

Illinois Environmental Protection Agency
Bureau of Air, Permit Section
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Project Summary for an Application from
Leading Edge Enterprises, LLC for
Issuance of the Construction Permit for a
Steel and Iron Casting Facility in
Decatur, Illinois

Site Identification No.: 115015APQ
Application No.: 06050060

Schedule

Public Comment Period Begins: October 28, 2006
Public Comment Period Closes: November 27, 2006

Illinois EPA Contacts

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I. INTRODUCTION

Leading Edge Enterprises, LLC has applied for a construction permit for its Decatur plant to construct a steel and ductile iron facility. The construction of this facility will have the Potential to Emit (PTE) of the single hazardous air pollutant (HAP), phenol, over major source threshold level of 10 tons per year thus making this project a major modification for the purposes of Section 112(g) of the Clean Air Act. Leading Edge Enterprises, LLC has proposed to restrict its production rate at the level which would limit phenol emission to less than 10 tons per year. These limits would prevent the facility from being a major source, avoiding the applicability of the requirements of the Section 112(g). The Illinois EPA has prepared a draft of the construction permit that it would propose to issue for the plant. However, before issuing 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

Leading Edge enterprises, LLC is a manufacture steel and ductile iron facility. The facility consist of the following units: Induction Furnace (Steel & Iron Production) controlled by Baghouse, Magnesium Treatment controlled by Baghouse, Pouring and Cooling Area (Manganese Steel), Mold Production (Chemically Bonded/No Bake) controlled by Baghouse, Sand Reclaim (Steel) controlled by Baghouse, Natural Gas-Fired Heat Treating Furnace (Steel), Greensand Mold and Sand System (bond silo, virgin sand silo, and bond silo) controlled by bin vent filters and Baghouse, Pouring and Cooling Area (Ductile Iron), Shakeout (Iron) controlled by Baghouse.

III. GENERAL DISCUSSION

The limitations established by the construction permit 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 limitations on the operation of a source restrict the potential emissions of the source.

The source has actual emissions which are below the levels at which the plant would be considered a major source under Section 112(g) Clean Air Act. However, in the absence of federally enforceable limitations, the plant 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 undergo Section 112(g) review, as would otherwise be required.

The construction permit limits the operation and annual emissions of the plant to below the major-source-thresholds of 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 emission standards.

The principal air contaminants emitted from the facility is carbon monoxide, volatile organic material, and particulate matter. These emissions are released from the furnace during the melting process as a result of incomplete combustion of organic materials presented in the mold pouring, cooling and shakeout. The particulate matter is also emitted as a result of incomplete combustion of carbon additives, flux additions, and dirt, as well as during the raw materials handling operations and post-casting operations: grinding, sand blasting etc.

This permit will be issued based on the source not being subject to the requirements of The National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries, 40 CFR Part 63, Subpart EEEEE. This is consequence of the federally enforceable production and operating limitations established in this permit, which restrict a potential to emit to less than 10 tons/year for any individual Hazardous Air Pollutant (HAP), and 25 tons/year of any combination of such HAPs. Annual emissions of other pollutants from the plant are well below the 100 ton major source threshold.

This permit will be issued based upon the coating operations are exempt from emission limitations of 35 Ill. Adm. Code Part 215, Subpart F: Coating Operations, due to emissions of volatile organic materials (VOM) from these operations being less than exemption level of 25 tons/year established by Section 215.206(a).

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 steel and iron casting facility is subject to rule 35 Ill. Adm. Code 212.123 (a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit. 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 construction is not triggering major source status for HAP and does not need to undergo Section 112(g) review. The permit would limit the operation and annual emissions of the plant to below the major-source-thresholds of 10 tons for an individual HAP and 25 tons for combined HAPs.

The permit conditions would also continue to require appropriate compliance procedures, including inspection practices as well as recordkeeping and reporting requirements with daily, monthly and annual single HAPs and combined HAPs emissions from no-bake, green-sand, mold make, paint booth, induction and heat treatment (lbs/day, tons/month, and tons/year with supporting calculations); and monthly and annual NO_x, PM, PM₁₀, SO₂, lead, single HAPs and combined HAPs emissions from the steel and Iron foundry shall be maintained, based on steel and iron casting and the applicable emission factors, with supporting calculations (tons/month and tons/year).

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.