

STATEMENT OF BASIS

Title V Air Operation Permit Revision
Permit No. 0310157-023-AV

APPLICANT

The applicant for this project is CMC Steel Florida. The applicant's responsible official and mailing address are: Steven Hughes, Director of Operations, CMC Steel US, LLC, CMC Steel Florida, 16770 Rebar Road, Jacksonville, Florida 32234.

FACILITY DESCRIPTION

The applicant operates the existing CMC Steel Florida, which is located in Duval County at 16770 Rebar Road, Jacksonville, Florida.

This facility consists of a scrap steel recycling operation which produces steel reinforcing bars and rods. Major components of this facility include: an electric arc furnace (EAF) with a maximum hourly production rate of 160 tons/hour of liquid steel; a continuous caster with a physical capacity between 110 – 160 tons/hour dependent on grade and size of product; a Billet Reheat Furnace (BRF); rolling mill, rod mill; slag handling and storage operations; an electric powered Scrap Metal and Automobile Shredder; and seven emergency diesel engines. The production of steel is a series of batch processes including charging, melting, refining, slagging, tapping, further refining and casting.

The EAF is controlled by a 1,000,000 actual cubic feet per minute (acfm) baghouse equipped with a bag leak detection system. A refined direct-shell evacuation control (DEC) system maintains negative pressure within the EAF above the slag or metal and ducts emissions to the control device.

The EAF processes scrap steel in the melt shop building. The EAF uses electric arcs from carbon electrodes to heat the charge materials (the scrap steel and other materials comprising proprietary recipes) to create molten steel. Slag, which consists of impurities, floats to the top of the molten steel. CMC Steel Florida separates the slag from the molten steel by pouring the floating slag off into a pit below the furnace. The molten steel is then transferred in a preheated ladle to a four-strand continuous caster for the formation of billets, an intermediate product. The melt shop building, including the continuous caster, is vented to the melt shop emissions control system (Baghouse No. 5). Collectively, the operations are included in Melt Shop, Electric Arc Furnace (EU 008) and Continuous Caster. Following the Melt Shop, steel billets are then reheated via the natural gas-fired Billet Reheat Furnace (BRF) and rolled into steel reinforcing bar and rod products at the rolling mill.

This facility also includes miscellaneous unregulated/insignificant emissions units and/or activities.

REGULATED EMISSIONS UNIT IDENTIFICATION NUMBERS AND DESCRIPTIONS

EU No.	Brief Description
<i>Regulated Emissions Units</i>	
002	Billet Reheat Furnace
008	Melt Shop, Electric Arc Furnace and Continuous Caster
012	201 BHP Cummins Emergency Diesel Engine (150 KW)
013	134 BHP Cummins Emergency Diesel Engine (100 KW)
014	1341 BHP Cummins Emergency Diesel Engine (1000 KW)
015	155 BHP Cummins Emergency Diesel Engine
016	402 BHP Caterpillar Emergency Diesel Engine (300KW)
017	335 BHP Caterpillar Emergency Diesel Engine (250 KW)
018	Scrap Metal and Automobile Shredder
020	225 BHP Perkins Emergency Diesel Engine (168 KW)

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APPLICABLE REGULATIONS

Based on the Title V air operation permit revision application received on January 16, 2024, this facility is not a major source of hazardous air pollutants (HAP). The existing facility is a prevention of significant deterioration (PSD) major source of air pollutants in accordance with Rule 62-212.400, F.A.C. A summary of applicable regulations is shown in the following table:

Regulation	EU No(s).
<i>Federal Rule Citations</i>	
40 CFR 60, Subpart A, NSPS General Provisions	008, 012-014
40 CFR 60, Subpart AAa, Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983	008
40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	012-014, 020
40 CFR 63, Subpart A, NESHAP General Provisions	008, 012, 013, <u>014</u> , 016, 017, 020
40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	012-013, <u>014</u> , 016, 017, 020
40 CFR 63, Subpart YYYYY, National Emissions Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities	008
40 CFR Part 64, Compliance Assurance Monitoring (CAM)	008
<i>State Rule Citations</i>	
Rule 62-204, F.A.C., General Provisions	All
Rule 62-210, F.A.C., Stationary Sources – General Requirements	All
Rule 62-212, F.A.C., Stationary Sources – Preconstruction Review (BACT)	002, 008
Rule 62-213, F.A.C., Operation Permits for Major Source of Air Pollution	All
Rule 62-296, F.A.C., Stationary Sources – Emission Standards	All
Rule 62-297, F.A.C., Stationary Sources – Emissions Monitoring	All
<i>City of Jacksonville Rule Citations</i>	
City of Jacksonville Ordinance Code, Title X, Chapter 360 [Environmental Regulation], Chapter 362 [Air and Water Pollution], Chapter 376 [Odor Control], JEPB Rule 1 [Final Rules with Respect to Organization, Procedure, and Practice]; JEPB Rule 2, Parts I through VII, and Parts IX through XIV	All

PROJECT DESCRIPTION

The purpose of this permitting project is to revise the existing Title V permit No. 0310157-021-AV, for the above referenced facility. The applicant applied on January 16, 2025, to the Department for a Title V air operation permit revision. This revision, permit No. 0310157-023-AV, incorporates permit No. 0310157-020-AC, which authorized the replacement of the tundish associated with the Melt Shop, Electric Arc Furnace, and Continuous Caster (EU008). The facility also requests that the actual emissions reporting requirement be clarified. Additionally, the facility requests that EU015, 155 BHP Cummins Emergency Disel Engine be removed from the Title V permit, as the engine is retired and no longer required to be listed in the permit.

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Application for a Title V Air Operation Permit Revision received **January 16, 2025**

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PRIMARY REGULATORY REQUIREMENTS

Standard Industrial Classification (SIC) Code: 3312 – Blast Furnaces and Steel Mills.

North American Industry Classification System (NAICS): 331110 – Iron and Steel Mills and Ferroalloy Manufacturing.

HAP: The facility is not identified as a major source of hazardous air pollutants (HAP).

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is a Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility operates units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60.

NESHAP: The facility operates units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

CAM: Compliance Assurance Monitoring (CAM) applies to emissions unit 008 for the controlled emissions of particulate matter. Emissions Unit 008 is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under 40 CFR 64.2(b)(1); the unit uses a control device to achieve compliance with any such emission limitation or standard; and the unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source. For purposes of this paragraph, “potential pre-control device emissions” shall have the same meaning as “potential to emit,” as defined in 40 CFR 64.1, except that emission reductions achieved by the applicable control device shall not be taken into account.

PROJECT REVIEW

The purpose of this project is to incorporate air construction Permit No. 0310157-020-AC for the above referenced facility. This project also clarifies the actual emissions reporting requirements. Section 3, Condition 5 of permit No. 0310157-020-AC requires that CMC submit an actual emissions report for carbon monoxide emissions from the BRF and Melt Shop, EAF, and Continuous Caster for the first full calendar year (CY) of operation with the replaced tundish and the following four calendar years. The first full calendar year of operation using the replaced tundish was CY 2024; therefore, the facility will submit actual emissions reports indicating carbon monoxide emissions from emission unit (EU) 002 and EU008 for calendar years 2024-2028 within 60 days after the end of each calendar year. This project also removes EU 015, 155 BHP Cummins Emergency Diesel Engine from the Title V permit, as the engine is retired and no longer required to be listed in the permit. In addition, minor revisions to rule language were made to reflect current rule language.

Changes to the permit made as part of this revision are shown in ~~strike through~~ format for deletions and in double underline format for additions. For ease of identification, all changes have also been **highlighted in yellow** within the permit document. The revisions shown below are the only portions of the permit that are open for public comment or challenge. Comments received related to the remainder of the permit will not be addressed during this permitting action.

The revised permit includes the following changes.

1. Changes throughout the Title V air operation permit are based on the Department’s updated formats for a Title V air operation permit.
2. Minor changes in language throughout the permit was revised for clarity.

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3. Removed Emissions Unit 015 (155 BHP Caterpillar Diesel Engine).

Section I. Facility Information

Subsection B. Summary of Emissions Units

4. Removed Emissions Unit 015 (155 BHP Caterpillar Diesel Engine).

Section III. Emission Units and Specific Conditions

Subsection B. Melt Shop, Electric Arc Furnace (EAF) and Continuous Caster

5. Updated the facility description.
6. Updated the applicable requirements pursuant to 40 CFR 60, Subpart AAa, Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarbonization Vessels Constructed After August 17, 1983, and On or Before May 16, 2022.
7. Added Specific Condition B.45 (Actual Emissions Reporting).

Subsection C. Emissions Units 012, 013, and 020

8. Updated the applicable requirements pursuant to 40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.
9. Added Specific Condition C.14 (Electronic annual report submittal beginning On February 26, 2025) pursuant to 40 CFR 60.4214(g).

Subsection D. Emissions Unit 014

10. Updated the applicable requirements pursuant to 40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.
11. Added Specific Condition D.13 (Electronic annual report submittal beginning On February 26, 2025) pursuant to 40 CFR 60.4214(g).

Subsection E. Emissions Units ~~015~~, 016 & 017

12. Removed Emissions Unit 015 (155 BHP Caterpillar Diesel Engine) from the Title V permit at the request of the facility. The facility states in Application No. 0310157-023-AV that the engine is retired, which was noted as such in Application No. 0310157-021-AV submitted on August 18, 2023. The facility has confirmed that the engine was retired in December 2021. The facility has surrendered the operation of the EU.
13. Updated the applicable requirements pursuant to 40 CFR 60, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

CONCLUSION

This project revises Title V air operation Permit No. 0310157-021-AV, which was effective on May 5, 2024. This Title V air operation permit revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4, 62-210, and 62-213, F.A.C.