



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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July 18, 2016

Mr. Mark Whittaker
AR Metallizing, Ltd.
24 National Drive
Franklin, MA 02038

RE: Franklin
Transmittal No.: X268671
Application No.: CE-15-021
Class: *OP*
FMF No.: 407354
AIR QUALITY PLAN APPROVAL

Dear Mr. Whittaker:

The Massachusetts Department of Environmental Protection (“MassDEP”), Bureau of Air and Waste, has reviewed your Limited Plan Application (“Application”) listed above. This Application concerns the proposed replacement of burners on two boilers at your metallizing facility located at 24 National Drive in Franklin, 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-O, 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

A. HISTORY AND DESCRIPTION OF OPERATIONS

The Permittee manufactures and distributes a variety of metalized and embossed paper products at its facility located at 24 National Drive, Franklin, Massachusetts (“the Facility”). The Facility was constructed in the early 1990’s. MassDEP has issued three Air Quality Plan Approvals to the Permittee, the most recent Plan Approval being Transmittal No. X223977 issued September 17, 2008 and modified June 26, 2009. The Facility is a major source for volatile organic compounds (VOC). The Permittee holds an Operating Permit for the Facility, most recently issued as Renewal Operating Permit Transmittal No. X224028 on February 9, 2010.

The Facility has two Cleaver Brooks boilers which primarily produce steam to regenerate the activated carbon in the solvent recovery system which is used to control VOC emissions from Coating Line No. 1 and other VOC emission units.

The Permittee installed new burners on the boilers in 2015 prior to applying for Plan Approval. After MassDEP brought this to their attention, the Permittee submitted the present Application to MassDEP on December 24, 2015. The requirement to obtain a Plan Approval for the new burners was also incorporated into Administrative Consent Order ACOP-CE-16-7001-NT executed on April 15, 2016.

B. PROJECT DESCRIPTION

The new burners on the two boilers are Cleaver Brooks replacement burners. The burners have the same firing rate as the original burners (14.7 million Btu per hour each). The new burners are expected to achieve lower emissions than the original burners, based on documentation from the manufacturer.

C. APPLICABLE REGULATORY REQUIREMENTS

State Requirements

This project is subject to the 310 CMR 7.02(8) requirement for Best Available Control Technology (BACT). The Application documented that for new boilers, Top-Case BACT is represented by the emission limits specified in 310 CMR 7.26(30) Industry Performance Standards for Boilers. However, the two new burners as manufactured and installed in 2015 were not designed and built to achieve the referenced Top-Case BACT emission limit for oxides of nitrogen (NOx) of 0.035 pounds per million British Thermal Units (BTU) heat input. In other words, the new burners were not “low NOx” burners as are currently required as BACT for new boiler installations. The Permittee supplied manufacturer’s documentation that the NOx emission factor for each of the new burners is 0.11 pounds per million BTU. The manufacturer’s

documentation shows that emissions of other air contaminants besides NO_x will meet the Top-Case BACT limits.

The two boilers are capable of having low NO_x burners installed, and MassDEP considered the possibility of requiring the Permittee to remove the recently installed burners and replace them with low NO_x burners. However, the Permittee documented that the actual historical usage of the boilers has been relatively low, resulting in historical actual NO_x emissions on the order of 1 to 2 tons per year. Therefore it appeared that the actual NO_x reduction from requiring low-NO_x burners would be less than 2 tons per year. MassDEP determined that the cost per ton of NO_x removed was excessively high to change out these two new burners for the relatively small gain of less than 2 tons NO_x per year.

The Permittee documented that the actual annual emissions from the boilers are far below the maximum potential emissions. The Permittee also closely monitored short term (daily) emissions from the boilers, and found that the actual daily emissions are below the levels that could potentially be emitted by BACT-compliant boilers (approximately 25 pounds NO_x per day per boiler). The Permittee therefore requested fuel firing limits for natural gas which would put the allowable emissions of NO_x at or below 25 pounds NO_x per day per boiler. In order to allow some flexibility of day-to-day operation, and reduce the burden of recordkeeping, MassDEP decided to impose a weekly limit of 175 pounds NO_x per boiler instead of the daily limit of 25 pounds per boiler.

MassDEP determined that BACT pursuant to 310 CMR 7.02 for this application is a fuel usage restriction to maintain potential emissions of NO_x less than or equal to 175 pounds per week and 2.25 tons per year per boiler. This figure is significantly less than the previously permitted NO_x limit of 8.6 tons per year per boiler.

Federal Requirements

The Permittee has indicated that the boilers are subject to 40 CFR 60 Subpart Dc. Since the Facility is an Operating Permit source, MassDEP enforces this subpart as it pertains to the boilers through the Facility Operating Permit.

2. EMISSION UNIT (EU) IDENTIFICATION

Each Emission Unit (EU) identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1			
EU	Description	Design Capacity	Pollution Control Device (PCD)
1-1	Superior Boiler	14,700,000 Btu/hour	None
1-2	Superior Boiler	14,700,000 Btu/hour	None

Table 1 Key:

EU = Emission Unit Number
 PCD = Pollution Control Device
 Btu = British Thermal Units

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 Limits Per Boiler (Note 1)			
			Lb/ MMBtu	Lb/Wk	TPM	TPY
1-1 and 1-2	1. Each boiler's total fuel usage not to exceed natural gas fuel usage 41.3 million cubic feet per year and 3.5 million cubic feet per month. 2. Natural Gas shall be the only fuel.	NO _x	0.11	175	0.19	2.25
		CO	0.08		0.14	1.65
		VOC	0.03		0.05	0.62
		SO ₂	0.0055		0.01	0.12
		PM	0.01		0.02	0.21

Table 2 Key:

EU = Emission Unit Number	Lb/MMBtu = pounds per million British Thermal Units
CO = Carbon Monoxide	NO _x = Nitrogen Oxides
PM = Total Particulate Matter, both filterable and condensable	SO ₂ = Sulfur Dioxide
TPY = tons per consecutive 12-month period	TPM = tons per month
VOC = Volatile Organic Compounds	Lb/Wk = pounds per week

Table 2 Notes

Note 1: Compliance with the pounds per week, TPM and TPY emission limits shall be determined by computing actual emissions on a monthly basis. The actual emissions shall be computed by multiplying actual fuel usage in MMBtu times the lb/MMBtu limits listed in the table.

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
1-1 and 1-2	<ol style="list-style-type: none"> 1. The Permittee shall monitor total usage of natural gas for each boiler in order to calculate emissions as required by Table 2. The Permittee shall install individual gas meters on each boiler before January 31, 2017. <ol style="list-style-type: none"> a. Gas usage for each boiler shall be monitored and recorded on a daily basis. b. The total gas usage for each boiler shall be added up on a weekly basis so that the weekly NOx emissions can be calculated. b. C. The total gas usage for each boiler shall be added up on a monthly basis so that emissions of all air contaminants with limits in Table 2 can be calculated on a monthly basis as well as the tons per consecutive twelve-month period. 2. The Permittee shall monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration. 3. 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
1-1 and 1-2	<ol style="list-style-type: none"> 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 twelve-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/eea/agencies/massdep/air/approvals/limited-emissions-record-keeping-and-reporting.html#WorkbookforReportingOn-SiteRecordKeeping. 2. The Permittee shall maintain records of monitoring and testing as required by Table 3. 3. 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. 4. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s), PCD(s) and monitoring equipment. 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. 5. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s) and monitoring equipment. 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. 6. The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration. 7. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years. 8. 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
 SOMP = Standard Operating and Maintenance
 Procedure

PCD = Pollution Control Device
 USEPA = United States Environmental Protection
 Agency

Table 5	
EU	Reporting Requirements
1-1 and 1-2	1. The Permittee shall notify MassDEP in writing when the individual gas meters are installed on the boilers within thirty (30) days of installation.
	2. 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).
	3. The Permittee shall notify the Central Regional Office of MassDEP, BAW Permit Chief by telephone: 508-767-2845, email: Roseanna.Stanley@massmail.state.ma.us or fax : 508-792-7621, as soon as possible, but no later than three (3) business days after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to PermitChief at MassDEP within ten (10) 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).
	4. The Permittee shall report every three years to MassDEP, in accordance with 310 CMR 7.12, all information as required by the Source Registration/Emission Statement Form. The Permittee shall note therein any minor changes (under 310 CMR 7.02(2)(e), 7.03, 7.26, etc.), which did not require Plan Approval.
	5. 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.
	6. The Permittee shall submit to MassDEP for approval a stack emission pretest protocol, at least 30 days prior to emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.
	7. The Permittee shall submit to MassDEP a final stack 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
1-1 and 1-2	1. Any prior Plan Approvals issued under 310 CMR 7.02 shall remain in effect unless specifically changed or superseded by this Plan Approval. The Facility shall not exceed the emission limits and shall comply with approved conditions specified in the prior Plan Approval(s) unless specifically altered by this Plan Approval.

Table 6 Key:

EU = Emission Unit Number

- B. The Permittee shall install and use an exhaust stack, as required in Table 7, on each of the Emission Units that is consistent with good air pollution control engineering practice and that discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including but not limited to rain protection devices known as “shanty caps” and “egg beaters.”

- C. The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7, for the Emission Units that are regulated by this Plan Approval:

Table 7				
EU	Stack Height Above Ground (feet)	Stack Inside Exit Dimensions (feet)	Stack Gas Exit Velocity Range (feet per second)	Stack Gas Exit Temperature Range (°F)
1-1	45	24	35	529 max.
1-2	45	24	35	529 max.

Table 7 Key:

EU = Emission Unit Number

°F = Degree Fahrenheit

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 laws or regulations now or in the future.
- F. The Application is incorporated into this Plan Approval by reference. 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. 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) and a completed Adjudicatory Hearing Fee Transmittal Form, a copy of which is attached hereto, 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 Dwiggin 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
Permit Chief
Bureau of Air and Waste

Enclosures:

- Adjudicatory Hearing Fee Transmittal Form
- Stamped Plan Application

ecc: Franklin Board of Health
Franklin Fire Department
MassDEP/Boston - Yi Tian