



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

September 12, 2016

Mr. Michael Dyson
Globe Composite Solutions Ltd.
200 Shuman Avenue
Stoughton, MA 02072

RE: STOUGHTON
Transmittal No.: X270905
Application No.: SE-16-010
Class: *SM-25*
FMF No.: 131195
AIR QUALITY PLAN APPROVAL

Dear Mr. Dyson:

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 construction and operation of process equipment (e.g. mixing, molding and curing) at your urethane and rubber products manufacturing facility located at 200 Shuman Avenue in Stoughton, 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

Globe Composite Solutions (“Permittee”) manufactures urethane and rubber products to meet customer specifications. Manufacturing involves mixing small batches of raw materials, usually urethanes and a curative, followed by vacuum de-aeration to remove air bubbles; then the liquids are poured into molds, followed by curing in one of several electric or gas-fired ovens. The finished products are then trimmed, inspected, packaged, labeled and sent to customers. The facility normally operates Monday – Thursday, dayshift, with some work on Friday and Saturday, as needed.

In addition to rubber and polyurethane parts manufacturing, emission unit (EU) 1, the facility includes a spray booth (EU2), that complies with the requirements and specifications at 310 CMR 7.03(16), to apply a thin layer of adhesive to metal parts, Solvent cleaning operations (EU3) and mold release application (EU4). Ancillary operations include an aqueous parts washer, shot blasters with dedicated dust collectors (self-contained), a number of machining tools (e.g. lathe) and a surface grinder. The facility is a de minimis source of particulate matter in accordance with 310 CMR 7.02(2)(b)7.

The facility fuel burning equipment consists of several natural gas fired HVAC units in addition to a 0.4 MMBtu/hr cure oven and 0.1 MMBtu/hr laboratory oven. All fuel burning equipment fires natural gas only and is exempt from plan approval in accordance with 310 CMR 7.02(2)(b)15., which applies to fuel burning equipment with a heat input capacity less than ten (10) MMBtu/hr Current facility-wide fuel burning capacity is less than 5.0 MMBtu/hr.

The manufacturing process results in the emission of Volatile Organic Compounds (VOC), Halogenated Organic Compounds (HOC) and Hazardous Air Pollutants (HAP), and non-criteria pollutants (e.g. Acetone). Best Available Control Technology for this project is detailed in Table 2.

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)
EU1	Rubber and polyurethane parts manufacturing	various	None
EU2	Spray booth	Working dimensions: 7’4”W x 48”H x 3’8”D 2126 cfm @ 0.5” sp	HVLP spray gun (or equivalent) Fabric filter
EU3	Solvent cleaning operations	N/A	None
EU4	Mold release application	N/A	None

Table 1 Key:
 EU# = Emission Unit Number
 N/A = not applicable or not available

PCD = Pollution Control Device
sp = static pressure

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 below:

Table 2					
EU#	Operational / Production Limit	Air Contaminant	Emission Limit		
EU1	1. See Table 6, Special Terms and Conditions, provision 1. ^(Note 1) 2. Solvent Cleaning operations shall comply with the applicable requirements of 310 CMR 7.18(8).	VOC	0.1 TPM 0.5 TPY		
		HAP	0.1 TPM 0.5 TPY		
EU2	3. VOC content of coatings used shall comply with the regulations at 310 CMR 7.18(11) 4. Adhesive use shall comply with the regulations at 310 CMR 7.18(30) 5. Spray Booth fabric filters shall maintain a minimum particulate collection efficiency of 97% by weight.		VOC	0.5 TPM 3.0 TPY	
		HAP	0.5 TPM 3.0 TPY		
			HOC	0.25 TPM 0.25 TPY	
		EU3		6. Non-criteria pollutants ^(Note 2) as contained in materials used shall not exceed shall not exceed 1000 pounds per month. 7. Non-criteria pollutants ^(Note 2) as contained in materials used shall not exceed 3000 pounds per year. 8. Maximum single HAP usage shall not exceed 1000 pounds per month. 9. Maximum single HAP usage shall not exceed 6000 pounds per year.	VOC
HOC	0.5 TPM 3.0 TPY				
	HAP		0.5 TPM 3.0 TPY		
Non-criteria pollutants (i.e. VOC exempt organic compounds)			0.25 TPM 1.5 TPY		
	EU4				VOC
HAP					0.1 TPM 0.5 TPY

Table 2 Notes:

Note 1: The emission factors used for the parts manufacturing operation are based on engineering calculations taken from an industry reference document entitled "MDI Emissions Reporting Guidelines for the Polyurethane Industry", dated May 2012.

Note 2: In accordance with the definitions a 310 CMR 7.00, Acetone (CAS 67641) is an organic compound that is not included in the definition of VOC.

Table 2 Key:

CMR= Code of Massachusetts Regulations
EU# = Emission Unit Number
VOC= Volatile Organic Compounds
HAP = Hazardous Air Pollutant(s)
HOC = Halogenated Organic Compound

TPM = tons per month
TPY = tons per consecutive 12-month period
Year = any consecutive 12-month period
% = percent

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 below:

Table 3	
EU#	Monitoring and Testing Requirements
EU1, EU2, EU3, EU4	1. The Permittee shall monitor raw material throughput, and calculate monthly emissions as required at Table 6, Special Terms and Conditions No. 1, in order to demonstrate compliance with the emission limitations in Table 2.
EU2	2. The Permittee shall monitor coating and/or adhesive usage to ensure compliance with the requirements at 310 CMR 7.18(30) and 310 CMR 7.18(11).
	3. The Permittee shall monitor raw materials used in spray booth operations to ensure compliance with emission limitations in Table 2.
	4. The Permittee shall monitor the spray booth pressure gauge as per manufacturer's recommendations to ensure fabric filter particulate collection efficiency of at least 97%. The Permittee shall change fabric filters when reduced collection efficiency is indicated, or as per manufacturer's recommendations.
EU3	5. The Permittee shall monitor raw materials used in solvent cleaning operations to ensure compliance with the emission limitations in Table 2.
EU4	6. The Permittee shall monitor raw materials used in mold release operations to ensure compliance with emission limitations in Table 2.
Facility-wide	7. The Permittee shall monitor facility operations to ensure compliance with requirements of Table 2.
	8. The Permittee shall monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	9. 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:

CMR = Code of Massachusetts Regulations
EU# = Emission Unit Number
No. = number
USEPA = United States Environmental Protection Agency
% = percent

Table 4

EU#	Record Keeping Requirements
EU1, EU2, EU3, EU4	1. The Permittee shall maintain a record of the calculations required at Table 6, Special Terms and Conditions No. 1 in order to demonstrate compliance with emission limitations in Table 2.
EU2	<p>2. The Permittee shall maintain sufficient records to demonstrate compliance for each calendar month. Such records shall include, but are not limited to:</p> <p>A. For each coating, as applied:</p> <ol style="list-style-type: none"> 1. Gallons of coating used; 2. Coating density (Pounds per gallon); 3. Pounds of VOC and/or HAP per gallon of coating; 4. Pounds of solids per gallon of coating; 5. Pounds of water per gallon of coating; 6. Pounds of other non-VOC liquid per gallon of coating; and 7. Pounds of VOC per gallon of solids as applied. <p>B. For each adhesive, sealant, adhesive primer, or sealant primer:</p> <ol style="list-style-type: none"> 1. a data sheet or materials list that provides the material name, product category according to 310 CMR 7.18(30)(c): Table 1, and Table 2., manufacturer identification, the VOC content of each product as supplied, and type of material application; 2. a list of each adhesive, sealant, adhesive primer, sealant primer, cleanup solvent, and surface preparation solvent in use and in storage; 3. a list of reducers, catalysts, or other components used and the as applied mix ratio; 4. the final VOC content of any adhesive, sealant, adhesive primer, or sealant primer as applied; 5. the VOC content and vapor pressure, of any cleanup solvents, surface preparation solvents, reducers and catalysts, and VOC-containing materials used in the preparation, application, rework, and cleaning processes related to use or application of any adhesive, sealant, adhesive primer, or sealant primer; 6. the monthly volume of each adhesive, sealant, adhesive primer, sealant primer, cleanup solvent, and surface preparation solvent used; 7. all records pertaining to compliance testing pursuant to 310 CMR 7.18(30)(h); and 9. the monthly total facility-wide VOC emissions from all adhesives, sealants, adhesive primers, and sealant primers used or applied at any facility where a person is claiming an exemption pursuant to 310 CMR 7.18(30)(d)4. <p>C. Gallons of exempt/non-compliance coatings used; and</p> <p>D. Maintenance records of filter pad replacement and disposal.</p>
EU3	The Permittee shall maintain records of solvent cleaning solution used and VOC, HAP and/or HOC, by weight, as contained in the cleaning solution.
EU4	The Permittee shall maintain records of mold release used, by weight, and the VOC and HAP, by weight, as contained in the mold release.
Facility-wide	<p>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/dep/air/approvals/aqforms.htm#report .</p> <p>The facility shall maintain records as required by 310 CMR 7.02(2)(d).</p> <p>The Permittee shall maintain records of monitoring and testing as required by Table 3.</p>

Table 4	
EU#	Record Keeping Requirements
Facility-wide	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.
	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.
	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.
	The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.
	The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

Table 4 Key:

- CMR = Code of Massachusetts Regulations
- 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
Facility-wide	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. The Permittee shall notify the Southeast Regional Office of MassDEP, BAW Compliance & Enforcement Chief by telephone: 508-946-2817, email: sero.Air@massmail.state.ma.us, or fax : 508-947-6557, as soon as possible, but no later than three (3) business day after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to Compliance & Enforcement Chief 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).
	3. The Permittee shall report 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.
	4. 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.

Table 5	
EU#	Reporting Requirements
Facility-wide	5. 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.
	6. 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:

- BAW = Bureau of Air and Waste
 CMR = Code of Massachusetts Regulations
 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 shall comply with the Special Terms and Conditions as contained in Table 6 below:

Table 6	
EU#	Special Terms and Conditions
EU1, EU2, EU3, EU4	<p>1. The Permittee shall limit the use of materials containing VOC, HOC, and HAP as defined herein. This methodology represents an alternative to the limitation when operational or production limitations on a source are not feasible due to production or materials variability. The limitations consist of emission formulas, which when implemented, preserve the practical enforceability requirements necessary in limiting a facility's potential to emit. These emission formulas set out the methodology by which emissions from various process materials will be determined. These formulas determine emissions in a replicable manner by relating the pollutant species and the associated emissions.</p> <p style="margin-left: 40px;">a. $VOC = \sum \%VOC_i \times Quantity_i \times Emission\ Factor \leq Emission\ limit$</p> <p style="margin-left: 40px;">b. $HOC = \sum \%HOC_i \times Quantity_i \times Emission\ Factor \leq Emission\ limit$</p> <p style="margin-left: 40px;">c. $HAP = \sum \%HAP_i \times Quantity_i \times Emission\ Factor \leq Emission\ limit$</p> <p>Notes:</p> <ol style="list-style-type: none"> Usage limitations can include credit for documented material shipped as hazardous waste. Emission limit is the corresponding monthly or annual emission limit identified in Table 2. Emission factor takes into account the amount of VOC or HOC or HAP that is incorporated into the product or is otherwise reacted or processed. The Permittee is responsible for establishing and maintaining records of the associated emission factors(s).
EU2	<p>2. The spray booth operation shall comply with the requirements of 310 CMR 7.03(16)(b) through (k).</p> <p>3. The spray booth shall utilize two or more layers of dry fiber mat filter with a total thickness of at least two inches or an equivalent system that achieves the proposed particulate control efficiency of at least 97 percent by weight.</p>

Table 6	
EU#	Special Terms and Conditions
EU2	4. Spray guns shall be cleaned in a device that minimizes solvent evaporation during the cleaning, rinsing, and draining operations; re-circulates solvent during the cleaning operation so that the solvent is reused; and collects spent solvent in a container with a tight fitting cover so that it is available for proper disposal or recycling. No halogenated solvents shall be used in spray gun cleaning.
Facility-wide	5. The Permittee may reconcile the VOC, HOC, HAP and/or VOC exempt organic compounds contained in any hazardous waste shipped during a month when determining monthly emissions. The facility shall maintain hazardous waste disposal records and purchase records for VOC, HOC, HAP and/or VOC exempt organic compound containing materials for this purpose. Such records shall verify the VOC, HOC, HAP and/or specific VOC exempt organic compounds quantity present in the waste being shipped if reconciling monthly emissions.
	6. The Permittee shall comply with any applicable requirements at 310 CMR 7.18 <u>Volatile and Halogenated Organic Compounds</u> including §7.18(30) <u>Adhesives and Sealants</u> .
	7. The Permittee shall conduct all handling and transferring operations involving VOC, HOC, HAP and/or VOC exempt organic compound containing solvents in a way that minimizes spills and releases of VOC, HOC, HAP and/or VOC exempt organic compounds.
	8. The Permittee shall store and dispose of volatile organic compounds in a manner which will minimize evaporation to the atmosphere. Proper storage shall be in a container with a tight fitting cover.

Table 6 Key:
 CMR= Code of Massachusetts Regulations
 EU# = Emission Unit Number
 VOC= Volatile Organic Compounds
 HAP = Hazardous Air Pollutant(s)
 HOC= Halogenated Organic Compound
 % = percent
 § = section
 Σ = sum

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

Table 7				
EU#	Stack Height Above Ground (feet)	Stack Inside Exit Dimensions (inches)	Stack Gas Exit Velocity Range (feet per second)	Stack Gas Exit Temperature Range (°F)
EU1	30	6-12 (multiple stacks)	30-40	70-200
EU2	35	12	40	50-100

Table 7				
EU#	Stack Height Above Ground (feet)	Stack Inside Exit Dimensions (inches)	Stack Gas Exit Velocity Range (feet per second)	Stack Gas Exit Temperature Range (°F)
EU3	g.v.	g.v.	g.v.	g.v.
EU4	g.v.	g.v.	g.v.	g.v.

Table 7 Key:
EU# = Emission Unit Number
°F = Degree Fahrenheit
g.v. = general ventilation

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 Peter Russell by telephone at 508-946-2821, or in writing at the letterhead address.

Sincerely,

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.

Thomas Cushing
Permit Chief
Bureau of Air and Waste

Enclosure

ecc: Stoughton Board of Health
Stoughton Fire Department
Neil Inglis, Goldman Environmental
MassDEP/Boston - Yi Tian
MassDEP/SERO – Maria Pinaud, Peter Russell, Lisa Ramos