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Project Summary for a  
Construction Permit Application from  
Material Sciences Corporation for  
Modifications to Coating Lines 2 and 4  
at Its Existing Plant in  
Elk Grove Village, Illinois

Site Identification No.: 031440AGL  
Application No.: 95030105

Illinois EPA Contacts

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Important Dates:

Application Received: December 24, 2008  
Public Comment Period Begins: August 28, 2009  
Public Comment Period Closes: September 27, 2009

## **I. INTRODUCTION**

Material Sciences Corporation ("MSC") has applied for a revised construction permit for the metal coil coating lines at its plant in Elk Grove Village. This revision entails an increase in permitted emissions of volatile organic material (VOM) for two lines (Lines 2 and 4) and a decrease in permitted VOM emissions for a third line (Line 18).

The Illinois EPA has reviewed the application and made a preliminary determination that this application meets applicable requirements. Accordingly, the Illinois EPA has prepared a draft of the air pollution control construction permit that it would propose to issue for this project. However, before issuing this permit, the Illinois EPA is holding a public comment period to receive written comments on the proposed issuance of this permit and the terms and conditions of the draft permit.

## **II. PROJECT DESCRIPTION**

The purpose of this construction permit revision is to allow an increase in the permitted emissions at Lines 2 and 4, which are currently constrained due to an offset obligation associated with Line 18. Line 18 is a modified line that was permitted with a significant increase in emissions. Accordingly, the project was subjected to the New Source Review rules. One of the requirements was to provide emissions offsets. The emission offsets for Line 18 were provided "internally," by reductions at the source with most of the offsets coming from the permanent shutdown of Line 3, which Line 18 replaced. In addition, some emission offsets were provided by reduction in utilization and VOM emissions of Lines 2 and 4, two lines that would continue to be in operation after Line 18 started up.

To relieve this obligation, MSC now has proposed to use only Line 3's decreases as offsets rather than the combination of decreases at Lines 2, 3, and 4. This is possible because Line 3 shut down and had sufficient decreases to offset Line 18 at the required ratio of 1.3 to 1. The VOM emissions of the different lines that are involved in this transaction are presented in the Attachment to the permit.

## **III. APPLICABLE EMISSION STANDARDS**

### **A. State Emissions Standards**

All emission sources in Illinois must comply with Illinois Pollution Control Board emission standards. The Board's emission standard represents the basic requirements for sources in Illinois. Emissions of VOM from the proposed line are regulated by 35 IAC Code 218, Subpart F, Coating Operation. These rules generally require use of low solvent coating, water based coating or use of control equipment. An afterburner must provide at least 90 percent destruction of VOM and, in conjunction with the capture efficiency, provide at least 81 percent overall control or a level of control equivalent to use of a low solvent

coating. The control equipment currently in place for the existing lines will readily comply with applicable requirements.

B. Federal Emission Standards

The coating lines are subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) for Metal Coil Surface Coating Operations, 40 CFR 63 Subpart SSSS, which requires 98 percent reduction of hazardous air pollutant emissions. These existing lines will continue to be subject to this NESHAP as provided in the source's Clean Air Act Permit Program (CAAPP) Permit.

**IV. EVALUATION OF THE NET CHANGE IN VOM EMISSIONS**

As part of the review of the application, it was necessary to separately evaluate the net change in VOM emissions accompanying the original modification and subsequent operation of Line 18 and the change in VOM emissions for the requested modifications to Lines 2 and 4. These evaluations were performed separately because these are appropriately treated as separate projects. In addition, when the modifications to Line 18 originally occurred, the Greater Chicago area was designated severe nonattainment for ozone. The area is now designated moderate nonattainment for ozone. It was not necessary to address the changes for emissions of other pollutants because they will not be significant, nor are there other contemporaneous projects with emission increases for those pollutants that must be considered.

A. Line 18 was permitted as a major modification to an existing major source. Generally, one of the requirements for a major modification is that the new or modified units must comply with the Lowest Achievable Emission Rate (LAER). In the case of the modification to Line 18, MSC was eligible for and elected to take advantage of an alternative to LAER that is available in severe ozone nonattainment areas pursuant to 35 IAC 203.301(f). Under this alternative, a source may elect to offset the increase in emissions internally at a ratio of 1.3 to 1, i.e., 1.3 tons of decreases occurring from other units at the plant for each ton of increase occurring at the new or modified unit. Currently, these offsets come from restrictions at Lines 2, 3 and 4. As part of this application, MSC has asked that all offsets come from Line 3, which was shut down such that the restrictions on Lines 2 and 4 cease to be necessary. For modified Line 18, with permitted VOM emissions of 73.2 tons per year, approximately 95 tons are required for internal offsets. Actual emissions for Line 3 prior to the shutdown were greater than 100 tons, so the offset requirement has been met.

B. Once the offset obligation has been removed for Lines 2 and 4, Lines 2 and 4 can be modified with an increase in emissions. To determine the increase in emission resulting from this modification, the actual emissions for Lines 2 and 4 have been reviewed and compared against the new

permitted emission rates for these lines. Based on this data, the emissions increase for Lines 2 and 4 would be 39.1 tons VOM per year.

**V. ADDITIONAL REQUIREMENTS FOR MAJOR PROJECTS**

Line 18 was permitted as a major modification to a major source because the net increase in VOM emissions for the source exceeded 25 tons per year. Accordingly, MSC must comply with applicable requirements for Major Stationary Sources Construction and Modification (MSSCAM), 35 IAC Part 203.

The Illinois EPA has determined that the applicable requirements of 35 IAC Part 203 have been met for VOM. In particular for Line 18, MSC would continue to provide offsets, i.e., contemporaneous actual decreased in emissions, at a ratio of at least 1.3 ton decrease for each 1.0 ton allowed from Line 18. Because MSC is meeting the offset requirement "internally" from decreases at the plant, Line 18 would continue to be excluded from the requirement to meet LAER. MSC was subject to the other elements of Illinois' rules for MSSCAM, i.e., demonstration of compliance by existing sources and an analysis of alternatives. Because these items were appropriately submitted before Line 18 was modified, the Illinois EPA is relying on the original submittals.

**VI. CONTENTS OF PERMIT**

The permit contains appropriate conditions for implementation of the applicable state and federal standards for VOM emissions from the modified coating lines. These standards require ongoing monitoring and recordkeeping to verify continuing compliance. Overall, the permit would allow emissions of 171.2 tons of VOM per year from coating lines 2, 4, and 18. This is less than the 177 tons of VOM per year currently allowed.

**VII. REQUEST FOR COMMENTS**

It is the Illinois EPA's preliminary determination that this proposed project meets all applicable state and federal air pollution control requirements, subject to the conditions proposed in the draft permit.

Comments are requested by the Illinois EPA on this proposed issuance of a permit for Modifications to Lines 2, 4, and 18 and the proposed conditions of the draft permit. If substantial public concern is shown in this matter the Illinois EPA will consider holding a public hearing in accordance with 35 IAC Part 164.

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