementioned "pre-grind" asbestos test.</p> <p>3. Approved Asbestos Sampling Protocol--Confirmatory Asbestos Testing</p> <p>In addition to the asbestos testing performed by the PC-TO supplier, the Permittee shall perform confirmatory asbestos testing on all PC-TO material supplied to the Facility on randomly selected containers at the rate of one (1) test per 250 tons of PC-TO received. The sampling and testing shall be conducted using the following method:</p> <p>A. A minimum of one (1) sample for every two hundred and fifty (250) tons of material received at the Facility processed shall be taken and analyzed for the presence of asbestos fibers. The container to be sampled shall be identified in accordance ASTM method D3665 "Standard Practice for Random Sampling of Construction Materials."</p> <p>B. The Permittee shall obtain a composite sample that is representative of all materials present in the container directly from the container, without discharging the material onto the ground. Sampling shall be completed within 48 hours of receiving the material.</p> <p>C. A portion, no smaller than 1 inch by 1 inch, of each individual material (such as, but not limited to, shingles, roofing felt, tarpaper, roofing tar/cements, etc.) from the container will be ground in a laboratory on-site to a gradation similar to that obtained during routine full scale grinding. The quantity of the ground sample will be contingent on the number of distinct materials necessary to represent the entire stockpile. A portion of the ground sample will be forwarded to the testing laboratory for analysis. The remaining ground sample and the remaining unground "parent" sample will be stored in separate sealed containers following sample preparation. All containers will</p>

Table 3	
EU#	Monitoring and Testing Requirements
	<p>be appropriately labeled to identify source of material and the date and time of sampling.</p>
	<p>D. A Massachusetts Department of Labor and Workforce Development, Division of Occupational Safety ("DOS") accredited laboratory will analyze the ground sample in accordance with USEPA Test Method 600/R-93/116, "Method for the Determination of Asbestos in Bulk Building Materials."</p> <p>E. If asbestos is not found in the ground sample, the container will be prepared for grinding.</p> <p>F. If any amount of asbestos is found in the ground container sample, then the material in the asbestos-containing container shall not be recycled. The material in the asbestos-containing container shall be disposed of in accordance with all applicable Regulations. Disposal records shall be kept on site and copies provided to MassDEP as required.</p> <p>G. Processed PC-TO material will be introduced into the manufacturing process only when results from a DOS accredited laboratory indicate there is no asbestos present.</p>
9	<p>4. Any request for modification of the Asbestos Sampling Protocol shall be made in writing. The Permittee shall not implement any changes to the Asbestos Sampling Protocol until receiving written approval from the Department.</p>

Table 3	
EU#	Monitoring and Testing Requirements
	5. During daily startup of the grinder operations, facility representatives shall conduct a visual inspection of the wet dust suppression system, verify that water is flowing from the nozzles, and make written note of deficiencies/malfunctions, if any, and take immediate corrective actions.
	6. If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and Regulation 310 CMR 7.13

Table 3 Key:

EU# = Emission Unit Number

USEPA = United States Environmental Protection Agency

Table 4	
EU#	Record Keeping Requirements
9	<p>1. The Permittee shall maintain adequate records on-site to demonstrate compliance with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive 12-month period (current month plus prior eleven months). These records shall be compiled no later than the 15th day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at http://www.mass.gov/dep/air/approvals/aqforms.htm#report .</p> <p>2. The Permittee shall maintain records of the make, model, maximum heat rate input, and dates and hours of operation of the portable unit(s) used.</p> <p>3. a) The Permittee shall maintain a daily record of the amount of PC-TO and PC-OS received, amount processed as ground material, and amount of bituminous concrete produced with the ground PC-TO and PC-OS. The daily record shall be totaled on a monthly and on a consecutive 12-month basis; and b) An end of month record of how much PC-TO and PC-OS shingle material is present onsite, both ground and unground.</p> <p>4. The Permittee shall maintain asbestos-related records including: a) Records of asbestos screening for each accepted load of PC-TO; b) Records of asbestos sampling and testing results of PC-TO conducted in accordance with the Department approved Asbestos Sampling Protocol; and c) Records of disposal of PC-TO found to contain asbestos, in accordance with the Department approved Asbestos Sampling Protocol.</p> <p>5. The Permittee shall maintain records of monitoring and testing as required by Table 3.</p> <p>6. The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMP for the EU(s) approved herein on-site.</p> <p>7. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s). The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.</p> <p>8. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s). At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.</p> <p>9. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.</p>

Table 4	
EU#	Record Keeping Requirements
	10. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

Table 4 Key:

EU# = Emission Unit Number
 PCD = Pollution Control Device
 SOMP = Standard Operating and Maintenance Procedure
 USEPA = United States Environmental Protection Agency

Table 5	
EU#	Reporting Requirements
9	<ol style="list-style-type: none"> 1. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a “Responsible Official” as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c). 2. 4. The Permittee shall notify the Central Regional Office of MassDEP, BWP Permit Chief by telephone: 508-767-2845 , email: CERO.Air@massmail.state.ma.us or fax : 508-792-7621, as soon as possible, but no later than one (1) business day after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to Permit Chief at MassDEP within three (3) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s). 3. The Permittee shall provide a copy to MassDEP of any record required to be maintained by this Plan Approval within 30-days from MassDEP’s request. 4. The Permittee shall submit to MassDEP for approval an emission pretest protocol, at least 30 days prior to emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements. 5. The Permittee shall submit to MassDEP a final emission test results report, within 45 days after emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.

Table 5 Key:

EU# = Emission Unit Number

4. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to, and shall comply with, the following special terms and conditions:

A. The Permittee is subject to and shall comply with the Special Terms and Conditions as contained in Table 6:

Table 6	
EU#	Special Terms and Conditions
9	<p>1. Grinding or processing of asphalt shingles shall be done only with a portable unit meeting the definition of “non-road engine” as defined in 40 CFR Part 89. The current definition of non-road engine is the following:</p> <p>“Non-road engine” means:</p> <p>(1) Except as discussed in paragraph (2) of this definition, a non-road engine is any internal combustion engine:</p> <p>(i) In or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as garden tractors, off-highway mobile cranes and bulldozers); or</p> <p>(ii) In or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers); or</p> <p>(iii) That, by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.</p> <p>(2) An internal combustion engine is not a non-road engine if:</p> <p>(i) The engine is used to propel a motor vehicle or a vehicle used solely for competition, or is subject to standards promulgated under section 202 of the Act; or</p> <p>(ii) The engine is regulated by a federal New Source Performance Standard promulgated under section 111 of the Act; or</p> <p>(iii) The engine otherwise included in paragraph (1)(iii) of this definition remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine (or engines) that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at that single location approximately three months (or more) each year. This paragraph does not apply to an engine after the engine is removed from the location.</p>

Table 6	
EU#	Special Terms and Conditions
	2. The Permittee shall comply with all terms and conditions of the Beneficial Use Determination ("BUD") Transmittal No. X239191, including any revisions; or such other BUD or Solid Waste approval that may be issued in the future by MassDEP.
	3. The Permittee may receive shingles only from suppliers that have the necessary permits and approvals under the BUD. The Permittee may not receive from a new supplier of PC-TO shingles until it has obtained MassDEP review and approval of the supplier's asbestos screening and testing procedures.
	4. Vehicular Site Traffic - Potential dust emissions that could be generated from moving vehicles on paved/unpaved roadways on site shall be controlled by the use of water, or the application of an appropriate dust suppressant agent (calcium chloride, soil cement dust retardant, or other agent as approved by MassDEP) and the use of a mobile sweeper. Opacity from on-site roadways shall be limited to no more than 10 % at any time.
Facility-Wide	5. Plan Approval Transmittal #X236203 issued under 310 CMR 7.02 shall remain in effect. The Facility shall not exceed the emission limits and shall comply with approved conditions specified in Plan Approval Transmittal #X236203.

Table 6 Key:
 EU# = Emission Unit Number

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

- A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).
- B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.
- C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.

- D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.
- E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.
- F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
- G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
- H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
- I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.
- J. The Permittee shall conduct emission testing, if requested by MassDEP, in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13. If required, a pretest protocol report shall be submitted to MassDEP at least 30 days prior to emission testing and the final test results report shall be submitted within 45 days after emission testing.
- K. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain “Fail-Safe Provisions,” which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL PROCESS

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Enclosed is a stamped approved copy of the application submittal.

Should you have any questions concerning this Plan Approval, please contact Paul Dwiggins by telephone at (508)767-2760, or in writing at the letterhead address.

This final document copy is being provided to you electronically by the
Department of Environmental Protection. A signed copy of this document
is on file at the DEP office listed on the letterhead.

Roseanna E. Stanley
Acting Permit Chief
Bureau of Waste Prevention

Enclosure

ecc: Lunenburg Board of Health
Lunenburg Fire Department
MassDEP/Boston - Yi Tian
Christine Gibbons, ETG, Inc.