

PSD PERMIT APPLICATION REVIEW

Applicant : Nucor Steel		Site Location: Cofield		County: Hertford	
Technical Contact: Terry Hairston Environmental Manager		Phone: (252) 356-3707 Fax: (252) 356-3750		Responsible Official: Giffin Daughtridge Title: General Manager	
Review Engineer: William Willets, P.E.		Signature:		Review Date: September 1, 2004	
Regional Contact: Yongcheng Chen		Regional Office: WARO		SIC Code: 3312	
				Application Number: 4600099.04B	
Existing Permit Number: 08680T08		New Permit Number: 08680T09		Applicability: PSD modifications to change BACT emission limits	

I. Introduction:

Nucor Steel operates a plate mill in Cofield, Hertford County, North Carolina. This facility is requesting a PSD modification which will be issued as Permit No. 08680T09.

The permit application (4600099.04A) was received by the DAQ on April 26, 2004 and the application was considered complete for processing on this date.

II. Purpose of this Application:

The purpose of this PSD permit modification is to increase the emission limits for sulfur dioxide, nitrogen oxides, and carbon monoxide from the existing melt shop.

III. Changes in Emissions:

The following table summarizes the requested changes in emission limits:

Pollutant	Initial Permit Limit	Current Permit Limit	Requested Permit Limit
particulate (front-half)	0.0032 grains per dscf	0.0018 grains per dscf	0.0018 grains per dscf*
particulate (PM-10 plus back-half)	0.0052 grains per dscf	0.0052 grains per dscf	0.0052 grains per dscf*
sulfur dioxide	0.35 pounds per ton of steel	0.22 pounds per ton of steel	0.35 pounds per ton of steel
nitrogen oxides	0.51 pounds per ton of steel	0.27 pounds per ton of steel	0.36 pounds per ton of steel
carbon monoxide	4.0 pounds per ton of steel	1.82 pounds per ton of steel	2.3 pounds per ton of steel
volatile organic compounds	0.35 pounds per ton of steel	0.13 pounds per ton of steel	0.13 pounds per ton of steel*
lead	0.0016 pounds per ton of steel	0.0016 pounds per ton of steel	0.0016 pounds per ton of steel*

*The permittee is not requesting in a change in the emission limit for this pollutant from the current limit.

IV. Changes to existing PSD permit per this application No. 9600217.03A:

Page No.	Condition No.	Changes
Page 1	Heading and body of letter	Revised date, revised permit number, changed modification received date, changed letterhead.
Page 2	Heading and body of letter	Revised issued date at the top of letter and changed contact person to William Willets, P.E.
Page 1	Front page	Changed: Permit No., "Replaces Permit No.," application No., permit issue date.
Pages 3 and 4	Section 1	Removed ES79 from table and footnote.
Pages 3 and 4	Section 1	Removed ES83 and ES85 from table.
Pages 5 and 6	2.1(A)	Changed emission limits in accordance with final determination.

Page No.	Condition No.	Changes
Page 8	2.1(B)	Changed emission limits in accordance with final determination.
Page 12	2.1(C)(3)	Added testing (if required) language
Page 12	2.1(D)(1)	Added testing (if required) language
Page 16	2.1(H)	Removed scrap bar cutting operation as requested by applicant
NA	2.1(J)	Removed sandblasting operation as requested by applicant

V. Facility Description:

Nucor Steel manufactures various sizes of steel plates for a variety of end uses by other industries. The facility was originally permitted as a PSD major source in April 1999.

VI. Statement of Compliance:

Mr. Robert Bright of the Washington Regional Office performed a facility inspection on April 20, 2004 and stated that the facility “ ... appeared to be in compliance with all applicable regulations and permit conditions at the time of inspection.”

VII. PSD Evaluation:

The Nucor plate mill is rated at a maximum design capacity of 250 tons per hour (tph) and has actual baseline operations of 160 tph. Considering these values and the requested emission increases, the following table summarizes the expected annual emission rate increase as a result of the modification. Emissions shown are from the melt shop baghouse. Total emissions from the melt shop are 110% of the baghouse numbers when accounting for the emissions from the roof monitors.

Pollutant	Future Potential Emissions (tpy)	Baseline Actual Emissions (tpy)	Increase (tpy)	Significant Increase (tpy)
particulate (front-half)*	NA	NA	NA	25
particulate (PM-10 plus back-half)*	NA	NA	NA	15
Sulfur dioxide	383.25	154.2	229.0	40
nitrogen oxides	394.2	189.2	205.0	40
carbon monoxide	2,518.5	1,275.5	1,243.0	100
volatile organic compounds*	NA	NA	NA	40
lead*	NA	NA	NA	0.6

*No change requested to the current BACT limit.

The table shows that PSD review is triggered for sulfur dioxide, nitrogen oxides, and carbon monoxide.

VIII. Toxics Evaluation:

Nucor Steel is not proposing to increase emissions of toxic air pollutants above the levels currently in its air permit.

IX. A Professional Engineers Seal was not required for this modification.

X. No consistency determination was required for this application.

XI. An application fee of \$12,982.00 is required and was received by the DAQ on April 26, 2004.

XII. The appropriate number of copies of the application was received by the DAQ on April 26, 2004.

XIII. The application did contain the Reduction and Recycling Form.

XIV. The application was signed by an authorized official as defined by 15A NCAC 2Q .0304(j).

XV. Public Notice

A 30-day public notice will be provided for this PSD affected permit modification.

XVI. Recommendations

This modification has been reviewed by the DAQ to determine compliance with all procedures and requirements. The DAQ has determined that this facility is complying or will achieve compliance as specified in the permit with all applicable requirements.

Mr. Yongcheng Chen of the WaRO concurs with the issuance of the permit.

Issue permit No. 08680T09.