



Department of Environmental Protection

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

DEVAL L. PATRICK
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Secretary

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Commissioner

Date: September 21, 2011

Joe Morano
Creative Materials, Inc.
12 Willow Road
Ayer, MA 01432

RE: Ayer
Transmittal No.: X238899
Approval No.: CE-11-007
Class: SM150
FMF No.: 525222
SSEIS No. 121-0720
LPA PLAN APPROVAL

Dear Mr. Morano:

The Massachusetts Department of Environmental Protection, Bureau of Waste Prevention, Permitting Section ("MassDEP") has determined that the referenced Limited Plan Application ("LPA") is administratively complete and in conformance with current air pollution control engineering practices. MassDEP **approves** the referenced LPA authorizing the proposed construction, substantial reconstruction and/or alteration, and subsequent operation, of the conductive adhesives manufacturing facility at the referenced location.

This LPA Plan Approval is in accordance with 310 CMR 7.02 of the Air Pollution Control Regulations ("Regulations"), 310 CMR 7.00, as adopted pursuant to M.G.L. c.111, sections 142A-142N.

Included as part of the LPA Plan Approval are the following:

- Stamped approved **BWP AQ 01-B** Application form,
- Special Conditions (if any).
- General Conditions for Non-Fuel Emission LPAs,

Please review the entire LPA Plan Approval carefully as it stipulates the particular conditions which the facility owner/operator must adhere to for the facility to be constructed/reconstructed/altered and operated in compliance with the Regulations.

MassDEP has determined that the filing of an Environmental Notification Form ("ENF") with the Secretary of Environmental Affairs, for air quality purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act and Regulation 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 Environmental Impact Report later.

I. FACILITY DESCRIPTION

On February 18, 2005 MassDEP issued an LPA, Transmittal #W057409, to Creative Materials, Inc. (“The Permittee”) for its manufacturing facility at 141 Middlesex Road, Tyngsborough, Massachusetts.

On July 14, 2011 MassDEP received the present application for the Permittee moving the manufacturing facility from Tyngsborough to 12 Willow Road, Ayer, Massachusetts. The basic operations and emission and usage limits are proposed to be the same as were approved in 2005. The previous approval Transmittal #W057409 will cease to be in effect upon the moving of all operations out of the Tyngsborough facility.

II. PROJECT DESCRIPTION

The manufacturing process consists of taking polymers and mixing them with various solvents in containers to dissolve the polymers. Silver powder is added to the mix to give the final product electrical conductivity. Fugitive emissions of solvents which are Volatile Organic Compounds (VOC) and sometimes also Hazardous Air Pollutants (HAPs) are captured in the room exhaust and vented from a roof mounted exhaust stack. Dust from the dry powdered ingredients can also potentially be released during handling, pouring, mixing, etc. and become fugitive airborne particulate matter (PM) emissions.

The Department has determined that Best Available Control Technology (“BACT”) is the use of Good Housekeeping, conforming to Special Conditions noted below and the use of input substitution or reformulation where practicable to reduce the amount of VOCs/HAPs in use at the facility.

III. SPECIAL CONDITIONS

- A. The Permittee shall comply with the VOCs, HAPs, and PM short and long term limits, and raw materials usage limits, presented in Table 1.

Table 1					
EU ID ¹	Equipment Description	Pollutant	Emission Limits		
			Short Term Monthly (per calendar month)	Long Term – 12 Month Rolling Total ³	
EU #1	Adhesive Mixing	VOCs ² / HAPs	2450 pounds/month	4.9 Tons per year combined	
		PM	1800 pounds/month	3.6 tons/year	
			Usage Limits		
			Short Tem Monthly	Long Term - 12 Month Rolling Total	
		VOC/ HAP	98,000 pounds/month VOC material used in formulation and 775 gallons/month Cleaning Solvent used	392,000 pounds/year VOC material used in formulation and 3,100 gallons/year Cleaning Solvent used	
		PM	180,500 pounds/month Solids Used in Formulation	722,000 pounds/year Solids Used in Formulation	

¹ EU # represents Emission Unit Identification

² Includes cleaning operations

³ To calculate the amount of a consecutive 12 month rolling period, take the current calendar month amount and add it to the previous 11 calendar months total amount.

B. The Permittee shall employ Good Housekeeping throughout the facility to minimize VOCs/HAPs emissions. Good Housekeeping is defined as:

1) All VOCs /Solvent HAPs containing formulations must be stored in covered containers.

2) Saturated cleaning or wiping rags utilizing VOCs/HAPs solvent shall be kept in covered containers.

C. The Permittee shall employ Good Housekeeping throughout the facility to minimize PM emissions, including but not limited to controlling dust at the point of generation, sweeping floors, vacuuming upright surfaces, and proper handling of collected dust.

IV. GENERAL CONDITIONS FOR NON-FUEL EMISSION LPAs

A. **INSTALLATION and OPERATION** - No person shall install or operate the equipment as noted in this plan application except in conformance with the requirements established in this Plan Approval. This Plan Approval is only for the equipment as noted within the application or as may otherwise be specified in the Plan Approval.

B. **SUSPENSION, MODIFICATION, AMENDMENT OR REVOCATION** - This Plan Approval may be suspended, modified, amended or revoked by MassDEP if, at any time, MassDEP determines that the facility is violating any condition or part of this Plan Approval. This Plan Approval may be modified or amended when in the opinion of MassDEP a modification or amendment is necessary or appropriate to clarify the approval conditions or after consideration of a written request by the Permittee to amend the approval conditions. Any relaxation of an emission limit or a specific condition noted in this Plan Approval that would result in an increase in emission rates as established in this Plan Approval must be made in accordance with 310 CMR 7.02.

C. **OTHER REGULATIONS** - This Plan Approval does not negate the responsibility of the owner/operator to comply with this or any other applicable federal, state, or local regulations now or in the future. Nor does this Plan Approval imply compliance with any other applicable federal, state or local regulation now or in the future.

D. **EXISTING APPROVALS** - All plan approvals under 310 CMR 7.02 issued prior to the effective date of this Plan Approval shall continue to be in effect unless specifically changed by this Plan Approval. The facility shall meet the emission rates and approved conditions specified in the applicable plan approval(s) unless specifically altered by this Plan Approval.

E. **VISIBLE EMISSIONS** - Unless otherwise required by this Plan Approval, opacity, exclusive of uncombined water, shall not exceed 10% at all times during all modes of operation, including startups and shutdowns. Visible emissions or opacity that exceeds the limits set forth in this Plan Approval shall be reported to MassDEP in writing or by fax within seven (7) days of the occurrence.

F. **DUST AND ODOR** - The facility shall be operated in a manner to prevent the occurrence of dust or odor conditions that may cause or contribute to a condition of air pollution as defined in Regulation 310 CMR 7.01 and 7.09.

G. **NOISE** - Noise from the facility during routine operation, including startups and shutdowns, shall not exceed

MassDEP noise guidelines and shall not cause a condition of air pollution as defined in Regulation 310 CMR 7.01 and 7.10.

H. ASBESTOS - Should asbestos remediation/removal be required as a result of this Plan Approval, such asbestos remediation/removal shall be done in accordance with Regulation 310 CMR 7.15.

I. TESTING -

1. Any emission testing conducted to show compliance with the limitations in this Plan Approval must be conducted in accordance with the Environmental Protection Agency test methods as specified in the Code of Federal Regulations, Title 40, Part 60, Appendix A - Standards of Performance for New Stationary Sources or by another method correlated to the above method to the satisfaction of MassDEP and in accordance with the requirements noted in 310 CMR 7.13.
2. In accordance with 310 CMR 7.13, MassDEP may require testing for any pollutants if deemed necessary to ascertain the emission rates and relationship to equipment design and operation. When informed in writing by MassDEP that stack testing is necessary to ascertain compliance with the Air Pollution Control Regulations or design approval provisions the Permittee shall conduct the required stack testing. Such stack testing shall be:
 - a) Conducted by a person knowledgeable in stack testing,
 - b) Conducted in accordance with procedures contained in a test protocol which has been approved by MassDEP, and
 - c) In the presence of a representative of MassDEP when such is deemed necessary in accordance with 310 CMR 7.13.

J. RECORD KEEPING -

1. A record keeping system shall be established and continued on site by the Permittee. All records shall be maintained up-to-date such that twelve-month rolling period information is readily available for Department examination. Record keeping shall, at a minimum, include:
 - a) The initiation and completion dates for the proposed construction, reconstruction or alteration.
 - b) Compliance records sufficient to demonstrate that emissions of air contaminants have not exceeded the emission limits set forth in Section III of this Plan Approval. An electronic version in Microsoft Excel of the MassDEP approved Reporting Form can be downloaded at <http://www.mass.gov/dep/air/approvals/aqforms.htm#report>. Such records may include daily production records, raw material usage rates, emissions test results, monitoring equipment data and reports.
 - c) Maintenance: A record of routine maintenance activities performed on emission unit, control equipment and monitoring equipment including, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.
 - d) Malfunctions: A record of all malfunctions on emission unit, control equipment and monitoring equipment including, at a minimum: the date and time the malfunction occurred; a description of the malfunction and the corrective action taken; the date and time corrective actions were initiated; and the date and time corrective actions were completed and the emission unit returned to compliance.
2. All records shall be kept on site for five (5) years and shall be made available to MassDEP upon request.
3. Pursuant to the authority granted to MassDEP at 310 CMR 7.02, the facility shall maintain a copy of this Plan Approval, and any subsequent modifications of this Plan Approval, on-site for as long as the Plan Approval is valid. The Plan Approval is valid until one of the following conditions occur: the equipment is dismantled or removed from the facility, the facility notifies MassDEP that the Plan Approval is no longer valid, the

equipment is substantially reconstructed or altered and subject to 310 CMR 7.02, the Plan Approval is superseded by another Plan Approval, or MassDEP revokes the Plan Approval in accordance with 310 CMR 7.02. MassDEP may revoke, in accordance with 310 CMR 7.02, any Plan Approval if the actual construction has not begun within two years from the date of issuance or if, during the construction, the construction is suspended for the period of one year or more.

K. REPORTING -

1. The Permittee shall submit a Source Registration/Emission Statement Form to MassDEP on an annual or tri-annual basis as required by 310 CMR 7.12.
2. Any construction, substantial reconstruction or alteration, as described in 310 CMR 7.02, of equipment as noted within this Plan Approval application at this facility shall be reported in writing to MassDEP 30 days prior to said construction, substantial reconstruction or alteration and on the next required source registration.
3. The Regional Bureau of Waste Prevention, Compliance and Enforcement office, must be notified by telephone, email, or fax as soon as possible (but no later than 24 hours) after the occurrence of any exceedance of an emission limit as noted within this Plan Approval OR any upsets or malfunctions to the facility equipment, air pollution control equipment, or monitoring equipment which result in an excess emission to the air, a violation of any conditions of this Plan Approval and/or a condition of air pollution.

L. REMOVAL OF AIR POLLUTION CONTROL EQUIPMENT - Notwithstanding 310 CMR 7.02, no person shall cause, suffer, allow, or permit the removal, alteration or shall otherwise render inoperative any air pollution control equipment or equipment used to monitor emissions which has been installed as a requirement of 310 CMR 7.00, other than for reasonable maintenance periods or unexpected and unavoidable failure of the equipment, provided that MassDEP has been notified of such failure, or in accordance with specific written approval of MassDEP.

M. MONITORING - Equipment or emission monitoring systems installed for the purpose of documenting compliance with this Plan Approval shall be installed, calibrated, maintained and operated by the Permittee in sufficient manner to ensure continuous and accurate operations at all times.

N. COMPLIANCE ASSURANCE FEE - Pursuant to 310 CMR 4.03, an annual fee, based on the Commonwealth's fiscal year, will be charged to your facility to cover the cost of compliance activities performed by MassDEP, including registrations, report reviews, inspections, source registration reviews, etc. No fee shall be charged in the fiscal year that the permit is issued. If multiple air quality permits exist for a facility, the facility shall pay the single highest applicable fee. This fee does not include stack test fees.

V. APPEAL

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 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 02241

The 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.

Should you have any questions concerning this Plan Approval, please contact Paul Dwiggins at (508)767-2760.

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.**

Roseanna E. Stanley
Section Chief,
Bureau of Waste Prevention

RES/PD

ecc: Yi Tian, Dana Samuelson, MassDEP