

West Virginia Department of Environmental Protection

Division of Air Quality

*Earl Ray Tomblin
Governor*

*Randy C. Huffman
Cabinet Secretary*

Permit to Modify



R13-2864A

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45 C.S.R. 13 — Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the facility listed below is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:

Armstrong World Industries, Inc.

Millwood Facility

035-00049

A blue ink signature of William F. Durham, written in a cursive style.

*William F. Durham
Director*

Issued: August 21, 2015

This permit supersedes and replaces R13-2864A.

Facility Location: Millwood, Jackson County, West Virginia
Mailing Address: 141 Sensenich Drive
Millwood, WV 25262
Facility Description: Slag Wool Manufacturing Facility
NAICS Codes: 327993
UTM Coordinates: 427.2 km Easting • 4,307 km Northing • Zone 17
Permit Type: Modification
Description of Change:

Application to increase the allowable CO emissions from the EAF, increase storage pile size, add CO and SO₂ CEMS and decrease the operating hours from the emergency generator.

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

The source is subject to 45CSR30. Changes authorized by this permit must also be incorporated into the facility's Title V operating permit. Commencement of the operations authorized by this permit shall be determined by the appropriate timing limitations associated with Title V permit revisions per 45CSR30.

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1.0 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
1S	1-2E	Raw Material Transfer and EAF	2011	40,000 lb/hr	1C & 2C
3S	3-4E	Spinner Collection Chamber #1	2011	34,500 lb/hr	3C
4S	3-4E	Spinner Collection Chamber #2	2011		4C
5S	5E	Housekeeping Vacuum System	2011	1,000 cfm	5C
6S	6E	Hydrated Lime Storage Silo	2011	3,300 cf	6C
7S	7E	Backup Generator	2011	565 kW	N
8S	Fugitive	Haulroads	2010	8,880 VMT/yr	WS
9S	Fugitive	Slag Handling and Storage	2011	175,000 tpy	N
10S	10E	Cooling Tower #1	2011	1,500 GPM	N
11S	Fugitive	Railcar Unloading	2011	300 TPH	N
12S	Fugitive	Diesel Storage Tank #1	2011	500 Gal	N
13S	Fugitive	Diesel Storage Tank #2	2011	500 Gal	N
14S	Fugitive	Glycol Additive Storage Tank	2011	10,000 Gal	N
15S	8E	Slag Wool Processing Line #1	2011	28,000 lb/hr	7C
16S	8E	Slag Wool Processing Line #2	2011		7C
17S	17E	Cooling Tower #2	2011	800 GPM	N

2.0. General Conditions

2.1. Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45 CSR § 30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.2. Acronyms

CAAA	Clean Air Act Amendments	NO_x	Nitrogen Oxides
CBI	Confidential Business Information	NSPS	New Source Performance Standards
CEM	Continuous Emission Monitor	PM	Particulate Matter
CES	Certified Emission Statement	PM_{2.5}	Particulate Matter less than 2.5µm in diameter
C.F.R. or CFR	Code of Federal Regulations	PM₁₀	Particulate Matter less than 10µm in diameter
CO	Carbon Monoxide	Ppb	Pounds per Batch
C.S.R. or CSR	Codes of State Rules	pph	Pounds per Hour
DAQ	Division of Air Quality	ppm	Parts per Million
DEP	Department of Environmental Protection	Ppmv or ppmv	Parts per million by volume
dscm	Dry Standard Cubic Meter	PSD	Prevention of Significant Deterioration
FOIA	Freedom of Information Act	psi	Pounds per Square Inch
HAP	Hazardous Air Pollutant	SIC	Standard Industrial Classification
HON	Hazardous Organic NESHAP	SIP	State Implementation Plan
HP	Horsepower	SO₂	Sulfur Dioxide
lbs/hr	Pounds per Hour	TAP	Toxic Air Pollutant
LDAR	Leak Detection and Repair	TPY	Tons per Year
M	Thousand	TRS	Total Reduced Sulfur
MACT	Maximum Achievable Control Technology	TSP	Total Suspended Particulate
MDHI	Maximum Design Heat Input	USEPA	United States Environmental Protection Agency
MM	Million	UTM	Universal Transverse Mercator
MMBtu/hr or mmbtu/hr	Million British Thermal Units per Hour	VEE	Visual Emissions Evaluation
MMCF/hr or mmcf/hr	Million Cubic Feet per Hour	VOC	Volatile Organic Compounds
NA	Not Applicable	VOL	Volatile Organic Liquids
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		

2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Law W.Va. Code §§22-5-1 et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

2.4. Term and Renewal

- 2.4.1. This permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any applicable legislative rule.

2.5. Duty to Comply

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2864, R13-2864A, R13-2864B and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;
[45CSR§§13-5.11 and 13-10.3]
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses and/or approvals from other agencies; i.e., local, state and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

2.7. Duty to Supplement and Correct Information

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

2.8. Administrative Update

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-4]

2.9. Permit Modification

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-5.4.]

2.10. Major Permit Modification

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.

[45CSR§13-5.1]

2.11. Inspection and Entry

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

2.12. Emergency

- 2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission

limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

- 2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are not met.
- 2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and,
 - d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emission, and corrective actions taken.
- 2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- 2.12.5. The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

2.13. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

2.14. Suspension of Activities

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

2.15. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege.

2.16. Severability

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

2.17. Transferability

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1]

2.18. Notification Requirements

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

2.19. Credible Evidence

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40CFR§61.145(b) and 45CSR§34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.
[45CSR§13-10.5.]
- 3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45 C.S.R. 11.
[45CSR§11-5.2.]

3.2. Monitoring Requirements

[Reserved]

3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in

this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
 1. The permit or rule evaluated, with the citation number and language;
 2. The result of the test for each permit or rule condition; and,
 3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13]

3.4. Recordkeeping Requirements

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.
- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§4. *State-Enforceable only.*]

3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W. Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304-2345

If to the USEPA:

Associate Director
Office of Air Enforcement and Compliance Assistance
(3AP20)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

3.5.4. Operating Fee.

3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, the permittee shall submit a Certified Emissions Statement (CES) and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

4.0. Source-Specific Requirements

4.1. Limitations and Standards

4.1.1. Emissions from the facility shall not exceed the limitations set forth in Tables 4.1.1.1 and 4.1.1.2:

Table 4.1.1.1

Source	PM		PM ₁₀ ¹		NO _x		VOC		SO ₂		CO	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
1S	2.60	11.39	2.60	11.39	5.00	21.90	5.00	21.90	55.94	245.00	55.00 ²	240.90
3S	7.09	31.06	7.09	31.06	--	--	0.04	0.17	--	--	--	--
4S	7.09	31.06	7.09	31.06	--	--	0.04	0.17	--	--	--	--
5S	0.34	1.50	0.34	1.50	--	--	--	--	--	--	--	--
6S	0.51	2.25	0.51	2.25	--	--	--	--	--	--	--	--
7S	0.25	0.07	0.25	0.07	6.47	1.62	0.20	0.05	0.02	0.01	4.36	1.09
9S	--	1.98	--	0.97	--	--	--	--	--	--	--	--
10S	0.77	3.37	0.77	3.37	--	--	--	--	--	--	--	--
11S	0.02	0.10	0.01	0.05	--	--	--	--	--	--	--	--
12S	--	--	--	--	--	--	0.01	0.04	--	--	--	--
13S	--	--	--	--	--	--	0.01	0.04	--	--	--	--
14S	--	--	--	--	--	--	0.01	0.04	--	--	--	--
15S	2.39	10.47	2.39	10.47	--	--	--	--	--	--	--	--
16S												
17S	0.41	1.80	0.41	1.80	--	--	--	--	--	--	--	--
Total	21.47	95.05	21.46	93.99	11.47	23.52	5.31	22.41	55.96	245.01	59.36	241.99

¹All PM₁₀ is assumed to be PM_{2.5} and all PM, PM₁₀, PM_{2.5} emission limits include both filterable and condensable particulate matter .

²Hourly CO emission limits from the EAF are 55 pounds per hour based on a rolling 30 day average and 100 pounds per hour based on a rolling 24 hour average.

Table 4.1.1.2

Source	Mn		VOC HAP		Total HAP	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
1S	0.28	1.25	--	--	0.28	1.25
3S	0.78	3.40	--	--	0.78	3.40
4S	0.78	3.40	--	--	0.78	3.40
5S	0.04	0.16	--	--	0.04	0.16
6S	--	--	--	--	--	--
7S	--	--	0.01	0.01	0.01	0.01
9S	0.02	0.22	--	--	0.02	0.22
10S	--	--	--	--	--	--
11S	0.01	0.01	--	--	0.01	0.01
12S	--	--	0.01	0.04	0.01	0.04
13S	--	--	0.01	0.04	0.01	0.04
14S	--	--	--	--	--	--
15S	0.26	1.15	--	--	0.26	1.15
16S						
17S	--	--	--	--	--	--
Total	2.17	9.59	0.03	0.09	2.20	9.68

- 4.1.2 The total annual SO₂ emissions from the Submerged Electric Arc Furnace (1S) shall not exceed 245 tons per year based on a rolling 12 month total basis.
- 4.1.3 The Furnace Dry Scrubber (1C) shall be designed, installed, operated and maintained so as to ensure compliance with the emission limits of 4.1.1. Operation of the scrubber is only *required* when necessary to meet the emission limits of 4.1.1.
- 4.1.4 For the purpose of complying with the PM/PM₁₀/PM_{2.5} emission limits of condition 4.1.1 of this permit, all of the dust collectors shall be operated according to the following requirements:
- 4.1.4.1 Withing 180 days of initial startup, the permittee shall determine the optimal ranges for the pressure drop across baghouses 2C, 3C, 4C and 7C. The permittee shall maintain on site, and update as necessary, a certified report listing the operating ranges.
- 4.1.5 Manganese content of the slag entering the furnace shall not exceed 10.95% (equivalent to 14.14% MnO).

- 4.1.6 Fugitive particulate emissions resulting from use of haulroads and mobile work areas shall be minimized by the following:
- a. The permittee shall maintain a water truck on site and in good operating condition, and shall utilize same to apply a either water or a mixture of water and an environmentally acceptable dust control additive, hereinafter referred to as solution, as often as is necessary in order to minimize the atmospheric entrainment of fugitive particulate emissions that may be generated from unpaved haulroads and other unpaved work areas where mobile equipment is used. The spraybar shall be equipped with commercially available spray nozzles, of sufficient size and number, so as to provide adequate coverage to the area being treated.

The pump delivering the solution, shall be of sufficient size and capacity so as to be capable of delivering to the spray nozzle(s) an adequate quantity of solution, and at a sufficient pressure, so as to assure that the treatment process will minimize the atmospheric entrainment of fugitive particulate emissions generated from the unpaved haulroads and work areas where mobile equipment is used.
 - b. All unpaved haulroads, access roads, stockpile and work areas shall be kept clean and in good condition by replacing base material and/or grading as required.
 - c. If tracking of solids by vehicular traffic from access and/or haulroads onto any public road or highway occurs and generates or has the potential to generate fugitive particulate emissions, the registrant shall properly operate and maintain an underbody truck wash, rumble strips or employ other suitable measures to maintain effective fugitive dust control of the premises and minimize the emission of particulate matter.
- 4.1.7 The permittee shall ensure that the water trucks and/or water sprays are properly equipped with winterization systems capable of operating in a manner such that all such fugitive dust control systems remain effective and functional, to the maximum extent practicable, during winter months and cold weather. At all times, including periods of cold weather, the registrant shall comply with the water trucks and/or water sprays requirements of this permit
- 4.1.8 Total slag throughput to the EAF shall not exceed 175,200 tons per year on a rolling 12 month total.
- 4.1.9 The permittee shall comply with all applicable requirements of 45CSR7 including but not limited to the following:
- 4.1.9.1 Opacity from any process source operation shall not exceed 20% except for opacity which is less than 40% for a period or periods aggregating no more than 5 minutes in any 60 minute period. [45CSR§7-3.1 &45CSR§7-3.2]
 - 4.1.9.2 No person shall cause, suffer, allow, or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A. [45CSR§7-4.1.]

4.1.9.3 No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.
[45CSR§7-5.1.]

4.1.9.4 The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment.
[45CSR§7-5.2.]

4.1.10 The permittee shall comply with all applicable requirements of 45CSR10 including but not limited to the following:

4.1.10.1 The in stack SO₂ concentration from the EAF shall not exceed 2,000 ppm.
[45CSR§10-4.1.]

4.1.11 The permittee shall comply with all applicable requirements of 40 CFR 60 Subpart IIII (backup generator 7S) including but not limited to the following:

4.1.11.1 Emissions from the Backup Generator (7S) shall not exceed the following:

NO _x +NMHC (g/hp-hr)	CO (g/hp-hr)	PM (g/hp-hr)
6.4	3.5	0.20

[40 CFR§60-4204(b)]

4.1.11.2 The permittee shall operate and maintain the backup generator (7S) according to the manufacturers written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer over the entire life of the engine.
[40 CFR§60-4206]

4.1.11.3 The nonroad diesel fuel that is used in the backup generator must have a sulfur content less than 15 parts per million.
[40 CFR§60-4207(b)]

4.1.12. The total annual Mn emissions from the facility shall not exceed 9.6 tons per year based on a rolling 12 month total basis.

4.1.13. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit

or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR§13-5.11.]

4.2. Monitoring Requirements

- 4.2.1. The permittee shall install, maintain, and operate all monitoring equipment required by this permit in accordance with all manufacturers recommendations concerning maintenance and performance.
- 4.2.2. The permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source (stacks, conveyors, crushers, silos, bins, and screens) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions.

If visible emissions are present at a source(s) for three (3) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check. Method 9 checks shall be performed on the source for at least six (6) minutes. A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

- 4.2.3. The permittee shall install, maintain and operate instrumentation to continuously monitor and record at least once per operating day the control device parameters (1C, 2C, 3C, 4C and 7C) as determined by conditions 4.1.3 and 4.1.4 of this permit at all times that the emission source(s) is/are in operation.
- 4.2.4. A continuous emission monitoring system (CEMS) shall be installed, operated, and maintained to measure the emissions of SO₂, from the EAF exhaust stack. The CEMS shall be designed, installed, operated and maintained compliance with the USEPA Part 60, Appendix B, Performance Specification 2 as appropriate. and Performance Specification 4, 4a or 4b (CO) as appropriate.
- 4.2.5. For the purposes of demonstrating compliance with the sulfur content limit in 4.1.11.3 of this permit, analytical testing results showing sulfur content shall be obtained from the fuel supplier. Alternatively, the permittee may obtain a fuel sample of each shipment and perform analytical testing to determine the sulfur content.

- 4.2.6 A continuous emission monitoring system (CEMS) shall be installed, operated, and maintained to measure the emissions of CO, from the EAF exhaust stack. The CEMS shall be designed, installed, operated and maintained compliance with the USEPA Part 60, Appendix B, Performance Specification 4, 4a or 4b as appropriate.
- 4.2.7 To show compliance with the SO₂ limit in condition 4.1.2 of this permit, monthly SO₂ emissions from the submerged electric arc furnace shall be calculated (using SO₂ CEMS) by the 15th date of the subsequent month. A twelve month running total of emissions shall be maintained to verify compliance with the annual emission limitation. Each month a new twelve month total shall be calculated using the previous twelve months of data.
- 4.2.8 The permittee shall maintain monthly records of slag wool production.
- 4.2.9 In order to determine compliance with conditions 4.1.1.2 and 4.1.5 of this permit, the permittee shall obtain representative samples from each shipment of slag from each supplier for the first week of operation (i.e. one sample taken from the total slag delivered during the day from each supplier for 1 week) to be analyzed for the Manganese content (percent Manganese by weight). The manganese content from each type of slag shall be averaged for the week in order to determine a baseline manganese content for that suppliers slag. After the first week of samples, the permittee shall continue to collect the weeks worth of samples (i.e. one sample taken from the total slag delivered during the day from each supplier for 1 week) at least once per month to either confirm the existing or re-establish a new baseline Mn level for that supplier. If the permittee adds a new slag supplier, the permittee shall collect samples for each shipment for one week in order to establish the baseline Mn content for that supplier.
- If the baseline Mn content of the slag from any supplier exceeds the Mn level permitted in condition 4.1.5 of this permit, Armstrong shall maintain a record documenting, any time that specific slag is used in the furnace, that the Mn content of the slag blend entering the furnace does not exceed the Mn level permitted in Condition 4.1.5 of this permit.
- 4.2.10 To show compliance with the CO limit in condition 4.1.1 of this permit, monthly CO emissions from the submerged electric arc furnace shall be calculated (using CO CEMS) by the 15th date of the subsequent month. A twelve month running total of emissions shall be maintained to verify compliance with the annual emission limitation. Each month a new twelve month total shall be calculated using the previous twelve months of data.
- 4.2.11 The permittee shall maintain monthly records of slag throughput to the EAF.
- 4.2.12 To show compliance with the Mn emission limit in condition 4.1.12 of this permit, monthly Mn emissions from the facility shall be calculated (mass balance) by the 15th date of the subsequent month. A twelve month running total of emissions shall be maintained to verify compliance with the annual emission limitation. Each month a new twelve month total shall be calculated using the previous twelve months of data.

4.3. Testing Requirements

4.3.1. Within 90 days of reaching nominal production capacity but not later than 180 days from initial startup of the first module, the permittee shall complete the following performance testing:

4.3.1.1 The permittee shall perform or have performed EPA approved stack tests to determine emissions of NO_x, VOCs, PM and PM₁₀ from the submerged electric arc furnace.

4.3.1.2 The permittee shall perform or have performed EPA approved stack tests to determine emissions of PM and PM₁₀ from one of the spinner collection chambers.

4.3.1.3 The permittee shall perform or have performed EPA approved stack tests to determine emissions of Manganese from one of the spinner collection chambers and the submerged electric arc furnace.

4.3.2 After the testing required by 4.3.1 of this permit is completed, ongoing compliance shall be demonstrated by repeating the above testing according to the following schedule:

Test	Test Results	Testing Frequency
Initial	< 10% of limits	Upon Directors Request
Initial	Between 10% and 50% of limits	Once/5 years
Initial	Between 50% and 90% limits	Once/3 years
Initial	≥90% of limits	Annual
Annual	After two successive tests indicate emission rates ≤50% of limits	Once/5 years
Annual	After two successive tests indicate emission rates <90% of limits	Once/3 years
Annual	≥90% of limits	Annual
Once/3 years	After two successive tests indicate emission rates ≤50% of limits	Once/5 years
Once/3 years	After two successive tests indicate emission rates <90% of limits	Once/3 years
Once/3 years	≥90% of limits	Annual
Once/5 years	After two successive tests indicate emission rates < 10% of limits	Upon Directors Request
Once/5 years	≤50% of limits	Once/5 years
Once/5 years	Between 50% and 90% of limits	Once/3 years
Once/5 years	≥90% of limits	Annual

4.3.3 The permittee shall comply with all applicable testing requirements of 40 CFR 60 Subpart IIII.

4.4. Recordkeeping Requirements

- 4.4.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:
- a. The date, place as defined in this permit and time of sampling or measurements;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of the analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.
- 4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
- 4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:
- a. The equipment involved.
 - b. Steps taken to minimize emissions during the event.
 - c. The duration of the event.
 - d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
 - f. Steps taken to correct the malfunction.
 - g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 4.4.4. In order to determine compliance with condition 4.1.5 of this permit, the permittee shall keep monthly records of the Manganese content of the slag. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.

- 4.4.5 In order to determine compliance with condition 4.2.8 of this permit, the permittee shall maintain monthly records of slag wool production from the facility. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.
- 4.4.6 In order to demonstrate compliance with the requirements of 4.2.2 of this permit, records of the Method 22 testing and any necessary Method 9 testing shall be retained on site by the permittee for at least five (5) years. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.
- 4.4.7 In order to determine compliance with the requirements of conditions 4.1.11.3 and 4.2.5 of this permit, the permittee shall maintain records of the fuel oil sulfur content. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.
- 4.4.8 In order to determine compliance with the requirements of condition 4.1.4 of this permit, the permittee shall maintain daily records of the pressure drop across each baghouse. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.
- 4.4.9 In order to determine compliance with condition 4.2.11 of this permit, the permittee shall maintain monthly records of slag throughput to the EAF. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.

4.5. Reporting Requirements

- 4.5.1 Any violations of the allowable visible emission requirement for any emission source discovered during testing must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
- 4.5.2 With regard to testing required by section 4.3 of this permit, results shall be submitted to the Director no more than 60 days after the date the testing takes place.
- 4.5.3 The permittee shall comply with all applicable reporting requirements of 45CSR7, 45CSR10, 45CSR13 and 40 CFR 60 Subpart IIII.

CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached _____, representing the period beginning _____ and ending _____, and any supporting documents appended hereto, is true, accurate, and complete.

Signature¹
(please use blue ink)

Responsible Official or Authorized Representative

Date

Name and Title
(please print or type)

Name

Title

Telephone No. _____

Fax No. _____

¹ This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
 - (I) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
 - (ii) the delegation of authority to such representative is approved in advance by the Director;
- b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of USEPA); or
- d. The designated representative delegated with such authority and approved in advance by the Director.