



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, Tennessee 37243

February 14, 2014

Mr. Chris Ervin, V. P. General Manager
Gerdau Ameristeel US, Inc.; Jackson Mill
P O Box 10848
801 Gerdau Ameristeel Road
Jackson, TN 38303-0114

Reference Number: 57-0189-02-S4

Dear Mr. Ervin:

The Tennessee Division of Air Pollution Control has received the compliance test report for the Electric Arc Furnace located at the Gerdau Ameristeel US facility in Jackson, Tennessee. Ambient Air Services, Inc. performed this testing during July 10-11, 2013. This testing was conducted in accordance with Condition E4-9. of Title V operating permit No. 558867 which was in effect at the time of the testing and requires that periodic testing be conducted every five years. Previous testing was conducted on May 17-18, 2011. The purpose of this testing was to reestablish the particulate and lead emissions values due to concerns that the results of the previous testing exhibited a high bias due to issues with the testing.

The Division's Compliance Validation Program has reviewed the source test report. Based on this review, the Division considers the report to be technically correct with regards to the testing procedures employed, the mathematical accuracy of the calculations presented, and the acceptability of the equipment calibration data. The Division also agrees that the testing was conducted in conformance with the test protocol dated May 1, 2013.

The purpose of this testing was to determine the amount of particulate matter (PM), lead (Pb), carbon monoxide (CO), oxides of nitrogen (NOx), sulfur dioxide (SO2), and visible emissions (VEEs) from the two baghouses that control waste gas emissions from the electric arc furnace and the general melt shop operations. Because of the baghouse design, flow measurements were performed in the duct leading to each baghouse.

The following tables provide a summary of the emissions testing and the visible emissions evaluations:

**Electric Arc Furnace Baghouses 1 and 2
 Particulate and Gaseous Emissions**

Parameter	Actual Emissions	Allowable Emission**
Particulate Matter		
gr/dscf	0.0012*	0.0041 (E5-2.)
lbs/hr	8.45	40.76 (E5-2.)
Lead		
lbs/hr	0.1	1.06 (E5-8.)
Carbon Monoxide		
lbs/hr	337	945 (E5-7.)
Oxides of Nitrogen		
lbs/hr	15.5	72.9 (E5-6.)
Sulfur Dioxide		
lbs/hr	7.4	40.5 (E5-4.)

* Flow weighted average of the two baghouses

** Bracketed values refer to condition numbers of Title V permit No. 565713

Visible Emission Evaluations (VEE)

Source	VEE Actual*	VEE Allowable
Electric Arc Furnace Baghouse 1 and 2, as %	0%	3%
¹ Meltshop Building, as %	3%	6% and 20%
Dust handling System, as %	0%	10%

All visible emission limits set forth in Condition E5-10. of Title V permit No. 565713

¹Meltshop visible limit is 6% during all periods except tapping and charging. A 20% limit is required during tapping and charging.

*Highest six-minute data average

During the testing period on July 10-11, 2013 the electric arc furnace had an average a production rate of 108.5 tons of steel during the particulate testing and 101.54 tons of steel per hour during the gaseous testing. These production rates are 80 and 75 per cent of the maximum permitted production rate of 135 tons per hour as set forth in Condition E5-1. of Title V permit No. 565713 (the currently effective permit for the facility) While these production rates are low compared to the maximum permitted production rate for the source, they approximate the normal production rates occurring during the time frame of the testing. Thus, the operational of the electric arc furnace was considered as being acceptable for a demonstration of compliance.

The furnace exhaust leaves the electric arc furnace building as a single duct. This single duct is where the duct damper is located and where duct flow rate was determined during the testing. Prior to entry to the baghouse the duct is divided into two ducts, each with its own fan. During the dates of this testing, the fan motor current draw in amperes for each baghouse fan and the duct damper position was recorded. The underlying requirement set forth in 40 CFR 60.274(c) is for a determination of the total volumetric flow rate. The Division considers that the total amperage into both fan motors serving each baghouse meets this requirement. The following table provides the results of this monitoring. These values serve to reestablish the amperage values pursuant to the requirements set forth in 40 CFR 60.274(c)

Control Device Operating Parameters

Source	Fan Motor Amperes*	Damper Position
Baghouse No. 1, amperes	238	70% open
Baghouse No. 2, amperes	500	70% open**

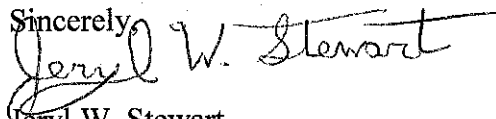
*Total both motors

**Variable damper this value represents normal operations

With the acceptance of this source emissions testing, the Division agrees that Gerdau Ameristeel US has demonstrated compliance with each of the emission and visible emission limits set forth above. With the acceptance of this source emissions testing, the Division also agrees that Gerdau Ameristeel US has fulfilled the periodic testing requirements set forth in Condition E4-9. of Title V operating permit No. 558867 (in effect at the time of the testing) and Condition E5-9. of Title V operating permit No. 565713 (issued December 18, 2013).

Should you have any questions concerning the matters addressed by this letter, please contact either Mr. Steve Morgan at (615) 532-0533 or me at (615) 532-0605.

Sincerely,



Jeryl W. Stewart
Compliance Validation Program
Division of Air Pollution Control

c: Jackson - EFO