

TENNESSEE AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-1531



Permit to Construct or Modify an Air Contaminant Source Issued Pursuant to Tennessee Air Quality Act

Date Issued: July 12, 2017

Permit Number:

972680P

Date Expires: November 1, 2017

Issued To:

Gerdau AmeriSteel U.S. Inc.

Installation Address:

801 AmeriSteel Road

Jackson

Installation Description:

Scrap Steel Raw Material Processing:

An Electrically Powered Scrap Steel Shredder with Cyclone

Modification: Sorting Hubs Production Capacity Increase and

an Increase in Non-ferrous Material Handling Rate

(Sorting Shredded Steel) with Cyclone and Baghouse

Emission Source Reference No.

57-0189-01

NESHAPs, Part 63 Subpart YYYYYY

Title V

The holder of this permit shall comply with the Conditions contained in this permit as well as all applicable provisions of the Tennessee Air Pollution Control Regulations.

CONDITIONS:

1. The application that was utilized in the preparation of this permit is dated March 30, 2017 and is signed by Mr. Ricardo Anawate, VP and General Manager for the permitted facility. If this person terminates his/her employment or is reassigned different duties such that he/she is no longer the responsible person to represent and bind the facility in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification shall be in writing and submitted within thirty (30) days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the facility in environmental permitting affairs. All representations, agreement to terms and Conditions and covenants made by the former responsible person that were used in the establishment of limiting permit Conditions on this permit will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

(Conditions continued on next page)


TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

NON-TRANSFERABLE

CN-0754 (Rev. 9-92)

POST AT INSTALLATION ADDRESS

RDA-1298

SOURCES

57-0189-01	Scrap Steel Shredder	An electrically powered scrap steel shredder for recycling steel. Ferrous and non-ferrous metals as well as Auto Shredder Residue (ASR) are separated by various methods including magnetic separation. Emissions from the separation of ASR are controlled with a cyclone (ASR cyclone).
	Modification:	<u>Non-ferrous Separation System:</u> Non-ferrous material handling and separation operations that receive shredded material from the outlet of the existing scrap shredder will be directed to the new sorting hubs. The shredded metal infeed to the hubs will come from the existing steel scrap shredder or other steel scrap providers and on-site landfill. The sorted product will initially be stored in piles of uniformly sized materials and then will either be used in the existing steel melting process or be shipped offsite to customers. Source includes four (4) stand-alone sorting hubs (Steps 10, 11, 12, 15) with conveyor belts, separators, and destoners to separate miscellaneous metals including ferrous materials, ICW (insulated copper wire), copper, Zurik (primarily stainless steel), Zorba (primarily Al) and non-ferrous microfines. A shared cyclone and baghouse system will control particulate matter emissions from the destoners on Steps 11 and 15 (Sorting Hubs 11 and 15).

E4.	Conditions specific to source 57-0189-01
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E4-1. Input capacity restriction

- a) Input capacity for the existing scrap steel shredder shall not exceed 400 tons per hour on a daily basis.
Permit Number 050995P
- b) Input capacity of the non-ferrous material handling equipment following the shredder, but prior to the sorting hubs, shall not exceed 80 tons per hour on a monthly average basis.
- c) Input capacity for the sorting hubs shall not exceed the following rates:
 - Sorting Hub Number 10: 40 tons per hour on a monthly average basis
 - Sorting Hub Number 11: 25 tons per hour on a monthly average basis
 - Sorting Hub Number 12: 45 tons per hour on a monthly average basis
 - Sorting Hub Number 15: 10 tons per hour on a monthly average basis

A construction permit will be required if an increase in the design rate is desired for any of the above operations a, b, and c.

E4-2. Particulate Matter (PM) limitation

- a) PM emitted from the existing scrap steel shredder shall not exceed 25.0 pounds per hour and 26 tons/year.

TAPCR 1200-03-07-.01(5) and the information contained in the agreement letter dated January 22, 1999, from the permittee.

Compliance Method: This process shall not be operated without the use of ASR cyclone control. Each cyclone shall be inspected weekly to see if there are any abrasion holes. Any abrasion holes shall be promptly repaired. All plugging problems shall be remedied promptly. Compliance with the annual limit shall be assured by compliance with Condition E4-3 and by completing Log 1 of Condition E4-4. A maintenance log shall be retained and be available for inspection to the Technical Secretary or a Division representative.
Compliance with the annual limit contained in E4-2(a) shall be assured by compliance with Condition E4-3 and by completing Log 1 of Condition E4-4.

- b) PM emitted from the non-ferrous material handling/separation and sorting hubs shall not exceed 3.26 pounds per hour and 14.28 tons/year.

TAPCR 1200-03-07-.01(5) and the information contained in the pre-agreed emission limit in the application dated March 30, 2017 from the permittee.

Compliance Method: The destoners from this process (Hubs 11 and 15) shall not be operated without the use of the cyclone with baghouse control device. The control device shall be inspected weekly to see if there are any abrasion holes. Any abrasion holes shall be promptly repaired. All plugging problems shall be remedied promptly. A maintenance log shall be retained and be available for inspection to the Technical Secretary or a Division representative.

Compliance with this requirement shall be assured by maintaining a pressure drop across the destoner baghouse greater than or equal to 70 Pascals (as requested by the permittee in the letter submitted October 18, 2016). The pressure drop for the cyclone/baghouse system shall be recorded once daily when the source is in operation. Days when the source is not operating shall be noted. For lower pressure drop readings resulting from replacement of the baghouse filter, the permittee shall record the deviation as such in their daily records. Due allowance will be made for lower pressure drop readings which follow replacement of the baghouse filter provided the permittee establishes to the satisfaction of the Technical Secretary that these lower readings resulted from the replacement of the cartridge collector filter.

Compliance with the annual limit contained in E4-2(b) shall be assured by compliance with Condition E4-3 and by completing Log 1 of Condition E4-4.

E4-3. Operating hour restriction

a) Total yearly operating hours for the shredder shall not exceed 2,080 hours per year.
Permit Number 050995P

Compliance Method: The permittee shall complete Log 1 of Condition E4-4.

b) There are no restrictions on hours of operation for the non-ferrous material handling/separation equipment and sorting hubs.

Compliance Method: The permittee shall complete Log 1 of Condition E4-4

E4-4. Actual emissions for fee purposes

Per TAPCR 1200-03-26-.02(9), actual emissions shall be determined for fee purposes for each fee accounting period for the billable pollutants by completing Log 1. Total operating hours and annual PM emission shall be recorded for compliance purposes.

LOG 1

LOG OF POLLUTANT EMISSION TONNAGE FOR SOURCE 01 FOR FEE AND COMPLIANCE PURPOSES

Month/Year	Hours of Operation of Shredder	Hours of Operation of Non-Ferrous Material Handling & Separation and Sorting Hubs	PM (lbs) (Shredder)	PM (lbs) (Non-Ferrous)	PM (lb) (Total)
July/Year					
June/Year					
12 Month Total (lbs)					
12 Month Total (tons)					

Notes: To calculate particulate emission from the Shredder multiply the Number of hours operated by 25.0 lbs/hour. To calculate the hours of operation of the non-ferrous portion of the operation multiply the number of hours worked by 3.26 lbs/hour.

E4-5. a) The source (scrap steel shredder) and facility shall comply with the NESHAPs requirements of 40 CFR Part 63 Subpart YYYYYY, §63.10685, ((a), (b) and (c) for metallic scrap utilized, Mercury requirements and record keeping & reporting requirements, respectively). The details of the standard and rules are included as Attachment #6 of Title V permit # 565713. As part of the compliance with this Rule, the company has submitted their Pollution Prevention Plan to this Division dated September 18, 2013 and is attached as Attachment #7 of Title V permit #565713.

b) The newly added four sorting hubs for material recycling and reprocessing will receive feed scrap material as follows: approximately 50% from the scrap steel shredder or other 40 CFR Part 63 Subpart YYYYYY-compliant steel scrap providers and other 50% from onsite landfill materials. The process will re-sort the old landfill material for recovery of mostly non-ferrous products which in turn will be shipped to customers. Any small amount of ferrous material recovered can be

re-directed to the electric arc furnace (EAF) and for this EAF metal scrap charging, the permittee shall adhere to the following guidelines as stipulated in their May 18, 2015 and June 11, 2015 letters of agreement (Attachment 1 of this permit):

- i) to minimize the amount(s) chlorinated plastics, lead, free organic liquids and mercury in metallic scrap charge;
- ii) to ensure that sorting process of ferrous and non-ferrous metals are properly accomplished through usages of magnetic separators which excludes non-ferrous metals.

- E4-6.** In addition to the conditions of this permit, the source shall also comply with the applicable requirements and conditions for this source in their Title V permit #565713.
- E4-7.** Visible emissions from this source shall not exhibit greater than twenty percent (20%) opacity, except for one (1) six-minute period in any one (1) hour period and for no more than four (4) six-minute periods in any twenty-four (24) hour period. Visible emissions from this source shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (six-minute average). TAPCR 1200-03-05-.03(6) and TAPCR 1200-03-05-.01(1)
- E4-8.** The issuance of this permit does not exempt the permittee from any requirements of the Environmental Protection Agency pertaining to emissions from the operation of this source.
- E4-9.** This permit shall serve as a temporary operating permit from the issuance date of this permit to the receipt of a modified Title V permit (regardless of the expiration date), provided an application for Significant Modification to the Title V permit is applied for within three hundred sixty days (360) of the issuance date of this permit; and the conditions of this permit and any applicable emission standards are met.

(End of Conditions)

The permit application gives the location of this source as 35.727493 Latitude and 88.810269 Longitude.

ATTACHMENT 1



TN
AIR POLL

2015 MAY 7

May 18, 2015

Attn: Mr. Manir Ahmed
Tennessee Department of Environment and Conservation
Division of Air Pollution Control
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243

RECEIVED

2015 MAY 26 PM 12:11:6

TN DIV OF
AIR POLLUTION CONTROL

Re: Documentation for Non-Ferrous Separation System
Construction Permit Application File
Gerdau AmeriSteel U.S. Inc.
Jackson, TN Facility

Mr. Ahmed:

Gerdau AmeriSteel U.S. Inc. (Gerdau) submitted a construction permit application to modify the existing steel scrap shredder (ESRN 57-0189-01) and construct four (4) new sorting hubs at the Gerdau Jackson, TN facility on February 5, 2015. At your request, this letter documents how the proposed new sorting equipment are inherently designed to minimize the melting of scrap contaminants regulated by 40 CFR Part 63 Subpart YYYYYY (National Emission Standards For Hazardous Air Pollutants For Area Sources: Electric Arc Furnace Steelmaking Facilities or "NESHAP Subpart 5Y").

The proposed sorting hubs may process scrap that was shredded prior to the effective date of NESHAP Subpart 5Y and that is currently staged in the onsite landfill. A majority of the material recovered from the new sorting hubs will include non-ferrous products that will be shipped to customers, hence the title of Gerdau's project, "Non-Ferrous Separation System". A minor amount of ferrous material may be recovered through the proposed sorting hubs and if recovered, will be directed to the existing metal scrap pile for charging to the furnace.

NESHAP Subpart 5Y requires means to minimize chlorinated plastics, lead, and free organic liquids in metallic scrap charged to an EAF furnace. NESHAP Subpart 5Y also includes mercury requirements that regulate the purchase of motor vehicle scrap. [40 CFR §63.10685(a), (b)]

The proposed sorting hubs include specially-designed equipment that are engineered to sort, separate, and recover very specific types of non-ferrous materials [insulated copper wire, copper, zurik (primarily stainless steel), zorba (primarily aluminum), and nonferrous microfines]. Step 10 (the "first" step of the set of new

sorting hubs to receive landfill material) includes an eddy current separator equipped with a dual magnetic separator. Subsequent sorting hubs (Steps 11, 12/13, 15/16) will utilize a combination of magnetic and/or density separation techniques. Ferrous material will be collected by magnets that are inherent to the sorting process, which by design minimizes chlorinated plastics, lead, and mercury switches from collection with the ferrous stream, since those materials are not magnetic.

Furthermore, purchased motor vehicle scrap processed in the new sorting hubs will comply with NESHAP Subpart 5Y by coming from operators certified for removal of mercury switches. Scrap from the landfill is not purchased motor vehicle scrap after the compliance date of NESHAP Subpart 5Y and is therefore outside the requirements of being purchased from a certified vendor.

Should any further information be required, please do not hesitate to contact Will Ownby, Environmental Manager at (731) 423-5274.

Sincerely,



Ricardo Anawate
VP and General Manager

Cc: Will Ownby - Gerdau
Jeffrey H. Twaddle, P.E. - ERM

Certified Mail # - 7010 1870 0002 3231 0162



57-0189
TN. DIV. OF
AIR POLLUTION CONTROL

June 11, 2015

2015 JUN 16 PM 11: 15

Attn: Mr. Manir Ahmed
Tennessee Department of Environment and Conservation
Division of Air Pollution Control
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243

RECEIVED

Re: Documentation for Non-Ferrous Separation System Material Infeed
Construction Permit Application File
Gerdau AmeriSteel U.S. Inc.
Jackson, TN Facility

Mr. Ahmed:

Gerdau AmeriSteel U.S. Inc. (Gerdau) submitted a construction permit application to modify the existing steel scrap shredder (ESRN 57-0189-01) and construct four (4) new sorting hubs at the Gerdau Jackson, TN facility on February 5, 2015. At your request, this letter clarifies the infeed materials to the proposed new sorting equipment and associated compliance with 40 CFR Part 63 Subpart YYYYYY (National Emission Standards For Hazardous Air Pollutants For Area Sources: Electric Arc Furnace Steelmaking Facilities or "NESHAP Subpart 5Y").

The proposed new sorting hubs will receive feed material according to the following:

- Approximately 50% from the existing scrap steel shredder or other NESHAP Subpart 5Y-compliant providers (e.g., other Gerdau shredders or other scrap shredding operations); and
- Approximately 50% from onsite landfill materials.

The existing steel scrap shredder complies with the requirements of NESHAP Subpart 5Y (as outlined in Title V Permit No. 565713). Gerdau will specify and require that any material for non-ferrous recovery that is received or purchased from other providers be compliant with the requirements of NESHAP Subpart 5Y. Compliance with NESHAP Subpart 5Y with respect to the onsite landfill material is detailed in a previously submitted letter dated May 18, 2015.

Should any further information be required, please do not hesitate to contact Will Ownby, Environmental Manager at (731) 423-5274.

Sincerely,

A handwritten signature in dark ink, appearing to read "Ricardo Anawate", followed by a horizontal line.

Ricardo Anawate
VP and General Manager

Cc: Will Ownby – Gerdau
Jeffrey H. Twaddle, P.E. – ERM

Certified Mail #: 7010 1870 0002 3231 0254