



Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

September 10, 2004

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

TO: Interested Parties / Applicant
RE: Nucor Steel / 107-19387-00038
FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision – Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-AM.dot 9/16/03



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-
6015
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

September 10, 2004

David Sulc
Nucor Steel
4537 South Nucor Road
Crawfordsville, IN 47933

Re: **107-19387-00038**
Amendment to Permit Modification 107-19155-00038

Dear Mr. Sulc:

On June 11, 2004, Nucor Steel was issued a permit modification (107-19155-00038) to extend the schedule of the compliance certification of the continuous emission monitoring systems (CEMS) for the electric arc furnaces (EAFs) exhausts as initially required in the PSD Permit (107-16823-00038).

On July 22, 2004, the Office of Air Quality (OAQ) received a request to clarify the date that Nucor Steel needs to begin continuously recording the emissions from the electric arc furnaces (EAFs) using the continuous emissions monitoring system (CEMS).

Based on the information provided by Nucor Steel, and evaluation of the request, Condition D.1.12 of PSD permit 107-16823-00038 and as modified in Permit Modification 107-19155-00038 is hereby amended as follows:

- D.1.12 CO, SO₂, and NO_x Continuous Emission Rate Monitoring Requirement
[326 IAC 2-2] [326 IAC 3-5]
- (a) CO, SO₂, and NO_x CEMS
 - (i) Pursuant to 326 IAC 2-2 (PSD) and 326 IAC 3-5-1(d), the Permittee shall install, calibrate, certify, operate, and maintain continuous emissions monitoring systems (CEMS) for measuring CO, SO₂, and NO_x emissions rates in pounds per hour from the Meltshop EAFs, in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.

The Permittee shall comply with the PSD BACT SO₂ and NO_x hourly emission rates by averaging the CEMS readings based on the actual hours of operation in a 24-hour period.

- (ii) CEMS for Existing Vents



The CEMS installed to measure the emissions through the existing vent shall be calibrated no later than July 15, 2004.

From the initial start up of the modified Meltshop EAFs to July 15, 2004, the Permittee shall calculate the emission rates (in pounds per hour) based on the [theoretical maximum](#) parts per million concentrations and [theoretical](#) maximum flow rates.

- (iii) CEMS for Baghouse Stack
The CEMS installed to measure the emissions through the EAF baghouses stack shall be calibrated within 180 days of the installation of the new Meltshop EAF Baghouse2.
- (iv) The location of these CEMS to measure the Meltshop EAFs emissions shall be approved by OAQ prior to their installation.
- (b) The Permittee shall submit to IDEM, OAQ, within ninety (90) days after complete monitor installation, a complete written continuous monitoring standard operating procedure (CMSOP), in accordance with the requirements of 326 IAC 3-5-4.
- (c) The Permittee shall record the output of the systems in pounds per hour and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.

All other conditions of permit PSD 107-16823-00038, its amendments and modifications shall remain unchanged and in effect. This permit decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.

If you have any questions regarding this permit modification please contact Ms. Iryn Calilung of my staff at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana 46206-6015 or by telephone at (317) 233-5692 or toll free at 1-800-451-6027 extension 3-5692 or by e-mail at icalilun@dem.state.in.us.

Sincerely,

[Original signed by Paul Dubenetzky](#)

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Enclosure: TSD of Permit Modification 107-19387-00038
cc: File – Montgomery County
Montgomery County Health Department
Air Compliance Section Inspector – RS
Compliance Data Section - KA
Technical Support and Modeling - MB
Part 70 Operating Permit Reviewer – MG

**Indiana Department of Environmental Management
Office of Air Quality**

Technical Support Document (TSD)
Permit Amendment to a Permit Modification

| |
|--|
| Source Background and Description |
|--|

| | |
|--------------------|---|
| Source Name: | Nucor Steel |
| Source Location: | 4537 South Nucor Street, Crawfordsville, IN 47933 |
| Mailing Address: | 4537 South Nucor Street, Crawfordsville, IN 47933 RR2, Box 311, Crawfordsville, IN 47933 |
| County Location: | Montgomery |
| SIC Code: | 3312 (Steel Mill) |
| Source Categories: | 1 of 28 Listed Source Categories Major PSD Source Major Source, CAA Section 112 |
| Amendment: | 107-19387-00038 |
| Permit Writer: | Iryn Calilung 317/233-5692 icalilun@dem.state.in.us |

| |
|-----------------------------|
| Existing Requirement |
|-----------------------------|

On June 11, 2004, Nucor Steel was issued a Permit Modification (107-19155-00038) to extend the schedule of the compliance certification of the continuous emission monitoring systems (CEMS) for the electric arc furnaces (EAFs) exhausts as initially required in the PSD Permit (107-16823-00038).

Condition D.1.12 as currently written is shown below:

D.1.12 CO, SO₂, and NO_x Continuous Emission Rate Monitoring Requirement [326 IAC 2-2] [326 IAC 3-5]

- (a) CO, SO₂, and NO_x CEMS
- (i) Pursuant to 326 IAC 2-2 (PSD) and 326 IAC 3-5-1(d), the Permittee shall install, calibrate, certify, operate, and maintain continuous emissions monitoring systems (CEMS) for measuring CO, SO₂, and NO_x emissions rates in pounds per hour from the Meltshop EAFs, in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.

The Permittee shall comply with the PSD BACT SO₂ and NO_x hourly emission rates by averaging the CEMS readings based on the actual hours of operation in a 24-hour period.

- (ii) CEMS for Existing Vents
The CEMS installed to measure the emissions through the existing vent shall be calibrated no later than July 15, 2004.

From the initial start up of the modified Meltshop EAFs to July 15, 2004, the Permittee shall calculate the emission rates (in pounds per hour) based on the measured parts per million concentrations and maximum flow rates.

- (iii) CEMS for Baghouse Stack
The CEMS installed to measure the emissions through the EAF baghouses stack shall be calibrated within 180 days of the installation of the new Meltshop EAF Baghouse2.

- (iv) The location of these CEMS to measure the Meltshop EAFs emissions shall be approved by OAQ prior to their installation.
- (b) The Permittee shall submit to IDEM, OAQ, within ninety (90) days after complete monitor installation, a complete written continuous monitoring standard operating procedure (CMSOP), in accordance with the requirements of 326 IAC 3-5-4.
- (c) The Permittee shall record the output of the systems in pounds per hour and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.

Description of the Amendment

On July 22, 2004, Nucor Steel submitted a letter requesting the Office of Air Quality (OAQ) to clarify the date that Nucor Steel needs to begin continuously recording the emissions from the electric arc furnaces (EAFs) using the continuous emissions monitoring system (CEMS).

The original requirement in the PSD permit (107-16823-00038) provided a 180-day period for Nucor Steel to install the CEMS in place. In the Permit Modification (107-19155-00038), OAQ added a new requirement for Nucor Steel to calculate the emissions rates using measured parameters from the initial start up of the modified electric arc furnaces (EAFs), rather than from the complete installation of the CEMS. Since the initial start up of the modified EAFs has already passed and predates the installation of the CEMS, Nucor Steel has no means to comply with the revised condition. Nucor Steel requests that OAQ revise the condition to remove any ambiguity.

Condition D.1.12(a)(ii) CEMS for Existing Vents

The CEMS installed to measure the emissions through the existing vent shall be calibrated no later than July 15, 2004.

From the initial start up of the modified Meltshop EAFs to July 15, 2004, the Permittee shall calculate the emission rates (in pounds per hour) based on the measured parts per million concentrations and maximum flow rates.

Nucor Steel construes the reference in this condition "through the existing vent" as merely describing where the emissions occur and not the location of the CEMS.

Permit Amendment

The Office of Air Quality (OAQ) has reviewed the request to clarify Condition D.1.12. The intent of the requirement is for Nucor Steel to demonstrate and verify compliance with the emissions limitations specified for the electric arc furnaces (EAFs) starting from their initial start up of being modified. It is correct that the initial PSD permit provided a 180-day transition period for Nucor Steel to install the continuous emissions monitoring system (CEMS), however, compliance has to be verified as the operation of the modified EAFs begin. During the transition period provided for the installation of the CEMS, Nucor Steel may use theoretical values or manufacturer's guarantees to verify compliance.

The OAQ confirms that the requirement where the CEMS can be located did not change. See Condition D.1.12(a) (iv).

Even though the transition period is passed, the compliance determination is clarified to provide Nucor Steel a clearer method to certify compliance.

Condition D.1.12 is revised as follows (new requirements are in **bold** fonts and deleted items are in ~~strikeout~~ fonts):

D.1.12 CO, SO₂, and NO_x Continuous Emission Rate Monitoring Requirement [326 IAC 2-2]
[326 IAC 3-5]

(a) CO, SO₂, and NO_x CEMS

(i) Pursuant to 326 IAC 2-2 (PSD) and 326 IAC 3-5-1(d), the Permittee shall install, calibrate, certify, operate, and maintain continuous emissions monitoring systems (CEMS) for measuring CO, SO₂, and NO_x emissions rates in pounds per hour from the Meltshop EAFs, in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.

The Permittee shall comply with the PSD BACT SO₂ and NO_x hourly emission rates by averaging the CEMS readings based on the actual hours of operation in a 24-hour period.

(ii) CEMS for Existing Vents

The CEMS installed to measure the emissions through the existing vent shall be calibrated no later than July 15, 2004.

From the initial start up of the modified Meltshop EAFs to July 15, 2004, the Permittee shall calculate the emission rates (in pounds per hour) based on the ~~measured~~ **theoretical maximum** parts per million concentration and **theoretical** maximum flow rates.

(iii) CEMS for Baghouse Stack

The CEMS installed to measure the emissions through the EAF baghouses stack shall be calibrated within 180 days of the installation of the new Meltshop EAF Baghouse2.

(iv) The location of these CEMS to measure the Meltshop EAFs emissions shall be approved by OAQ prior to their installation.

(b) The Permittee shall submit to IDEM, OAQ, within ninety (90) days after complete monitor installation, a complete written continuous monitoring standard operating procedure (CMSOP), in accordance with the requirements of 326 IAC 3-5-4.

(c) The Permittee shall record the output of the systems in pounds per hour and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.

Recommendations and Conclusion

- (1) Based on the facts, conditions and evaluations made, the Office of Air Quality (OAQ) recommends to the Indiana Department of Environmental Management (IDEM) Commissioner that the findings in the Permit Amendment 107-19387-00038 be approved.
- (2) Unless otherwise stated, information used in this review was derived from the letter submitted on July 22, 2004, by Nucor Steel.
- (3) A copy of the amendment is available on the Internet at: www.IN.gov/idem/air/permits/Air-Permits-Online.
- (4) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.IN.gov/idem/guides.

IDEM Contact

Questions regarding this proposed PSD permit amendment can be directed to Iryn Calilung at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana 46206-6015 or by telephone at (317) 233-5692 or toll free at 1-800-451-6027 extension 3-5692 or by e-mail at icalilun@dem.state.in.us.