

Illinois Environmental Protection Agency
Bureau of Air, Permit Section
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Project Summary for a
Construction Permit Application From
Sun Chemical in
Kankakee, Illinois
for a
Plant Expansion Project

Site Identification No.: 091804AAF
Application No.: 08070057

Illinois EPA Contacts:

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Relevant Dates

Application Received: July 24, 2008
Comment Period Begins: August 4, 2009
Comment Period Closes: September 3, 2009

I. Introduction

Sun Chemical has applied for a construction permit for an Expansion Project at its existing ink manufacturing plant in Kankakee. The requested permit would allow increased production of printing ink accompanied by an increase in permitted emissions.

The Illinois Environmental Protection Agency (Illinois EPA) has reviewed Sun Chemical's application and made a preliminary determination that the application meets applicable requirements. Because the plant would become a major source for emissions of hazardous air pollutant (HAPs) with the requested expansion, the Illinois EPA is holding a public comment period to receive comments on the proposed issuance of a permit for the expansion. The Illinois EPA has also prepared a draft version of the air pollution control construction permit that it would propose to issue for this project. The Illinois EPA is making this draft permit available for public review and for comments on the terms and conditions of the draft permit.

II. Application Description

At its Kankakee plant, Sun Chemical manufactures printing ink and "varnish", which is the base material for printing ink prior to addition of pigment and thinning solvent. The plant emits volatile organic materials (VOM) because of the organic solvents that are a component of printing ink and varnish. Some of the organic solvent is lost as emissions to the atmosphere in the manufacturing process and in the handling of materials. The primary organic solvent used at the plant is toluene, which is a HAP. Toluene is a necessary component of printing inks and varnishes to meet the established specifications and quality requirements for these products.

In 2006, Sun Chemical received a construction permit¹ for an Emission Reduction Project at the plant, with the addition of certain pollution control equipment, improved production practices, and other emission control measures for the existing ink production equipment. The overall effect was to enhance the level of control at the plant for HAP emissions so that the plant would not be a major source of HAPs.²

Sun Chemical has now requested a construction permit for increased production at its Kankakee plant. This would enable Sun Chemical to consolidate the ink manufacturing operations at its Kankakee plant, with the transfer of the production for its other facilities to Kankakee. This action would improve the efficiency of manufacturing operations and enable Sun Chemical to take advantage of existing control measures that have already been installed at its Kankakee plant.

¹ Construction Permit 06060001, date issued October 24, 2006.

² Subsequently, in 2007, Sun Chemical requested and was issued a revised construction permit for the Emission Reduction Project that increased the permitted production of raw material grade varnish. This revised permit continued to limit emissions of the plant so it would be a minor source for HAPs.

The increase in permitted production of the plant would be accompanied by an increase in emissions of hazardous air pollutants (HAPs) that would result in the plant being a major source for emissions of HAPs. As a result, the plant would become subject to the requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP) for Miscellaneous Coating Manufacturing, 40 CFR Part 63, Subpart HHHHH. This includes use of control measures such as condensers on certain manufacturing processes and vapor balances systems for certain material handling operations. This also includes implementation of a leak detection and repair program for components in organic HAP service to prevent emissions of organic HAPs from leaking components. Appropriate testing, monitoring, and recordkeeping are also specified to assure ongoing compliance.

III. Emissions

With the requested increase in production, the potential emissions of VOM, including toluene, from the plant, as limited by permit, would be 19.9 tons per year. This would make the plant a major source for HAPs as its permitted emissions of an individual HAP, i.e., toluene, would be more than 10 tons per year.

IV. Applicable Emission Standards

All emission sources in Illinois must comply with the Illinois Pollution Control Board's emission standards. The Board's emission standards represent the basic requirements for sources in Illinois. The Board has standards for emission of NO_x, SO₂, CO, VOM, and PM. This plant readily complies with all applicable Board standards.

As already discussed, with the requested increase in permitted production, the plant would become subject to the federal NESHAP for Hazardous Air Pollutants Miscellaneous Coating Manufacturing, 40 CFR 63, Subpart HHHHH. The plant already has the necessary equipment to comply with the control requirements of this NESHAP.

V. Draft Permit

The construction permit would identify the air pollution control requirements that apply to the plant with the Expansion Project. Most significantly, it would require that the plant be operated in compliance with all applicable requirements of the NESHAP for Miscellaneous Coating Manufacturing, 40 CFR Part 63, Subpart HHHHH.

The permit would also set limitations on the amount of HAPs emitted by the plant. This limitation would be accompanied by limitations on the amount of HAPs used at the plant. As the construction permit for the Expansion Project would now allow the source to be a major source for HAPs, this permit would take the place of the earlier construction permit for the Emission Reduction Project.

The permit would also have conditions establishing appropriate compliance procedures to accompany the new limitations, including testing, monitoring, and recordkeeping requirements. The Permittee must carry out these procedures on an on-going basis to demonstrate that the plant is operating within the limitations set by the permit and emissions are properly being controlled.

VI. Request for Comments

It is the Illinois EPA's preliminary determination that the application for this construction permit meets all applicable state and federal air pollution control requirements, subject to the conditions proposed in the draft permit. The Illinois EPA is therefore proposing to issue a construction permit for the Expansion Project.

Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft permit. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 IAC Part 166.

KTH:kth