

Fact Sheet



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

Permit Number: **R30-03500049-2025**
Application Received: **January 24, 2024**
Plant Identification Number: **03-054-035-00049**
Permittee: **Armstrong World Industries, Inc.**
Facility Name: **Armstrong Millwood Plant**
Mailing Address: **P.O. Box 220, Millwood, WV 25262**

Physical Location: Millwood, Jackson County, West Virginia
UTM Coordinates: 427.2 km Easting • 4,307 km Northing • Zone 17
Directions: From US-33 E, turn left onto WV 68 S. Continue on WV 68 S for 0.4 miles. Turn right onto WV 2 S. Continue for approximately 6 miles. Turn right onto Jack Burlingame Road.

Facility Description

The Armstrong World Industries Millwood plant is a slag wool manufacturing facility covered under SIC Code 3296. It typically manufactures slag wool from silicomanganese slag. The plant receives the slag via truck or railcar, stores the slag in outdoor piles, and then transfers the slag to a belt conveyor via front-end loader. The slag is then transferred to a submerged Electric Arc Furnace (EAF) where the slag is melted using graphite electrodes. The molten slag is then transferred to one of two spinners which spin the molten slag into slag wool fibers. The wool fibers are then collected in one of two collection chambers, further processed into slag wool bales, and then shipped off site.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions ¹	Actual Emissions ²
Carbon Monoxide (CO)	241.54	75.02
Nitrogen Oxides (NO _x)	24.22	0.22
Particulate Matter (PM _{2.5})	95.10	16.84
Particulate Matter (PM ₁₀)	99.45	18.59
Total Particulate Matter (TSP)	111.19	47.79
Sulfur Dioxide (SO ₂)	245.10	53.24
Volatile Organic Compounds (VOC)	25.35	0.78

PM₁₀ is a component of TSP.

Hazardous Air Pollutants	Potential Emissions ¹	Actual Emissions ²
Manganese Compounds	9.27	5.57
Total HAPs excluding Mn	0.0	Not Reported

Some of the above HAPs may be counted as PM or VOCs.

¹ Potential emissions are from Table 1 of Attachment I in the renewal application, but have been modified to exclude the suggested changes in the application that could not be incorporated at this time because NSR permit R13-2864D must be revised first.

² Actual emissions are from the State and Local Emissions Inventory System (SLEIS) Summary Report Total Emissions by Source.

Title V Program Applicability Basis

This facility has the potential to emit 241.54 tpy of CO and 245.10 tpy of SO₂. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Armstrong World Industries, Inc. 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.

This facility has been found to be subject to the following applicable rules:

- | | | |
|--------------------|---------|---------------------------------------|
| Federal and State: | 45CSR6 | Open burning prohibited |
| | 45CSR7 | PM limits on manufacturing processes |
| | 45CSR10 | Emissions of sulfur dioxides |
| | 45CSR11 | Standby plans for emergency episodes. |
| | 45CSR13 | Construction permits |
| | 45CSR16 | New Source Performance Standards |

WV Code § 22-5-4 (a) (15) 45CSR30 45CSR34 40 C.F.R. Part 60 Subpart III 40 C.F.R. Part 61 40 C.F.R. Part 63 Subpart ZZZZ 40 C.F.R. Part 64 40 C.F.R. Part 82, Subpart F	The Secretary can request any pertinent information such as annual emission inventory reporting. Operating permit requirement Emission Standards for HAPs Stationary Compression Ignition Engines NSPS Asbestos inspection and removal RICE MACT Compliance Assurance Monitoring (CAM) Ozone depleting substances
State Only:	45CSR4 No objectionable odors

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>)
R13-2864D	September 23, 2019	

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 is the second renewal of the Title V Permit. There were no changes to the existing emission units which have control devices or the approved compliance assurance monitoring (CAM) plans. Therefore, there were no changes to CAM applicability or the existing CAM plans.

The following changes have occurred since the most recent Title V permit was issued:

Title V Permit Boilerplate changes:

- **Condition 2.1.3.** – This condition was updated to delete the word “such” which was removed from 45CSR30 effective March 31, 2023. The citation was changed from “45CSR§30-2.12” to “45CSR§30-2.39” because the definition of “Secretary” was renumbered from a previous version of 45CSR30.
- **Condition 2.11.4** – The citation was changed from “45CSR§30-2.39” to “45CSR§30-2.40” because it was renumbered from a previous version of 45CSR30.

- **Conditions 2.17., 3.5.7. and 3.5.8.a.1.** – These conditions were deleted and replaced with “Reserved” because the emergency provisions under 45CSR§30-5.7 were removed from 45CSR30 effective March 31, 2023.
- **Condition 2.22.1** – “45CSR38” was removed from the citation because this rule has been repealed.
- **Conditions 3.1.6. and 3.3.1.** – The citation was revised to refer to the current version of the WV Code.
- **Condition 3.3.1.b.** – This condition was updated to include the following additional language: “If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit shall be revised in accordance with 45CSR§30-6.4. or 45CSR§30-6.5 as applicable.”
- **Condition 3.5.3.** – This condition was updated to include the current EPA mailing address.
- **Condition 3.5.4.** – This condition was updated because the requirement to submit a certified emissions statement was removed from 45CSR30 effective March 31, 2023.
- **Condition 3.5.8.a.2.** – This condition was updated to replace the word “telefax” with “email” according to the change in 45CSR30 effective March 31, 2023.

Updated Permit Language Due to Rule/Regulation Language Changes:

- **Conditions 6.1.5.a.3., 6.1.6., 6.1.6.2. and 6.1.6.3.** – These conditions were amended to match the current version of 40 CFR 60 Subpart IIII.

Changes requested in the permit renewal application:

- **Condition 4.5.4.(1)** – The condition previously included was from a CAM boilerplate that was developed for a different facility and is not applicable to the Armstrong Millwood Plant, so the language was changed to match the language from 40 C.F.R. §60.90(a)(1).

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

- a. **40 CFR 60 Subpart CC – Standards of Performance for Glass Manufacturing Plants.** The Millwood plant does not include glass melting furnaces, which are the affected facility to which this subpart applies (40 C.F.R. §60.290(a)). Therefore, this subpart is not applicable to the facility.
- b. **40 CFR 60 Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants.** Slag does not meet the definition of nonmetallic mineral. In addition, the permittee installed a small propane-fired sand dryer (EUID 18S) permitted under R13-2864C. The source is used for drying batches (2,000 lb/hr) of sand used to collect tapped off metal material from the bottom of the EAF. The metal is tapped off onto a sand bed which must be dry due to its contact with molten metal. The sand drying operation is not subject to the Nonmetallic Mineral Processing Plants NSPS (Subpart OOO) because dryers are not an “affected facility” as listed by the regulation.
- c. **40 CFR 60 Subpart UUU – Standards of Performance for Calciners and Dryers in Mineral Industries.** The Electric Arc Furnace does not meet the definition of a calciner or dryer in §60.731 and is therefore not subject to this subpart. In addition, the permittee installed a small propane-fired sand dryer (EUID 18S) permitted under R13-2864C. The source is used for drying batches (2,000 lb/hr) of sand used to collect tapped off metal material from the bottom of the EAF. The metal is tapped off onto a sand bed which must be dry due to its contact with molten metal. The sand drying operation is not a Mineral processing plant as defined in §60.731 and is therefore not subject to the Calciners and Dryers in Mineral Industries NSPS (Subpart UUU) because sand and other regulated materials do not constitute

- the majority (>50%) of the materials processed at the Millwood facility. The vast majority of materials handled consist of slag (raw material) and slag wool (product) that are not listed materials.
- d. **40 CFR 63 Subpart DDD – National Emission Standards for Hazardous Air Pollutants for Mineral Wool Production.** The Millwood plant is not classified as a major HAP source because potential HAP emissions are < 10/25 tpy for any single/combination of HAPs. In addition, the EAF is not classified as a “cupola” and the plant does not operate a mineral wool “curing oven”. For these reasons, the “mineral wool production NESHAP” at 40 CFR 63 Subpart DDD is not applicable.
 - e. **40 CFR 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.** The Millwood plant does not operate boilers and is therefore not subject to the Subpart JJJJJJ Area Source ICI Boiler NESHAP.
 - f. **45CSR17 - WV Fugitive emissions from material handling.** Per 45CSR§7-6.1. if sources are subject to 45CSR7 they are exempt from the requirements of this Rule.
 - g. **45CSR19 and 45CSR21 WV NSR permitting for non-attainment areas and VOC Regulations.** The Millwood plant is not located in affected areas.
 - h. **45CSR27 - WV Emissions of Toxic Air Pollutants.** The Millwood plant does not operate any “chemical processing units” and does not use listed chemicals.

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: December 6, 2024

Ending Date: January 6, 2025

Point of Contact

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

Dan Roberts
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
304/926-0499 ext. 41902
Daniel.p.roberts@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 (Statement of Basis)

No comments were received from EPA or the public.

In an email received on December 16, 2024, the company submitted comments which requested to remove the temporary propane fired sand dryer (EU-18S), update the capacity of diesel storage tank #2 (EU - 13S) from 500 gallons to 1,000 gallons to correct a typo (hourly and annual throughputs will not change) and modify the definition of water truck to include an equivalent alternative such as an ATV-type vehicle equipped with a spray rig. These changes were originally proposed in the renewal application, but could not be included at this time because their NSR Rule 13 permit R13-2864D has not been modified. This was explained to the company and consultant. In another email received on December 16, 2024, the consultant submitted an application for an NSR Class I administrative update/Title V minor modification which will address these comments.