



Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

December 14, 2004

CERTIFIED MAIL – Return Receipt Requested

Mr. Donald R. Shumake
Vice President/General Manager
Gerdau Ameristeel
Jacksonville Steel Mill
16770 Rebar Road
Baldwin, Florida 32234

RE: Request to Replace the Existing Electric Arc Furnace with Two New Ones and Increase Production of the
Meltshop Operation and the Billet Reheat Furnace Operation
Project No.: 0310157-007-AC/PSD-FL-349
U.S. EPA, Region 4's Comments

Dear Mr. Shumake:

The Department received comments (see Enclosure) in an e-mail from Mr. Scott Miller with the U.S. EPA, Region 4, regarding your October 26, 2004 application for a facility modification. Please address his comments and include them with your response to our RAI (Request for Additional Information) that was mailed to you on November 24, 2004.

The Department will resume processing this application after receipt of the requested information. If you have any questions regarding this matter, please call Bruce Mitchell or Cleve Holladay at (850)413-9198 or (851)921-9896, respectively.

Sincerely,

Trina L. Vielhauer
Chief
Bureau of Air Regulation

TLV/bm

Enclosure

cc: Gregg Worley, U.S. EPA, Region 4
John Bunyak, NPS
Chris Kirts, NED
Kennard F. Kosky, P.E., GAI
Cleve Holladay, DEP/DARM/BAR
Bruce 12-16-04 am

Mitchell, Bruce

From: Pennington, Jim
Sent: Wednesday, December 15, 2004 2:56 PM
To: Mitchell, Bruce
Subject: FW: EPA Region 4 Comments on Gerdau Ameristeel PSD Application PSD-FL-349

-----Original Message-----

From: Holladay, Cleve
Sent: Wednesday, December 15, 2004 2:44 PM
To: Pennington, Jim
Subject: FW: EPA Region 4 Comments on Gerdau Ameristeel PSD Application PSD-FL-349

-----Original Message-----

From: Miller.Scott@epamail.epa.gov [mailto:Miller.Scott@epamail.epa.gov]
Sent: Wednesday, December 15, 2004 2:01 PM
To: Holladay, Cleve
Cc: Little.James@epamail.epa.gov
Subject: EPA Region 4 Comments on Gerdau Ameristeel PSD Application PSD-FL-349

Cleve,

Good day! Thank you for giving the Region the opportunity to review and comment on the prevention of significant deterioration (PSD) permit application for the replacement of the electric arc furnace and other furnaces at the Jacksonville Steel Mill. We have a few concerns with respect to the application:

Best Available Control Technology (BACT) Analysis

The applicant dismissed the use selective non-catalytic reduction (SNCR) for the EAF/LMF installation as technically infeasible. In addition, the applicant did not consider selective catalytic reduction (SCR) for the reheat furnaces. There has been successful use of SNCR for EAFs on multiple occasions. The Institute of Clean Air Companies released a White Paper entitled, "Selective Non-Catalytic Reduction for Controlling NOx Emissions" dated May 2000. It lists several steel mini-mills where SNCR and SCR have been demonstrated and are in operation. Mills where one of both technologies have been demonstrated are National Steel (Ecorse, MI), Nucor Steel (Hickman, AR), Nucor Steel (Hugor, SC), Protec/U.S. Steel (Leipsic, OH) among others. We recommend that the applicant be required to consider both SCR and SNCR technically feasible and evaluated for installation. It is important to note that BACT is not exclusively limited to technologies that have been entered into the BACT/LAER Clearinghouse but those emission rates produced by technologies available and demonstrated.

If we may be of assistance in this matter, please contact me at the number below or via reply e-mail to this message. Thanks! Scott Miller Environmental Engineer Air Permits Section APTMD U.S. EPA Region 4 61 Forsyth Street, SW Atlanta, GA 30303 Phone (404) 562-9120 Fax (404) 562-9019

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<p>1. Article Addressed to: Mr. Donald R. Shumake Vice President/General Gerdau Ameristeel Jacksonville Steel Mill 16770 Rebar Road Baldwin, Florida 32234</p>		<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>	
<p>2. Article Number (Transfer from service label) 7000 1670 0013 3110 2189</p>		<p>Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. </p>	
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Mr. Donald R. Shumake, Vice President
Gerdau Ameristeel
Jacksonville, Steel Mill
16770 Rebar Road
Baldwin, Florida 32234

PS Form 3800, May 2000 See Reverse for Instructions



Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

November 24, 2004

CERTIFIED MAIL – Return Receipt Requested

Mr. Donald R. Shumake
Vice President/General Manager
Gerdau Ameristeel
Jacksonville Steel Mill
16770 Rebar Road
Baldwin, Florida 32234

RE: Request to Replace the Existing Electric Arc Furnace with Two New Ones and Increase Production of the Meltshop Operation and the Billet Reheat Furnace Operation
Project No.: 0310157-007-AC/PSD-FL-349

Dear Mr. Shumake:

On October 26, 2004, the Department received a request to replace the existing Electric Arc Furnace (EAF) with two new EAFs (an EAF and a Ladle Metallurgical Furnace (LMF)), replace the existing caster operation with a new continuous caster, and increase production of the meltshop operation and the billet reheat furnace operation (accomplished by either expanding the length of the furnace bed or replace the existing furnace). Based on our review of the proposed project, we have determined that the following additional information is needed in order to continue processing this application package. Please provide all assumptions, calculations, and reference material(s), that are used or reflected in any of your responses to the following issues

1. In Section 2.2.1, 2nd paragraph, it is stated that the existing EAF "generates heat at 19 tons per day", which is less than a ton per hour (TPH). Is this number correct? Please explain and submit a correction, if appropriate.

2. In Section 2.2.1, 2nd paragraph, it is stated that the new EAF will be "tapping 105 tons of liquid steel", which is less than the proposed "140 TPH monthly average" and "160 TPH maximum hourly average". Is this number correct or not? Please explain and submit a correction, if appropriate.

3. In Section 2.2.1, 5th paragraph, it is stated that the new EAFs will "each have a daily maximum hourly production rate of 160 TPH and a monthly maximum hourly production rate of 140 TPH". Based on the stated existing EAF's production rate (see Issue #1, above), is this request for the modification of the meltshop operation production a net increase of 319 TPH? Please explain and submit a correction, if appropriate.

4. In Section 2.2.1, 3rd paragraph, it is stated that the LMF is "a small EAF", yet it is described as and sized at the same processing level as the proposed new EAF. Are the proposed EAF and LMF identical and separate emissions units? Please explain in detail the differences, including fuel consumption rates, processing rates (both raw material input and product output), physical layout, hooding, venting, process, materials used, heat cycle timeframes, etc.

5. Referring to Item #4, above, the application's potential pollutant emissions (see Section 1 of 4, Emissions Unit Information) are only calculated for one proposed new EAF and not for two separate, but similar/identical production emissions units (EAFs: EAF and LMF). If both of the proposed new EAFs (EAF and LMF) are each separate production emissions units, then the application needs to be supplemented with additional pages related to the LMF (described as a smaller EAF). Please calculate and submit the potential pollutant emissions for the additional emissions unit (fuel related pollutants and process pollutants) on the appropriate application pages and associated appendices, if necessary.

Mr. Donald R. Shurnake
Gerdau Ameristeel
Jacksonville Steel Mill
Air Construction Permit Project No.: 0310157-007-AC/PSD-FL-349
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6. Referring to Item #1, above, please adjust and submit any contemporaneous emissions calculations, if appropriate.
7. Please provide the manufacturer's specifications on the proposed new EAF and the proposed new LMF regarding their production rate(s) and operation(s). If any, please provide a picture of the proposed new EAF and the proposed new LMF.
8. What is the maximum raw material feed input rate(s) to and their product rate(s) from each the proposed new EAF and the proposed new LMF?
9. Please explain in more detail how the proposed new EAF and the proposed new LMF interact operation and production wise (in series or parallel or both) and show how they will be physically aligned with each other on the proposed new mezzanine pad. Please explain a "heat cycle" through each the proposed new EAF and the proposed new LMF and include a timeframe for each response.
10. For purposes of reducing nitrogen oxides (NO_x) emissions from the proposed modified Billet Reheat Furnace operations, evaluate and submit the cost analysis for the installation of SCR.
11. For purposes of reducing lead (Pb) emissions from the EAF and LMF operations, evaluate the feasibility and submit the cost analysis for the installation of a HEPA Filtration System in series and after the baghouse control system(s) for the EAF/LMF and Meltshop Building operations.
12. For the LMF operation, are there plans to use a refractory-lined lid to reduce or minimize air emissions? If so, please provide the details.
13. For purposes of reducing PM/PM₁₀ (particulate matter and particulate matter less than 10 microns) and Pb emissions from the EAF/LMF and Meltshop Building operations, evaluate the feasibility and submit the cost analysis for the installation of a scrubber system.
14. Please provide an ambient air quality standards (AAQS) analysis for Pb in the Class II area, and address the impacts of the projected increase in Pb emissions in the Class I area.
15. In the Class II SO₂ PSD modeling input files provided to us, source CFPLPUTM is missing. This source is identified in Table E-1, which contains a summary of SO₂ sources used in the modeling analyses. In the Class II NO_x PSD modeling input files provided to us source RECOV is missing. This source is identified in Table E-2, which contains a summary of NO_x sources used in the modeling analyses. Also St. John's River Power Park is an SO₂, NO_x and PM₁₀ increment-consuming source; all of their SO₂, NO_x and PM₁₀ emissions at Units 1 and 2 consume increment (1858 grams/seconds SO₂, 928.88 grams/second NO_x and 46.48 grams/second PM₁₀ emissions). Please update Tables E-1, E-2, E-3 and E-4 to show that these emissions are increment-consuming and remodel using the correct inputs.
16. No table or documentation of either the current actual or PSD baseline emissions used in the significant impact and PSD increment analyses was given in the application; please provide this information. Also different values for NO_x emissions were used in the Class I and Class II PSD increment analyses. In addition, the NAAQS analyses for SO₂, PM₁₀, and NO_x contained and modeled the negative input emissions used as the current actual values in the respective significant impact analyses for these pollutants. Please address and correct these inputs and remodel where necessary.

Mr. Donald R. Shumake
Gerdau Ameristeel
Jacksonville Steel Mill
Air Construction Permit Project No.: 0310157-007-AC/PSD-FL-349
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17. The Seminole Electric CEM data summarized in Table E-5 should be updated to include the most recent two years of data (preferably through October, 2004, if available). Also the department can not exclude periods when the scrubber at Seminole Electric is inoperative.

The Department will resume processing this application after receipt of the requested information. If you have any questions regarding this matter, please call Bruce Mitchell or Cleve Holladay at (850)413-9198 or (851)921-9896, respectively.

Sincerely,



Trina L. Vielhauer
Chief
Bureau of Air Regulation

TLV/bm

cc: Gregg Worley, U.S. EPA, Region 4
John Bunyak, NPS
Chris Kirts, NED
Kennard F. Kosky, P.E., GAI

Trina's Reading File } mailed @ Centerville, P.O.
Cleve } 11-24-04
Bruce }

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Mr. Donald R. Shumake Gerdau Ameristeel

Jacksonville Steel Mill

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