



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Western Regional Office • 436 Dwight Street, Springfield MA 01103 • 413-784-1100

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

September 5, 2012

Mr. Mark Jason
Henkel Corporation
730 Worcester Street
Springfield, MA 01151

Re: Plan Approval Administrative Amendment
Application # 1-P-09-024
Transmittal # X229812
Pilot Plant: Chemical Processing

Final Approval (Administrative Amendment)

Dear Mr. Jason:

The Department of Environmental Protection, Western Regional Office (“MassDEP”) received on September 4, 2012, a request to administratively amend the existing Limited Plan Approval #1-P-09-024 for Henkel Corporation (formerly Cytec Industries, Inc.) located at 730 Worcester Street, Springfield, Massachusetts. As of August 1, 2012, Henkel Corporation completed its acquisition of the pressure sensitive adhesives business of Cytec Industries, Inc. Therefore, the administrative amendment requests that the facility name reflect the new ownership.

The MassDEP has determined that this change is in conformance with the administrative amendment regulations contained in 310 CMR 7.02(13). Accordingly, MassDEP issues this Final Approval (Administrative Amendment) incorporating the requested change into the existing Conditional Approval #1-P-09-024, dated October 23, 2009.

This Final Approval (Administrative Amendment) replaces the Conditional Approval 1-P-09-024, dated October 23, 2009, in its entirety.

This LPA Approval is in accordance with 310 CMR 7.02(4) of the Air Pollution Control Regulations ("Regulations"), 310 CMR 7.00, as adopted pursuant to M.G.L. c.111, sections 142A-142O.

Included as part of the LPA Approval are the following:

Stamped approved **BWP AQ 01-B** Application form;
Special Conditions for Approval;
General Conditions for Approval; and
Appeal Rights

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

Henkel Corporation was issued a Notice of Noncompliance (NON) File No.: NON-09-9037-27 for the failure to obtain a plan approval for the operation of a process with the potential to emit in excess of one ton of volatile organic compounds (VOC) per year, in violation of 310 CMR 7.02(3)(a). In the application, Henkel Corporation is requesting to limit the VOC emissions to below 5 tons per 12-month rolling total. Limiting the VOCs will also limit hazardous air pollutants (HAP) emissions below 5 tons per year. Tracking the emissions will be done based on the number of batches processed for each product type produced.

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 at a later time.

Should you have any questions concerning this Final Approval, please contact Cortney Danneker at (413) 755-2234.

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.

Marc Simpson
Permit Chief
Western Region

ecc: Yi Tian, MassDEP, Boston
Peter Czapienski, MassDEP, WERO

INTRODUCTION

Henkel Corporation is a specialty chemicals and materials manufacturing company. Materials are produced for use in the aerospace and automotive industries and used in adhesives, industrial coatings, inks and plastics. Henkel Corporation submitted a Limited Plan Approval application for a Pilot Plant Facility located at 730 Worcester Street in Springfield. The facility supports Henkel Corporation manufacturing units operated by Solutia, Inc. at the property. Several different specialty products are manufactured at the Pilot Plant. Volatile organics compounds and hazardous air pollutants are emitted from the process. Henkel Corporation is proposing to limit the emissions to less than 5 tons VOC / HAP per rolling 12 month total.

PROCESS DESCRIPTION

Henkel Corporation utilizes several reactors and support vessels in the chemical manufacturing process. Various monomers and solvents along with a catalyst are added to the reactors in a batch process and then reacted. Each reactor is equipped with a water cooled condenser which is inherent to the process equipment. Once the process is complete, the materials are packed directly into containers for shipment. Table 1 summarizes the existing process equipment.

TABLE 1			
Reactor Designation	Reactor Volume (gallons)	Reactor Support Vessels Designation	Support Vessels Volume (gallons)
V-1	100	T-7	3.2
		T-8	33
V-2	85	T-9	15
		T-11	60
V-4	400	T-10	350
		T-12	80
V-6	125	T-13	45
		V-7	100
Two (2) additional support vessels can be used interchangeably with some of the reactors. (V-8- 200 gallons and T14-15 gallons)			

The manufacturing operation in the Pilot Plant is done in a batch process. Volatile organic compounds and hazardous air pollutants are emitted during the process. Emissions occur during the following times: 1) filling of the reactors and the support vessels, 2) expansion of the reactor vapor gases during heat up, 3) the purging process, and 4) the packaging of the finished materials. Emissions are estimated using chemical engineering principles and modeling based on a guidance document, Methods for Estimating Air Emissions from Chemical Manufacturing Facilities, 8/07, Vol.II: Chapter 16. The model uses the type of product and the amounts of solvents used in each of the batch processes to produce a specific product. Four product types were selected for evaluation. Emissions from the Pilot Plant are based on the number of batches processed for each of the four product types. Each month, the 12-month total pounds of emission will be calculated and maintained below 5 tons. Specific modeling and calculations are contained in the application.

Henkel Corporation proposes Best Available Control Technology (BACT) as limiting the VOC emissions to below 5 tons per 12-month rolling total. MassDEP concurs with this determination.

SPECIAL CONDITIONS OF APPROVAL

Operational Requirements

1. Henkel Corporation shall ensure that the calendar month and yearly (12-month rolling total) emissions of volatile organic compounds (VOC) and hazardous air pollutants (HAP) indicated in Table 1 are not exceeded:

**Table 1
 Emission Limits**

Emission Unit (EU)	Total HAP		VOC Emissions	
	Tons / Month ⁽¹⁾	Tons / Year ⁽²⁾	Tons / Month ⁽¹⁾	Tons / Year ⁽²⁾
Chemical Manufacturing & Processing	1.0	5.0	1.0	5.0
Total Facility-Wide VOC / HAP		5.0		5.0
<p>(1) Based on a calendar month total. (2) Based on a 12-month rolling total. Compliance with a 12 month rolling total is determined each month by adding the previous 12 months of VOC emissions and comparing the total to the limit specified above.</p>				

2. Henkel Corporation shall track, on a daily basis, the number of batches produced for each product and the emissions per batch.
3. Henkel Corporation shall employ all reasonable management practices to minimize VOC emissions from its process operations. Henkel Corporation shall keep any containers containing VOC materials tightly covered as much as practical during use and at all times when not being used. Henkel Corporation shall take all reasonable steps to prevent spills by instituting proper material handling techniques and good housekeeping practices.
4. Henkel Corporation shall not exceed 5.0 tons VOC or 5.0 tons HAP emitted per rolling 12 month total.
5. Henkel Corporation shall not exceed 1.0 ton total HAP in any month from the facility.

Monitoring / Testing Requirements

6. Henkel Corporation shall perform any testing / monitoring deemed necessary, at the request of MassDEP, to determine compliance with this Final Approval or any other Massachusetts Regulation.

Recordkeeping

7. Henkel Corporation shall during each calendar month, calculate and record the total quantity of VOCs and HAPs emitted during the previous month and the total quantity of VOCs and HAPs emitted during the previous twelve consecutive month period.

Reporting

8. Henkel Corporation shall notify MassDEP by telephone or fax as soon as possible after the occurrence of any upsets or malfunctions to the facility equipment, air pollution control equipment, or monitoring equipment which results in excess emissions to the ambient air and/or a condition of air pollution.
9. Henkel Corporation shall generate monthly reports in-house that document compliance with all of the emission limits specified in this Approval.

GENERAL CONDITIONS OF APPROVAL

1. Henkel Corporation shall allow authorized MassDEP representatives immediate access to the facility in order to take samples, view the process operation or examine records to verify compliance.
2. This Approval may be suspended, modified, or revoked by MassDEP if, at anytime, MassDEP determines that any condition or part of this Approval is being violated. MassDEP shall be notified in writing prior to any modification of the facility such as a change in raw materials or an increase in production capacity that may increase emissions.
3. Henkel Corporation shall operate a facility constructed, substantially reconstructed, or altered pursuant to 310 CMR 7.02 in conformance with the requirements established therein and in conformance with the specific written plan approval requirements.
4. Henkel Corporation shall ensure that noise from the facility during construction, initial startup and routine operation, including startups and shutdowns, shall not exceed MassDEP noise guidelines and shall not cause a condition of air pollution as defined in 310 CMR 7.01 and 7.10.
5. Henkel Corporation shall ensure the facility is operated in a manner to minimize the occurrence of dust or odor conditions which cause or contribute to a condition of air pollution as defined in 310 CMR 7.01 and 7.09.

6. Henkel Corporation shall operate the facility in a manner to minimize the occurrence of visible emissions, which cause or contribute to a condition of air pollution as defined in Regulation 310 CMR 7.01 and 7.06.
7. This Final Approval does not negate the responsibility of owner/ operator of the referenced facility to comply with this or any other applicable federal, state, or local regulations now or in the future. Nor does this approval imply compliance with any other applicable federal, state or local regulation now or in the future.
8. Should asbestos remediation/removal be required as a result of the approved construction/reconstruction/alteration of this facility, such asbestos remediation / removal shall be done in accordance with Regulation 310 CMR 7.15 in its entirety and 310 CMR 4.00.

This Final Approval consists of the application materials and this Approval letter. If conflicting information is found between these two documents, then the requirements of this Approval letter shall take precedence over the documentation in the application materials.

APPEAL RIGHTS

This Final 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 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 Final 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) must be mailed to:

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

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.