

Illinois Environmental Protection Agency

Public Notice

Proposed Issuance of a Construction Permit/PSD Approval to
Nucor Steel Kankakee, Inc. in Bourbonnais

Nucor Steel Kankakee, Inc. has applied to the Illinois EPA for a construction permit to authorize increased SO₂ and VOM emissions from the electric arc furnace at its steel mill located at 972 East 4500 North Road in Bourbonnais. The higher limits do not reflect a change in intended operation of the furnace but instead the use of emission factors that are higher than factors previously used by Birmingham Steel, which Nucor believes more accurately account for the potential range of SO₂ and VOM emissions from the furnace. Because this increase in emissions is significant for sulfur dioxide (SO₂), and volatile organic material (VOM), the project is considered a major modification subject to the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21, for these pollutants

Based on its review of Nucor Steel's application, the Illinois EPA has made a preliminary determination that this project is entitled to a construction permit. **The Illinois EPA is accepting comments prior to making a final decision on the application for this project. Comments must be postmarked by midnight September 19, 2006.** If sufficient interest is expressed in this matter, a hearing may be held. Comments, questions and requests for information, should be directed to Brad Frost, Bureau of Air, Illinois EPA, Box 19506, Springfield, IL 62794-9506, phone 217/782-2113, TDD 217/782-9143.

Persons wanting more information may view the draft permits and project summaries at www.epa.gov/region5/air/permits/ilonline.htm (please look under All Permit Records, PSD, New). These documents and the application may also be viewed at the Illinois EPA's offices at 9511 West Harrison in Des Plaines, 847/294-4000 and 1340 N. Ninth St., Springfield, 217/782-7027 (please call ahead to assure that someone will be available to assist you). Copies of the documents will be made available upon request.

In December 2002, Nucor acquired the former Birmingham Steel facility and took over the operations of and the air permits for the facility. Nucor conducted emissions testing for the Bourbonnais facility after the acquisition to verify that the facility was complying with all permit limits and applicable regulations. These activities were conducted in February of 2004 and demonstrated compliance. However, they also showed that the SO₂ emissions from the furnace at the Bourbonnais facility had the potential to exceed the 0.137 lbs/ton limit that was previously established in the CAAPP permit for this source.

The modification triggers a determination of Best Available Control Technology (BACT) under the PSD rules for sulfur dioxide and volatile organic material. BACT has been determined to be implementation of a scrap management plan to minimize the purchase

of scrap steel that contains oil, paint, rubber, and other contaminants that contribute to sulfur dioxide and volatile organic material emissions from the affected furnace, good air pollution control practices to minimize emissions, and VOM and SO₂ emission rates that are no more than 0.35 and 0.60 pounds per ton of steel produced, respectively.

The affected furnace is a new furnace for purposes of the New Source Performance Standards, NSPS, 40 CFR 60 Subpart AAa. Emissions of particulate matter (PM) from the furnace are controlled by two baghouses, including a supplementary baghouse installed in 2005. The affected furnace was subjected to PSD permitting for emissions of carbon monoxide (CO) and nitrogen oxides (NO_x) in 1993.

Nucor was also required to perform ambient air quality modeling for SO₂. The analysis showed that the SO₂ air quality standards and PSD increments would continue to be met. The maximum predicted ambient SO₂ concentrations, in total considering both existing units, new units and background, were 966.8, 300.8, and 46.0 micrograms per cubic meter (ug/m³), compared to the standards of 1300, 365, and 80 ug/m³, on a 3-hour, 24-hour and annual basis, respectively. The maximum predicted consumption of SO₂ increment was 227.1, 65.5, and 6.2 ug/m³, compared to the increments of 512, 91, and 20, on a 3-hour, 24-hour and annual basis, respectively.