

Illinois Environmental Protection Agency  
Bureau of Air, Permit Section  
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Project Summary for an Application from  
P.H. Broughton and Sons for Renewal of the  
Federally Enforceable State Operating Permit (FESOP) for  
a Batch - Mix Asphalt plant  
in Springfield, Illinois

Site Identification No.: 167822AAF  
Application No.: 73010605

Schedule

Public Comment Period Begins: October 18, 2006

Public Comment Period Closes: November 17, 2006

Illinois EPA Contacts

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**I. INTRODUCTION**

P. H. Broughton and Sons has applied for renewal of its Federally Enforceable State Operating Permit (FESOP) for its batch – mix asphalt plant. This plant requires an air pollution control operating permit because it is a source of emissions. The Illinois EPA has prepared a draft of the renewed permit that it would propose to issue for the plant. However, before renewing the permit, the Illinois EPA is holding a public comment period to receive comments on this proposed action and the terms and conditions of the draft permit that it would propose to issue.

## **II. SOURCE DESCRIPTION**

An asphalt plant produces asphalt paving for use on roads, parking lots, driveways, etc. Asphalt paving is composed of aggregate (crushed rock) which is held together by asphalt.

Raw materials are transported to the site by truck, where they are stored until used in open storage piles, silos or storage tanks. Aggregate is hauled by front-end loader from the on site storage piles and is placed in the appropriate feed hoppers. The aggregate from the hopper is conveyed near the burner end of the revolving drum mixer. The asphalt, a solid at ambient temperature, is pumped from a heated storage tank, weighed and injected mid way along the drum. The resulting asphalt pavement material is transferred to the job site by truck or kept in an insulated silo for temporary storage.

## **III. GENERAL DISCUSSION**

Federally Enforceable State Operating Permits (FESOPs) are federally enforceable, that is, the terms and conditions of the permits can be enforced by USEPA under federal law, as well as by Illinois government and the public under state law. These permits can establish federally enforceable limitations on the operation and emissions of a source that restrict the potential emissions of the source.

The source has been operating this plant under a FESOP because the actual emissions of the plant are below the levels at which the plant would be considered a major source under Title V of the federal Clean Air Act. However, in the absence of federally enforceable limitations, the plant's potential emissions would be such that the plant would be considered a major source. The permit acts to restrict the plant potential emissions so that it need not be considered a major source. As a result, the source does not need to obtain a Clean Air Act Permit Program (CAAPP) permit for the plant, as would otherwise be required.

The FESOP limits the operation and annual emissions of the plant to below the major-source-thresholds of 100 tons for VOM, 10 tons for an individual HAP and 25 tons for combined HAPs.

## **IV. APPLICABLE EMISSION STANDARDS**

All emission units in Illinois must comply with state emission standards adopted by the Illinois Pollution Control Board. These emission standards represent the basic requirements for sources in Illinois. The board has standards for sources of Volatile Organic Material (VOM), and Particulate Matter (PM) emission. The application shows that the plant is in compliance with applicable state and federal emission standards.

The principal air contaminant of concern for an asphalt plant is particulate matter or dust. Particulate emissions are generated by the drum mixer and other plant activities

such as storage piles and plant roads. The drum mixer exhaust is vented to a Baghouse where the majority of the PM is removed before being exhausted into the atmosphere. Particulate matter generated by working the storage piles and from plant roads is controlled by watering as required. The secondary air contaminant emitted during asphalt pavement production is volatile organic material (VOM), which is released during heating and mixing of the liquid asphalt and aggregate.

Additional emissions are generated from fuel combustion in the dryer and the asphalt storage tank heaters. Emissions from fuel combustion are nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), VOM and sulfur dioxide (SO<sub>2</sub>). NO<sub>x</sub> can be formed thermally by combination of oxygen and nitrogen in the air at the temperature at which fuel is burned. CO and VOM are formed from the incomplete combustion of fuel. Emissions of SO<sub>2</sub> are found in varying amounts from the combustion of fuel oil, depending on the sulfur content of the oil.

At this site #2 fuel oil is used as the fuel for the dryer and the asphalt storage tank heaters. The site is permitted to burn fuel oil with less than 0.3% sulfur content for both the dryer and the asphalt storage tank heater.

## **V. CONTENTS OF THE PERMIT**

The renewed permit that the Illinois EPA is proposing to issue would continue to identify the specific emission standards that apply to the emission units at the plant. As explained, the batch - mix asphalt plant is subject to rule 35 Ill. Adm. Code 218.301, which no person shall cause or allow the discharge of more than 3.6 kg/hour (8 lbs/hour) of organic material into the atmosphere from any emission source. The conditions of this permit are intended to ensure that the source continues to comply with applicable emission standards.

The permit would also contain limitations and requirements to assure that this plant is operated as a non-major source. The permit would limit the operation and annual emissions of the plant to below the major-source-thresholds of 100 tons for VOM, 10 tons for an individual HAP and 25 tons for combined HAPs. (Annual emissions of other pollutants from the plant are well below the 100 ton major source threshold.)

The permit would also set limitations on requirements to assure that this facility will be operated as a non-major source. The permit sets limitations on Fuel Oil-Fired Batch-Mix Asphalt Plant throughput, Storage Tanks and Hot Mix Storage Silos. These limitations are consistent with the historical operation and capacity of the facility.

The permit conditions would also continue to require appropriate compliance procedures, including inspection practices as well as recordkeeping and reporting requirements. The source must carry out these procedures on an on-going basis to demonstrate that the plant is being operated within the limitations set by the permit and the plant's emissions are being properly controlled.

## **VI. REQUEST FOR COMMENTS**

It is the Illinois EPA's preliminary determination that the source has met the requirements for renewal of its permit. The Illinois EPA is therefore proposing to renew the permit.

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.