



AIR QUALITY PROGRAM
836 Fulton Street
Pittsburgh, PA 15233-2124

**New Source Review (NSR)/Prevention of Significant
Deterioration (PSD)
INSTALLATION PERMIT**

<u>Issued To:</u>	United States Steel Corporation	<u>ACHD Permit #:</u>	0051-I011
<u>Facility:</u>	Edgar Thomson Plant 13th Street and Braddock Avenue Braddock, PA 15104	<u>Date of Issuance:</u>	Month 00, 20XX
		<u>Expiration Date:</u>	(See Section III.12)

Issued By: _____
JoAnn Truchan, P.E.
Program Manager, Engineering

Prepared By: _____
Hafeez Ajenifuja
Air Quality Engineer

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AMENDMENTS:

DATE	SECTION(S)
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I. CONTACT INFORMATION

Facility Location: Edgar Thomson Plant
13th Street and Braddock Avenue
Braddock, PA 15104

Permittee/Owner: **United States Steel Corporation**
Mon Valley Works
13th Street and Braddock Avenue
Braddock, PA 15104

Permittee/Operator: **same as above**

Responsible Official: **Mark Jeffery**
Title: General Manager, Mon Valley Works
Company: United States Steel Corporation
Mon Valley Works
Address: P.O. Box 878
Dravosburg, PA 15034
Telephone Number: 412-233-1002
E-mail Address: mjeffrey@uss.com

Facility Contact: **Jonelle Sheetz**
Title: Coordinating Manager- Environmental
Telephone Number: 412-273-4730
E-mail Address: jssheetz@uss.com

AGENCY ADDRESSES:

ACHD Contact: **Program Manager, Engineering**
Allegheny County Health Department
Air Quality Program
836 Fulton Street
Pittsburgh, PA 15233-2124
aqpermits@alleghenycounty.us

EPA Contact: **ECAD – Air Section**
Environmental Protection Agency
Four Penn Center
1600 John F. Kennedy Boulevard
Mail Code 3ED21
Philadelphia, PA 19103-2029

II. FACILITY DESCRIPTION

FACILITY DESCRIPTION

The U. S. Steel Mon Valley Works Edgar Thomson Plant (ET) is an iron and steel making facility located at 13th Street and Braddock Avenue in the East Side of Pittsburgh, which produces steel slabs.

Raw materials such as coke, iron-bearing materials, and fluxes are charged to blast furnaces in the iron making process. Molten metal (iron) is tapped from the blast furnace at the casthouse into transfer ladles. The hot metal is then transferred to a hot metal mixer or direct pour station in preparation for desulfurization. For desulfurization, a reagent is added to the hot metal, causing sulfur and other impurities to form and rise to the surface. Desulfurized hot metal is then introduced into the basic oxygen process (BOP), where the hot metal is transformed into molten steel. Scrap, alloys, fluxes, and oxygen are also introduced at the BOP. The liquid steel is tapped from the BOP vessels and transferred to the ladle metallurgy facility (LMF) or Vacuum Degasser, where the properties of the steel can be more precisely refined according to customer specifications. To achieve this additional refining at the LMF or Vacuum Degasser, specific alloying materials are added to the process. The refined liquid steel is then charged to the dual-strand continuous caster mold. The steel slabs are formed in the continuous caster and are cut to length, ground, slit as necessary, and currently shipped offsite. There are three (3) Riley Boilers at ET, which are used to generate steam, heat, and electricity for the plant. The three (3) primary fuels for the boilers are Blast Furnace Gas (BFG), Coke Oven Gas, (COG), and Natural Gas (NG).

The facility is a major source of nitrogen oxides (NO_x), carbon monoxide (CO), particulate matter, particulate matter < 10 microns in diameter (PM₁₀), sulfur dioxide (SO₂), volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) as defined in section 2101.20 of Article XXI.

INSTALLATION DESCRIPTION

This permit is for the installation of a new Hot Strip Mill capable of producing up to 3,500,000 tons per year of hot rolled steel. The Hot Strip Mill will replace the existing Hot Strip Mill at U. S. Steel's Irvin Plant in West Mifflin, PA. The major components of the new Hot Strip Mill will include two (2) new natural gas/coke oven gas-fired walking beam reheat furnaces, modifications to the existing slab caster to facilitate the production of a thicker slab, a new additional LMF, and all required auxiliary equipment and facilities, which include a slab grinder, cooling towers and emergency generators.

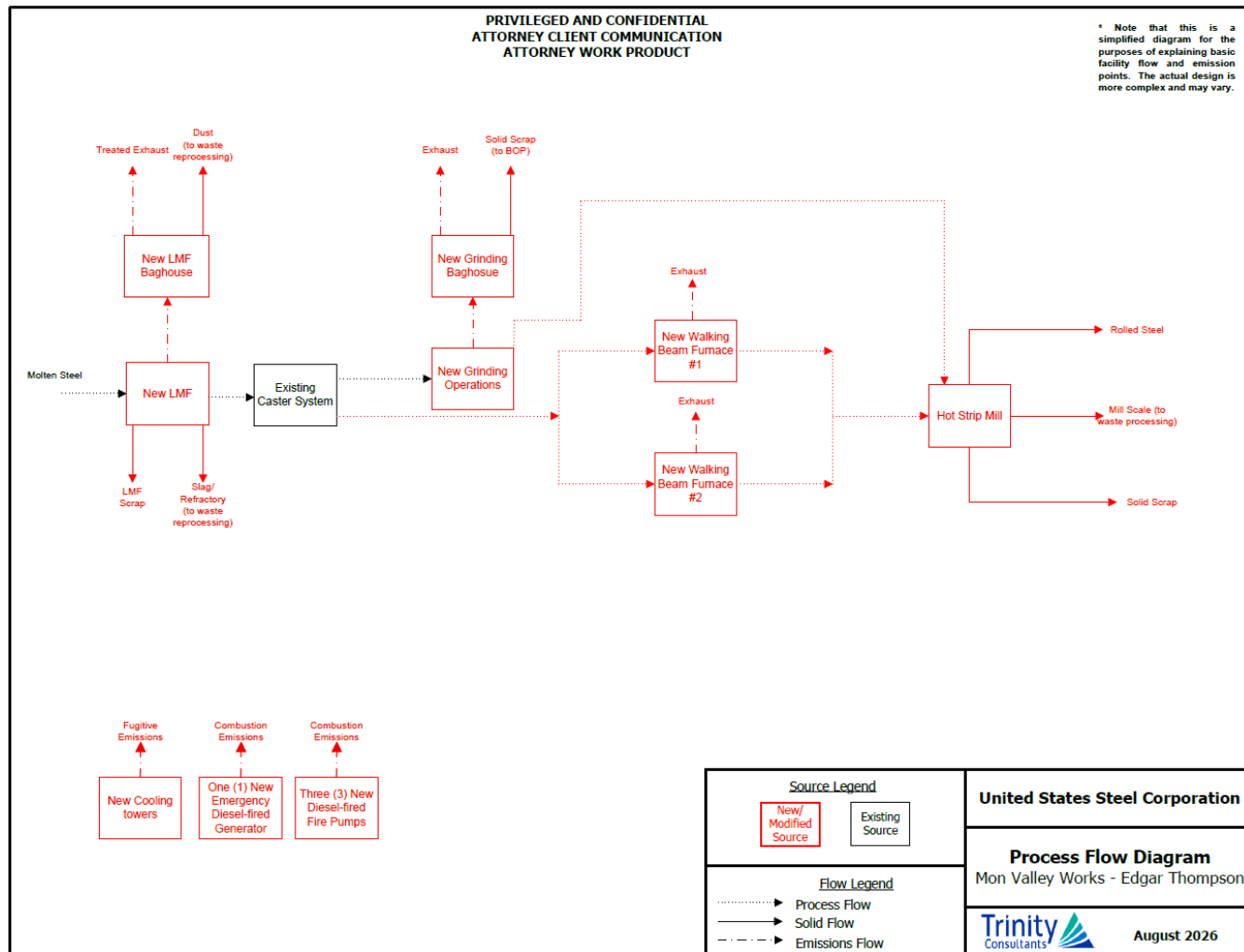
The installation of the new Hot Strip Mill at the Edgar Thomson Plant will not require shutting down any existing equipment or sources at the facility. However, once the new HSM completes a reasonable shake-down period and becomes fully operational, U. S. Steel will move forward with shutting down the HSM, including five (5) reheat furnaces, at the Irvin Plant.

The emission units regulated by this permit are summarized in Table II-1:

TABLE II-1: Emission Unit Identification

I.D.	SOURCE DESCRIPTION	CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK I.D.
P001	Hot Strip Mill Walking Beam Furnaces 1 & 2	System is equipped with Low NO _x Burner	3,500,000 tons/yr	Steel slab	S001A
			476 MMBtu/hr, each	Coke Oven Gas and/or Natural Gas	S001B
P002	Ladle Metallurgy Facility (LMF)	Baghouse	2,500,000 tons/yr	Steel (Liquid), Fluxes, Scrap, Alloy Additives	S003
P003	Slab Grinding	Baghouse	580,000 tons/yr	--	S004
GEN-1	Emergency Generator 1	None	2,500 kw	Diesel Fuel	EGS1
CT-1	Non-Contact Cooling Tower	Drift eliminator	38,500 gallons/minute	n/a	-
CT-2	Contact Cooling Tower- Main Mill	Drift eliminator	67,145 gallons/minute	n/a	-
CT-3	Contact Cooling Tower-Water Run Out Table	Drift eliminator	50,000 gallons/minute	n/a	-
FP 001	Clark Fire Pump Engine 1	None	366kW	Diesel Fuel	FPS1
FP 002	Clark Fire Pump Engine 2	None	366 kW	Diesel Fuel	FPS2
FP 003	Cummins Fire Pump Engine 3	None	135 kW	Diesel Fuel	FPS3

Hot Strip Mill Flow Diagram



DECLARATION OF POLICY

Pollution prevention is recognized as the preferred strategy (over pollution control) for reducing risk to air resources. Accordingly, pollution prevention measures should be integrated into air pollution control programs wherever possible, and the adoption by sources of cost-effective compliance strategies, incorporating pollution prevention, is encouraged. The Department will give expedited consideration to any permit modification request based on pollution prevention principles.

The permittee is subject to the terms and conditions set forth below. These terms and conditions constitute provisions of **Allegheny County Health Department Rules and Regulations, Article XXI Air Pollution Control**. The subject equipment has been conditionally approved for operation. The equipment shall be operated in conformity with the plans, specifications, conditions, and instructions which are part of your application, and may be periodically inspected for compliance by the Department. In the event that the terms and conditions of this permit, or the applicable provisions of Article XXI, conflict with the application for this permit, these terms and conditions and the applicable provisions of Article XXI shall prevail. Additionally, nothing in this permit relieves the permittee from the obligation to comply with all applicable Federal, State and Local laws and regulations.

III. GENERAL CONDITIONS**1. Prohibition of Air Pollution (§2101.11)**

- a. It shall be a violation of this permit to fail to comply with, or to cause or assist in the violation of, any requirement of this permit, or any order or permit issued pursuant to authority granted by Article XXI. The permittee shall not willfully, negligently, or through the failure to provide and operate necessary control equipment or to take necessary precautions, operate any source of air contaminants in such manner that emissions from such source:
 - 1) Exceed the amounts permitted by this permit or by any order or permit issued pursuant to Article XXI;
 - 2) Cause an exceedance of the ambient air quality standards established by Article XXI §2101.10; or
 - 3) May reasonably be anticipated to endanger the public health, safety, or welfare.
- b. It shall be a violation of this permit to operate, or allow to be operated, any source in such manner as to allow the release of air contaminants into the open air, or to cause air pollution as defined in Article XXI, except as is explicitly permitted by this permit or Article XXI.

2. Nuisances (§2101.13)

Any violation of any requirement of this Permit shall constitute a nuisance.

3. Definitions (§2101.20)

- a. Except as specifically provided in this permit, terms used retain the meaning accorded them under the applicable provisions and requirements of Article XXI or the applicable federal or state regulation. Whenever used in this permit, or in any action taken pursuant to this permit, the words and phrases shall have the meanings stated, unless the context clearly indicates otherwise.
- b. Unless specified otherwise in this permit or in the applicable regulation, the term “year” shall mean any twelve (12) consecutive months.

4. Certification (§2102.01)

Any report or compliance certification submitted under this permit shall contain written certification by a responsible official as to truth, accuracy, and completeness. This certification and any other certification required under this permit shall be signed by a responsible official of the source, and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

5. Operation and Maintenance (§2105.03)

All air pollution control equipment required by this permit or Article XXI, and all equivalent compliance techniques that have been approved by the Department, shall be properly installed, maintained, and operated consistent with good air pollution control practice.

6. Conditions (§2102.03.c)

It shall be a violation of this permit, giving rise to the remedies provided by Article XXI §2109.02, for any person to fail to comply with any terms or conditions set forth in this permit.

7. Transfers (§2102.03.e)

This permit shall not be transferable from one person to another, except in accordance with Article XXI §2102.03.e and in cases of change-in-ownership which are documented to the satisfaction of the Department, and shall be valid only for the specific sources and equipment for which this permit was issued. The transfer of permits in the case of change-in-ownership may be made consistent with the administrative permit amendment procedure of Article XXI §2103.14.b.

8. Effect (§2102.03.g)

Issuance of this permit shall not in any manner relieve any person of the duty to fully comply with the requirements of Article XXI or any other provision of law, nor shall it in any manner preclude or affect the right of the Department to initiate any enforcement action whatsoever for violations of Article XXI or this Permit, whether occurring before or after the issuance of such permit. Further, the issuance of this permit shall not be a defense to any nuisance action, nor shall such permit be construed as a certificate of compliance with the requirements of Article XXI or this Permit.

9. General Requirements (§2102.04.a)

It shall be a violation of this Permit, giving rise to the remedies set forth in Article XXI §2109, for any person to install, modify, replace, reconstruct, or reactivate any source or air pollution control equipment to which this Permit applies unless either:

- a. The Department has first issued an Installation Permit for such source or equipment; or
- b. Such action is solely a reactivation of a source with a current Operating Permit, which is approved under §2103.13 of Article XXI.

10. Conditions (§2102.04.e)

Further, the initiation of installation, modification, replacement, reconstruction, or reactivation under this Installation Permit and any reactivation plan shall be deemed acceptance by the source of all terms and conditions specified by the Department in this permit and plan.

11. Revocation (§2102.04.f)

- a. The Department may, at any time, revoke this Installation Permit if it finds that:
 - 1) Any statement made in the permit application is not true, or that material information has not been disclosed in the application;
 - 2) The source is not being installed, modified, replaced, reconstructed, or reactivated in the manner indicated by this permit or applicable reactivation plan;
 - 3) Air contaminants will not be controlled to the degree indicated by this permit;
 - 4) Any term or condition of this permit has not been complied with;
 - 5) The Department has been denied lawful access to the premises or records, charts, instruments and the like as authorized by this Permit; or
- b. Prior to the date on which construction of the proposed source has commenced, the Department may revoke this Installation Permit if a significantly better air pollution control technology has become available for such source, a more stringent regulation applicable to such source has been adopted, or any other change has occurred which requires a more stringent degree of control of air contaminants.

12. Term (§2102.04.g)

This Installation Permit shall expire in 18 months if construction has not commenced within such period, or shall expire 18 months after such construction has been suspended, if construction is not resumed within such period. Installation Permits shall authorize temporary operation to facilitate shakedown of sources and air cleaning devices, to permit operations pending issuance of a related subsequent Operating Permit, or to permit the evaluation of the air contamination aspects of the source. Such temporary operation period shall be valid for a limited time, not to exceed 180 days, but may be extended for additional limited periods, each not to exceed 120 days, except that no temporary operation shall be authorized or extended which may circumvent the requirements of Article XXI.

For major sources, if the construction, modification, or installation is not commenced within 18 months of the issuance of an Installation Permit, or if there is more than an 18-month lapse in construction, modification, or installation, a new Installation Permit application shall be submitted. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. An applicant for an extension of an Installation Permit shall pay a fee in the amount set by the Board of Health and approved by Allegheny County Council. The fee for an extension of an installation permit will not apply if, through no fault of the applicant, an extension is required.

13. Prohibition of Operating Without a Permit (§2103.10.b.1)

Except as otherwise expressly provided under Article XXI §2103.10, no source may be operated, or allowed to operate, after the time a complete Operating Permit application for such source is required to be submitted under §2103.10, except in compliance with an Operating Permit issued under §2103.10.

14. Severability Requirement (§2103.12.l)

The provisions of this permit are severable, and if any provision of this permit is determined by a court of competent jurisdiction to be invalid or unenforceable, such a determination will not affect the remaining provisions of this permit.

15. Reporting Requirements (§2103.12.k)

- a. The permittee shall submit reports of any required monitoring at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by the Responsible Official.
- b. Prompt reporting of deviations from permit requirements is required, including those attributable to upset conditions as defined in this permit and Article XXI §2108.01.c, the probable cause of such deviations, and any corrective actions or preventive measures taken.
- c. All reports submitted to the Department shall comply with the certification requirements of General Condition III.4 above.
- d. Semiannual reports required by this permit shall be submitted to the Department as follows:
 - 1) One semiannual report is due by **July 31** of each year for the time period beginning January 1 and ending June 30.
 - 2) One semiannual report is due by **January 31** of each year for the time period beginning July 1 and ending December 31.
 - 3) The first semiannual report shall be due **January 31, 2027**, for the time period beginning on the issuance date of this permit through December 31, 2026.
- e. Reports should be submitted online through the ACHD Air Quality Regulated Entities Portal (REP). If REP is not available, written notice should be sent to the Department at aqreports@alleghenycounty.us.

16. Minor Modifications of an Installation Permit (§2102.10.c)

Modifications to this Installation Permit may be applied for but only upon submission of an application with a fee paid and where:

- a. No reassessment of any control technology determination is required;
- b. No reassessment of any ambient air quality impact is required; and
- c. There is no increase in emissions; and
- d. The applicable requirements of §2102.04.j, “Miscellaneous Notice Requirements,” are met.

The fee amount shall be set by the Board of Health.

17. Violations (§2104.06)

The violation of any emission standard established by this Permit shall be a violation of this Permit giving rise to the remedies provided by Article XXI §2109.02.

18. Other Requirements Not Affected (§2105.02)

Compliance with the requirements of this permit shall not in any manner relieve any person from the duty to fully comply with any other applicable federal, state, or county statute, rule, regulation, or the like, including, but not limited to, any applicable NSPSs, NESHAPs, MACTs, or Generally Achievable Control Technology standards now or hereafter established by the EPA, and any applicable requirement of BACT or LAER as provided by Article XXI, any condition contained in this Installation Permit and/or any additional or more stringent requirements contained in an order issued to such person, pursuant to Part I of Article XXI.

19. Other Rights and Remedies Preserved (§2109.02.b)

Nothing in this permit shall be construed as impairing any right or remedy now existing or hereafter created in equity, common law, or statutory law with respect to air pollution, nor shall any court be deprived of such jurisdiction for the reason that such air pollution constitutes a violation of this permit.

20. Penalties, Fines, and Interest (§2109.07.a)

A source that fails to pay any fee required under this Permit or Article XXI when due shall pay a civil penalty of 50% of the fee amount, plus interest on the fee amount computed in accordance with Article XXI §2109.06.a.4 from the date the fee was required to be paid. The Department will allow up to a fifteen (15) calendar day “grace period” from the due date of fees required under this Article prior to assessing such civil penalty and interest. In addition, the source may have its permit revoked.

21. Appeals (§2109.10)

In accordance with State Law and County regulations and ordinances, any person aggrieved by an order or other final action of the Department, issued pursuant to Article XXI, shall have the right to appeal the action to the Director in accordance with the applicable County regulations and ordinances.

IV. SITE LEVEL TERMS AND CONDITIONS

1. Reporting of Upset Conditions (§2103.12.k.2)

The permittee shall promptly report all deviations from permit requirements, including those attributable to upset conditions as defined in Article XXI §2108.01.c, the probable cause of such deviations, and any corrective actions or preventive measures taken.

2. Visible Emissions (§2104.01)

Except as provided for by Article XXI §2108.01.d pertaining to a cold start, the permittee shall not operate, or allow to be operated, any source in such manner that the opacity of visible emissions from a flue, or process fugitive emissions from such source, excluding uncombined water:

- a. Equal or exceed an opacity of 20% for a period, or periods, aggregating more than three (3) minutes in any sixty (60) minute period; or
- b. Equal or exceed an opacity of 60% at any time.
- c. Measurement of visible emissions shall be performed according to the procedures established by Part G of Article XXI. §2104.01(d) and source testing manual.

3. Odor Emissions (§2104.04) (County-only enforceable)

No person shall operate, or allow to be operated, any source in such manner that emissions of malodorous matter from such source are perceptible beyond the property line of such source. In addition, the Department may pursue the remedies provided by §2109.02 for any violation of this Section. Measurements of odor emissions shall be performed according to the procedures established by Part G of Article XXI (§2104.04(c)).

4. Materials Handling (§2104.05)

The permittee shall not conduct, or allow to be conducted, any materials handling operation in such manner that emissions from such operation are visible at or beyond the property line.

5. Open Burning (§2105.50)

The permittee shall not conduct, or allow to be conducted, the open burning of any material, except where the Department has issued an Open Burning Permit to the permittee in accordance with Article XXI §2105.50 or where the open burning is conducted solely for the purpose of non-commercial preparation of food for human consumption, recreation, light, ornament, or provision of warmth for outside workers, and in a manner which contributes a negligible amount of air contaminants.

6. Shutdown of Control Equipment (§2108.01.b)

- a. In the event any air pollution control equipment is shut down for reasons other than a breakdown, the permittee shall report, in writing, to the Department the intent to shut down such equipment at least 24 hours prior to the planned shutdown. Notwithstanding the submission of such report, the equipment shall not be shut down until the approval of the

Department is obtained; provided, however, that no such report shall be required if the source(s) served by such air pollution control equipment is also shut down at all times that such equipment is shut down.

- b. The Department shall act on all requested shutdowns as promptly as possible. If the Department does not take action on such requests within ten (10) calendar days of receipt of the notice, the request shall be deemed denied, and upon request, the owner or operator of the affected source shall have a right to appeal in accordance with the provisions of Article XI.
- c. The prior report required by Site Level Condition IV.6.a above shall include:
 - 1) Identification of the specific equipment to be shut down, its location and permit number (if permitted), together with an identification of the source(s) affected;
 - 2) The reasons for the shutdown;
 - 3) The expected length of time that the equipment will be out of service;
 - 4) Identification of the nature and quantity of emissions likely to occur during the shutdown;
 - 5) Measures, including extra labor and equipment, which will be taken to minimize the length of the shutdown, the amount of air contaminants emitted, or the ambient effects of the emissions;
 - 6) Measures which will be taken to shut down or curtail the affected source(s), or the reasons why it is impossible or impracticable to shut down or curtail the affected source(s) during the shutdown; and
 - 7) Such other information as may be required by the Department.
- d. Written notice required by this condition should be submitted online through the ACHD Air Quality Regulated Entities Portal (REP). If REP is not available, written notice should be sent to the Department at aqreports@alleghenycounty.us.

7. Breakdowns (§2108.01.c)

- a. In the event that any air pollution control equipment, process equipment, or other source of air contaminants breaks down in such manner as to have a substantial likelihood of causing the emission of air contaminants in violation of this permit, or of causing the emission into the open air of potentially toxic or hazardous materials, the permittee shall immediately, but in no event later than sixty (60) minutes after the commencement of the breakdown, notify the Department of such breakdown and shall, as expeditiously as possible but in no event later than seven (7) days after the original notification, provide written notice to the Department.
- b. To the maximum extent possible, all oral and written notices required shall include all pertinent facts, including:
 - 1) Identification of the specific equipment which has broken down, its location and permit number (if permitted), together with an identification of all related devices, equipment, and other sources which will be affected.
 - 2) The nature and probable cause of the breakdown.

- 3) The expected length of time that the equipment will be inoperable or that the emissions will continue.
 - 4) Identification of the specific material(s) which are being, or are likely to be emitted, together with a statement concerning its toxic qualities, including its qualities as an irritant, and its potential for causing illness, disability, or mortality.
 - 5) The estimated quantity of each material being or likely to be emitted.
 - 6) Measures, including extra labor and equipment, taken or to be taken to minimize the length of the breakdown, the amount of air contaminants emitted, or the ambient effects of the emissions, together with an implementation schedule.
 - 7) Measures being taken to shut down or curtail the affected source(s) or the reasons why it is impossible or impractical to shut down the source(s), or any part thereof, during the breakdown.
- c. Notices required shall be updated, in writing, as needed to advise the Department of changes in the information contained therein. In addition, any changes concerning potentially toxic or hazardous emissions shall be reported immediately. All additional information requested by the Department shall be submitted as expeditiously as practicable.
 - d. Unless otherwise directed by the Department, the Department shall be notified whenever the condition causing the breakdown is corrected, or the equipment or other source is placed back in operation, by no later than 9:00 AM on the next County business day. Within seven (7) days thereafter, written notice shall be submitted pursuant to Paragraphs a and b above.
 - e. Breakdown reporting shall not apply to breakdowns of air pollution control equipment which occur during the initial startup of said equipment, provided that emissions resulting from the breakdown are of the same nature and quantity as the emissions occurring prior to startup of the air pollution control equipment.
 - f. In no case shall the reporting of a breakdown prevent prosecution for any violation of this permit or Article XXI.
 - g. Written notice required by this condition should be submitted online through the ACHD Air Quality Regulated Entities Portal (REP). If REP is not available, written notice should be sent to the Department at aqreports@alleghenycounty.us.

8. Cold Start (§2108.01.d)

In the event of a cold start on any fuel-burning or combustion equipment, except stationary internal combustion engines and combustion turbines used by utilities to meet peak load demands, the person responsible for such equipment shall report in writing to the Department the intent to perform such cold start at least 24 hours prior to the planned cold start. Such report shall identify the equipment and fuel(s) involved and shall include the expected time and duration of the startup. Upon written application from the person responsible for fuel-burning or combustion equipment, which is routinely used to meet peak load demands and which is shown by experience not to be excessively emissive during a cold start, the Department may waive these requirements and may instead require periodic reports listing all cold starts which occurred during the report

period. The Department shall make such waiver in writing, specifying such terms and conditions as are appropriate to achieve the purposes of Article XXI. Such waiver may be terminated by the Department at any time by written notice to the applicant. Cold start notifications should be submitted online through the ACHD Air Quality Regulated Entities Portal (REP). If REP is not available, written notice should be sent to the Department at aqreports@alleghenycounty.us.

9. Emissions Inventory Statements (§2108.01.e & g)

- a. Emissions inventory statements in accordance with §2108.01.e shall be submitted to the Department by March 15 of each year for the preceding calendar year. The Department may require more frequent submittals if the Department determines that more frequent submissions are required by the EPA or that analysis of the data on a more frequent basis is necessary to implement the requirements of Article XXI or the Clean Air Act.
- b. The failure to submit any report or update within the time specified, the knowing submission of false information, or the willful failure to submit a complete report shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

10. Orders (§2108.01.f)

In addition to meeting the requirements Site Level Conditions IV.6 through IV.9, inclusive, the permittee shall, upon order by the Department, report to the Department such information as the Department may require in order to assess the actual and potential contribution of the source to air quality. The order shall specify a reasonable time in which to make such a report.

11. Violations (§2108.01.g)

The failure to submit any report or update thereof required by Site Level Conditions IV.6 through IV.10 above, inclusive, within the time specified, the knowing submission of false information, or the willful failure to submit a complete report shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

12. Emissions Testing (§2108.02)

- a. **New and Modified Sources:** No later than 60 days after achieving full production or 120 days after startup, whichever is earlier, the permittee shall conduct, or cause to be conducted, such emissions tests as are specified by the Department to demonstrate compliance with the applicable requirements of this permit and shall submit the results of such tests to the Department in writing. Upon written application setting forth all information necessary to evaluate the application, the Department may, for good cause shown, extend the time for conducting such tests beyond 120 days after startup but shall not extend the time beyond 60 days after achieving full production. Emissions testing shall comply with all applicable requirements of Article XXI, §2108.02.e.
- b. **Tests by the Department:** Notwithstanding any tests conducted pursuant to this permit, the Department, or another entity designated by the Department, may conduct emissions testing on any source or air pollution control equipment. At the request of the Department,

the permittee shall provide adequate sampling ports, safe sampling platforms, and adequate utilities for the performance of such tests.

- c. **Testing Requirements:** No later than 45 days prior to conducting any tests required by this permit, the permittee shall submit for the Department's approval a written test protocol explaining the intended testing plan, including any deviations from standard testing procedures, the proposed operating conditions of the source during the test, calibration data for specific test equipment, and a demonstration that the tests will be conducted under the direct supervision of persons qualified, by training and experience satisfactory to the Department, to conduct such tests. In addition, at least 30 days prior to conducting such tests, the permittee shall notify the Department in writing of the time(s) and date(s) on which the tests will be conducted, and shall allow Department personnel to observe such tests, record data, provide pre-weighed filters, analyze samples in a County laboratory, and to take samples for independent analysis. Test results shall be comprehensively and accurately reported in the units of measurement specified by the applicable emission limitations of this permit.
- d. Test methods and procedures shall conform to the applicable reference method set forth in this permit or Article XXI Part G, or where those methods are not applicable, to an alternative sampling and testing procedure approved by the Department consistent with Article XXI §2108.02.e.2.
- e. **Violations:** The failure to perform tests as required by this permit or an order of the Department, the failure to submit test results within the time specified, the knowing submission of false information, the willful failure to submit complete results, or the refusal to allow the Department, upon presentation of a search warrant, to conduct tests, shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

13. Abrasive Blasting (§2105.51)

- a. Except where such blasting is a part of a process requiring an operating permit, the permittee shall not conduct, or allow to be conducted, abrasive blasting or power tool cleaning of any surface, structure, or part thereof which has a total area greater than 1,000 square feet, unless such abrasive blasting complies with all applicable requirements of Article XXI §2105.51.
- b. In addition to complying with all applicable provisions of §2105.51, the permittee shall not conduct, or allow to be conducted, abrasive blasting of any surface unless such abrasive blasting also complies with all other applicable requirements of Article XXI, unless such requirements are specifically addressed by §2105.51.

14. Asbestos Abatement (§2105.62, §2105.63)

In the event of removal, encasement, or encapsulation of Asbestos-Containing Material (ACM) at a facility or in the event of the demolition of any facility, the permittee shall comply with all applicable provisions of Article XXI §2105.62 and §2105.63.

15. Permit Source Premises (§2105.40)

- a. **General.** The permittee shall not operate, or allow to be operated, any source for which a permit is required by Article XXI Part C in such manner that emissions from any open land, roadway, haul road, yard, or other premises located upon the source or from any material being transported within such source or from any source-owned access road, haul road, or parking lot over five (5) parking spaces:
 - 1) Are visible at or beyond the property line of such source;
 - 2) Have an opacity of 20% or more for a period, or periods, aggregating more than three (3) minutes in any sixty (60) minute period; or
 - 3) Have an opacity of 60% or more at any time.
- b. **Deposition on Other Premises:** Visible emissions from any solid or liquid material that has been deposited by any means from a source onto any other premises shall be considered emissions from such source within the meaning of Site Level Condition IV.15.a above.

16. Parking Lots and Roadways (§2105.42)

- a. The permittee shall not maintain for use, or allow to be used, any parking lot over 50 parking spaces, or used by more than 50 vehicles in any day, or any other roadway carrying more than 100 vehicles in any day, or 15 vehicles in any hour, in such manner that emissions from such parking lot or roadway:
 - 1) Are visible at or beyond the property line;
 - 2) Have an opacity of 20% or more for a period, or periods, aggregating more than three (3) minutes in any 60 minute period; or
 - 3) Have an opacity of 60% or more at any time.
- b. Visible emissions from any solid or liquid material that has been deposited by any means from a parking lot or roadway onto any other premises shall be considered emissions from such parking lot or roadway.
- c. Site Level Condition IV.16.a above shall apply during any repairs or maintenance done to such parking lot or roadway.
- d. Notwithstanding any other provision of this permit, the prohibitions of Site Level Condition IV.16 may be enforced by any municipal or local government unit having jurisdiction over the place where such parking lots or roadways are located. Such enforcement shall be in accordance with the laws governing such municipal or local government unit. In addition, the Department may pursue the remedies provided by Article XXI §2109.02 for any violations of Site Level Condition IV.16.

17. Permit Source Transport (§2105.43)

- a. The permittee shall not transport, or allow to be transported, any solid or liquid material outside the boundary line of any source for which a permit is required by Article XXI Part C in such manner that there is any visible emission, leak, spill, or other escape of such material during transport.
- b. Notwithstanding any other provision of this permit, the prohibitions of Site Level Condition IV.17 may be enforced by any municipal or local government unit having jurisdiction over the place where such visible emission, leak, spill, or other escape of material during transport occurs. Such enforcement shall be in accordance with the laws governing such municipal or local government unit. In addition, the Department may pursue the remedies provided by Article XXI §2109.02 for any violation of Site Level Condition IV.17.

18. Construction and Land Clearing (§2105.45)

- a. The permittee shall not conduct, or allow to be conducted, any construction or land clearing activities in such manner that the opacity of emissions from such activities:
 - 1) Equal or exceed 20% for a period, or periods, aggregating more than three (3) minutes in any sixty (60) minute period; or
 - 2) Equal or exceed 60% at any time.
- b. Notwithstanding any other provision of this permit, the prohibitions of Site Level Condition IV.18 may be enforced by any municipal or local government unit having jurisdiction over the place where such construction or land clearing activities occur. Such enforcement shall be in accordance with the laws governing such municipal or local government unit. In addition, the Department may pursue the remedies provided by Article XXI §2109.02 for any violations of Site Level Condition IV.18.

19. Mining (§2105.46)

The permittee shall not conduct, or allow to be conducted, any mining activities in such manner that emissions from such activities:

- a. Are visible at or beyond the property line;
- b. Have an opacity of 20% or more for a period, or periods, aggregating more than three (3) minutes in any sixty (60) minute period; or
- c. Have an opacity of 60% or more at any time.

20. Demolition (§2105.47)

- a. The permittee shall not conduct, or allow to be conducted, any demolition activities in such manner that the opacity of the emissions from such activities equal or exceed 20% for a period, or periods, aggregating more than three (3) minutes in any 60-minute period.

- b. Notwithstanding any other provisions of this permit, the prohibitions of Site Level Condition IV.20 may be enforced by any municipal or local government unit having jurisdiction over the place where such demolition activities occur. Such enforcement shall be in accordance with the laws governing such municipal or local government unit. In addition, the Department may pursue the remedies provided by Article XXI §2109.02 for any violations of Site Level Condition IV.20.

21. Fugitive Emissions (§2105.49)

The permittee, in addition to complying with all other applicable provisions of this permit, shall take all reasonable actions to prevent fugitive air contaminants from becoming airborne. Such actions may include, but are not limited to:

- a. The use of asphalt, oil, water, or suitable chemicals for dust control;
- b. The paving and maintenance of roadways, parking lots, and the like;
- c. The prompt removal of earth or other material which has been deposited by leaks from transport, erosion, or other means;
- d. The adoption of work or other practices to minimize emissions;
- e. Enclosure of the source; and
- f. The proper hooding, venting, and collection of fugitive emissions.

22. Episode Plans (§2106.01 and Article XXI Part F)

The permittee shall upon written request of the Department, submit a source curtailment plan, consistent with good industrial practice and safe operating procedures, designed to reduce emissions of air contaminants during air pollution episodes. Such plans shall meet the requirements of Article XXI §2106.02 and Article XXI Part F.

23. New Source Performance Standards (§2105.05)

- a. It shall be a violation of this permit, giving rise to the remedies provided by §2109.02 of Article XXI, for the permittee to operate, or allow to be operated, any source in a manner that does not comply with all requirements of any applicable NSPS now or hereafter established by the EPA, except if the permittee has obtained from EPA a waiver pursuant to Section 111 or Section 129 of the Clean Air Act, or is otherwise lawfully temporarily relieved of the duty to comply with such requirements.
- b. If the permittee operates, or allows to be operated, any source subject to any NSPS, the permittee shall conduct, or cause to be conducted, such tests, measurements, monitoring, and the like as is required by such standard. All notices, reports, test results, and the like as are required by such standard shall be submitted to the Department in the manner and time specified by such standard. All information, data, and the like, which is required to be maintained by such standard, shall be made available to the Department upon request for inspection and copying.

24. National Emission Standards for Hazardous Air Pollutants (§2104.08)

The permittee shall comply with each applicable emission limitation, work practice standard, and operation and maintenance requirement of 40 CFR Part 63, Subpart FFFFF – *National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel*.

25. Emission Offsets (§2102.06.b.3)

- a. The permittee shall secure NO_x, SO₂, and, if necessary, PM_{2.5} emission reduction credits (ERCs) identified in Table IV-1 prior to commencement of operation of any sources at the facility to offset the total of the net increase in potential to emit. ERCs shall be properly generated and certified by the Department. Upon transfer, the permittee shall submit an installation permit application to the Department documenting the amount of ERCs secured, the company from which the ERCs were secured, and the effective date of transfer of the ERCs. The permittee shall not operate any of the sources until the required ERCs are provided to and processed through the ERC Registry in accordance with §2102.06.b.3.

Table IV-1 –Emission Offsets Required

Pollutant	Total Project-Wide Emissions (tpy)	Offset Ratio	ERC Offsets (tons)
NO _x	217	1.15:1	249.6
SO ₂	257.9	1:1	257.9
PM _{2.5}	18.3	1:1	18.3

26. Transitioning from Irvin Hot Strip Mill to Edgar Thomson Hot Strip Mill Emission Reduction Credits:

- a. The permittee shall limit hot-rolled coil production at both the Irvin Plant and the new Edgar Thomson Plant hot strip mill during the transition period as outlined below.

Table IV-2
HSM Transition Steel Production Plan

Plant	Start	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
Edgar Thomson	0	20,000	30,000	50,000	75,000	125,000	170,000
Irvin	170,000	150,000	140,000	120,000	95,000	45,000	0
Irvin Decrease	0	20,000	30,000	50,000	75,000	125,000	170,000

**Table IV- 3
ERC by Phase**

Phase	NO _x (tons)	PM _{2.5} (tons)	SO ₂ (tons)
Phase 1	3.2	0.3	2.6
Phase 2	4.8 (8.0 Cumulative)	0.4 (0.7 cumulative)	3.9 (6.5 cumulative)
Phase 3	7.9 (15.9 Cumulative)	0.6 (1.3 cumulative)	6.5 (13.0 cumulative)
Phase 4	1.9 (27.8 cumulative)	1.0 (2.3 cumulative)	9.7 (22.7 cumulative)
Phase 5	19.8 (47.6 cumulative)	1.6 (3.9 cumulative)	16.2 (38.9 cumulative)
Phase 6	27.0 (74.6 cumulative)	2.2 (6.1 cumulative)	22.0 (60.8 cumulative)

- b. The permittee shall obtain and surrender NO_x, SO₂, and, if necessary, PM_{2.5} emission reduction credits ("ERCs") in the phased-in and aggregate amounts required in Table IV-3 above to offset the net increase in potential to emit in Table IV-1 above. The ERCs shall be properly generated and certified by the Department and shall be processed through the ERC Registry in accordance with §2102.06.b.3.
- c. The permittee shall reduce production at Irvin Works for each phase as identified in Table IV-2 of condition IV.26.a above and shall secure for each phase, federally enforceable ERCs in the cumulative amounts specified for that phase by the time the permittee commences operation of the corresponding phase at the Edgar Thomson facility.
- d. The permittee shall not operate, or allow to be operated, the Hot Strip Mill and associated equipment in Section V of this permit at or above the production level associated with any phase in condition IV.26.a above until the following occur:
 - 1) The permittee has reduced production at Irvin to the level for that phase; and
 - 2) The cumulative ERC quantities specified for that phase have been identified, quantified, documented; and registered in the ERC Registry.
- e. The permittee shall not exceed the maximum authorized production set forth in Table IV-2 above for the highest operating phase. Production shall be measured in tons of HRC steel produced, recorded daily, and totaled monthly.

- f. The permittee shall notify the Department ten (10) days prior to commencing operation of any phase. The notification shall include a phase certification containing production data and the resulting emission decreases at Irvin demonstrating that the emission decreases occurred, documentation showing that the ERCs are in place, and evidence of registration of those ERCs.
- g. The permittee shall limit operation of the Hot Strip Mill to commissioning, equipment testing, refractory dry-out, and shakedown activities that do not produce hot rolled steel for sale prior to confirmation of the first phase.
- h. The permittee shall maintain records of the daily and monthly of the following:
 - 1) Production of hot-rolled coils (HRC) for Edgar Thomson and Irvin Works,
 - 2) ERC Certifications and records of Irvin Plant shutdown and disablement
 - 3) All records required shall be maintained by the permittee for a period of five (5) years and shall make such records available to the Department upon request.
- i. Upon completion of the transition, and prior to any ramp-up in production exceeding the levels authorized under the first six phases at the Edgar Thomson facility, the permittee shall have permanently shut down all five (5) Irvin Plant Hot Strip Mill reheat furnaces (P001–P005). The permittee shall also submit a permit application to the Department to amend the Irvin Title V operating permit (No. 0050) to remove the Hot Strip Mill Furnaces P001-P005 from the permit.

V. EMISSION UNIT LEVEL TERMS AND CONDITIONS

A. Process P001: Hot Strip Mill Walking Beam Reheat Furnaces 1 & 2

Process Description: Hot Strip Mill Walking Beam Reheat Furnaces

Facility ID: P001

Max. Design Rate: 476 MMBtu/hr, each reheat furnace

Capacity: 3,500,000 tons of sheets per year

Raw Materials: Steel slabs, Natural Gas and Coke Oven Gas

Control Device: Low NO_x Burner

1. Restrictions:

- a. The permittee shall only combust coke oven gas and/or natural gas in the Walking Beam Reheat Furnaces Nos. 1 & 2. [§2102.04.b.6]
- b. The heat input of each Walking Beam Reheat furnace shall be limited to 476 MMBtu/hr. [§2102.04.b.6]
- c. The maximum steel slab throughput for the hot strip mill shall not exceed 600 tons/hr per furnace, and 3.5 million tons per year combined. [§2102.04.b.6]
- d. The total natural gas input to each Walking Beam furnace shall not exceed 292 million cubic feet during any 12 consecutive months. [§2102.04.b.6]
- e. The total coke oven gas input to each Walking Beam furnace shall not exceed 2,625 million cubic feet during any 12 consecutive months. [§2102.04.b.6]
- f. The permittee shall not operate or allow to be operated any of the Walking Beam Reheat Furnaces unless low NO_x burners (LNBs) are in place and operating according to manufacturer's specifications. [§2102.04.b.6]
- g. The permittee shall utilize effective good combustion and operational control practices to minimize emissions of VOC, CO, SO_x, PM, PM₁₀, and PM_{2.5}. [§2102.04.b.6]

2. Testing Requirements:

- a. The permittee shall conduct biennial stack testing on PM/PM₁₀/PM_{2.5}, nitrogen oxides, sulfur dioxide, and 5-year stack testing on carbon monoxide and volatile organic compounds while combusting coke oven gas and natural gas. The emissions testing shall be performed in accordance with Site Level Condition IV.12 ("Emissions Testing Requirements") and the following :
 - 1) Method 5, 5D, or 17, as applicable, to determine the particulate matter (front half filterable catch only).
 - 2) Method 202 as applicable, to determine the condensable PM & PM_{2.5}
 - 3) Method 7, 7A, 7B, 7C, 7D, or 7E to determine the NO_x emissions

- 4) Method 10, 10A or 10B to determine the CO emissions
- 5) Methods 6, 6A, 6B, or 6C to determine the SO_x
- 6) Method 18 to determine the VOC emissions
- 7) Other EPA or Department approved test method or EPA/Department approved modified test method.

[§2103.12.h; §2108.02]

- b. The Department reserves the right to require emissions testing sufficient to ensure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

The permittee shall monitor the daily, monthly and 12-month rolling totals of the type and amount fuel combusted in each of the Walking Beam Reheat Furnaces. [§2103.12.i]

4. Record Keeping Requirements:

- a. The permittee shall maintain records of the daily, monthly, and 12-month rolling totals of each type of fuel (COG and natural gas) combusted. [§2103.12.j]
- b. The permittee shall maintain records of the daily, monthly, and 12-month rolling totals of steel slab throughput. [§2103.12.j]
- c. The permittee shall maintain records of the tune-up required in condition V.A.6.a below, and the records shall include following:
 - 1) The date of the annual tune-up
 - 2) The name of the service company and/or individuals performing the annual tune-up;
 - 3) The operating rate or load after the annual tune-up; and
 - 4) The CO and NO_x emission rate before and after the annual tune-up.

[§2103.12.j]

- d. Episodes of non-compliance with conditions of this permit and corrective actions taken shall be recorded upon occurrence. [§2103.12.j]
- e. All records required under this section shall be maintained by the permittee for a period of five (5) years following the date of such record. [§2103.12.j.2]

5. Reporting Requirements:

- a. The permittee shall submit semi-annual reports to the Department in accordance with General Condition III.15. The reports shall contain the following information for the time period of the report:
 - 1) The fuel use, per fuel type as required in condition V.A.4.a above;

- 2) The steel slab throughput as required in condition V.A.4.b above
- 3) The tune-up results as required in condition V.A.4.c above;
- 4) Non-compliance information, that includes date, time, duration, and cause of deviations (including unknown cause, if applicable) as required to be recorded by condition V.A.4.d above.

[§2103.12.k.1]

- b. The permittee shall report the total operating time of each furnace during the reporting period and identification of the furnace for which there was a deviation. [§2103.12.k]
- c. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.7, if appropriate. [§2103.12.k]

6. **Work Practice Standard:**

- a. The permittee shall perform an annual tune-up or adjustment on one walking beam reheat furnace, alternating between furnaces each year. Such annual tune-up shall include:
 - 1) Inspection, adjustment, cleaning, or necessary replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.
 - 2) Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO_x, and to the extent practicable minimizes emissions of carbon monoxide (hereafter referred as "CO"); and
 - 3) Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.

[§2102.04.b.6]

- b. At no time shall the permittee operate the walking beam reheat furnaces unless they are properly operated and maintained according to good engineering and air pollution control practices by performing regular maintenance with the exception of actions to mitigate emergency conditions. [§2102.04.b.5]

7. **Additional Requirements:**

The permittee shall notify the Department in writing ten (10) days prior to start-up of the Hot Strip Mill Walking Beam Reheat Furnaces. Notification may be sent via email to the Department at aqreports@alleghenycounty.us. The Department reserves the right to inspect and approve the equipment before it is placed into normal operation. [§2102.04.b.6]

B. Process P002: Ladle Metallurgical Facility

Process Description: Ladle Metallurgical Facility
Facility ID: P002
Max. Design Rate: 500 tons per hour steel
Capacity: 2,500,000 tons per year steel
Raw Materials: Liquid (Molten) Steel, Fluxes, Scrap, Alloy Additives
Control Device(s): Baghouse (Pulse Jet)

1. Restrictions:

- a. The permittee shall not operate or allow to be operated, the LMF Vessel and flux/alloy handling system unless the baghouse is in place and operating, controlling particulate emissions from the LMF Vessel and flux/alloy handling system. [§2102.04.b.6]
- b. The permittee shall not discharge to the atmosphere any gases from the LMF baghouse that contain particulate matter in excess of 0.0018 gr/dscf. [§2102.04.b.6; §63.7790(a), Table 1, Item 11]
- c. The maximum steel throughput charged to the LMF vessel shall not exceed 500 tons/hr and 2.5 million tons per year. [§2102.04.b.6]
- d. The differential pressure drop across the baghouse compartment shall be maintained within the normal operating range identified in the manual. [§2102.04.b.6; §63.7830(b)4]
- e. The LMF Flux/Alloy Handling System and the LMF shall not be operated, nor allowed to be operated, in such manner that visible emissions from any related air pollution control equipment, excluding uncombined water, equal or exceed an opacity of 15% at any time. [§2102.04.b.6]
- f. The LMF Flux/Alloy Handling System, the LMF and all related operations, activities, and facilities including all equipment preparation and repair shops, shall not be operated, nor allowed to be operated, in such manner that visible fugitive emissions from any of these operations or activities, excluding uncombined water:
 - 1) Equal or exceed an opacity of 15% for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period; or
 - 2) Equal or exceed an opacity of 45% at any time
 [§2102.04.b.6]
- g. Emissions from the transfer of lime materials from transport vehicles to the LMF Flux/Alloy Handling System shall be collected and exhausted to the LMF baghouse (LMF Tripper Car Conveyor System and Lime Bin Feeder System). [§2102.04.b.6]

- h. The automatic fume damper on the LMF emission control system shall maintain a negative pressure within the collection hood when operating to minimize any emissions that may escape the control system. [§2102.04.b.6]
- i. No wire feeding shall be made at the LMF station at any time when power is being supplied to the electrodes. [§2102.04.b.6]

2. Testing Requirements:

- a. Emissions testing shall be performed for exhaust gas PM concentrations (gr/dscf) in accordance with the Site Level Condition IV.12 (“Emissions Testing Requirements”) to demonstrate compliance with Condition V.B.1.b. [§63.7821(a); §63.7821(c); §2108.02; §2103.12.h.1]
- b. Emissions testing in accordance with V.B.2.a above shall be performed once every two calendar years. [§2103.12.h]
- c. The permittee shall conduct each performance test under conditions representative of normal operations.
 - 1) The permittee shall record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation.
 - 2) Upon request, the permittee shall make available to the Department such records as may be necessary to determine the conditions of performance tests.
 - 3) Representative conditions exclude startup and shutdown periods. [§63.7822(a)]
- d. To determine compliance with the applicable emission limits for particulate matter in Condition V.B.1.b, the permittee shall follow the test methods and procedures in paragraphs V.B.2.e.1) and V.B.2.e.2) below and Site Level Condition IV.12 above (“Emissions Testing Requirements”).
 - 1) Determine the concentration of particulate matter according to the following approved EPA test methods in appendix A to 40 CFR, Part 60, Article XXI §2108.02 or another Department approved test method:
 - a) Method 1 to select sampling port locations and the number of traverse points. Sampling ports must be located at the outlet of the control device and prior to any releases to the atmosphere.
 - b) Method 2, 2F, or 2G to determine the volumetric flow rate of the stack gas.
 - c) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.
 - d) Method 4 to determine the moisture content of the stack gas.
 - e) Method 5, 5D, or 17, as applicable, to determine the concentration of particulate matter (front half filterable catch only).
 - 2) Collect a minimum sample volume of 60 dry standard cubic feet (dscf) of gas during each particulate matter test run. Three (3) valid test runs are needed to comprise a performance test. [§2103.12.h; §2108.02; §63.7822(b)]

- e. During the performance test, the permittee shall sample from the LMF baghouse only when the operation(s) is being conducted. [§2103.12.h; §63.7822(h)]
- f. The permittee must conduct each visible emissions performance test such that the opacity observations overlap with the performance test for particulate matter. [§2103.12.h; §63.7823(b)]
- g. Measurement of visible emissions to determine compliance with the opacity limits in Conditions V.B.1.e and V.B.1.f above shall be performed using EPA Method 9. [§2104.01.d]
- h. The Department reserves the right to require additional emissions testing sufficient to ensure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

- a. The permittee shall install, operate, and maintain a bag leak detection system according to Condition V.B.3.h below and monitor the relative change in particulate matter loadings according to the requirements in Conditions V.B.3.i and V.B.3.k below. [§2103.12.i; §63.7830(b)(1)]
- b. The permittee shall conduct inspections of the LMF Baghouse at the specified frequencies according to the following requirements:
 - 1) Monitor the pressure drop across the baghouse cell each day to ensure pressure drop is within the normal operating range identified in the manual.
 - 2) Confirm that dust is being removed from hoppers through weekly visual inspections or other means of ensuring the proper functioning of removal mechanisms.
 - 3) Check the compressed air supply for pulse-jet baghouse each day.
 - 4) Monitor cleaning cycles to ensure proper operation using an appropriate methodology.
 - 5) Check bag cleaning mechanisms for proper functioning through monthly visual inspection or equivalent means.
 - 6) Confirm the physical integrity of the baghouse through quarterly visual inspections of the baghouse interior for air leaks.
 - 7) Inspect fans for wear, material buildup, and corrosion through quarterly visual inspections, vibration detectors, or equivalent means.

[§63.7830(b)(4)(i)-(viii); §2103.12.i]
- c. The permittee shall develop and make available for inspection upon request by the Department a site-specific monitoring plan that addresses the following requirements:
 - 1) Installation of the CPMS sampling probe or other interface at a measurement location relative to the capture system applied to the LMF process emissions such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);
 - 2) Performance and equipment specifications for the sample interface, the parametric signal analyzer, and the data collection and reduction system;
 - 3) Performance evaluation procedures and acceptance criteria (e.g., calibrations);

- 4) Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1)(ii), (c)(3), (c)(4)(ii), (c)(7), and (c)(8);
- 5) Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d); and
- 6) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §63.10(c)(1) through 14, (e)(1), and (e)(2)(i); and

[§2103.12.i; §63.7831(a)]

d. Unless otherwise specified, each CPMS must:

- 1) Complete a minimum of one cycle of operation for each successive 15-minute period and collect a minimum of three of the required four data points to constitute a valid hour of data;
- 2) Provide valid hourly data for at least 95 percent of every averaging period; and
- 3) Determine and record the hourly average of all recorded readings.

[§2103.12.i; §63.7831(b)]

e. The permittee must conduct a performance evaluation of each CPMS in accordance with the site-specific monitoring plan. [§2103.12.i; §63.7831(c)]

f. The permittee must operate and maintain the CPMS in continuous operation according to the site-specific monitoring plan. [§2103.12.i; §63.7831(d)]

g. The permittee shall install, operate, and maintain the bag leak detection system required under condition V.B.3.a above according to the following requirements:

- 1) The system must be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.
- 2) The system must provide output of relative changes in particulate matter loadings.
- 3) The system must be equipped with an alarm that will sound when an increase in relative particulate loadings is detected over a preset level. The alarm must be located such that it can be heard by the appropriate plant personnel.
- 4) Each system that works based on the triboelectric effect must be installed, operated, and maintained in a manner consistent with the guidance document, "Fabric Filter Bag Leak Detection Guidance," EPA-454/R-98-015 (incorporated by reference, see §63.14). The permittee may install, operate, and maintain other types of bag leak detection systems in a manner consistent with the manufacturer's written specifications and recommendations.
- 5) To make the initial adjustment of the system, establish the baseline output by adjusting the sensitivity (range) and the averaging period of the device. Then, establish the alarm set points and the alarm delay time.
- 6) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in your operation and maintenance plan. Do not increase the sensitivity by more than 100 percent or decrease the sensitivity by more than 50 percent over a 365-day period unless a responsible official

certifies, in writing, that the baghouse has been inspected and found to be in good operating condition.

- 7) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. [§2103.12.i; §63.7831(f)]
- h. Except for monitoring malfunctions, out-of-control periods as specified in §63.8(c)(7), associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), the permittee shall monitor continuously (or collect data at all required intervals) at all times the capture system applied to LMF is operating. [§2103.12.i; §63.7832(a)]
- i. The permittee may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels or to fulfill a minimum data availability requirement, if applicable. The permittee must use all the data collected during all other periods in assessing compliance. [§2103.12.i; §63.7832(b)]
- j. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. [§2103.12.i; §63.7832(c)]
- k. The permittee shall demonstrate continuous compliance with the ladle metallurgy operation subject to an emission limit in Conditions V.B.1.b above by meeting the following requirements:
 - 1) For each ladle metallurgy operation at the BOP shop:
 - a) Maintain emissions of particulate matter from a control device at or below 0.0014 gr/dscf; and
 - b) Conduct subsequent performance tests no less frequently than once every two (2) years,[§63.7833(a)Table 3, Item 11.b and §63.7821]
- l. The permittee shall demonstrate continuous compliance with the particulate emission limit in V.B.1.b above at the LMF Baghouse by meeting the following requirements:
 - 1) For a baghouse equipped with a bag leak detection system, operating and maintaining each bag leak detection system according to condition V.B.3.h above and recording all information needed to document conformance with these requirements. If you increase or decrease the sensitivity of the bag leak detection system beyond the limits specified in condition V.B.3.h.6) above, permittee must include a copy of the required written certification by a responsible official in the next semiannual compliance report.
 - 2) Inspecting each baghouse according to the requirements in §63.7830(b)(4) and maintaining all records needed to document conformance with these requirements.
 - 3) Maintaining records of the time you initiated corrective action in the event of a bag leak detection system alarm, the corrective action(s) taken, and the date on which corrective action was completed. [§2103.12.i; §63.7833(c)]

- m. When operating, the permittee shall monitor and record the pressure measurement once per shift to demonstrate compliance with the collection hood negative pressure requirement of condition V.B.1.h above. [§2103.12.h.1]
- n. Notations of visible emissions from the LMF Baghouse stacks shall be performed once per quarter during normal daylight operations. A trained individual shall record whether any emissions are observed. [§2103.12.h.1]
- o. Quarterly visual inspections of the LMF dust collectors to ensure that the equipment is operating properly, and that the integrity of the control equipment exhausts systems are not compromised by damage, malfunction, or deterioration. Repairs shall be made as soon as practicable to correct obvious failures or deficiencies. [§2103.12.h.1]
- p. Notations of visible emissions from the LMF operations shall be performed once per week during normal daylight operations using EPA Method 22. The permittee may reduce to monthly monitoring after six (6) consecutive months of compliance with the weekly monitoring. [§2103.12.h.1; §2102.04.e]
- q. The Department reserves the right to revert the monitoring frequency in condition V.B.3.p above V.B.3.q above from monthly to weekly at any time, based on but not limited to the review of the compliance certification and semi-annual report of monitoring and recordkeeping, complaints, monitoring results, and/or Department findings. [§2103.12.h.1]

4. Record Keeping Requirements:

- a. The permittee shall keep and maintain records to demonstrate compliance with the requirements of this permit, Data and information required to determine compliance shall be recorded and maintained by the permittee and shall include the following:
 - 1) LMF liquid (molten) steel production (daily, monthly, 12-month);
 - 2) The differential pressure drops across each compartment of the LMF Baghouse as required by condition V.B.3.c (recorded once per day);
 - 3) Stack test protocols and reports, and
 - 4) The pressure reading of the LMF Baghouse collection hood (recorded once per day). [§2103.12.j]
- b. The permittee shall maintain records of air pollution control system inspections and performance evaluations and all records of calibration checks, adjustments, and maintenance performed on all equipment that is subject to section V.B of this permit. [§2103.12.j]
- c. The permittee shall keep the following records:
 - 1) A copy of each notification and report that was submitted to comply with 40 CFR Part 63, Subpart FFFFF, including all documentation supporting any initial notification or notification of compliance status that was submitted, according to the requirements in §63.10(b)(2)(xiv).

- 2) For each failure to meet an applicable standard, a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions.
- 3) Records of the actions taken to minimize emissions in accordance with V.B.6.b below and any corrective actions taken to return the affected unit to its normal or usual manner of operation.
- 4) Records of performance tests, performance evaluations, and opacity observations.

[§2103.12.j; §63.7842(a)]

- d. The permittee shall keep the records required in §63.6(h)(6) and V.B.3.q above for visual observations. [§2103.12.j; §63.7842(c)]
- e. The permittee shall keep the records required in Conditions V.B.3.l and V.B.3.m above to show continuous compliance with each emission limitation and operation and maintenance requirement that applies to the facility. [§2103.12.j; §63.7842(d)]
- f. The records must be in a form suitable and readily available to the Department for expeditious review, according to §63.10(b)(1). [§2103.12.j; §63.7843(a)]
- g. The episodes of non-compliance with the conditions of this permit and corrective actions taken shall be recorded upon occurrence. [§2103.12.j]
- h. The permittee shall maintain records of all maintenance performed on the Ladle Metallurgy Facility (LMF) as required in condition V.B.6.d. These records shall be made available to the Department upon request for inspection and/or copying. [§2103.12.j]
- i. As specified in §63.10(b)(1), All records shall be retained by the facility for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. These records shall be made available to the Department upon request for inspection and/or copying. [§2103.12.j.2; §63.7843(b)]
- j. The permittee must keep each record on site for at least two (2) years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to §63.10(b)(1). Records may be kept offsite for the remaining three (3) years. [§2103.12.j.2; §63.7843(c)]

5. Reporting Requirements:

- a. The permittee shall submit semi-annual reports to the Department in accordance with General Condition III.15. The reports shall contain the following information for the time period of the report:
 - 1) LMF liquid (molten) steel production as required in condition V.B.4.a.1) above.
 - 2) The differential pressure drops as required in condition V.B.4.a.2) above

- 3) Non-compliance information, that include date, time, duration, and cause of deviations (including unknown cause, if applicable) as required to be recorded by condition V.B.4.g above.

[§2103.12.k]

- b. Deviations. The permittee shall report each instance in which each emission limitation in Condition V.B.1.b above was not met. This includes periods of startup, shutdown, and malfunction. The permittee also shall report each instance in which each operation and maintenance requirement in Condition V.B.6.c below was not met. These instances are deviations from the emission limitations and operation and maintenance requirements in 40 CFR Part 63, Subpart FFFFF. These deviations must be reported according to the requirements in Conditions V.B.5.h and V.B.5.i below.

- 1) In the event that an affected unit fails to meet an applicable standard, record the date, time, and duration of each failure.
- 2) For each failure to meet an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.
- 3) Record actions taken to minimize emissions in accordance with V.B.6.b below, and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

[§2103.12.k.1; §63.7835(a)]

- c. The permittee shall submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin. [§2103.12.k.1; §63.7840(d)]
- d. The permittee shall submit a notification of compliance status according to §63.9(h)(2)(ii).
 - 1) For each initial compliance demonstration that does not include a performance test, the permittee must submit the notification of compliance status before the close of business on the 30th calendar day following completion of the initial compliance demonstration.
 - 2) For each initial compliance demonstration that does include a performance test, the permittee must submit the notification of compliance status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to §63.10(d)(2).

[§2103.12.k; §63.7825(c); §63.7840(e)]

- e. Compliance Report Due Dates: Unless the Department has approved a different schedule, the permittee must submit a semiannual compliance report to the Department according to the following requirements:
 - 1) The compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

- 2) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after the end of the semiannual reporting period.

[§2103.12.k.1; §63.7841(a)]

- f. Compliance report contents. Each compliance report shall include the information in conditions V.B.5.i.1) through V.B.5.i.3) below and, as applicable, conditions V.B.5.i.4) through V.B.5.i.7) below:
 - 1) Company name and address.
 - 2) Statement by a responsible official, with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.
 - 3) Date of report and beginning and ending dates of the reporting period.
 - 4) If there were no deviations from the continuous compliance requirements in conditions V.B.3.l and V.B.3.m above, a statement that there were no deviations from the emission limitations or operation and maintenance requirements during the reporting period.
 - 5) If there were no periods during which a continuous monitoring system (including a CPMS), was out-of-control as specified in §63.8(c)(7), a statement that there were no periods during which the CPMS was out-of-control during the reporting period.
 - 6) For each deviation from an emission limitation in condition V.B.1.b above that occurs at the capture and control system applied to emissions, where a continuous monitoring system is not used (including a CPMS) to comply with an emission limitation in 40 CFR Part 63, Subpart FFFFF, the compliance report must contain the information in conditions V.B.5.i.1) through V.B.5.i.4) above and the information in conditions V.B.5.i.6)a) and V.B.5.i.6)b) below.
 - a) The total operating time of the capture and control system applied to secondary emissions during the reporting period.
 - b) Information on the number, duration, and cause of deviations (including unknown cause, if applicable) as applicable and the corrective action taken.
 - 7) For each deviation from an emission limitation occurring at the capture and control system applied to LMF emissions, the permittee shall include the following information. This includes periods of startup, shutdown, and malfunction.
 - a) The date and time that each malfunction started and stopped.
 - b) The date and time that each continuous monitoring was inoperative, except for zero (low-level) and high-level checks.
 - c) The date, time, and duration that each continuous monitoring system was out-of-control as specified in §63.8(c)(7), including the information in §63.8(c)(8).
 - d) The date and time that each deviation started and stopped, and whether each deviation occurred during a malfunction or during another period.
 - e) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

- f) A breakdown of the total duration of the deviations during the reporting period including those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
 - g) A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of continuous monitoring system downtime as a percent of the total source operating time during the reporting period.
 - h) A brief description of the process units.
 - i) A brief description of the continuous monitoring system.
 - j) The date of the latest continuous monitoring system certification or audit.
 - k) A description of any changes in continuous monitoring systems, processes, or controls since the last reporting period.
- 8) If permittee failed to meet an applicable standard, the compliance report must include the start date, start time, and duration of each failure. For each failure, the compliance report must include a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions.

[§2103.12.k.1; §63.7841(b)]

- g. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.7, if appropriate. [§2103.12.k]

6. Work Practice Standard:

- a. The permittee shall, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. [§2102.04.b.5; §2105.03; §63.7800(a); §63.7810(d)]
- b. The permittee shall calibrate, maintain, and operate all instrumentation, process equipment, and control equipment according to manufacturer's recommendations and good engineering practices. [§2105.03]

7. Additional Requirements:

The permittee shall notify the Department in writing ten (10) days prior to start-up of the Ladle Metallurgical Facility Notification may be sent via email to the Department at aqreports@alleghenycounty.us. The installation of the equipment included in this permit shall be inspected and approved by the Department before being placed into normal operation. [§2102.04.b.6]

C. Process P003: Slab Grinding

Process Description:	Slab Grinder
Facility ID:	P003
Max. Design Rate:	76 tons per hour steel
Capacity:	580,000 tons per year steel
Raw Materials:	Specialty Steel Products
Control Device(s):	Baghouse (Pulse Jet)

1. Restrictions

- a. Emissions of particulate matter from the steel slab grinder shall be controlled at all times during operation by a baghouse. [§2102.04.b.6]
- b. The differential pressure drops across the baghouse compartment shall be maintained between 1-inch w.c. and 12 inches w.c. at all times while the baghouse is in operation. [§2102.04.b.6]
- c. The maximum steel throughput for the slab grinder shall not exceed 580,000 tons per year. [§2102.04.b.6]

2. Testing Requirements

The Department reserves the right to require emissions testing sufficient to ensure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements

The permittee shall continuously monitor the pressure drop across the baghouse controlling particulate emissions from the slab grinder. [§2102.04.e, §2103.12.i]

4. Record Keeping Requirements

- a. The permittee shall record at least once per day the pressure drops across the baghouse compartment. [§2103.12.j]
- b. The permittee shall maintain records of the monthly, and 12-month rolling totals of steel slab throughput to the slab grinder. [§2103.12.j]
- c. All records required under this section shall be maintained by the permittee for a period of five (5) years following the date of such record. [§2103.12.j.2]

5. Reporting Requirements:

- a. The permittee shall submit semi-annual reports to the Department in accordance with General Condition III.15. [§2103.12.k]
- b. The permittee shall submit reports of the information required in condition V.C.4.a & V.C.4.b above. [§2103.12.k]
- c. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.7, if appropriate. [§2103.12.k]

6. Work Practice Standard:

The permittee shall, at all times, operate and maintain the slab grinder, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. [§2102.04.b.6; §2105.03]

7. Additional Requirements:

The permittee shall notify the Department in writing ten (10) days prior to start-up of the Slab Grinder. Notification may be sent via email to the Department at aqreports@alleghenycounty.us. The installation of the equipment included in this permit shall be inspected and approved by the Department before being placed into normal operation. [§2102.04.b.6]

D. Stationary Compression Ignition Diesel Engine

Process Description:	Compression Ignition Power Generator Engine
Facility ID:	EG001
Capacity:	3356 hp (2500 Kw)
Raw Materials:	Ultra Low Sulfur Diesel
Control Device:	None

1. Restrictions:

- a. The permittee shall only combust or allow to be combusted diesel fuel that meets the following requirements:
 - 1) Sulfur content no higher than 0.0015% sulfur content (by weight) (15 ppm S); and
 - 2) A minimum cetane index of 40, or a maximum aromatic content of 35 volume percent.

[§2102.04.b.6; §2102.04.e; §2104.10.a; §60.4207(b); §80.510(c)]
- b. The permittee shall not operate emergency generator for more than 500 hours in any consecutive 12-month period, including operation for maintenance checks and readiness testing. [§2103.12.a.2.B]
- c. The emergency generator may be operated for the purpose of maintenance check and readiness testing, provided that the tests are recommended by the Department, the manufacturer, the vendor, or the insurance company associated with the generator. Maintenance checks and readiness testing is limited to 100 hours per year. [§2102.04.b.6; §2102.04.e; §60.4211(f)(2)(i)]
- d. The permittee may operate the emergency generator up to 50 hours per year in non-emergency situations. The 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid, or otherwise supply non-emergency power as part of a financial arrangement with another entity. [§2102.04.b.6; §2102.04.e; §60.4211(f)(3)]

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to ensure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

- a. The permittee shall install a non-resettable hour meter. [§2103.12.i; §60.4209(a)]
- b. Compliance with the fuel oil sulfur limitations in V.D.1.a shall be determined based on a certification of analysis from the fuel supplier. [§2103.12.i]

4. Record Keeping Requirements:

- a. The permittee shall keep and maintain the following data for the generator: [§2103.12.j; §60.4214(b)]
 - 1) Fuel shipment records (date and amount received), type of fuel consumed and supplier's certification of sulfur content, and heating value;
 - 2) Date, time, duration, and reason for each use;
 - 3) Operating hours (monthly and 12-month) as recorded by the non-resettable hour meters required under Condition V.D.3.a above; and
 - 4) Records of operation, maintenance, inspection, calibration, and/or replacement of combustion equipment.
- b. Records of fuel supplier certifications used to demonstrate compliance with the sulfur limitations of Condition V.D.3.b above shall be maintained per shipment and include the following information: [§2103.12.j]
 - 1) The name of the diesel fuel supplier, and
 - 2) A statement from the fuel supplier that the diesel fuel complies with ASTM D975 "Standard Specifications for Diesel Fuel Oils."
- c. Instances of non-compliance with the conditions of this permit shall be recorded upon occurrence. [§2103.12.j]
- d. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. [§2103.12.j.2]

5. Reporting Requirements:

- a. The permittee shall report the following information to the Department semiannually in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: [§2103.12.k]
 - 1) Information required under conditions V.D.4.a.2) and V.D.4.a.3) above;
 - 2) Non-compliance information required to be recorded by condition V.D.4.c above; and
 - 3) Diesel fuel certifications and a statement from the permittee that the record of fuel supplier certifications represents all the diesel fuel used during the reporting period.
- b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.7, if appropriate. [§2103.12.k]

6. Work Practice Standard:

- a. The permittee shall operate and maintain the engine according to the manufacturer's emission-related written instructions. [§2102.04.b.6; §60.4211(a)(1)]
- b. The permittee shall change only those emission-related settings that are permitted by the manufacturer. [§2102.04.b.6; §60.4211(a)(2)]

E. Circulation Water Cooling Towers

Process Description:	Three (3) Circulating Water-Cooling Towers
Facility ID:	CT 1, CT-2 and CT-3
Max. Capacity:	38,500 gpm (CT-1) - Non-Contact Cooling Tower 67,145 gpm (CT-2) - Contact Cooling Tower - Main Mill 50,000 gpm (CT-3) - Contact Cooling Tower - Water Run Out Table
Raw Materials:	Cooling Water
Control Device(s):	Drift eliminators

1. Restrictions

- a. The cooling towers shall be equipped with drift eliminators, which shall operate at all times the units are operating, with a drift rate of 0.0005%. [§2102.04.b.6]
- b. The total dissolved solids (TDS) in each of the cooling towers (1, #2, and #3) shall not exceed 2000 ppm. [§2102.04.b.6]

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to ensure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

The permittee shall monitor the total dissolved solids (TDS) of the cooling tower water to demonstrate compliance with conditions V.E.1.b through V.E.1.d above. [§2103.12.i]

4. Record Keeping Requirements:

- a. The permittee shall keep weekly records of the TDS measurements required in condition V.E.3 above. [§2103.12.j]
- b. The permittee shall keep and maintain records of the completed inspection and maintenance as required by conditions V.E.6.a and V.E.6.b. [§2103.12.j]
- c. Episodes of non-compliance with conditions of this permit and corrective actions taken shall be recorded upon occurrence. [§2103.12.j]
- d. All records required under this section shall be maintained by the permittee for a period of five (5) years following the date of such record. [§2103.12.j.2]

5. Reporting Requirements:

- a. The permittee shall submit semi-annual reports to the Department in accordance with General Condition III.15. The reports shall contain the following information for the time period of the report:

- 1) The inspection and maintenance results as required in condition conditions V.E.4.b above
- 2) The results of the TDS measurement required in condition V.E.4.a above
- 3) Non-compliance information, that include date, time, duration, and cause of deviations (including unknown cause, if applicable) as required to be recorded by condition V.E.4.c above.

[§2103.12.k.1]

- b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.7, if appropriate. [§2103.12.k]

6. Work Practice Standards:

- a. The permittee shall perform the following inspection annually, and any noted deficiencies are to be corrected as soon as possible to ensure proper operation of the cooling towers.

- 1) Inspect drift eliminators for the following:

- a) Proper installation
- b) Spacing; and
- c) Condition.

- 2) Inspect towers water flow and distribution.

- 3) Inspect cooling towers fill for blockage.

[§2102.04.b.6]

- b. The permittee shall inspect the cooling towers system for biological activity quarterly. Any noted deficiencies shall be corrected as soon as possible. [§2102.04.b.6]
- c. The permittee may revise the work practice required in condition V.E.6.a and V.E.6.b above by providing notice to the Department. [§2102.04.b.6]

F. Fire Pump Engines

Process Description: Three Fire Pump Engines
Facility ID: FP001, FP-002 & FP003
Capacity: 366 kW, 366 kW & 135 kW (491 hp; 491 & 181 hp)
Raw Materials: Ultra Low Sulfur Diesel
Control Device: None

1. Restrictions:

a. The permittee shall only combust or allow to be combusted diesel fuel that meets the following requirements:

- 1) Sulfur content no higher than 0.0015% sulfur content (by weight) (15 ppm S); and
- 2) A minimum cetane index of 40, or a maximum aromatic content of 35 volume percent.

[§2102.04.b.6; §2102.04.e; §2104.10a; §60.4207(b); §80.510(c)]

b. The permittee shall not operate fire pump engines for more than 250 hours per engine in any consecutive 12-month period, including operation for maintenance checks and readiness testing. [§2103.12.a.2.B]

2. Testing Requirements:

The Department reserves the right to require emissions testing sufficient to ensure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

a. The permittee shall install a non-resettable hour meter to monitor the engines hours of operation . [§2103.12.i; §60.4209(a)]

b. Compliance with the fuel oil sulfur limitations in V.F.1.a above shall be determined based on a certification of analysis from the fuel supplier. [§2103.12.i]

4. Record Keeping Requirements:

a. The permittee shall keep and maintain the following data for the generator: [§2103.12.j; §60.4214(b)]

- 1) Fuel shipment records (date and amount received), type of fuel consumed and supplier's certification of sulfur content, and heating value;
- 2) Operating hours (monthly and 12-month) as recorded by the non-resettable hour meters required under Condition V.F.3.a above ; and
- 3) Records of operation, maintenance, inspection, calibration, and/or replacement of combustion equipment.

- b. Records of fuel supplier certifications used to demonstrate compliance with the sulfur limitations of Condition V.F.3.b above shall be maintained per shipment and include the following information: [§2103.12.j]
 - 1) The name of the diesel fuel supplier, and
 - 2) A statement from the fuel supplier that the diesel fuel complies with ASTM D975 “Standard Specifications for Diesel Fuel Oils.”
- c. Instances of non-compliance with the conditions of this permit shall be recorded upon occurrence. [§2103.12.j]
- d. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. [§2103.12.j.2]

5. Reporting Requirements:

- a. The permittee shall report the following information to the Department semiannually in accordance with General Condition III.15 above. The reports shall contain all required information for the time period of the report: [§2103.12.k]
 - 1) Information required under condition V.F.4.a above;
 - 2) Non-compliance information required to be recorded by condition V.F.4.c above; and
 - 3) Diesel fuel certifications and a statement from the permittee that the record of fuel supplier certifications represents all the diesel fuel used during the reporting period.
- b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.7, if appropriate. [§2103.12.k]

6. Work Practice Standard:

- a. The permittee shall operate and maintain the engine according to the manufacturer’s emission-related written instructions. [§2102.04.b.6; §60.4211(a)(1)]
- b. The permittee shall change only those emission-related settings that are permitted by the manufacturer. [§2102.04.b.6; §60.4211(a)(2)]

VI. MISCELLANEOUS

No alternative operating scenarios exist for this installation.

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VII. ALTERNATIVE OPERATING SCENARIOS

No alternative operating scenarios exist for this installation.

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VIII. EMISSIONS LIMITATIONS SUMMARY

The annual emission limitations for the new sources included in this Installation Permit at the U. S. Steel Edgar Thomson facility are summarized in the following table:

TABLE VIII-1: Emission Limitations Summary

POLLUTANT	ANNUAL EMISSION LIMIT (tons/year)*
Particulate Matter	43.28
Particulate Matter <10 µm (PM ₁₀)	30.54
Particulate Matter <2.5 µm (PM _{2.5})	25.96
Nitrogen Oxides (NO _x)	146.58
Sulfur Oxides (SO _x)	247.76
Carbon Monoxide (CO)	61.96
Volatile Organic Compounds (VOC)	15.11
Hydrogen Sulfide (H ₂ S)	47.67
Greenhouse Gases (CO ₂ e)	266,055

* A year is defined as any consecutive 12-month period.