

Illinois Environmental Protection Agency  
Bureau of Air, Permit Section  
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Project Summary for a  
Construction Permit Application from  
Archer Daniels Midland Company for a  
De-Oiled Lecithin Production Increase Project in  
Decatur, Illinois

Site Identification No.: 115015AAE  
Application No.: 05110009

Illinois EPA Contacts:

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Important Dates

Application Received: November 3, 2005  
Comment Period Begins: 04/12/2006  
Comment Period Closes: 05/12/2006

## **PROJECT SUMMARY**

### **I. Introduction**

A construction permit application has been submitted by Archer Daniels Midland Company (ADM) for an increase in production at their existing De-Oiled Lecithin facility at their Decatur Complex. The limits in this permit prevent the project from being a major modification of the source so that a Prevention of Significant Deterioration (PSD) Permit is not required. The proposed limits would be accompanied by recordkeeping and reporting requirements to assure that the project is not a major modification.

### **II. Source Description**

ADM produces many products from soybeans, including oil and lecithin, which are separated at the existing De-Oiled Lecithin facility. Lecithin is a naturally occurring constituent of soybean oil that is used in many foods, for example, as an emulsifier in margarine and chocolate and an instantizer in products such as beverage powders, soups, and gravy mixes. It also has potential therapeutic effects. ADM would like to increase production of lecithin to satisfy demand for this useful nutritional supplement. The facility includes equipment such as drum dryers, granulation fluid bed dryers, and grinding/screening/packaging equipment. This Lecithin facility uses hexane to further process the unrefined lecithin to reduce the oil content to acceptable levels. The dry material processing creates dust, so the facility emits both volatile organic material (VOM) and particulate matter (PM). The project includes an additional drum dryer and an additional granulation fluid bed dryer, and changes to certain existing grinding/screening/packaging equipment to increase the throughput of the lecithin facility.

### **III. Emissions**

ADM has addressed the applicability of 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The limits in this permit ensure that the proposed modification to the lecithin facility does not constitute a major modification pursuant to these rules (i.e., an increase in emissions that would equal or exceed 40 tons per year of VOM or 15 tons per year of PM).

The increase in emissions of VOM (comparing past actual emissions of 29.8 t/yr to permitted emissions of 69.69 t/yr) is 39.89 t/yr.

The increase in emissions of PM (comparing past actual emissions of 13.1 t/yr to permitted emissions of 15.6 t/yr) is 3.5 t/yr.

### **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 sources of VOM and PM. This facility readily complies with all applicable Board standards.

## **V. Proposed Permit**

The conditions of the proposed permit contain limitations and requirements to assure that this project will not be considered a major modification pursuant to the PSD rules. The permit sets limitations on solvent usage and VOM and PM emissions.

The permit conditions also establish appropriate compliance procedures, including inspection practices, recordkeeping requirements, and reporting requirements. The Permittee must carry out these procedures on an on-going basis to demonstrate that the facility is operating within the limitations set by the permit and are properly controlling emissions.

## **VI. Request for Comments**

It is the Illinois EPA's preliminary determination that the this project 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 this 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 Ill. Adm. Code Part 166.