

Fact Sheet



For Final Minor Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

This Fact Sheet serves to address the changes specific to this Minor Modification, and shall be considered a supplement to the Fact Sheet corresponding with the Title V operating permit issued on October 11, 2011.

Permit Number: **R30-02900001-2011 (Part 1 of 3)**
Application Received: **May 8, 2013**
Plant Identification Number: **03-54-029-00001**
Permittee: **ArcelorMittal Weirton LLC**
Mailing Address: **100 Pennsylvania Avenue, Weirton, WV 26062**

Permit Action Number: *MM01* Revised: *March 25, 2014*

Physical Location: Weirton, Hancock County, West Virginia
UTM Coordinates: 533.70 km Easting • 4474.50 km Northing • Zone 17
Directions: From US 22 take Exit 2 to WV-2 North to Downtown Weirton. Continue on WV-2 approximately 3 miles. Approaching the 10th traffic light, at Pennsylvania Avenue, turn right into the driveway of the Mill Administration Building.

Facility Description

ArcelorMittal Weirton LLC operates a steel finishing facility that includes a Strip Mill with steel pickling and cold rolling operations, Tin Mill with tempering and electrolytic plating (tin and chrome), Hydrogen Plant, and Boilers. Other operations at the facility include an emergency generator, storage tanks, wastewater treatment plants and support/maintenance shops.

For Title V purposes, the facility operations were divided into three parts: Part 1 includes the Boilers and emergency generator, Part 2 includes the Cold operations and hydrogen plant, and Part 3 included the Hot operations, which are permanently shutdown. This permit covers Part 1 of the facility - Boilers and emergency generator. This modification incorporates the changes from NSR Permit R13-3075, which authorizes the installation of five new natural-gas fired boilers while decommissioning the three existing boilers.

Emissions Summary

The following are the changes in emissions resulting from the new boilers allowed by R13-3075:

Pollutant	Emissions per Boiler		Annual Rate w/5 units (TPY)
	Hourly Rate (lb/hr)	Annual Rate (TPY)	
PM/PM ₁₀ /PM _{2.5} Filterable	0.19	0.83	4.15
PM Condensable Fraction	0.56	2.45	12.25
Total PM	0.74	3.24	16.2
Sulfur Dioxide (SO ₂)	0.06	0.26	1.3
Oxides of Nitrogen (NO _x)	3.64	15.94	79.7
Carbon Dioxide (CO)	3.69	16.16	80.8
Volatile Organic Compounds (VOCs)	0.54	2.37	11.85
Total Hazardous Air Pollutants (HAPs)	0.18	0.81	4.05
Carbon Dioxide (CO ₂)	11,752.94	51,477.88	257,389.40

The following table represents the change in potential emissions as a result of installing the new boilers and decommissioning the existing boilers:

Pollutant	Potential of Boilers 3,4, and 5 (TPY)	Potential from replacement Boilers (TPY)	Change in Potential Emissions Rate w/5 units (TPY)
PM/PM ₁₀ /PM _{2.5} Filterable	397.6	4.15	-393.5
PM Condensable Fraction	542.9	12.3	-530.6
Total PM	746.6	16.2	-730.4
Sulfur Dioxide (SO ₂)	11,351	1.3	-11,349.7
Oxides of Nitrogen (NO _x)	1,873	79.7	-1793.3
Carbon Dioxide (CO)	562	80.8	-481.2
Volatile Organic Compounds (VOCs)	37	11.9	-25.2
Total Hazardous Air Pollutants (HAPs)	16	4.1	-11.9

Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility maintains the potential to emit 498.61 tpy of CO, 577.25 tpy of NO_x, and 239.02 tpy of PM₁₀. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, over 10 tons per year of a single HAP, over 25 tons per year of aggregate HAPs, over 100,000 tons per year of carbon dioxide equivalent, and 100 tons per year of greenhouse gases on a mass basis, ArcelorMittal Weirton LLC is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	PM emission limits
	45CSR10	SO ₂ emission limits
	45CSR13	Construction Permits
	45CSR16	Performance Standards for New Stationary Sources
	45CSR30	Operating permit requirement
	45CSR34	Emissions Standards for HAPs
	40 CFR Part 60, Subpart Dc	NSPS for small, industrial boilers
	40 CFR Part 63, Subpart DDDDD	Industrial Boiler MACT
State Only:	None	

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R13-3075	August 13, 2013	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

This Title V minor modification incorporates the limitations and recordkeeping requirements authorized by NSR permit R13-3075. The following changes have been made:

- The equipment table was updated with the new emission sources.
- The R13-3075 emission sources were added to the heading for Section 4.0.
- Conditions 4.1.11. through 4.1.14. were added to incorporate emission limits, fuel consumption limits, control device requirements, and boiler decommissioning requirements from R13-3075.
- Conditions 4.4.2. through 4.4.5. were added to incorporate the recordkeeping requirement from R13-3075.
- Conditions 4.5.4. and 4.5.5. were added to incorporate the reporting requirements from R13-3075.

45CSR2 - The five new boilers are subject to PM emissions limits from Rule 2. In accordance with 45CSR§2A-3.1. the boilers are exempt from the periodic testing requirements of 45CSR§2A-5 and the monitoring requirements of 45CSR§2A-6 because the boilers combust only natural gas and because they have a design heat input of less than 100 mmBtu/hr. Compliance with the Rule 2 PM limits shall be demonstrated by recording the hours of operation and the amount of natural gas consumption in accordance with 45CSR§2A-7.1.a.1. (Condition 4.2.8. of the permit). Condition 4.1.11.d. requires each boiler to be fired with pipeline quality natural gas, which will demonstrate compliance with 45CSR§§2-3.1 and 4.1.b.

45CSR10 - The five new boilers are subject to SO₂ emissions limits from Rule 10. In accordance with 45CSR§10-10.3., the boilers are exempt from the testing, monitoring, recordkeeping, and reporting requirements of 45CSR§10-8 because the boilers combust only natural gas. Condition 4.1.11.d. requires each boiler to be fired with pipeline quality natural gas, which will demonstrate compliance with 45CSR§10-3.1.e.

40 CFR Part 60, Subpart Dc - The five new boilers are subject to 40 CFR Part 60, Subpart Dc. This NSPS standard does not establish any emission standard for these new units since they will only burn natural gas. The only applicable NSPS requirement is to record hours of operation and amount of natural gas consumed in accordance with 40CFR§60.48c(g)(2). This requirement is the same as the Rule 2 requirement and the two requirements have been streamlined in the permit as Condition 4.4.5.

Determination of 45CSR14 - Permits for Construction and Major Modification of Major Stationary Sources for the Prevention of Significant Deterioration (PSD) of Air Quality. ArcelorMittal LLC is a major source for CO, NO_x, PM/PM₁₀/PM_{2.5}, and CO_{2e} under PSD. The facility is also a major source for HAPs. The new boilers authorized by R13-3075 represent a "significant emission increase" in accordance with 45CSR§14-2.75 for PM₁₀, PM_{2.5} direct, NO_x, and CO_{2e}. The next step is to determine if the addition of the new boilers results in a "net significant emission increase" pursuant to 45CSR§§14-2.46 and 2.74.

ArcelorMittal LLC performed a netting analysis for PM₁₀/PM_{2.5}, NO_x, and CO_{2e}. 45CSR§14-2.8.b. defines "baseline actual emissions" for existing emissions units other than electric utility steam generating units as the average rate, in tons per year (tpy), at which the emissions unit actually emitted the pollutant during any consecutive 24-month period within the 10 year period immediately preceding either the date construction began or upon receipt of a complete permit application by the Secretary (May 29, 2013), whichever is earlier. The facility selected the baseline period of 2005-2006. Emission generated by Boilers 3, 4 and 5 during this time represent the baseline actual emission for the netting analysis.

These boilers discharged an average of 126.8 tpy of PM₁₀/PM_{2.5}, 505.7 tpy of NO_x and 297,830 tpy of CO_{2e} during the baseline period. These emissions are representing a decrease in emissions in this netting analysis because these boilers will be shut-down as a result of the project.

In addition, ArcelorMittal LLC reviewed the facility's activities to determine if any other increases or decreases occurred during the five years, 2008 to 2012, preceding the expected construction date of the project (contemporaneous period). ArcelorMittal LLC determined that the only changes in activities that resulted in either emission increases or decreases within the contemporaneous period were the shutdown of the Hot Strip Mill, HCL Plant, and scarfing operations. The following table summarized the netting analysis for this project.

Pollutant	New Potential from the New Boilers (tpy)	Baseline decreases from Boilers 3, 4, & 5 (tpy)	Other changes in the contemporaneous period (tpy)	Net Change (- decrease) (tpy)	Significance threshold (tpy)	Net Significant emission increase (yes/no)
PM ₁₀ /PM _{2.5} *	16.2	-126.8	-0.3	-110.9	15/10	No
NO _x	79.7	-505.7	-4.0	-430	40	No
CO _{2e}	257,919	-298,758	-4,871.8	-45,710.8	75,000	No

* - Includes both the condensable and filterable portions.

Determination of 45CSR19 - With regards to the National Ambient Air Quality Standards, Hancock County is classified as non-attainment for PM_{2.5}. The facility has the potential to emit nearly 1,080 tpy of PM_{2.5}, which means that the facility is classified as a major source of PM_{2.5} direct. Thus, it must be determined if this project will result in a "significant emissions increase" and a "significant net emissions increase" in accordance with

45CSR§19-3.4. The applicability test for Non-Attainment Permitting (45CSR19) is nearly the same as for PSD except the test is only conducted for the pollutant that the area is classified as non-attainment, which is PM_{2.5} and its precursors (SO₂ and NO_x for PM_{2.5}). This project would represent a significant increase of PM_{2.5} direct and NO_x. However, the shutdown of Boilers 3, 4, and 5 as part of this project would not result in a “significant net emission increase”. Therefore, this proposed project does not require a permit under PSD and/or Non-Attainment New Source Review.

40CFR Part 63, Subpart DDDDD - ArcelorMittal LLC is currently classified as a major source of HAPs, which means the facility has the potential to emit at least 10 tons per year of a single HAP or 25 tpy of total HAPs. Within the application, ArcelorMittal has not elected to determine if this project would change the facility's major source status for HAPs. Thus, the replacement boilers are subject to 40 CFR 63, Subpart DDDDD – National Emission Standard for Hazardous Air Pollutants (NESHAP) for Major Sources: Industrial Commercial, and Institutional Boilers and Process Heaters. This regulation establishes work practices as a means to comply with the emission standards (see Item 3 of Table 3 to Subpart DDDDD of Part 63). The applicable requirement would require an annual tune-up in accordance with 40 CFR §63.7540(a)(10) for each of the new boilers. The facility will also be required to conduct a one-time energy assessment in accordance with Item 4 of Table 3 of 40 CFR Part 63, Subpart DDDDD.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:
None.

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: N/A
Ending Date: N/A

Point of Contact

All written comments should be addressed to the following individual and office:

Bobbie Scroggie
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1225 • Fax: 304/926-0478
Bobbie.Scroggie@wv.gov

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments

As a result of company comments received on March 10, 2014: changed company name to ArcelorMittal Weirton LLC; Boiler MACT placeholder language was updated as "date specified in 40CFR§63.7495" (condition 4.1.10); removed recordkeeping in condition 4.1.11.c.v. because it was redundant with condition 4.4.4.; existing boilers only were listed in condition 4.1.13.