**Texas Commission on Environmental Quality**
**INTEROFFICE MEMORANDUM**

**TO:** Office of Chief Clerk **Date:** March 23, 2026

**FROM:** Contessa N. Gay
Staff Attorney
Environmental Law Division

**SUBJECT:** Backup Documents Filed for Consideration of Hearing Requests at Agenda

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| **Applicant:** | ArcelorMittal Texas HBI, LLC<br>*formerly known as Voestalpine Texas LLC* |
| **Permit Nos.:** | 108113, PSDTX1344M2, GHGPSDTX43 |
| **Program:** | Air |
| **Docket No.:** | TCEQ Docket No. 2026-0187-AIR |

Enclosed please find a copy of the following documents for inclusion in the background material for this permit application:

- The final draft of the permit Special Conditions
- The Emission Sources – Maximum Allowable Emission Rates for Permit Nos. 108113 and PSDTX1344M2
- The Emission Sources – Maximum Allowable Emission Rates for Permit No. GHGPSDTX43
- The Compliance History Report
- The Permit Amendment Source Analysis & Technical Review
- The Preliminary Determination Summary

## Special Conditions

Permit Numbers 108113, PSDTX1344M2 and GHGPSDTX43

### Emission Limitations

1. This permit authorizes only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission rates and other conditions specified in the table. In addition, this permit authorizes all emissions from planned startup and shutdown activities associated with facilities or groups of facilities authorized by this permit.

### Fuel Specifications

2. Fuel shall be limited as specified and use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).

    A. Fuel for the hot flare pilot (Emission Point No. [EPN] 38) shall be pipeline-quality natural gas;

    B. Fuel for the main reformer burners and the process gas system shall be pipeline-quality natural gas and top gas;

    C. Fuel for the reformer auxiliary burners shall be pipeline-quality natural gas;

    D. Fuel for the Fines Recycling Plant (FRP) Dryer burner shall be pipeline-quality sweet natural gas; and **(DRAFT)**

    E. Fuel used in the emergency generator (EPN 34) and the fire pump (EPN 35) is limited to diesel containing no more than 15 ppm by weight sulfur.

3. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

### Federal Applicability

4. The emergency generator and fire pump engines shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources in Title 40 Code of Federal Regulations (40 CFR) Part 60, specifically the following:

    A. Subpart A - General Provisions; and

    B. Subpart IIII – Stationary Compression Ignition Internal Combustion Engines.

5. The emergency generator and fire pump engines shall comply with all applicable requirements of the EPA Regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63, specifically the following:

    A. Subpart A - General Provisions; and

    B. Subpart ZZZZ –Reciprocating Internal Combustion Engines.

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**Opacity/Visible Emission Limitations**

6. Opacity of particulate matter emissions from the Oxide Unloading Transfer Fabric Filter Stack (EPN 4A), Oxide Unloading and Product Loading Fabric Filter Stack (EPN 4B), Oxide Pellet Transfer (Pre-Storage) Fabric Filter Stack (EPN 5A), Oxide Pellet Transfer (Post-Storage) Fabric Filter Stack (EPN 5B), Oxide Pellet Transfer (Post Storage) Fabric Filter Stack (EPN 6), Oxide Day Bin Filling Fabric Filter Stack (EPN 7A), Oxide Day Bin Discharge Fabric Filter Stack (EPN 7B), Oxide Day Bin Off Spec Fabric Filter Stack (EPN 7C), Oxide Tower Transfer Fabric Filter Stack (EPN 7D), Furnace Charge Hopper Loading Silos Fabric Filter Stack (EPN 16), Reformer Main Flue Ejector Stack (EPN 29), Fines Recycling Plant (FRP) Bag Filter Stack (EPN BFL-1), and the FRP Bin Vent Filters 1-3 (EPNs BVF-1, BVF-2, and BVF-3) shall not exceed 5 percent, averaged over a six-minute period. During MSS activities, the opacity shall not exceed 15 percent averaged over a six-minute period. **(DRAFT)**

7. Opacity of particulate matter emissions from the Furnace Dedusting Bottom Seal Gas (BSG) Dust Collection Wet Scrubber Stack (EPN 8), Briquetter Dedusting Scrubber Stack (EPN 9), HBI Cooling Conveyor Scrubber Stack (EPN 11), and Charge Hopper Wet Scrubber Stack (EPN 17) shall not exceed 10 percent, averaged over a six-minute period. **(DRAFT)**

8. There shall be no visible fugitive emissions leaving the property from process buildings or fugitive sources. Observations for visible emissions shall be performed and recorded quarterly. (**DRAFT)**

**Operational Limitations, Work Practices, and Plant Design**

9. Plant operations and production shall be limited to the following:

   A. As represented, iron ore throughput shall not exceed 500 tons per hour (tph) and 3,197,250 tons per year (tpy) in any rolling 12-month period. **(03/18)**

   B. Hot briquette iron (HBI) production shall be limited to 360 tph and 2,205,000 tpy.

   C. Loading of the Briquette Curing Bin (EPN-DP-2) shall be limited to 28 tph and 245,280 tpy. **(DRAFT)**

   D. Plant wide natural gas usage shall not exceed 26,698 million standard cubic feet (MMscf) per year. **(08/15)**

   E. Annual throughput for Remet/Fines Storage (EPN 36) shall not exceed 130,000 tons/yr. **(DRAFT)**

10. Loading and unloading of the Solid Binder Bin (EPN BVF-1) at the Fines Recycling Plant, shall be limited to 4 hours per day, not to exceed 1,460 hours per year. **(DRAFT)**

11. Fabric filter baghouses designed to meet an outlet grain loading of not more than 0.002 grains per dry standard cubic foot (gr/dscf) of exhaust each, properly installed and in good working order, shall control particulate matter emissions from Oxide Unloading Transfer, Oxide Unloading and Product Loading, Oxide Pellet Transfer (Pre-Storage), Oxide Pellet Transfer (Post-Storage), Oxide Day Bin Filling, Oxide Day Bin Discharge, Oxide Day Bin Off Spec, Oxide Tower Transfer, Furnace Charge Hopper Loading Silos when the processes are in operation. **(DRAFT)**

12. A fabric filter baghouse (EPN BFL-1) designed to meet an outlet grain loading of not more than 0.002 grains per dry standard cubic foot (gr/dscf) of exhaust, properly installed and in good working

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order, shall control particulate matter emissions from the following sources at the Fines Recycling Plant: cyclone separator, briquetting plant, dosing bin, mixer and natural gas dryer. **(DRAFT)**

13. Bin vent filters designed to meet and outlet grain loading of not more than 0.002 grains per dry standard cubic foot (gr/dscf) of exhaust each, properly installed and in good working order, shall control particulate matter emissions from the Solid Binder Bin Vent (EPN BVF-1), Dried Filter Cake Bin Vent (EPN BVF-2), and Pellet Dust Bin Vent (EPN BVF-3). **(DRAFT)**

14. A wet scrubber designed to meet an outlet grain loading of not more than 0.0079 gr/dscf of exhaust each properly installed and in good working order, shall control particulate matter emissions from the Charge Hopper, Furnace Dedusting (Bottom Seal Gas Dust Collection) and Briquetter Dedusting when the equipment is in operation. **(DRAFT)**

15. The HBI conveyors shall employ water sprays to cool the HBI and shall be equipped with vapor hoods to remove steam created by the process. Additionally, a wet scrubber designed to meet an outlet grain loading of not more than 0.0079 gr/dscf of exhaust each properly installed and in good working order, shall control particulate matter emissions from the HBI Cooling Conveyor when the equipment is in operation. **(08/15)**

16. The reformer shall be equipped with low $NO_x$ burners and shall not exceed the following emission limits: **(DRAFT)**

**Table 1: Reformer Emission Limits**

| Pollutant | Emission Limit ($mg/Nm^3$) | Averaging Time |
|---|---|---|
| PM, $PM_{10}$, and $PM_{2.5}$ | 20 $mg/Nm^3$ dry at 3% $O_2$ | 1-day hourly average |
| CO | 173 $mg/Nm^3$ dry at 3% $O_2$ | 1-day hourly average |
| VOC (as total hydrocarbons) | 11 $mg/Nm^3$ dry at 3% $O_2$ | 1-day hourly average |
| $NO_x$ | 110 $mg/Nm^3$ dry at 3% $O_2$ | 30-day continuous average |

17. During startup and shutdown, the reduction reactor shall exhaust through the top gas scrubber to a flare subject to the requirements of Special Condition (SC) 29.

18. Dock ore unloading operations shall employ enclosed conveyors and water sprays at conveyor transfer points.

19. All conveyors at the Fines Recycling Plant shall be fully enclosed and shall not contribute to the total emissions from the Hot Briquetting Facility. **(DRAFT)**

20. The following sources shall employ hooded conveyors and enclosed transfer stations: Oxide Unloading Transfer, Oxide Unloading and Product Loading, Oxide Pellet Transfer (Pre-Storage), Oxide Pellet Transfer (Post-Storage), Oxide Day Bin Discharge, Oxide Day Bin Off Spec, Oxide Tower Transfer, and Product Transfer and Screening (Station No. 2, Post Pile fully enclosed). **(08/15)**

21. Emissions from the cement, burnt lime, hydrated lime, and hydrated dolomite storage silos shall be controlled by the fabric filter exhausting at EPN 16.

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22. Iron ore shall be stored in enclosed storage. **(03/18)**

23. Replaced or used fabric filter bags shall be placed in sealed containers and disposed of in a manner that will prevent any dust from becoming airborne.

24. All air pollution abatement equipment shall be properly maintained and operated during the operation of these facilities. Cleaning and maintenance of the abatement equipment shall be performed as recommended by the manufacturer and as necessary so the equipment efficiency can be adequately maintained.

25. All hood, duct, and collection systems shall be effective in capturing emissions from process equipment and in preventing fugitive emissions from the buildings. The hood and duct systems shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the emission capture system.

26. The hoods and ductwork for the emission capture and control systems shall be inspected quarterly to ensure they are free of holes, cracks, and other conditions that would reduce the collection efficiency of the emission capture system.

27. This facility shall not create a nuisance as defined in 30 TAC § 101.4 as adopted by the TCEQ. If such a condition does occur, additional controls may be required.

28. The operations/processes listed in the table below operate per the criteria of the referenced Permit by Rule (PBR) and are incorporated by reference only. The list is not meant to be an exhaustive list. **(DRAFT)**

**Table 1: Authorizations Incorporated by Reference**

| Operation/Process | PBR No. | Registration No. |
|---|---|---|
| Facility Welding | 106.227 | N/A |
| Barbecue Pit | 106.244 | N/A |
| Routine Maintenance | 106.263 | N/A |
| Industrial Vacuums | 106.266 | N/A |
| Motor Vehicle Fueling | 106.412 | N/A |
| Diesel Fuel Storage | 106.472 | N/A |
| Gasoline Storage | 106.473 | N/A |
| Emergency Engines | 106.511 | N/A |
| Oil and Water Separator | 106.532 | N/A |
| Maintenance Yard | 106.261 and 106.452 | 150444 |
| Temporary Storage Piles and Screeners | 106.261 | 147082 |

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**Flare**

29. The flare controlling emissions from the Hot Pressure Relief Vent (EPN 38) shall be designed and operated in accordance with the following requirements:

    A. The flare shall have a minimum destruction and removal efficiency (DRE) for methane, CO, and VOC of 98%. **(DRAFT)**

    B. The flare systems shall be designed such that the combined assist natural gas and waste stream to each flare meets the 40 CFR § 60.18 specifications for minimum heating value and maximum tip velocity under normal, upset, and maintenance flow conditions.

    The heating value and velocity requirements shall be satisfied during operations authorized by this permit. Flare testing per 40 CFR § 60.18(f) may be requested by the regional office having jurisdiction to demonstrate compliance with these requirements.

    C. The flare shall be operated with a flame present at all times and/or have a constant pilot flame. The pilot flame shall be continuously monitored by a thermocouple or an infrared monitor. The time, date, and duration of any loss of pilot flame shall be recorded. Infrared monitors shall be accurate and shall be calibrated at a frequency in accordance with, the manufacturer's specifications.

    D. The flare shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. This shall be ensured by the use of air assist to the flare.

    E. The permit holder shall install a continuous flow monitor and composition analyzer that provide a record of the vent stream flow and composition (total VOC or Btu content) to the flare. The flow monitor sensor and analyzer sample points shall be installed in the vent stream as near as possible to the flare inlet such that the total vent stream to the flare is measured and analyzed. Readings shall be taken at least once every 15 minutes and the average hourly values of the flow and composition shall be recorded each hour.

    The monitors shall be calibrated on an annual basis to meet the following accuracy specifications: the flow monitor shall be ±5.0%, temperature monitor shall be ±2.0% at absolute temperature, and pressure monitor shall be ±5.0 mm Hg;

    If VOC are monitored, calibration of the analyzer shall follow the procedures and requirements of Section 10.0 of 40 CFR Part 60, Appendix B, Performance Specification 9, as amended through October 17, 2000 (65 FR 61744), except that the multi-point calibration procedure in Section 10.1 of Performance Specification 9 shall be performed at least once every calendar quarter instead of once every month, and the mid-level calibration check procedure in Section 10.2 of Performance Specification 9 shall be performed at least once every calendar week instead of once every 24 hours. The calibration gases used for calibration procedures shall be in accordance with Section 7.1 of Performance Specification 9. Net heating value of the gas combusted in the flare shall be calculated according to the equation given in 40 CFR §60.18(f)(3) as amended through October 17, 2000 (65 FR 61744).

    If a calorimeter is used, the calorimeter shall be calibrated, installed, operated, and maintained, in accordance with manufacturer recommendations, to continuously measure and record the net heating value of the gas sent to the flare, in British thermal units/standard cubic foot of the gas.

    The monitors and analyzers shall operate as required by this section at least 95% of the time when the flare is operational, averaged over a rolling 12-month period. Flared gas net

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heating value and actual exit velocity determined in accordance with 40 CFR §60.18(f)(4) shall be recorded at least once every 15 minutes.

If a VOC monitor is used, hourly mass emission rates shall be determined and recorded using the above readings and the emission factors used in the permit application PI-1 dated February 4, 2013.

**Cooling Tower**

30. The cooling water used by the cooling tower exhausting at EPN 33 shall use sea water and shall be equipped with drift eliminators having a design drift rate not greater than 0.0005%. **(Draft)**

A. Cooling water shall be sampled once a week for concentrations of total dissolved solids (TDS). 3% of the dissolved solids in the cooling water drift are considered to be emitted as $PM_{10}$ and 3% of the dissolved solids are considered to be emitted as $PM_{2.5}$. The analysis method for TDS shall be the latest EPA Method 160.1, ASTM D5907, and SM 2540 C (Standard Methods for Examination of Water).

Cooling water shall either be sampled once a day for conductivity and analyzed using the latest ASTM D1125 and SM 2510B (Standard Methods for Examination of Water) or shall be continuously monitored for conductivity. Use of an alternative sampling method shall be approved by the TCEQ Regional Director prior to its implementation. Quality-assured (or valid) data must be generated when the cooling tower is operating except during the performance of a daily zero check. Loss of valid data due to periods of monitor breakdown, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided the total data loss period does not exceed 5 percent of the time (in hours) that the cooling tower operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

The TDS and conductivity data shall result from sampling or monitoring the cooling tower return stream (i.e., water stream routed to the tower for cooling), and represent the water being cooled in the tower. Water samples should be capped upon collection and transferred to a laboratory area for analysis.

B. The permit holder may reduce the frequency of TDS sampling required by paragraph B of this condition by establishing a valid correlation between TDS and conductivity for the cooling tower as follows:

(1) The sampling and analysis required by paragraph B of this condition (i.e., frequency of sampling for TDS and conductivity) shall be conducted as specified until a valid correlation is established between TDS and conductivity.

(2) For a minimum period of six months, the cooling water shall be sampled at least weekly for analysis of TDS and conductivity. The data from the TDS and conductivity measurements shall be plotted, with a total range of two standard deviations (plus and minus one standard deviation) applied to the resulting plot. A report including the data analysis results and the correlation established between TDS concentrations and conductivity shall be maintained on site.

(3) Following completion of the report, the cooling water may either be sampled daily or monitored continuously for conductivity, and the result converted to TDS with the use of the established correlation.

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(4) The correlation shall be re-validated annually with the analysis of a single cooling water sample for TDS and conductivity. The measured TDS value shall be compared to the correlation TDS value (i.e., the TDS value derived from the measured conductivity and the established correlation). If the measured TDS value is not within plus or minus one standard deviation of the correlation TDS value, a new correlation shall be developed according to paragraph B. of this condition.

C. Cooling tower PM emissions shall be determined using the cooling tower water circulation rate, cooling tower design drift, and the measured or estimated TDS.

31. Primary in-plant roads and parking areas shall be paved with a cohesive hard surface and cleaned as necessary using sweeping and enforced reduced speed limits to maintain compliance with all applicable TCEQ rules.

32. Paved, in-plant roads shall be swept no less than once per day. **(DRAFT)**

33. Dozer traffic at the Remet/Fines Storage area (EPN 36) is limited to half a mile per day and front-end loader traffic is limited to 1 mile per day. **(DRAFT)**

34. Dozer traffic at the HBI Pile (EPN 14) is limited to two miles per day and front-end loader traffic is limited to ten miles per day. **(DRAFT)**

35. Unpaved areas and roads, including storage yards shall be sprinkled with water or dust suppressant chemicals as necessary and have enforced reduced speed limits to control dust emissions and maintain compliance with all applicable TCEQ rules.

36. Stockpiles shall be sprayed with water or chemical suppressants/surfactants, using an installed area type water spray, a dedicated truck or equipment upon detection of visible particulate matter emissions to maintain compliance with all applicable TCEQ rules and regulations. **(DRAFT)**

**Demonstration of Continuous Compliance**

37. Upon being informed by the TCEQ Executive Director that the staff has documented visible emissions from this facility exceeding opacity of emissions stated in SC 6 the holder of this permit shall conduct stack sampling analyses as appropriate or take immediate corrective action to demonstrate compliance.

38. Upon request by the TCEQ Executive Director or the TCEQ Regional Director having jurisdiction, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere to demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions and/or otherwise prove satisfactory equipment performance. Sampling must be conducted in accordance with the TCEQ Sampling Procedures Manual and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director or the appropriate TCEQ Regional Director prior to conducting sampling.

39. Visible emissions observations for wet scrubbers exhausting at EPN's 8, 9, 11, 17 and 38 shall be made once per day and recorded in accordance with the requirements specified in 40 CFR § 64.7(c). **(DRAFT)**

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**Initial Determination of Compliance**

40. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from EPNs 8 and 29: **(DRAFT)**

    A. Air contaminants from EPN 8 to be sampled and analyzed include (but are not limited to) PM, $PM_{10}$, $PM_{2.5}$, $NO_x$, $SO_2$, NOx, VOC, CO and $NH_3$.

    B. Air contaminants from EPN 29 to be sampled and analyzed include (but are not limited to) PM, $PM_{10}$, $PM_{2.5}$, $NO_x$, $SO_2$, CO, and VOC.

    C. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after initial startup.

**Sampling Requirements**

41. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stack(s) according to the specifications set forth in the attachment entitled “Chapter 2, Stack Sampling Facilities” prior to stack sampling. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.

42. Sampling shall be conducted in accordance with the TCEQ Sampling Procedures Manual and EPA Test Methods in 40 CFR part 60, Appendix A and 40 CFR Part 51, Appendix M.

    A. Test methods to be used are as follows:

        (1) Appendix A, Method 5, per TCEQ Lab Method for the concentration of PM;

        (2) Appendix A, Method 5 or 17, for the filterable concentration of PM (front-half catch);

        (3) Appendix A, Method 7E for the concentrations of $NO_x$ and $O_2$, or equivalent methods;

        (4) Appendix A, Method 9 for opacity;

        (5) Appendix A, Method 10 for the concentration of CO;

        (6) Appendix A, Method 22, for visual determination of fugitive emissions from material sources;

        (7) Appendix M, Method 202, or Appendix A, Reference Method 5, modified to include back-half condensables, for the concentration of $PM_{10}$; and

        (8) Appendix M, Methods 201A or Appendix A, Reference Method 5, for the filterable concentration of $PM_{10}$ (front-half catch);

    B. Any variations from these procedures must be approved by the Executive Director of the TCEQ or his designated representative prior to sampling.

43. A pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:

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A. Date for pretest meeting;

B. Date sampling will occur;

C. Points or sources to be sampled;

D. Name of firm conducting sampling;

E. Type of sampling equipment to be used; and

F. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

44. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved by the TCEQ Regional Office with jurisdiction at least two weeks prior to sampling.

45. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.

46. During stack sampling emission testing, the facilities shall operate at maximum represented production/throughput rates. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.

    If the plant is unable to operate at the maximum represented production/throughput rates during testing, then additional stack testing shall be required when the production rate exceeds the previous stack test production rate by +10 percent unless otherwise determined, in writing, by the TCEQ Executive Director.

47. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.

48. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

    One copy to the TCEQ Regional Office with jurisdiction.

    One copy to the TCEQ Office of Air, Air Permits Division in Austin.

    One copy to each appropriate local air pollution control program with jurisdiction.

49. If, as a result of stack sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with Special Condition No. 1 and the permitted emission rates.

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50. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily records of production sufficient to demonstrate compliance with the permitted emission rates. Daily records of production and operating parameters shall be distributed as follows:

    One copy to the TCEQ Regional Office with jurisdiction.

    One copy to the TCEQ Office of Air, Air Permits Division in Austin.

**Recordkeeping Requirements**

51. Records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled for each calendar month, retained for a rolling 60-month period, and include the following:

    A. A daily record of operating hours, amount of iron ore processed, and hot briquetted iron produced in tons per 24-hour period. From this data, average hourly throughput and production shall be calculated; **(03/18)**

    B. A record of annual iron ore throughput and hot briquetted iron production in tons on a rolling 12-month basis; (**03/18)**

    C. Annual natural gas usage for the facility (MMscf), on a rolling 12-month basis;

    D. Records of the inspection, maintenance, malfunction, and repair of abatement equipment. Inspections of capture systems and abatement devices shall be recorded as they occur;

    E. Records required by NSPS Subpart IIII and MACT Subpart ZZZZ;

    F. Quarterly observations for visible emissions and/or opacity determinations as required by Special Conditions Nos. 6 and 7;

    G. A daily record of loading and unloading hours for the Solid Binder Bin at the Fines Recycling Plant; **(DRAFT)**

    H. Records required by SC 29 to include (1) time, date, and duration of loss of flare pilot flame, (2) hourly values of flow and composition of the vent stream, and (3) hourly VOC mass emission rate if a VOC monitor is used;

    I. Records required by SC 30 to include TDS and conductivity sampling;

    J. Daily observations for visible emissions required by SC 35; and

    K. Records shall be kept in sufficient detail to allow emission rates of Hazardous Air Pollutants (HAPS) to be accurately determined from all emission points having the potential to emit HAPS. Using this recorded data, a report shall be produced for the emission of HAPs (in tons per year) over the previous 12 consecutive month. The required records shall be kept with examples of the method of data reduction including units, conversion factors, assumptions, and the basis of the assumptions.

**Greenhouse Gases Special Conditions**

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52. The facility shall combust as fuel and use as relevant raw material pipeline quality natural gas in all sources except for the emergency engines.

53. The permit holder shall determine the pipeline quality natural gas fuel gross calorific value (GCV) [high heat value (HHV)], carbon content and if applicable, molecular weight, shall be determined, at a minimum, monthly by the procedures contained in 40 CFR § 98.34(b)(3). Records of the fuel GCV shall be maintained for a minimum period of five years. Upon request, the permit holder shall provide a sample and/or analysis of the fuel that is fired in any unit covered by this permit at the time of the request, or shall allow a sample to be taken for analysis by TCEQ or any air pollution control program personnel with jurisdiction.

54. Pipeline quality natural gas shall be exempt from the requirement of SC 49 provided the permit holder receives and maintains quarterly records of the vendor's analysis, and the data is of sufficient quality to yield further analysis as required above.

55. The permit holder shall utilize insulation materials where feasible to reduce heat loss.

56. The permit holder shall maintain a minimum overall efficiency of less than or equal to 13 dekatherms of natural gas/ton (11.79 mmBtu/ton) of HBI produced on a 12-month rolling average basis, calculated monthly. Heat input is on the higher heating value basis. Natural gas use includes all uses of natural gas at the site, including during periods of start-up, shutdown, maintenance and idle time. Any time when natural gas is used shall be included. Total HBI production shall include all HBI passing through the shaft furnace, including commercial and off specification or unsaleable product. The calculations to demonstrate compliance shall be made each month and the 12-month rolling values shall be updated by the last day of the following month.

57. The permit holder shall calibrate and perform preventative maintenance checks of the natural gas flow meters and document at the minimum frequency established per the manufacturer's recommendation, or at the interval specified per 40 CFR § 98.34(b)(1)(ii). The flow meters must be located at the natural gas receiving station and prior to natural gas distribution to the facility.

58. The permit holder shall calculate, on a monthly basis, the amount of $CO_2$ emitted from the consumption (fuel and raw material) of natural gas in tons/yr using equation C-2a in 40 CFR Part 98 Subpart C, converted to short tons. Compliance shall be based on a 12-month rolling basis to be updated by the last day of the following month.

59. The permit holder shall calculate the $CO_2e$ emissions on a 12-month rolling basis, based on the procedures and Global Warming Potentials (GWP) contained in Greenhouse Gas Regulations, 40 CFR Part 98, Subpart A, Table A-1, as published on November 29, 2013 (74 FR 71948). The record shall be updated by the last day of the following month.

60. The permit holder shall determine the entire HBI production quantity for each month by the last day of the following month. Such production data shall include subtotals by type of HBI produced, including all on-spec and off-spec material that passes through the shaft furnace.

**Reformer Main Flue Ejector Stack (EPN 29)**

61. The reformer furnace shall be designed and operated in accordance with the following requirements:

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A. The reformer furnace shall have fuel metering for natural gas (auxiliary fuel) and top gas. The permit holder shall measure and record the fuel flow rates using an operation non-resettable elapsed flow meter or by recording the flow rate date in an electronic format with individual flow measurements being taken no less frequently than once every 15 minutes. Electronic data may be reduced to hourly averages for recordkeeping.

B. The permit holder shall install, operate, and maintain an $O_2$ analyzer in the furnace flue gas at a location downstream of the radiant sections of the furnace.

C. The oxygen analyzer shall:

(1) be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the Performance Specification No. 3, 40 CFR Part 60, Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

(2) be quality-assured at least semiannually using cylinder gas audits (CGAs) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, § 5.1.2, with the following exception: a relative accuracy test audit is not required once every four quarter (i.e., two successive semiannual CGAs may be conducted). An equivalent quality-assurance method approved by the EPA may also be used.

Successive semiannual audits shall occur no closer than four months. Necessary corrective action shall be taken for all CGA exceedances of ± 15 percent accuracy and any continuous emissions monitoring system downtime in excess of 5 percent of incinerator operating time. These occurrences and corrective actions shall be reported to the TCEQ, Region 14 office on a quarterly basis. Supplemental stack concentration measurements may be required at the discretion of the regional office.

D. The fuel gas meters, and oxygen analyzer shall have a minimum 95% on-stream time or greater when the reformer is being fired. Missing data shall be supplied using good engineering practices and documenting methods used.

E. The reformer furnace shall not exceed the one-hour maximum firing rate of 1,591 mm/Btu/hr. This one-hour maximum firing rates shall be determined daily.

F. Natural gas to the reformer fuel supply and as raw material to the reformer shall be recorded daily and summed monthly.

G. The permit holder shall on a monthly basis, determine the total $CO_2$ and $CO_2e$ emissions from EPN 29 based on flue gas composition and the actual measured flows through EPN 29.

H. The permit holder shall calculate, on a monthly basis, the amount of $CH_4$ and $N_2O$ emitted from combustion of natural gas in tons/yr using $CH_4$ and $N_2O$ emission factors from AP-42, Chapter 1 Section 4, Table 1.4-2, converted to short tons. This emission rate includes the reformer and the seal gas system and will be apportioned according to the total auxiliary fuel emissions excluding the seal gas system emissions (SC 58.B).

**Seal Gas System: Charge Hopper (EPN 17), Bottom Seal Gas Vent (EPN 8) and Briquetting Wet Scrubber (EPN 9)**

62. The Seal Gas System shall be designed and operated in accordance with the following requirements:

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A. Reformer flue gas bleed-off to be used as seal gas shall be measured using an operation non-resettable elapsed flow meter or by recording the flow rate data in an electronic format with individual flow measurements being taken no less frequently than once every 15 minutes. Electronic data may be reduced to hourly averages for recordkeeping purposes and monthly averages for emission calculations purposes.

B. The permit holder shall use flow and pressure or other comparable engineering methods to apportion the actual flow of seal gas through each of the 3 EPNs identified in this special condition.

C. The permit holder shall calibrate and perform preventative maintenance checks of the flue gas flow meter, pressure, and other, if any, necessary meters and document at the minimum frequency established per the manufacturer's recommendations, or at the interval specified per 40 CFR § 98.34(b)(1)(ii).

D. The permit holder shall calculate, on a monthly basis, the amount of $CO_2$, $CH_4$ and $N_2O$ emitted from EPNs 8, 9 and 17 in tons/yr using the data collected in SC 57.G and H and 58. A and B.

E. The permit holder shall calculate each month the $CO_2e$ emissions on a 12-month rolling basis, based on the procedures and Global Warming Potentials (GWP) contained in Greenhouse Gas Regulations, 40 CFR Part 98, Subpart A, Table A-1, as published on November 29, 2013 (74 FR 71948). The record shall be updated by the last day of the following month.

**Process Water Degasser (EPNs 30a and 30b)**

63. The process water degasser shall be designed and operated in accordance with the following requirements:

A. The process water degasser water inlet shall be measured for temperature, pressure and the top gas scrubber water inlet shall be measured for water flow using operational non-resettable elapsed meters or by recording the data in an electronic format with individual measurements being taken no less frequently than once every 15 minutes. Electronic data may be reduced to hourly averages for recordkeeping purposes. **(DRAFT)**

B. The permit holder shall calibrate and perform preventative maintenance checks for the monitoring equipment in this special condition and document the checks at the minimum frequency established per the manufacturer's recommendation, or at the interval specified per 40 CFR § 98.34(b)(1)(ii).

C. The permit holder shall calculate, on a monthly basis, the amount of $CO_2$, $CH_4$ and $N_2O$ emitted from EPN 30a and 30b, in tons/yr., using the parameters monitored in Item SC 59.A. and the Henry's Law coefficient for the appropriate greenhouse gas. Compliance shall be based on a 12-month rolling basis to be updated by the last day of the following month.

D. The permit holder shall calculate the $CO_2e$ emissions on a 12- month rolling basis, based on the procedures and Global Warming Potentials (GWP) contained in Greenhouse Gas Regulations, 40 CFR Part 98, Subpart A, Table A-1, as published on November 29, 2013 (74 FR 71948). The record shall be updated by the last day of the following month.

**Emergency Engines (EPNs 34 and 35)**

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64. The Fire Water Pump (EPN 35) and Emergency Generator (EPN 34) shall be operated in accordance with the following requirements:

    A. The Fire Water Pump and Emergency Generator are each limited to 100 hours of non-emergency operation per year. The emergency firewater pump engine shall not exceed 240 horsepower and the emergency generator shall have a power output not to exceed 2,500 kW. Compliance with the 100-hour, non-emergency operational requirement is determined on a 12-month rolling basis.

    B. The Fire Water Pump and Emergency Generator shall meet all applicable requirements in 40 CFR Part 60 IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

    C. The permit holder shall install and maintain an operational non-resettable elapsed time meter for the Fire Water Pump and Emergency Generator.

    D. The permit holder shall maintain a file of all records, data measurements, reports and documents related to the operation of the Fire Water Pumps and Emergency Generator, including, but not limited to, the following:

        (1) all records or reports pertaining to maintenance performed;

        (2) all records relating to performance tests and monitoring of the emergency generator and fire pump equipment;

        (3) records of each diesel fuel oil delivery, documents from the fuel supplier certifying compliance with the fuel sulfur content limit specified in SC 2.E;

        (4) fuel heat input values and hours of operation required in SC 60.A; and all other information required by this permit recorded in a permanent form suitable for inspection; and,

        (5) The file must be retained for not less than five years following the date of such measurements, maintenance, reports, and/or records.

    E. Compliance with the Annual Emission Limit shall be demonstrated on a 12-month total, rolling monthly, calculated in accordance with 40 CFR §98.33(a)(1)(ii).

**Fugitive Components (EPN FUG)**

65. The permit holder shall implement an auditory and visual monitoring program for detecting leaks in natural gas, top gas, and seal gas piping components, including valves and flanges. The program elements and methods shall be documented in the form of written procedures to be followed. **(DRAFT)**

    A. Auditory and visual monitoring shall be performed daily, sitewide.

    B. Any component found to be leaking using the auditory and visual monitoring program (or other means) shall be repaired within 15 days. Records must be kept of the component found to be leaking, the apparent cause of the leak (if discernable), the date the component was discovered leaking and the date the repairs were effective. Records shall be kept for 5 years.

    C. Records of the daily inspection results shall be maintained on site for 5 years.

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**Continuous Emissions Monitoring Systems (CEMS)**

66. As an alternative to SC 49, the permit holder may install a $CO_2$ CEMS, stack gas moisture monitor, and volumetric stack gas flow monitoring system with an automated data acquisition and handling system for measuring and recording $CO_2$ emissions discharged to the atmosphere, and use these values to show compliance with the annual emission limits in the MAERT for EPNs 29, 17, 8, and 9. A single monitoring system may be shared between these stacks, provided at least one cycle of measurement can accurately be made for each stack once each fifteen minutes,

67. The permit holder shall ensure that all required $CO_2$, stack gas moisture monitor, and stack gas flowrate monitoring system/equipment are installed and all certification tests are completed on or before the earlier of 90 unit operating days or 80 calendar days after the date the unit commences operation.

68. The permit holder shall ensure compliance with the specifications and test procedures for $CO_2$ emission monitoring systems at stationary sources, 40 CFR Part 75, or 40 CFR Part 60, Appendix B, Performance Specification numbers I through 9, as applicable.

69. The permit holder shall meet the appropriate quality assurance requirements specified in 40 CFR Part 60, Appendix F for the $CO_2$ emission monitoring system.

**Recordkeeping and Reporting Requirements**

70. In order to demonstrate compliance with the GHG emission rate for each emission unit, for the sitewide energy efficiency measure, and with the BACT requirements for each emissions unit, the permit holder shall monitor and record the following parameters and summarize the data on a calendar month basis.

    A. Records required in SC 48-61 D, including data collected, maintenance activities performed (where required), and calculation methods used to make the various demonstrations of compliance called for by the Special Conditions;

    B. Daily record of DRI and HBI process operating hours and hot briquetted iron produced (including off spec DRI/HBI) in tons per 24-hour period. Records shall include operating status (normal operations, startup, shutdown, malfunction, maintenance, idle, etc.) for each hour of the day;

    C. Annual hot briquetted iron production in tons on a rolling 12-month basis;

    D. Record of operating hours (and total by month) for each of the emergency engines;

    E. Total natural gas into the plant for each month (MMscf) and maintained on a rolling 12-month basis;

    F. Natural gas usage for each source, using continuous fuel/raw material flow monitors (a group of equipment can utilize a common flow meter, as long as actual usage is allocated to the individual equipment based upon actual operating hours and maximum utilization rate);

    G. For each calendar month, calculations of the 12-month rolling GHG emission rates for comparison to the MAERT limits;

    H. Time, date, and duration of any loss of the flare pilot flame;

    I. NSPS IIII certification statements for emergency engines; and

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J. The permit holder shall also maintain site-specific procedures for preventative maintenance practices, vendor-recommended operating procedures and O&M manuals, and the auditory and visual monitoring program documentation. These manuals shall be maintained with the permit and located on-site and retained for 5 years after the last use of the individual methods.

71. Malfunction Reporting

A. The permit holder shall notify the TCEQ, by mail, within 48 hours following the discovery of any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner, which results in an increase in GHG emissions above the allowable emission limits stated in the MAERT.

B. Within 10 days of the restoration of normal operations after any failure described in SC 67 A (above), the permit holder shall provide a written supplement to the initial notification that includes a description of the malfunctioning equipment or abnormal operation, the date of the initial malfunction, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed in the MAERT, and the methods utilized to mitigate emissions and restore normal operations.

C. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violation of this permit or any law or regulation such malfunction may cause.

72. The permit holder shall maintain records of the following events:

A. All records or reports pertaining to significant maintenance performed.

B. Start date and time and end date and time, and duration of each startup, shutdown, malfunction, maintenance event and idle time event of the reformer and furnace.

C. All incidents of process gas leaks past any seal gas leg, including the date, time, duration, and cause of each event.

D. All instances where the required minimum data collection by monitoring systems was not met, and the methods used to supply missing data, including relevant example calculations.

73. Records retention and format.

A. All required records must be maintained for at least 5 years following the date of such measurements, maintenance activity, or report unless otherwise noted in a specific condition of this permit.

B. Data may be kept in any suitable format, including electronic, provided they are promptly available upon request to the TCEQ or any air pollution control program personnel with jurisdiction. Where calculation methods are used to determine any record, example equations and methods must be retained along with the relevant records.

C. Records of any stack tests or performance tests shall be retained for the life of the permit.

D. The permit holder shall maintain records and submit a written report of all excess emissions or malfunction events (identified in SC 67, above) to the TCEQ semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator or authorized representative, on a case by-case basis, determines that more frequent

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reporting is necessary to accurately assess the compliance status of the source. The report is due on the 30th day following the end of each semi-annual period and shall include the following:

(1) Time intervals, data and magnitude of the excess emissions, the nature and cause (if known), corrective actions taken, and preventive measures adopted;

(2) Applicable time and date of each period during which the monitoring equipment was inoperative (monitoring down-time);

(3) A statement in the report of a negative declaration; that is; a statement when no excess emissions occurred or when the monitoring equipment has not been inoperative, repaired or adjusted; and

(4) Any failure to conduct any required source testing, monitoring, or other compliance activities.

Excess emissions shall be defined as any period in which the facility emission exceeds a maximum emission limit or fails to meet a minimum control requirement or work practice standard set forth in this permit.

Excess emissions indicated by GHG emission source certification testing or compliance monitoring shall be considered violations of the applicable emission limit for the purpose of this permit.

**Performance Testing Requirements**

74. The permit holder shall perform an initial stack test to establish the actual quantities of air contaminants being emitted into the atmosphere from the Reformer Main Flue Ejector Stack (EPN 29) to determine the initial compliance with the $CO_2$ emission limits established in this permit. Sampling shall be conducted in accordance with 40 CFR 60.8 and EPA Method 3a or 3b for the concentration of $CO_2$.

75. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility, performance tests(s) shall be conducted and a written report of the performance testing results furnished to the TCEQ. Additional sampling may be required by the TCEQ.

A. The permit holder shall submit a performance test protocol to the TCEQ no later than 30 days prior to the test to allow review of the test plan and to arrange for an observer to be present at the test. The performance test shall be conducted in accordance with the submitted protocol, and any changes required by the TCEQ.

B. Performance tests shall be conducted under such conditions to ensure representative performance of the affected facility. The permit holder shall make available to the TCEQ such records as may be necessary to determine the conditions of the performance test.

C. The owner or operator shall provide the TCEQ at least 30 days prior notice of any performance test, except as specified under other Subparts, to afford the TCEQ the opportunity to have an observer present and/or to attend a pre-test meeting. If there is a delay in the original test date, the permit holder shall provide at least 7 days prior notice of the rescheduled date of the performance test.

D. The permit holder shall provide, or cause to be provided, performance testing facilities as follows

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(1) Sampling ports adequate for test methods applicable to this facility,

(2) Safe sampling platform(s),

(3) Safe access to sampling platform(s), and

(4) Utilities for sampling and testing equipment.

E. Unless otherwise specified in this permit, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted under the conditions specified in the applicable test method. For purposes of determining compliance with an applicable test method, the arithmetic mean of the results of the three runs shall apply.

F. The permit holder shall determine if a compliance strategy is required as follows:

(1) Multiply the $CO_2$ hourly average emission rate determined during the initial performance test while operating under maximum operating test conditions by 8,760 hours; If the calculated $CO_2$ emission total does not exceed the tons per year (TPY) specified the MAERT, no compliance strategy needs to be developed. If the calculated $CO_2$ emission total exceeds the tons per year (TPY) specified in the MAERT, the facility shall;

(a) Document the exceedance in the test report; and

(b) Explain within the report how the facility will assure compliance with the $CO_2$ emission limit listed in the MAERT.

G. Emissions testing, as outlined above, shall be performed every three years, or more frequently if identified above, to verify continued performance with the permitted emission limits.

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Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 108113 and PSDTX1344M2

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates (6) | |
|---|---|---|---|---|
| | | | lbs/hour | TPY (4) |
| 1 | Dock Ore Unloading and Product Loading Gantry Crane (5) | PM | 0.28 | 1.22 |
| | | $PM_{10}$ | 0.13 | 0.58 |
| | | $PM_{2.5}$ | 0.02 | 0.09 |
| 4A | Oxide Unloading Transfer Fabric Filter Stack | PM | 0.07 | 0.31 |
| | | $PM_{10}$ | 0.07 | 0.31 |
| | | $PM_{2.5}$ | 0.05 | 0.23 |
| 4B | Oxide Unloading and Product Loading Fabric Filter Stack | PM | 0.07 | 0.31 |
| | | $PM_{10}$ | 0.07 | 0.31 |
| | | $PM_{2.5}$ | 0.05 | 0.23 |
| 5A | Oxide Pellet Transfer (Pre-Storage) Fabric Filter Stack | PM | 0.07 | 0.31 |
| | | $PM_{10}$ | 0.07 | 0.31 |
| | | $PM_{2.5}$ | 0.05 | 0.23 |
| 5B | Oxide Pellet Transfer (Post-Storage) Fabric Filter Stack | PM | 0.07 | 0.31 |
| | | $PM_{10}$ | 0.07 | 0.31 |
| | | $PM_{2.5}$ | 0.05 | 0.23 |
| 6 | Oxide Pellet Transfer (Post-Storage) Fabric Filter Stack | PM | 0.05 | 0.22 |
| | | $PM_{10}$ | 0.05 | 0.22 |
| | | $PM_{2.5}$ | 0.04 | 0.17 |
| 7A | Oxide Day Bin Filling Fabric Filter Stack | PM | 0.13 | 0.57 |
| | | $PM_{10}$ | 0.13 | 0.57 |
| | | $PM_{2.5}$ | 0.10 | 0.43 |

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Emission Sources - Maximum Allowable Emission Rates

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates (6) | |
|---|---|---|---|---|
| | | | lbs/hour | TPY (4) |
| 7B | Oxide Day Bin Discharge Fabric Filter Stack | PM | 0.64 | 2.82 |
| | | $PM_{10}$ | 0.64 | 2.82 |
| | | $PM_{2.5}$ | 0.48 | 2.12 |
| 7C | Oxide Day Bin Off Spec Fabric Filter Stack | PM | 0.12 | 0.53 |
| | | $PM_{10}$ | 0.12 | 0.53 |
| | | $PM_{2.5}$ | 0.09 | 0.40 |
| 7D | Oxide Tower Transfer Fabric Filter Stack | PM | 0.05 | 0.22 |
| | | $PM_{10}$ | 0.05 | 0.22 |
| | | $PM_{2.5}$ | 0.04 | 0.17 |
| 16 | Furnace Charge Hopper Loading Silos Fabric Filter Stack | PM | 0.01 | <0.01 |
| | | $PM_{10}$ | 0.01 | <0.01 |
| | | $PM_{2.5}$ | 0.01 | <0.01 |
| 17 | Charge Hopper Wet Scrubber Stack | PM | 0.13 | 0.59 |
| | | $PM_{10}$ | 0.13 | 0.59 |
| | | $PM_{2.5}$ | 0.10 | 0.44 |
| | | $NO_x$ | 2.02 | 8.84 |
| | | $SO_2$ | 0.25 | 1.10 |
| | | CO | 1.83 | 8.03 |
| | | VOC | 0.18 | 0.81 |
| | | $NH_3$ | 0.02 | 0.10 |
| 29 | Reformer Main Flue Ejector Stack | PM | 14.82 | 64.92 |
| | | $PM_{10}$ | 12.72 | 55.72 |
| | | $PM_{2.5}$ | 12.72 | 55.72 |
| | | $NO_x$ | 83.96 | 367.74 |

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Emission Sources - Maximum Allowable Emission Rates

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates (6) | |
|---|---|---|---|---|
| | | | lbs/hour | TPY (4) |
| | | $SO_2$ | 10.48 | 32.10 |
| | | CO | 76.33 | 334.31 |
| | | VOC | 7.69 | 33.67 |
| | | n-Hexane | 0.41 | 1.80 |
| 8 | Furnace Dedusting (BSG Dust Collection) Wet Scrubber Stack | PM | 2.50 | 10.95 |
| | | $PM_{10}$ | 2.50 | 10.95 |
| | | $PM_{2.5}$ | 0.50 | 2.19 |
| | | $NO_x$ | 2.02 | 8.84 |
| | | $SO_2$ | 0.25 | 1.10 |
| | | CO | 1500.00 | 6570.00 |
| | | VOC | 0.18 | 0.81 |
| | | $NH_3$ | 0.65 | 2.85 |
| 38 | Hot Pressure Relief Vent (Flare) | PM | 0.63 | 0.10 |
| | | $PM_{10}$ | 0.63 | 0.10 |
| | | $PM_{2.5}$ | 0.63 | 0.10 |
| | | $NO_x$ | 33.71 | 6.16 |
| | | $SO_2$ | 0.03 | 0.01 |
| | | CO | 622.27 | 104.37 |
| | | VOC | 0.29 | 0.06 |
| | | Pb | <0.01 | <0.01 |
| 9 | Briquetter Dedusting Scrubber Stack | PM | 3.97 | 17.38 |
| | | $PM_{10}$ | 3.97 | 17.38 |
| | | $PM_{2.5}$ | 0.79 | 3.48 |
| | | $NO_x$ | 1.01 | 4.42 |

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Emission Sources - Maximum Allowable Emission Rates

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates (6) | |
|---|---|---|---|---|
| | | | lbs/hour | TPY (4) |
| | | $SO_2$ | 0.13 | 0.55 |
| | | CO | 0.92 | 4.02 |
| | | VOC | 0.09 | 0.40 |
| | | $NH_3$ | 1.77 | 7.73 |
| 11 | HBI Cooling Conveyer Scrubber Stack | PM | 1.90 | 8.34 |
| | | $PM_{10}$ | 1.90 | 8.34 |
| | | $PM_{2.5}$ | 0.95 | 4.17 |
| | | $NH_3$ | 8.01 | 35.11 |
| 14 | HBI Pile (5) | PM | 0.32 | 1.39 |
| | | $PM_{10}$ | 0.13 | 0.56 |
| | | $PM_{2.5}$ | 0.04 | 0.16 |
| 36 | Remet/Fines Storage (5) | PM | 0.17 | 0.74 |
| | | $PM_{10}$ | 0.04 | 0.20 |
| | | $PM_{2.5}$ | 0.01 | 0.02 |
| 30a | Process Water Degasser (5) | CO | 21.72 | 95.13 |
| | | $NH_3$ | 2.78 | 12.18 |
| | | $H_2S$ | 0.01 | 0.06 |
| 30b | Process Water Degasser (5) | CO | 2.54 | 11.11 |
| | | $NH_3$ | 0.14 | 0.61 |
| | | $H_2S$ | 0.01 | 0.05 |
| 33 | Salt Water Cooling Tower (5) | PM | 13.91 | 60.91 |
| | | $PM_{10}$ | 0.06 | 0.28 |

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Emission Sources - Maximum Allowable Emission Rates

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates (6) | |
|---|---|---|---|---|
| | | | lbs/hour | TPY (4) |
| | | $PM_{2.5}$ | 0.06 | 0.28 |
| 39 | Paved Road Fugitive Dust (5) | PM | - | 1.08 |
| | | $PM_{10}$ | - | 0.21 |
| | | $PM_{2.5}$ | - | 0.03 |
| 34 | Emergency Generator | PM | 0.47 | 0.02 |
| | | $PM_{10}$ | 0.47 | 0.02 |
| | | $PM_{2.5}$ | 0.47 | 0.02 |
| | | $NO_x$ | 32.09 | 1.60 |
| | | $SO_2$ | 0.04 | <0.01 |
| | | CO | 3.80 | 0.19 |
| | | VOC | 0.99 | 0.05 |
| 35 | Fire Pump | PM | 0.03 | <0.01 |
| | | $PM_{10}$ | 0.03 | <0.01 |
| | | $PM_{2.5}$ | 0.03 | <0.01 |
| | | $NO_x$ | 2.25 | 0.11 |
| | | $SO_2$ | <0.01 | <0.01 |
| | | CO | 0.27 | 0.01 |
| | | VOC | 0.07 | <0.01 |
| BFL-1 | FRP Bag Filter Stack and Dryer Exhaust | PM | 0.98 | 4.29 |
| | | $PM_{10}$ | 0.51 | 2.25 |
| | | $PM_{2.5}$ | 0.24 | 1.05 |
| | | $NO_x$ | 1.56 | 6.82 |
| | | $SO_2$ | 0.01 | 0.04 |
| | | CO | 1.31 | 5.73 |

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Emission Sources - Maximum Allowable Emission Rates

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates (6) | |
|---|---|---|---|---|
| | | | lbs/hour | TPY (4) |
| | | VOC | 0.09 | 0.38 |
| BVF-1 | FRP Bin Vent Filter 1 (Solid Binder Bin) (7) | PM | 0.09 | 0.07 |
| | | $PM_{10}$ | 0.04 | 0.03 |
| | | $PM_{2.5}$ | 0.01 | 0.01 |
| BVF-2 | FRP Bin Vent Filter 2 (Dried Filter Cake Bin) (8) | PM | <0.01 | <0.01 |
| | | $PM_{10}$ | <0.01 | <0.01 |
| | | $PM_{2.5}$ | <0.01 | <0.01 |
| BVF-3 | FRP Bin Vent Filter 3 (Pellet Dust Bin) (8) | PM | <0.01 | <0.01 |
| | | $PM_{10}$ | <0.01 | <0.01 |
| | | $PM_{2.5}$ | <0.01 | <0.01 |
| DP-2 | FRP Briquette Curing Bin (Drop Point 2) (8) | PM | 0.07 | 0.30 |
| | | $PM_{10}$ | 0.03 | 0.14 |
| | | $PM_{2.5}$ | <0.01 | 0.02 |
| ALL | All Sources | All HAPS | - | 2.05 |

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
$NO_x$ - total oxides of nitrogen
$SO_2$ - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including $PM_{10}$ and $PM_{2.5}$, as represented
$PM_{10}$ - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
$NH_3$ - ammonia
$H_2S$ - hydrogen sulfide
n-Hexane - n-Hexane
Pb - lead
HAP - hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.



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Emission Sources - Maximum Allowable Emission Rates

(6) Planned startup and shutdown emissions are included. Maintenance activities are not authorized by this permit and will need separate authorization unless the activity can meet the conditions of 30 TAC 116.119.
(7) Particulate matter emissions are from bentonite.
(8) Particulate matter emissions are from iron oxide.

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Emission Sources - Maximum Allowable Emission Rates

Permit Number GHGPSDTX43

This table lists the maximum allowable emission rates of greenhouse gas (GHG) emissions, as defined in Title 30 Texas Administrative Code § 101.1, for all sources of GHG air contaminants on the applicant's property that are authorized by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities authorized by this permit.

Air Contaminants Data

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates |
|---|---|---|---|
| | | | TPY (4) |
| 17 | Charge Hopper Fabric Filter Stack | $CO_2$ (5) | 57,567.63 |
| | | $CH_4$ (5) | 1.10 |
| | | $N_2O$ (5) | 0.31 |
| | | $CO_2e$ | 57,686.71 |
| 29 | Reformer Main Flue Ejector Stack | $CO_2$ (5) | 1,674,797.96 |
| | | $CH_4$ (5) | 32.10 |
| | | $N_2O$ (5) | 8.93 |
| | | $CO_2e$ | 1,678,262.28 |
| 8 | Furnace Dedusting (BSG Dust Collection) Wet Scrubber Stack | $CO_2$ (5) | 57,567.63 |
| | | $CH_4$ (5) | 1.10 |
| | | $N_2O$ (5) | 0.31 |
| | | $CO_2e$ | 57,686.71 |
| 38 | Hot Pressure Relief Vent (Flare) | $CO_2$ (5) | 6,876.22 |
| | | $CH_4$ (5) | 17.11 |
| | | $N_2O$ (5) | <0.01 |
| | | $CO_2e$ | 7,304.31 |
| 9 | Briquetter Dedusting Scrubber Stack | $CO_2$ (5) | 28,783.82 |
| | | $CH_4$ (5) | 0.55 |
| | | $N_2O$ (5) | 0.15 |

DRAFT

Emission Sources - Maximum Allowable Emission Rates

| Emission Point No. (1) | Source Name (2) | Air Contaminant Name (3) | Emission Rates |
|---|---|---|---|
| | | | TPY (4) |
| | | $CO_2e$ | 28,843.36 |
| 30a | Process Water Degasser (5) | $CO_2$ (5) | 1,468.00 |
| | | $CH_4$ (5) | 13.52 |
| | | $CO_2e$ | 1,806.03 |
| 30b | Process Water Degasser (5) | $CO_2$ (5) | 193.16 |
| | | $CH_4$ (5) | 1.93 |
| | | $CO_2e$ | 241.45 |
| 34 | Emergency Generator | $CO_2$ (5) | 196.54 |
| | | $CH_4$ (5) | <0.01 |
| | | $N_2O$ (5) | <0.01 |
| | | $CO_2e$ | 197.23 |
| 35 | Fire Pump | $CO_2$ (5) | 12.83 |
| | | $CH_4$ (5) | <0.01 |
| | | $N_2O$ (5) | <0.01 |
| | | $CO_2e$ | 12.88 |
| FUGGHG | Methane Containing Piping Fugitives | $CO_2$ (5) | -- |
| | | $CH_4$ (5) | 4.01 |
| | | $CO_2e$ | 100.33 |

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) $CO_2$ - carbon dioxide
$N_2O$ - nitrous oxide
$CH_4$ - methane
HFCs - hydrofluorocarbons
PFCs - perfluorocarbons
$SF_6$ - sulfur hexafluoride
$CO_2e$ - carbon dioxide equivalents based on the following Global Warming Potentials (1/2015):
$CO_2$ (1), $N_2O$ (298), $CH_4$(25), $SF_6$ (22,800), HFC (various), PFC (various)
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period. These rates include emissions from maintenance, startup, and shutdown.
(5) Emission rate is given for informational purposes only and does not constitute enforceable limit.

Date: DRAFT



DRAFT

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# Compliance History Report

Compliance History Report for CN604261545, RN106597875, Rating Year 2025 which includes Compliance History (CH) components from September 1, 2020, through August 31, 2025.

**Customer, Respondent, or Owner/Operator:** CN604261545, ArcelorMittal Texas HBI LLC **Classification:** SATISFACTORY **Rating:** 28.97

**Regulated Entity:** RN106597875, LA QUINTA PLANT **Classification:** SATISFACTORY **Rating:** 28.97

**Complexity Points:** 25 **Repeat Violator:** NO

**CH Group:** 14 - Other

**Location:** 2800 KAY BAILEY HUTCHISON RD PORTLAND, TX 78374-7400, SAN PATRICIO COUNTY

**TCEQ Region:** REGION 14 - CORPUS CHRISTI

**ID Number(s):**

**AIR OPERATING PERMITS** PERMIT 3903
**AIR NEW SOURCE PERMITS** EPA PERMIT PSDTX1344
**AIR NEW SOURCE PERMITS** EPA PERMIT PSDTX1344M1
**AIR NEW SOURCE PERMITS** PERMIT 108113
**AIR NEW SOURCE PERMITS** REGISTRATION 134619
**AIR NEW SOURCE PERMITS** EPA PERMIT GHGPSDTX43
**AIR NEW SOURCE PERMITS** REGISTRATION 150444
**AIR NEW SOURCE PERMITS** REGISTRATION 166205
**AIR NEW SOURCE PERMITS** REGISTRATION 147082
**AIR NEW SOURCE PERMITS** REGISTRATION 157588
**AIR NEW SOURCE PERMITS** EPA PERMIT PSDTX1344M2
**AIR NEW SOURCE PERMITS** REGISTRATION 179378
**AIR NEW SOURCE PERMITS** AFS NUM 4840900240
**STORMWATER** PERMIT TXR05CR67
**WASTEWATER** EPA ID TX0134911
**WASTEWATER** PERMIT WQ0005097000
**AIR EMISSIONS INVENTORY** ACCOUNT NUMBER SDA012L
**POLLUTION PREVENTION PLANNING** ID NUMBER P09963
**INDUSTRIAL AND HAZARDOUS WASTE** EPA ID TXR000084679
**TAX RELIEF** ID NUMBER 20334
**TAX RELIEF** ID NUMBER 20387
**TAX RELIEF** ID NUMBER 24503
**TAX RELIEF** ID NUMBER 24501
**TAX RELIEF** ID NUMBER 24502
**TAX RELIEF** ID NUMBER 24504
**TAX RELIEF** ID NUMBER 20390
**TAX RELIEF** ID NUMBER 24506
**TAX RELIEF** ID NUMBER 24505

**Compliance History Period:** September 01, 2020 to August 31, 2025 **Rating Year:** 2025 **Rating Date:** 09/01/2025

**Date Compliance History Report Prepared:** March 20, 2026

**Agency Decision Requiring Compliance History:** Enforcement

**Component Period Selected:** September 01, 2020 to August 31, 2025

**TCEQ Staff Member to Contact for Additional Information Regarding This Compliance History.**

**Name:** TCEQ Staff Member **Phone:** (512) 239-1000

## Site and Owner/Operator History:

1) Has the site been in existence and/or operation for the full five year compliance period? YES
2) Has there been a (known) change in ownership/operator of the site during the compliance period? NO

## Components (Multimedia) for the Site Are Listed in Sections A - J

### A. Final Orders, court judgments, and consent decrees:

1 Effective Date: 09/29/2021 ADMINORDER 2020-1303-IWD-E (1660 Order-Agreed Order With Denial)

Classification: Moderate

Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)(1)
30 TAC Chapter 305, SubChapter F 305.125(1)

Rqmt Prov: Effluent Limits PERMIT

Description: Failure to comply with permit effluent limits as documented by a TCEQ record review of self-reported data.

Classification: Minor

Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
30 TAC Chapter 319, SubChapter A 319.5(b)

Rqmt Prov: Sampling & Analysis Requirements PERMIT

Description: Failure to collect and analyze samples for the required parameter at the minimum frequency specified in the permit as documented by a TCEQ record review.

2 Effective Date: 06/06/2022 ADMINORDER 2018-1266-MLM-E (1660 Order-Agreed Order With Denial)

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.4
5C THSC Chapter 382 382.085(a)
5C THSC Chapter 382 382.085(b)

Description: Failure to prevent nuisance dust conditions.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: PSDTX1344M1, Special Condition 17 PERMIT

Description: Failure to store iron ore pellets in enclosed storage.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.110(a)
30 TAC Chapter 116, SubChapter B 116.116(b)(1)
5C THSC Chapter 382 382.0518(a)
5C THSC Chapter 382 382.085(b)

Description: Failure to obtain proper authorization. Specifically, the Respondent did not obtain a permit amendment before operating additional non-enclosed stockpiles containing fines, clusters, chips, sludge, and remet.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: GC 14 PERMIT
GC 8 PERMIT
GTCs OP
SC 1 PERMIT
STC 7 OP

Description: Failure to comply with the Maximum Allowable Emission Rate Table (MAERT) limit for particulate matter (PM) at Emission Point Number (EPN) 29.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: GC 14 PERMIT
GC 8 PERMIT
GTCs OP
SC 1 PERMIT
STC 7 OP

Description: Failure to comply with the Maximum Allowable Emission Rate Table (MAERT) limit for carbon monoxide (CO) at Emission Point Number (EPN) 8.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.4
5C THSC Chapter 382 382.085(a)

Description: Failure to prevent nuisance dust conditions.

Classification: Minor

Citation: 30 TAC Chapter 281, SubChapter A 281.25(a)(4)
30 TAC Chapter 305, SubChapter F 305.125(1)
40 CFR Chapter 122, SubChapter D, PT 122, SubPT B 122.26(c)

Rqmt Prov: Part III; Section A(4)(f)(1) PERMIT

Description: Failed to conduct employee training annually. Specifically, operations at the Plant began in September of 2016 but employees had not received training on the stormwater pollution prevention plan.
Classification: Minor

Citation: 30 TAC Chapter 281, SubChapter A 281.25(a)(4)
30 TAC Chapter 305, SubChapter F 305.125(1)
40 CFR Chapter 122, SubChapter D, PT 122, SubPT B 122.26(c)

Rqmt Prov: Part III; Section B(1)(c) PERMIT

Description: Failed to certify that the facility's stormwater system has been evaluated and that discharges of non-stormwater and non-permitted flows do not occur. Specifically, the stormwater pollution prevention plan certification was not available for review upon request.
Classification: Moderate

Citation: 30 TAC Chapter 281, SubChapter A 281.25(a)(4)
30 TAC Chapter 305, SubChapter F 305.125(1)
40 CFR Chapter 122, SubChapter D, PT 122, SubPT B 122.26(c)

Rqmt Prov: Part III; Section A(3)(d)(1) PERMIT

Description: Failed to identify all stormwater outfalls at the facility. Specifically, the Respondent depicted one stormwater outfall on the Drainage Area Site Map, but additional outfalls were identified around the dock area and on the north side of the Plant.
Classification: Moderate

Citation: 30 TAC Chapter 281, SubChapter A 281.25(a)(4)
30 TAC Chapter 305, SubChapter F 305.125(1)
40 CFR Chapter 122, SubChapter D, PT 122, SubPT B 122.26(c)

Rqmt Prov: Part IV; Section B(1)(a) PERMIT

Description: Failed to conduct Benchmark Monitoring. Specifically, TPDES MSGP No. TXR05CR67 was issued on April 27, 2016, the Plant began operating in September 2016, and the Respondent had not conducted any benchmark monitoring.
Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: PSDTX1344M1, General Condition 1 OP
PSDTX1344M1, General Condition 14 PERMIT
PSDTX1344M1, General Condition 8 PERMIT
PSDTX1344M1, Special Condition 1 PERMIT

Description: Failure to comply with the annual permitted emission limit (tons per year (TPY)) for particulate matter (PM) from the Oxide Pellet Transfer (Post Storage) Fabric Filter Stack-Emission Point No. (EPN) 6.
Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: PSDTX1344M1 General Condition 1 OP
PSDTX1344M1, General Condition 14 PERMIT
PSDTX1344M1, General Condition 8 PERMIT
PSDTX1344M1, Special Condition 1 PERMIT

Description: Failure to comply with the annual permitted emission limit (TPY) for PM from the Oxide Tower Transfer Fabric Filter Stack-EPN 7D.
Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: PSDTX1344M1, General Condition 1 OP
PSDTX1344M1, General Condition 14 PERMIT
PSDTX1344M1, General Condition 8 PERMIT
PSDTX1344M1, Special Condition 1 PERMIT

Description: Failure to comply with the annual permitted emission limit (TPY) for PM, PM10, and PM2.5 from the Reformer Main Flue Ejector Stack-EPN 29.
Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: PSDTX1344M1 General Condition 1 OP
PSDTX1344M1, General Condition 14 PERMIT
PSDTX1344M1, General Condition 8 PERMIT
PSDTX1344M1, Special Condition 1 PERMIT

Description: Failure to comply with the annual permitted emission limit (TPY) for PM, PM10, and PM2.5 from the Salt Water Cooling Tower-EPN 33.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: PSDTX1344M1, Special Condition 6 PERMIT

Description: Failure to conduct quarterly visible emissions observations for the following EPNs: 4A, 4B, 5A, 5B, 6, 7A, 7B, 7C, 7D, 16, 17, 8, and 29.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: PSDTX1344M1, Special Condition 7 PERMIT

Description: Failure to conduct quarterly fugitive visible emissions observations from process buildings and/or fugitive sources.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Description: Failure to maintain records for the quarterly inspections on the hoods and ductwork for the emission capture and control systems.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: PSDTX1344M1, Special Condition 25A PERMIT

Description: Failure to sample and analyze cooling water for concentrations of total dissolved solids (TDS) once a week.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: PSDTX1344M1, Special Condition 25A PERMIT

Description: Failure to sample and analyze cooling water for conductivity once a day.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: PSDTX1344M1, Special Condition 30 PERMIT

Description: Failure to conduct visible emissions observations for wet scrubbers exhausting at EPNs 8, 9, 11, and 38 once per day.

Classification: Moderate

Citation: 30 TAC Chapter 106, SubChapter A 106.6(c)
30 TAC Chapter 106, SubChapter K 106.261
5C THSC Chapter 382 382.085(b)

Rqmt Prov: Permit by Rule (PBR) §106.261 PA

Description: Failure to comply with the annual permitted emission limit (TPY) for PM2.5 from the 75,000 mt (metric tons) Grade C HBI (hot briquette iron) storage pile-EPN 44.

Classification: Moderate

Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)(1)
30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)

5C THSC Chapter 382 382.085(b)

Rqmt Prov: PSDTX1344M1, Special Condition 7 PERMIT

Description: Failure to prevent particulate emissions from leaving the property from process buildings or fugitive sources resulting in the unauthorized discharge of industrial waste into or adjacent to any water in the state.

**B. Criminal convictions:**

N/A

**C. Chronic excessive emissions events:**

N/A

**D. The approval dates of investigations (CCEDS Inv. Track. No.):**

| | | |
|---|---|---|
| Item 1 | October 05, 2020 | (1625056) |
| Item 7 | November 18, 2020 | (1672196) |
| Item 10 | February 20, 2021 | (1732338) |
| Item 12 | March 15, 2021 | (1732339) |
| Item 13 | April 12, 2021 | (1732340) |
| Item 14 | April 14, 2021 | (1673160) |
| Item 16 | May 13, 2021 | (1743455) |
| Item 18 | August 16, 2021 | (1759313) |
| Item 19 | October 13, 2021 | (1779901) |
| Item 20 | November 11, 2021 | (1785955) |
| Item 22 | January 14, 2022 | (1800767) |
| Item 23 | February 04, 2022 | (1808587) |
| Item 24 | March 03, 2022 | (1815686) |
| Item 25 | March 18, 2022 | (1795519) |
| Item 27 | March 29, 2022 | (1804017) |
| Item 28 | March 31, 2022 | (1797572) |
| Item 29 | April 06, 2022 | (1822271) |
| Item 30 | May 11, 2022 | (1831103) |
| Item 32 | June 02, 2022 | (1837382) |
| Item 33 | July 05, 2022 | (1844549) |
| Item 35 | July 22, 2022 | (1832978) |
| Item 37 | August 09, 2022 | (1851074) |
| Item 38 | September 20, 2022 | (1858504) |
| Item 39 | October 12, 2022 | (1864841) |
| Item 40 | November 11, 2022 | (1871730) |
| Item 41 | December 20, 2022 | (1877611) |
| Item 42 | January 10, 2023 | (1884416) |
| Item 44 | February 15, 2023 | (1892213) |
| Item 45 | March 06, 2023 | (1885657) |
| Item 46 | March 15, 2023 | (1846931) |
| Item 47 | March 27, 2023 | (1873499) |
| Item 48 | April 05, 2023 | (1907595) |
| Item 49 | May 04, 2023 | (1914733) |
| Item 50 | May 23, 2023 | (1886735) |
| Item 52 | June 15, 2023 | (1921363) |
| Item 53 | July 18, 2023 | (1928338) |
| Item 54 | August 18, 2023 | (1935261) |
| Item 55 | August 30, 2023 | (1918996) |
| Item 58 | October 19, 2023 | (1948250) |
| Item 60 | November 20, 2023 | (1953930) |
| Item 61 | December 20, 2023 | (1963734) |
| Item 62 | January 31, 2024 | (1970298) |
| Item 63 | February 09, 2024 | (1944253) |
| Item 64 | February 19, 2024 | (1979378) |
| Item 65 | March 19, 2024 | (1985938) |
| Item 66 | April 18, 2024 | (1992479) |

| | | |
|---|---|---|
| Item 67 | May 20, 2024 | (1998914) |
| Item 68 | June 20, 2024 | (2005879) |
| Item 70 | July 19, 2024 | (2013439) |
| Item 71 | August 14, 2024 | (2019245) |
| Item 72 | September 11, 2024 | (2026040) |
| Item 73 | October 07, 2024 | (2032146) |
| Item 74 | November 07, 2024 | (2038455) |
| Item 75 | December 16, 2024 | (2044912) |
| Item 76 | January 13, 2025 | (2051414) |
| Item 77 | February 10, 2025 | (2058955) |
| Item 78 | March 13, 2025 | (2067531) |
| Item 79 | April 10, 2025 | (2074346) |
| Item 80 | June 17, 2025 | (2087843) |
| Item 81 | July 15, 2025 | (2094930) |
| Item 82 | August 14, 2025 | (2101505) |

## E. Written notices of violations (NOV) (CCEDS Inv. Track. No.):

A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.

1 Date: 04/30/2025 (2080714)

Self Report? YES Classification: Moderate

Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)
30 TAC Chapter 305, SubChapter F 305.125(1)

Description: Failure to meet the limit for one or more permit parameter

2 Date: 05/06/2025 (2028985)

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 111, SubChapter A 111.151(a)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085
FOP O-3908, Special Condition 6 OP
FOP O-3908, Special Condition 7 OP

Description: Failure to maintain the differential pressure of the baghouses at the site above or below the required differential pressure limit.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 111, SubChapter A 111.151(a)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085
FOP O-3908, Special Condition 1 OP
FOP O-3908, Special Condition 6 OP

Description: Failure to monitor on a weekly basis, the pressure drops across the dust collection system when the silo was being loaded.

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085
FOP O-3903, Special Condition 7 OP
NSR Permit 108113. Special Condition 25 PERMIT

Description: Failure to conduct daily Sea Water Conductivity Analysis.

## F. Environmental audits:

Notice of Intent Date: 02/28/2023 (1886397)

No DOV Associated

Notice of Intent Date: 02/19/2024 (1972629)

Disclosure Date: 11/22/2024

Viol. Classification: Minor

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)

Rqmt Prov: PERMIT Special Condition 42.J

Description: Failed to have sufficient detailed emission rates of hazardous air pollutants determined from all emission points and failed to keep separate records for unregistered (record only) PBR emission units

*Compliance History Report for CN604261545, RN106597875, Rating Year 2025 which includes Compliance History (CH) components from September 01, 2020, through August 31, 2025.*

nor keeps records of all HAP emissions from all the emission points.

Viol. Classification: Moderate

Citation: 30 TAC Chapter 106, SubChapter A 106.2
30 TAC Chapter 106, SubChapter A 106.4
30 TAC Chapter 106, SubChapter A 106.6
30 TAC Chapter 116, SubChapter B 116.110
30 TAC Chapter 122, SubChapter B 122.120
30 TAC Chapter 122, SubChapter B 122.146

Description: Failed to list units 40a, 40b and 40c (natural gas preheaters) in a PBR or NSR permit.

Viol. Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.10
30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 122, SubChapter B 122.110
30 TAC Chapter 122, SubChapter B 122.132
30 TAC Chapter 122, SubChapter B 122.146

Description: Failed to include RY2022 EI Exceedance in deviation report for 8.31.2023

Viol. Classification: Minor

Citation: 30 TAC Chapter 106, SubChapter A 106.2
30 TAC Chapter 106, SubChapter A 106.4
30 TAC Chapter 106, SubChapter A 106.6
30 TAC Chapter 122, SubChapter B 122.110
30 TAC Chapter 122, SubChapter B 122.132
30 TAC Chapter 122, SubChapter B 122.144
30 TAC Chapter 122, SubChapter B 122.146
40 CFR Chapter 60, SubChapter C, PT 60, SubPT IIII 60.4214
40 CFR Chapter 60, SubChapter C, PT 60, SubPT JJJJ 60.4245
40 CFR Chapter 63, SubChapter C, PT 63, SubPT ZZZZ 63.6590

Description: Failed to maintain proper runtime records for emergency generator, FW pump and FW booster pump.

Viol. Classification: Minor

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 106, SubChapter A 106.2
30 TAC Chapter 106, SubChapter A 106.4
30 TAC Chapter 106, SubChapter A 106.6
30 TAC Chapter 122, SubChapter B 122.110
30 TAC Chapter 122, SubChapter B 122.132
30 TAC Chapter 122, SubChapter B 122.146

Description: Failed to list FUG in NSR/PSD Permit or PBR nor Title V for VOC.

Viol. Classification: Minor

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 122, SubChapter B 122.146

Rqmt Prov: PERMIT Special Condition 10
PERMIT Special Condition 11
PERMIT Special Condition 9

Description: Failed to readily provide facility records complying NSR permit special conditions regarding fabric filter baghouse meeting 0.002 gr/dscf and wet scrubber meeting 0.0079 gr/dscf.

Viol. Classification: Minor

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 122, SubChapter B 122.146

Description: Failed to include N2O over the permitted limit under subpart 98 GHG reporting, indicating that the facility went over the emission limits specified in Table 1 of the permit PSD-TX-1344-GHG on the deviation report.

Viol. Classification: Minor

Citation: 30 TAC Chapter 106, SubChapter A 106.2
30 TAC Chapter 106, SubChapter A 106.4

30 TAC Chapter 106, SubChapter A 106.6
30 TAC Chapter 122, SubChapter B 122.110
30 TAC Chapter 122, SubChapter B 122.132
30 TAC Chapter 122, SubChapter B 122.146

Description: Failed to include EPN 41 (Remet 35,000 mt) in emission source for 2021 PBR registration application.
Viol. Classification: Minor
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)

Description: Failed to include information regarding facility routing the top gas to the reformer burner then goes out the flue stack in permit application.
Viol. Classification: Minor
Citation: 30 TAC Chapter 106, SubChapter A 106.2
30 TAC Chapter 106, SubChapter A 106.4
30 TAC Chapter 106, SubChapter A 106.6
30 TAC Chapter 116, SubChapter B 116.110
30 TAC Chapter 116, SubChapter B 116.116
30 TAC Chapter 122, SubChapter B 122.110
30 TAC Chapter 122, SubChapter B 122.132
30 TAC Chapter 122, SubChapter B 122.146

Description: Failed to include EPN DP-1 in 2019 PSD modification application.
Viol. Classification: Minor
Citation: 30 TAC Chapter 106, SubChapter A 106.2
30 TAC Chapter 106, SubChapter A 106.4
30 TAC Chapter 106, SubChapter A 106.6
30 TAC Chapter 122, SubChapter B 122.110
30 TAC Chapter 122, SubChapter B 122.132
30 TAC Chapter 122, SubChapter B 122.146

Description: Failed to include EPN 14 in the PBR registration 166205.
Viol. Classification: Minor
Citation: 30 TAC Chapter 101, SubChapter A 101.10
30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 122, SubChapter B 122.110
30 TAC Chapter 122, SubChapter B 122.132
30 TAC Chapter 122, SubChapter B 122.146

Description: Failed to list CO, NOx, and VOC streams from flare (38) in NSR permit, but listed in deviation report.
Disclosure Date: 03/04/2025
Viol. Classification: Moderate
Citation: 30 TAC Chapter 106, SubChapter A 106.2
30 TAC Chapter 106, SubChapter A 106.4
30 TAC Chapter 106, SubChapter A 106.6
30 TAC Chapter 116, SubChapter B 116.110
30 TAC Chapter 122, SubChapter B 122.120
30 TAC Chapter 122, SubChapter B 122.146

Description: Failed to list units 40a, 40b and 40c (natural gas preheaters) in a PBR or NSR permit.
Viol. Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.10
30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 122, SubChapter B 122.110
30 TAC Chapter 122, SubChapter B 122.132
30 TAC Chapter 122, SubChapter B 122.146

Description: Failed to include RY2022 EI Exceedance in deviation report for 8.31.2023
Viol. Classification: Minor
Citation: 30 TAC Chapter 106, SubChapter A 106.2
30 TAC Chapter 106, SubChapter A 106.4
30 TAC Chapter 106, SubChapter A 106.6

30 TAC Chapter 122, SubChapter B 122.110
30 TAC Chapter 122, SubChapter B 122.132
30 TAC Chapter 122, SubChapter B 122.144
30 TAC Chapter 122, SubChapter B 122.146
40 CFR Chapter 60, SubChapter C, PT 60, SubPT IIII 60.4214
40 CFR Chapter 60, SubChapter C, PT 60, SubPT JJJJ 60.4245
40 CFR Chapter 63, SubChapter C, PT 63, SubPT ZZZZ 63.6590

Description: Failed to maintain proper runtime records for emergency generator, FW pump and FW booster pump.
Viol. Classification: Moderate
Citation: 40 CFR Chapter 273, SubChapter I, PT 273, SubPT C 273.35(c)(2)
30 TAC Chapter 335, SubChapter H 335.261(a)

Description: Failed to properly manage universal wastes.
Viol. Classification: Moderate
Citation: 40 CFR Chapter 262, SubChapter I, PT 262, SubPT B 262.20(b)
30 TAC Chapter 335, SubChapter A 335.10

Description: Failed to comply with shipping and reporting procedures for class 1 nonhazardous waste.
Viol. Classification: Moderate
Citation: 40 CFR Chapter 262, SubChapter I, PT 262, SubPT A 262.16(b)(7)
40 CFR Chapter 268, SubChapter I, PT 268, SubPT A 268.7(a)(2)

Description: Failed to comply with land disposal restrictions by not maintaining proper records.
Viol. Classification: Minor
Citation: 30 TAC Chapter 335, SubChapter C 335.69(a)(4)(A)

Description: Failed to have documentation of training for personnel handling hazardous waste available.
Viol. Classification: Minor
Citation: 30 TAC Chapter 335, SubChapter A 335.9(a)(1)(G)

Description: Failed to have documentation of locations of satellite accumulation areas available.
Viol. Classification: Moderate
Citation: 40 CFR Chapter 262, SubChapter I, PT 262, SubPT A 262.16(b)(9)(ii)

Description: Failed to have signs posted in areas directly involved in generation and accumulation of hazardous waste providing name and number of emergency coordinator, locations of fire extinguishers and spill control material, and telephone number of fire department.
Viol. Classification: Minor
Citation: 40 CFR Chapter 262, SubChapter I, PT 262, SubPT A 262.16(b)(8)(vi)

Description: Failed to have documentation of refusal of state and local authorities to enter arrangements with facility to familiarize police, fire departments, and emergency response teams with layout of facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrance roads inside the facility, and possible evacuation routes.
Viol. Classification: Moderate
Citation: 40 CFR Chapter 262, SubChapter I, PT 262, SubPT C 262.34(c)(2)
30 TAC Chapter 335, SubChapter C 335.69(e)

Description: Failed to correctly label hazardous waste. Container of ferric chloride in hazardous waste storage area had hazardous waste label with accumulation start date of 12/29/23 and the container was marked with the words "FULL 12/12/23".
Viol. Classification: Moderate
Citation: 30 TAC Chapter 305, SubChapter F 305.125

Description: Failed to correctly report flow data from March 2020 to present. AMTX discovered its TPDES Permit Outfall 001 Flow Data Historian was connected to an incorrect DCS tag and recording incorrect flow data. AMTX under reported flow from March 2020 to present.

## G. Type of environmental management systems (EMSs):

N/A

## H. Voluntary on-site compliance assessment dates:

N/A

*Compliance History Report for CN604261545, RN106597875, Rating Year 2025 which includes Compliance History (CH) components from September 01, 2020, through August 31, 2025.*

**I. Participation in a voluntary pollution reduction program:**

N/A

**J. Early compliance:**

N/A

**Sites Outside of Texas:**

N/A

# Permit Amendment
# Source Analysis & Technical Review

| | | | |
|---|---|---|---|
| Company | **ArcelorMittal Texas HBI LLC** | Permit Numbers | **108113, PSDTX1344M2 and GHGPSDTX43** |
| City | **Portland** | Project Number | **302181** |
| County | **San Patricio** | Regulated Entity Number | **RN106597875** |
| Project Type | **Amendment** | Customer Reference Number | **CN604261545** |
| Project Reviewer | **Jean Shaw, P.E.** | Received Date | **May 30, 2019** |
| Site Name | **Direct Reduced Iron Hot Briquetting Facility** | | |

**Project Overview**

ArcelorMittal Texas HBI LLC (ArcelorMittal), previously known as voestalpine Texas LLC, has submitted an amendment request for their NSR and PSD permit to reflect as-built conditions and increase permitted emission rates to be consistent with those found during source stack testing. In addition, the applicant has requested to incorporate their EPA GHG PSD Permit No. GHG-PSD-TX-1344. The GHG emissions are authorized under Permit No. GHGPSDTX43.

**Emission Summary**

| Air Contaminant | Current Allowable Emission Rates (tpy) | Allowable Emission Rates Authorized by Consolidated PBRs (tpy) | Proposed Allowable Emission Rates (tpy) | Change in Allowable Emission Rates (tpy) |
|---|---|---|---|---|
| PM | 77.09 | 4.60 | 173.34 | +100.85 |
| $PM_{10}$ | 63.11 | 0 | 102.99 | +39.88 |
| $PM_{2.5}$ | 33.53 | 0 | 75.02 | +41.49 |
| VOC | 35.77 | 0.38 | 35.81 | +0.42 |
| $NO_X$ | 394.51 | 6.82 | 397.74 | +10.05 |
| CO | 4308.56 | 5.73 | 7127.17 | +2824.34 |
| $SO_2$ | 34.85 | 0.04 | 34.88 | +0.07 |
| $H_2S$ | 0.00 | 0 | 0.11 | +0.11 |
| $NH_3$ | 0.00 | 0 | 58.58 | +58.58 |
| n-hexane | 1.80 | 0 | 1.80 | 0.00 |
| Pb | <0.01 | 0 | <0.01 | 0.00 |
| HAPs | 2.05 | 0 | 2.05 | 0.00 |
| $CO_2$ | --- | 0 | 1,827,463.79 | 1,827,463.79 |
| $CH_4$ | --- | 0 | 71.44 | 71.44 |
| $N_2O$ | --- | 0 | 9.73 | 9.73 |
| $CO_2$ Equivalents ($CO_2e$) | --- | 0 | 1,832,141.29 | 1,832,141.29 |

**Compliance History Evaluation - 30 TAC Chapter 60 Rules**

| | |
|---|---|
| A compliance history report was reviewed on: | March 20, 2026 |
| Site rating & classification: | 0.00 / High |
| Company rating & classification: | 0.00 / High |
| Has the permit changed on the basis of the compliance history or rating? | No |

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| | |
|---|---|
| A compliance history report was reviewed on: | March 20, 2026 |
| Did the Regional Office have any comments? If so, explain. | Yes. Regional Office requested stack testing conducted for Reformer Main Flue Ejector Stack (EPN 29) and Furnace Dedusting Wet Scrubber Stack (EPN 8). Special Condition No. 40 has been added to address the comments. |

**Public Notice Information**

| **Requirement** | **Date** |
|---|---|
| Legislator letters mailed | 6/11/2019 |
| Date 1st notice published | 06/28/2019 |
| Publication Name: *Corpus Christi Caller Times* | |
| Pollutants: CO, $NO_X$, $H_2S$, HAPs, VOCs, Pb, $SO_2$, PM, $PM_{10}$ & $PM_{2.5}$ | |
| Date 1st notice Alternate Language published | 06/28/2019 |
| Publication Name (Alternate Language): *El Tejano Hispanic Community Magazine* | |
| 1st public notice tearsheet(s) received | 07/12/2019 |
| 1st public notice affidavit(s) received | 07/31/2019 |
| 1st public notice certification of sign posting/application availability received | 08/07/2019 |
| SB709 Notification mailed | 01/24/2020, 01/05/2021 06/01/2021 & 03/20/2026 |
| Date 2nd notice published | 6/15/21 & 9/12/2024 |
| Publication Name: Caller Times | |
| Pollutants: CO, $NO_X$, $H_2S$, HAPs, VOCs, Pb, $SO_2$, $NH_3$, $CO_2$, $CH_4$, PM, $PM_{10}$ & $PM_{2.5}$ | |
| Date 2nd notice published (Alternate Language) | 12/15/2023 & 9/13/2024 |
| Publication Name (Alternate Language): El Tejano Magazine | |
| 2nd public notice tearsheet(s) received | 06/29/2021, 12/26/2023, 9/13/2024 & 9/13/2024 |
| 2nd public notice affidavit(s) received | 06/29/2021, 12/26/2023, 9/13/2024 & 9/13/2024 |
| 2nd public notice certification of sign posting/application availability received | 08/04/2021 &10/28/2024 |

**Public Interest**

| | |
|---|---|
| Number of comments received | 117 |
| Number of meeting requests received | 10 |
| Number of hearing requests received | 23 |
| Date meeting held | 7/27/21 |
| Date response to comments filed with OCC | 12/10/2025 |
| Date of SOAH hearing | N/A |

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**Federal Rules Applicability**

| Requirement | |
|---|---|
| Subject to NSPS? | **Yes** |
| Subparts **A** & **IIII (Stationary Compression Ignition Internal Combustion Engines)** | |
| Subject to NESHAP? | **No, the site is not regulated under 40 CFR Part 61** |
| Subject to NESHAP (MACT) for source categories? | **Yes** |
| Subparts **A** & **ZZZZ (Reciprocating Internal Combustion Engines)** | |
| Nonattainment review applicability: | **San Patricio County is in attainment or unclassified for all pollutants. Therefore, nonattainment review is not applicable.** |
| PSD review applicability: | **Yes, the proposed project constitutes a major modification at an existing major source for PSD. The total projected increases of CO and particulates are greater than their corresponding significance levels; therefore, PSD review was applicable.** |

**Title V Applicability - 30 TAC Chapter 122 Rules**

| Requirement | |
|---|---|
| **Title V applicability**: | Yes, the site is a major source currently operating under federal permit number O3903. |
| **Periodic Monitoring (PM) applicability:** Monitoring required by the applicable NSPS and/or MACT requirements will be conducted. The permit requires opacity and visibility monitoring and recordkeeping. Also, cooling water will be sampled once a week for total dissolved solids (TDS) concentration and the flare pilot flame will be continuously monitored. | |
| **Compliance Assurance Monitoring (CAM) applicability:** Visible emissions observations will be made once per day and recorded for wet scrubbers exhausting at EPNs 8, 9, 11, 17 and 38. | |

**Process Description**

The facility consists of Direct Reduced Iron (DRI) and a briquetting operation referred to as HBI (hot briquetted iron). The general process includes conversion of iron oxide pellets into iron pellets that are pressed into iron briquettes. The HBI process consists of three main components, a reformer (to produce the reducing agent), the reactor (where the conversion occurs) and presses to make the briquettes. The resulting HBI is an ideal feed material for high-quality steelmaking. Steelmaking does not occur on site; rather this facility manufacturers HBI for sale to off-site steel manufacturers.

Pelletized iron ore ($Fe_2O_3$ ~65% by weight iron) is transported to the facility via ship and off-loaded to a material handling system. The ore is treated in the tower reactor with a reducing gas manufactured from reformed natural gas. The product, which is 91% by weight iron, is then compressed into iron briquettes and stockpiled before shipment via ship to other locations. Briquettes are formed to minimize the overall surface area of the reduced iron to prevent re-oxidation of the iron back into $Fe_2O_3$.

**Project Scope**

ArcelorMittal requested to make the following changes in the amendment application:

1. Incorporate their EPA issued GHG PSD Permit (GHG-PSD-TX-1344).
2. Switch from the existing AVO LDAR program to a physical, inspection based, LDAR program.
   The Applicant has requested to switch from an AVO LDAR program, a physical inspection based LDAR program due to process needs. The natural gas used at the facility cannot contain mercaptans to odorize the gas, as is typical. Therefore, an AVO LDAR program is not appropriate since the natural gas does not have a strong odor. For this reason, ArcelorMittal is requesting the physical inspection based LDAR program. The components being monitored are in pipeline natural gas service, and daily physical inspections are consistent with BACT for sources where the

target pollutants are GHGs and do not have significant VOC content. No control efficiency was previously claimed for the AVO program, so there will be no change in permitted fugitive emissions with this change in LDAR program. Special Condition No. 65 has been updated accordingly.

3. Switch the GHG permit requirement for a water flow meter on the process water degasser to the top gas scrubber inlet.
   The feed pipe directly upstream of the degasser is a free-flowing pipe, and because of this the pipe is not always full of liquid. Flow meters do not perform well when the pipe is not full, as air causes inaccurate readings. As, such ArcelorMittal has requested that the process water degasser water inlet shall be measured for temperature and pressure and the top gas scrubber water inlet shall be measured for water flow using operational non-resettable elapsed meters instead. Special Condition No. 63.A has been updated accordingly.
4. Increase CO emission rate for the deduster (EPN 8).
   During initial commissioning stack tests, CO emissions exceeded allowable rates in the permit. Process modifications were made, and follow-up testing was performed during October 2017 and May of 2018. The process modifications did not lead to sufficient reduction in CO emissions. Therefore, ArcelorMittal is requesting to amend permitted CO rates to be consistent with rates sampled during stack testing. The MAERT has been updated accordingly.
5. Replace the baghouse on the Charge Hopper (EPN 17) with a wet scrubber.
   The Charge Hopper was originally represented, and permitted, as being controlled with a baghouse. However, during design it was found that hot gases at step in the process would damage the fabric filter. Due to this operational issue, ArcelorMittal has requested to authorize the use of a wet scrubber instead of a baghouse. Special Condition Nos. 7 and 14 have been updated accordingly.
6. Increase particulate matter emissions from the Main Flue Ejector Stack (EPN 29), including an increase in the allowable Reformer emissions limits in Special Condition 12 from 10mg/$Nm^3$ to 20 mg$Nm^3$ at 3% $O_2$.
   During initial permitting, emissions of particulates from the Reformer Main Flue Ejector Stack were based on the particulate inherent in the process gas used as fuel and did not fully include emissions from combustion of the process gas nor the use of supplement natural gas. With this amendment ArcelorMittal is seeking to increase allowable emissions from this source to account for these combustion particulates, which also requires an increase in the particulate concentrations from the flue gas. Special Condition No. 16 and the MAERT have been updated accordingly.
7. Authorize Ammonia ($NH_3$) and $H_2S$ Emissions from the Process Water Degasser (EPNs 30a and 30b).
   During initial sampling, ArcelorMittal discovered the degasser was stripping ammonia and $H_2S$ emissions from the process water and exhausting them as gas. They have requested to include these emissions in their permit. The MAERT has been updated accordingly.
8. Authorize Ammonia ($NH_3$) Emissions Detected at the Furnace Dedusting (EPN 8), Briquetter Dedusting (EPN 9), HBI Cooling Conveyor (EPN11), and Charge Hopper (EPN 17).
   Based on the results from the degasser samples, ArcelorMittal requested an extension during the technical review in order to conduct sampling and modeling at additional locations where ammonia emissions might be expected, based on process flow. As a result, they were able to confirm minor emissions of ammonia occurring at the EPNs listed above. These emissions were added to the AQA and subsequently the MAERT.
9. Authorize a higher total dissolved solid (TDS) level and flow rate for the Cooling Tower (EPN 33).
10. Authorize additional venting emissions from the reformer to the Flare (EPN 38).
11. Incorporate by consolidation the on-site Fines Recycling Plant, currently authorized under PBR Registration #134619.
12. Incorporate by reference 2 registered and 9 non-registered PBRs.

**Best Available Control Technology**

| Source Name | EPN | Best Available Control Technology Description |
|---|---|---|
| Furnace Dedusting (EPN 8), Briquetter Dedusting (EPN 9) HBI Cooling Conveyor (EPN 11) and Charge Hopper (EPN 17). | 8, 9, 11 and 17 | PM: Wet Scrubbers designed to meet an outlet grain loading of not more than 0.0079 gr/dscf of exhaust. This exceeds current TCEQ Tier 1 BACT for control of particulates.<br>In addition, the HBI conveyors shall employ water sprays to cool the HBI and shall |

| Source Name | EPN | Best Available Control Technology Description |
|---|---|---|
| | | be equipped with vapor hoods to remove steam created by the process.<br><br>CO: Good combustion practices for the reformer flue gas |
| Reformer Main Flue | 29 | PM: high energy wet scrubber used for process gas prior to combustion and good combustion practices.<br>$SO_2$: use of natural gas containing no more than 2,000 gr sulfur/MMscf<br>$NO_X$: Use of low-$NO_X$ burners<br>CO: good combustion practices<br>VOC: good combustion practices |
| Process Water Degasser | 30a & 30b | Good design methods and use of good operating practices for $NH_3$ and $H_2S$ BACT. |
| Cooling Tower | 33 | Shall be equipped with drift eliminators having a design drift rate not greater than 0.0005%. This method meets the TCEQ's established Tier 1 BACT for PM emissions. |
| Hot Pressure Relief Vent | 38 | A flare with a minimum destruction and removal efficiency (DRE) for methane, CO, and VOC of 98%.<br>PM CO, & $NO_X$: Good combustion practices and use of low-Nitrogen fuel gas. |
| Fines Recycling Plant (cyclone separator, briquetting plant, dosing bin, mixer and natural gas dryer). | BFL-1 | PM: A fabric filter baghouse designed to meet an outlet grain loading of not more than 0.002 grains per dry standard cubic foot (gr/dscf) of exhaust. This BACT exceeds TCEQ's Tier 1 requirement for the control of PM. |
| Fines Recycling Plant Solid Binder Bin Vent,<br>Dried Filter Cake Bin Vent, and Pellet Dust Bin Vent | BVF-1, BVF-2 & BVF-3 | PM: Bin vent filters designed to meet and outlet grain loading of not more than 0.002 grains per dry standard cubic foot (gr/dscf) of exhaust, each. This BACT exceeds TCEQ's Tier 1 requirement for the control of PM. |

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**Permits Incorporation**

| Permit by Rule (PBR) | Description (include affected EPNs) | Action |
|---|---|---|
| 106.227 | Welding Facility | Reference |
| 106.244 | BBQ Pit | Reference |
| 106.263 | Facility Maintenance | Reference |
| 106.266 | Industrial Vacuums | Reference |
| 106.412 | Motor Vehicle Fueling | Reference |
| 106.472 | Diesel Fuel Storage | Reference |
| 106.473 | Gasoline Storage | Reference |
| 106.511 | Emergency Engines | Reference |
| 106.532 | Oil and Water Separator | Reference |
| 106.433 & 106.452 | Maintenance Yard (Reg.# 150444) | Reference |
| 106.261 | Temporary Storage Piles and Screeners (Reg.# 147082) | Reference |
| 106.183, 106.261, & 106.262 | Fines Recycling Plant (Reg.# 134619) | Consolidate |

**Impacts Evaluation**

Was modeling conducted? **Yes** Type of Modeling: **AERMOD**

Is the site within 3,000 feet of any school? No

Additional site/land use information: According to the site review received from the regional office, the primary land use surrounding the plant is a mix of industrial and residential, with the nearest receptor being an oil and gas plant located approximately 850 feet to the east.

Air dispersion modeling was conducted by the Applicant and audited by the Air Dispersion Modeling Team. The modeling result was found to be acceptable and no adverse health effects or exceedances of the NAAQS are expected with this project. More details may be found in the modeling memo in WCC Content ID 7186203.

Jean Shaw 12/10/2025

| Project Reviewer | Date | Team Leader | Date |
|---|---|---|---|
| Jean Shaw | | Joe Nicosia | |

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# Preliminary Determination Summary

ArcelorMittal Texas HBI LLC
Permit Numbers 108113, PSDTX1344M2 and GHGPSDTX43

## I. Applicant

ArcelorMittal Texas HBI LLC (ArcelorMittal, formerly known as voestalpine Texas LLC)
2800 Kay Bailey Hutchison Rd
Portland, TX 78374-7400

## II. Project Location

Direct Reduced Iron Hot Briquetting Facility
2800 Kay Bailey Hutchison Road
San Patricio County
Portland, Texas 78374

## III. Project Description

ArcelorMittal submitted an amendment request for their state issued NSR and PSD permit to reflect as-built conditions at their facility and increase permitted emission rates to be consistent with those found during source testing. In addition, the applicant has requested to incorporate their EPA issued GHG PSD Permit and numerous, existing Permit by Rule (PBR) authorizations. Greenhouse emissions are authorized under GHG Permit No. GHGPSDTX43.

Planned startup and shutdown emissions were previously authorized under the NSR and PSD permit. The applicant has represented emissions from routine maintenance are authorized under PBR No. 106.263 or claimed under 30 Texas Administrative Code § 116.119, De Minimis Facilities or Sources.

## IV. Emissions

| Air Contaminant | Proposed Allowable Emission Rates (tpy) |
|---|---|
| VOC | 36.19 |
| $NO_x$ | 404.56 |
| $SO_2$ | 34.92 |
| CO | 7132.90 |
| PM | 177.94 |
| $PM_{10}$ | 102.99 |
| $PM_{2.5}$ | 75.02 |
| $H_2S$ | 0.11 |
| $NH_3$ | 58.58 |
| n-hexane | 1.80 |
| Pb | <0.01 |
| HAPs | 2.05 |
| $CO_2$ | 1,827,463.79 |

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| | |
|---|---|
| $CH_4$ | 71.44 |
| $N_2O$ | 9.73 |
| $CO_2$ Equivalents ($CO_2e$) | 1,832,141.29 |

CO2e - carbon dioxide equivalents based on global warming potentials of $CH_4$ = 25, N2O = 298, SF6=22,800.

## V. Federal Applicability

The following chart illustrates the annual project emissions for each pollutant and whether this pollutant triggers PSD or Nonattainment (NA) review.

| Pollutant | Project Emissions (tpy) | Major Mod Trigger (tpy) | NA Triggered Y/N | PSD Triggered Y/N |
|---|---|---|---|---|
| VOC | 0.04 | 25 for NA<br>40 for PSD | No | No |
| $NO_x$ | 3.20 | 25 for NA<br>40 for PSD | No | No |
| $SO_2$ | 0.12 | 40 | No | No |
| CO | 2929.37 | 100 | No | Yes |
| PM | 96.17 | 25 | No | Yes |
| $PM_{10}$ | 37.50 | 15 | No | Yes |
| $PM_{2.5}$ | 37.46 | 10 | No | Yes |
| $H_2S$ | 0.11 | 10 | No | No |

San Patricio County is in attainment or unclassified for all criteria pollutants. The facility is an unnamed major source. The proposed project constitutes a major modification at an existing major source for PSD because the total projected increases of CO and particulates were greater than their corresponding significance levels; therefore, PSD review was applicable for non-GHG NSR regulated pollutants. As shown in the table below, because the project increases of CO2e are less more than 75,000 tpy, PSD review was not triggered for GHG emissions.

| Pollutant | Project Emissions (tpy) | Major Source or Major Mod Trigger Level (tpy) | PSD Triggered Y/N |
|---|---|---|---|
| $CO_2e$ | 4,414.54 | 75,000 | No |

## VI. Control Technology Review

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A Best Available Control Technology (BACT) evaluation was conducted for each criteria pollutant emitted from each of the modified emission sources at the Portland facility. Each of these evaluations, following TCEQ Tier I presumptive BACT to a full Tier III evaluation for technical feasibility and cost-effectiveness, is described below.

**Process Water Degasser (EPNs 30a and 30b)**

Direct contact coolers provide much of the gas cooling in the DRI plant. The gases being cooled are under pressure, so a portion of the CO, $CO_2$, $NH_3$, and $H_2S$ are absorbed into the cooling water. Due to the direct contact of process water with CO and process gases, some gas constituents are dissolved in process water in the top of the top of the gas scrubber that is at an elevated process gas pressure.

In order to reduce the fugitive emissions at the clarifier and to reduce scaling in process water ducts, a forced degassing unit will be installed. The process water degasser will use pressurized air to strip the process water of the dissolved gases prior to the clarifier. During this degassing process, CO, $CO_2$, $NH_3$, and $H_2S$ are released. However, the flow and concentration of these compounds are irregular since entry to and from the pressurized DRI process is episodic in nature.

This section performs a detailed, step-by-step BACT analysis for control of $NH_3$ and $H_2S$ emissions from the process water degasser at the ArcelorMittal facility. There are no changes to CO emissions for this source with this amendment, so there is no change needed in the CO BACT analysis.

*Proposed Emissions Reduction Option and Review of BACT Methods*

Emissions of $NH_3$ from the process water degassers are 2.92 lb/hr and 12.79 tpy and emissions of $H_2S$ from the process water degassers are 0.02 lb/hr and 0.11 tpy. ArcelorMittal proposes BACT for $NH_3$ and $H_2S$ as good design methods and good operating practices for the process water degassers.

*Tier I Analysis for the BACT Proposal*

TCEQ has not published a Tier I BACT $NH_3$ and $H_2S$ for routine or maintenance, startup, and shutdown (MSS) emissions from a DRI process water degasser. ArcelorMittal has reviewed the TCEQ's current BACT guidelines for process vents and found that the minimum acceptable control is a flare, any oxidizer, adsorber, absorber/scrubber, etc., and appropriate control device efficiency will be required. Therefore, ArcelorMittal conducted a detailed search in the USEPA's RACT/BACT/LAER Clearinghouse (RBLC) database. No established BACT was found for $NH_3$ and $H_2S$ emissions from water degassers in the RBLC. Therefore, to demonstrate BACT, a Tier II analysis was considered.

*Tier II Analysis for the BACT Proposal*

While there was no established BACT for $NH_3$ and $H_2S$, a review of previously accepted BACT emission reduction levels for CO emissions from sources in other process/industry types found that the generally accepted emissions reduction level regardless of industry type could vary. Therefore, to evaluate BACT, a Tier III analysis was considered.

*Tier III Analysis for the BACT Proposal*

<u>Step 1 — Identify Potential Control Technologies</u>

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A search of USEPA's RBLC database revealed no entries for the control of $NH_3$ and $H_2S$ emissions from the process water streams at DRI plants.

The following list of control technologies represent technologies that could be used for the control of $NH_3$ and $H_2S$ emissions from process water streams.

1. Flare
2. Good Design Methods and Good Operating Practices

Flare

Flaring is a direct combustion control process that is used for the destruction of combustible gases, normally VOCs and H2S. Typically, flares are used to control emissions from intermittent sources or emergency relief vents; however, flares are receiving increasing use on continuous operating sources. Flares are capable of achieving high levels of VOC and H2S destruction if proper attention is paid to combustion process control.

Good Design Methods and Good Operating Practices

Good design methods and good operating practices can be used to reduce emissions of NH3 and H2S in the process water degassers. By employing good operating practices, NH3 and H2S emissions may be greatly reduced.

Step 2 — Eliminate Technically Infeasible Options

Both control methods outlined in Step 1 are technically feasible.

Step 3 — Rank Remaining Technically Feasible Control Options

1. Flare -98%
2. Good Design Methods and Good Operating Practices — 50%

Step 4 — Evaluate Remaining Control Technologies

Flare

Direct combustion of the $NH_3$ and $H_2S$ in a flare or similar could be a viable technology; however, the concentration of $NH_3$ and $H_2S$ are only 0.005% (50 ppm) and 0.00005% (0.5 ppm) of the exhaust stream, while water vapor is 26.8% of the exhaust stream, with the remainder being primarily air. Because of the low contaminant concentrations in the exhaust gas, and the low heating value of that gas, a significant amount of fuel gas would need to be added to ensure complete combustion and overcome the water content of the exhaust gas. Secondarily combustion of ammonia would result in a commensurate increase in $NO_X$ emissions, which has its own environmental impact as a precursor to ground-level ozone formation. Because of the secondary environmental impact and the significant cost and emissions associated with all the additional fuel gas required to combust the trace amounts of $NH_3$ and $H_2S$ in the exhaust, the flare is not considered a practical option for controlling emissions from the process water degasser.

Good Design Methods and Good Operating Practices

Good design methods and the use of good operating practices (including pH control and other water treatment) can be relatively effective at reducing $NH_3$ and $H_2S$ emissions generated from the process water degassers.

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Step 5 - Selection of BACT

BACT for $NH_3$ and $H_2S$ from the process water degassers is proposed as good design methods and the use of good operating practices.

**Cooling Tower (EPN 33)**

TCEQ Tier I BACT for PM emissions from cooling towers is identified as a drift rate of 0.0005%, and the installed cooling tower meets this BACT limit. BACT is met.

**Furnace Deduster (EPN 8)**

CO is present in the seal gas emitted from the seal gas vents because it is diverted from the reformer flue gas to retain the reducing gas within the reduction furnace. Control of CO from the seal gas vents is most appropriately addressed at combustion within the reformer. This section performs a detailed, step-by-step BACT analysis for control of CO emissions from the seal gas vents at the ArcelorMittal facility.

*Proposed Emissions Reduction Option and Review of BACT Methods*

ArcelorMittal is proposing a CO BACT of no additional control for the seal gas vents. BACT for CO was already determined as good combustion practices for the reformer flue gas, and no additional control is feasible for the use of a small portion of this flue gas used as seal gas.

*Tier I Analysis for the BACT Proposal*

TCEQ has not published a Tier I BACT for CO emissions from a DRI seal gas vent. ArcelorMittal has reviewed the TCEQ's current BACT guidelines for process vents and found that the minimum acceptable control is a flare, any oxidizer, adsorber, absorber/scrubber, etc., and appropriate control device efficiency will be required. The TCEQ's current MSS BACT requirements are the same as BACT requirements.

In the previous permit application, the flaring and oxidation technologies were determined to be technologically and economically infeasible due to the high dust loading in the gas stream and the difficulty in controlling CO emissions at the concentration they are at in the duct, without adding significant fuel gas. As such, they are not being considered with this amendment.

Therefore, ArcelorMittal has conducted a detailed search in the USEPA's RBLC database. Documentation found in this research is presented in Table 1 below.

The BACT identified for CO emissions from the seal gas vent at a similar DRI plant (Cleveland-Cliffs) was replacing the seal gas blanket on the DRI with a Nitrogen blanket. This blanket would have the direct impact of eliminating the CO emissions associated with the blanket gas (approximately 60%). This facility has not been constructed yet and the technology has not been demonstrated long term at a full-scale basis at the facility in the RBLC database.

*Tier II Analysis for the BACT Proposal*

A review of previously accepted BACT emission reduction levels for CO emissions from sources in other process/industry types found that the generally accepted emissions reduction level regardless of industry type can vary widely. Therefore, to demonstrate BACT, a Tier III analysis was considered.

*Tier III Analysis for the BACT Proposal*

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Step 1 — Identify Potential Control Technologies

A search of recently issued permits for HBI plants noted that one facility was authorized in 2018, the Iron Units LLC — Toledo HBI facility identified below**.**

**Summary of RBLC Data for CO Emissions from the Seal Gas Vents at DRI Plants**

| RBLC ID Number Company, Date | Process Description | Emission Limits | Control Type and Efficiency |
|---|---|---|---|
| Iron Units LLC - Toledo HBI Toledo, OH 02/09/2018 | Seal Gas Vents/Bottom Seal Gas | BACT-PSD: CO Limit 43.00 lb/hr and 188.34 tpy | Nitrogen Seal Gas |

The following list of control technologies represent technologies that have been used for the control of CO emissions from the seal gas vent:

1. Nitrogen Bottom Gas Seal
2. Good Combustion Practices

*Nitrogen Bottom Gas Seal*

The nitrogen bottom gas seal is used to replace the process gas commonly used at other HBI plants. The process gas contains primarily $CO_2$ and water vapor, but also approximately 1 wt% CO. By replacing the process gas with Nitrogen on the bottom seal, CO emissions from EPN 8 would be reduced by approximately 60%. Emissions of CO would still occur through off-gassing from the DRI pellets, and this off-gassing from the pellets represents approximately 40% of the CO emissions.

Good Combustion Practices

Good combustion practices are used to reduce emissions of carbon monoxide, as well as other pollutants, by optimizing conditions in the combustion zone of a fuel-burning source. CO emissions from the burning of fuels are usually due to the incomplete combustion of hydrocarbon fuel. Good combustion practices typically entail introducing the proper ratio of combustion air to the fuel, maintaining a minimum temperature in the firebox of the combustor, or a minimum residence time of fuel and air in the combustion zone. By employing good combustion practices, CO emissions may be greatly reduced.

Step 2 — Eliminate Technically Infeasible Options

Good combustion practices is technically feasible and has not been eliminated.
Replacing the bottom seal gas with nitrogen has not been demonstrated at full scale operation at an HBI production plant. Therefore, it should not be considered established BACT until it has been proven in practice.

Step 3 — Rank Remaining Technically Feasible Control Options

1. Good Combustion Practices - 50%

Step 4 — Evaluate Remaining Control Technologies

*Good Combustion Practices*

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Good combustion practices can be relatively effective at reducing CO emissions generated from the incomplete combustion of hydrocarbon or CO fuels, because the technique maximizes combustion within the unit. The combustible components of the top gas fuel used in the reformer are primarily of CO and hydrogen, mixed with a quantity of natural gas to provide stable combustion characteristics and the necessary heat input to the unit. Good combustion practices will aim to completely combust the CO in the fuel.

Step 5 - Selection of BACT

ArcelorMittal is proposing no additional control for the seal gas vents. BACT for CO was already determined as good combustion practices for the reformer flue gas, and no additional control is feasible for the use of a small portion of this flue gas used as seal gas.

**Reformer Main Flue Ejector Stack (EPN 29)**

ArcelorMittal conducted BACT analysis for $PM_{10}$ and $PM_{2.5}$ emissions from Direct Reduced Iron (DRI) reformer main flue stack. ArcelorMittal has evaluated the control options of baghouse/fabric filter, wet scrubber, electrostatic precipitator, cyclone and good combustion practices. High energy wet scrubber and good combustion practices were selected as the appropriate options to control large volume of gas generated by the DRI process, large range of dust loading, flammable dusts, and low maintenance cost.

ArcelorMittal also evaluated the PM emission limits for the reformer found in the RBLC database, specifically Iron Units LLC (RBLC ID OH-0376) and Consolidated Environmental Management Inc (RBLC ID LA-0248). The BACT analysis from December 2011 included data from Consolidated Environmental Management Inc, suggesting a BACT of 0.0027 gr/dscf for $PM_{10}$ and $PM_{2.5}$, achievable through wet scrubbers. However, Consolidated Environmental Management Inc has never constructed or operated the relevant DRI reformer main flue stacks. The Ohio EPA's June 2019 BACT determination for Iron Units indicated a wet scrubber achieving 0.012 lb/MMBtu for $PM_{10}$ and $PM_{2.5}$. This emission limit is more recent and has been practically demonstrated. ArcelorMittal's wet scrubber achieves 0.0084 lb/MMBtu for $PM_{10}$ and $PM_{2.5}$, which is lower than the 0.012 lb/MMBtu emission limit demonstrated for Iron Units. This demonstrates that ArcelorMittal's wet scrubber meets the BACT for $PM_{10}$ and $PM_{2.5}$ emissions from the DRI reformer main flue stack.

**Hot Pressure Relief Vent Flare (EPN 38)**

For vent gas control, flares are identified as a possible control option and a flare was approved as VOC BACT for the initial permitting of this facility. With this project, ArcelorMittal requests no change to the established BACT of a flare to control this process vent. For PM, CO, and NOX for the flare, BACT is established as good combustion practices and the use of a low-Nitrogen fuel gas. Since there were no physical changes to the flare approved with this permitting action, ArcelorMittal is requesting that this BACT of good combustion practices and low-nitrogen fuel be maintained as BACT.

**Charge Hopper (EPN 17)**

During design, it was found that the hot gases flowing would damage the fabric filter. Due to these operational issues, it was recommended to utilize a wet scrubber dust collection system to control dust emissions. The wet scrubber discharge will have a PM concentration of at 18 $mg/Nm^3$ (0.0079 gr/dscf), which exceeds the current TCEQ Tier I BACT of 0.01 gr/dscf for particulate control. As such, ArcelorMittal is proposing as BACT the use of a wet scrubber with an outlet grain loading of 0.0079 gr/dscf.

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**Fines Recycling Plant (EPN BFL-1, BVF-1, 2, & 3)**

The current TCEQ Tier I BACT for PM emissions from solid material handling includes dust collectors that meet an outlet grain loading of 0.01 gr/dscf. The dust collectors on these sources all exceed this requirement, with an outlet loading of 0.002 gr/dscf. As such, ArcelorMittal requests the BACT for these sources be established at the outlet grain loading rate of 0.002 gr/dscf.

## VII. Air Quality Analysis

The air quality analysis (AQA) is acceptable for all review types and pollutants. The results are summarized below.

This is the fourth modeling audit for this NSR project number, and the audit was conducted to address as-built changes and other analyses updates. The results presented below supersede the corresponding results in the first, second, and third modeling audits dated June 4, 2020, July 26, 2020, and April 21, 2022, respectively.

### A. De Minimis Analysis

A De Minimis analysis was initially conducted to determine if a full impacts analysis would be required. The De Minimis analysis modeling results indicate that 24-hr $PM_{10}$, 24-hr and annual $PM_{2.5}$ (NAAQS and Increment), and 1-hr and 8-hr CO exceed the respective de minimis concentrations and require a full impacts analysis. The De Minimis analysis modeling result for annual $PM_{10}$ indicates that the project is below the respective de minimis concentrations and no further analysis is required.

The $PM_{2.5}$ and ozone De Minimis levels are the EPA recommended De Minimis levels. The use of the EPA recommended De Minimis levels is sufficient to conclude that a proposed source will not cause or contribute to a violation of an ozone and $PM_{2.5}$ NAAQS or $PM_{2.5}$ PSD increments based on the analyses documented in EPA guidance and policy memoranda[1].

While the De Minimis levels for both the NAAQS and increment are identical for $PM_{2.5}$ in the table below, the procedures to determine significance (that is, predicted concentrations to compare to the De Minimis levels) are different. This difference occurs because the NAAQS for $PM_{2.5}$ are statistically-based, but the corresponding increments are exceedance-based.

**Table 1. Modeling Results for PSD De Minimis Analysis in Micrograms Per Cubic Meter (µg/m$^3$)**

| Pollutant | Averaging Time | GLCmax (µg/m$^3$) | De Minimis (µg/m$^3$) |
|---|---|---|---|
| $PM_{10}$ | 24-hr | 6.77 | 5 |
| $PM_{10}$ | Annual | 0.85 | 1 |
| $PM_{2.5}$ (NAAQS) | 24-hr | 1.95 | 1.2 |

[1] www.tceq.texas.gov/permitting/air/modeling/epa-mod-guidance.html

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| Pollutant | Averaging Time | GLCmax (µg/m$^3$) | De Minimis (µg/m$^3$) |
|---|---|---|---|
| $PM_{2.5}$ (NAAQS) | Annual | 0.43 | 0.13 |
| $PM_{2.5}$ (Increment) | 24-hr | 2.14 | 1.2 |
| $PM_{2.5}$ (Increment) | Annual | 0.45 | 0.13 |
| CO | 1-hr | 3931 | 2000 |
| CO | 8-hr | 1676 | 500 |

The 24-hr and annual $PM_{2.5}$ (NAAQS) are based on the highest five-year averages of the maximum predicted concentrations determined for each receptor. The GLCmax for all other pollutants and averaging times represent the maximum predicted concentrations over five years of meteorological data.

To evaluate secondary $PM_{2.5}$ impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's Guideline on Air Quality Models (GAQM). Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as Modeled Emission Rates for Precursors (MERPs). The basic idea behind the MERPs is to use technically credible air quality modeling to relate precursor emissions and peak secondary pollutants impacts from a source. Using data associated with the worst-case hypothetical source, the applicant estimated 24-hr and annual secondary $PM_{2.5}$ concentrations of 0.31 µg/m$^3$ and 0.01 µg/m$^3$, respectively. Since the combined direct and secondary 24-hr and annual $PM_{2.5}$ impacts are above the De minimis levels, a full impacts analysis is required.

**Table 2. Modeling Results for Ozone PSD De Minimis Analysis in Parts per Billion (ppb)**

| Pollutant | Averaging Time | GLCmax (ppb) | De Minimis (ppb) |
|---|---|---|---|
| $O_3$ | 8-hr | 0.65 | 1 |

The applicant performed an $O_3$ analysis as part of the PSD AQA. The applicant evaluated project emissions of $O_3$ precursor emissions ($NO_x$ and VOC). For the project $NO_x$ and VOC emissions, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's GAQM. Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as MERPs. Using data associated with the 500 tpy Harris County source, the applicant estimated an 8-hr $O_3$ concentration of 0.65 ppb. When the estimates of ozone concentrations from the project emissions are added together, the results are less than the De Minimis level.

## B. Air Quality Monitoring

The De Minimis analysis modeling results indicate that 24-hr $PM_{10}$ is below its respective monitoring significance level. The De Minimis analysis modeling results indicate that 8-hr CO exceeds the respective monitoring significance level and requires the gathering of ambient monitoring information.

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**Table 3. Modeling Results for PSD Monitoring Significance Levels**

| Pollutant | Averaging Time | GLCmax (µg/m$^3$) | Significance (µg/m$^3$) |
|---|---|---|---|
| $PM_{10}$ | 24-hr | 6.77 | 10 |
| CO | 8-hr | 1676 | 575 |

The GLCmax for all pollutants and averaging times represent the maximum predicted concentrations over five years of meteorological data.

The applicant evaluated ambient CO and $PM_{2.5}$ monitoring data to satisfy the requirements for the pre-application air quality analysis.

Background concentrations for CO were obtained from the EPA AIRS monitor 482011039 located at 4514 1/2 Durant St, Deer Park, Harris County. The high, second high (H2H) 1-hr concentration from the most recent year of monitoring data (2023) was used for the 1-hr value (3207 µg/m$^3$). The H2H 8-hr concentration from the most recent year of monitoring data (2023) was used for the 8-hr value (1603 µg/m$^3$). The ADMT was unable to verify the reported concentrations; however, this discrepancy does not change the overall conclusions. The use of this monitor is reasonable based on a comparison of county-wide emissions, population, and land use. The background concentrations for CO noted above were also used in the NAAQS analysis.

Background concentrations for $PM_{2.5}$ were obtained from the EPA AIRS monitor 483550034 located at 5707 Up River Rd., Corpus Christi, Nueces County. The applicant calculated a three-year average (2021-2023) of the 98th percentile of the annual distribution of 24-hr average concentrations for the 24-hr value (22.7 µg/m$^3$). The applicant calculated a three-year average (2021-2023) of the annual concentrations for the annual value (8.6 µg/m$^3$). The use of this monitor is reasonable based on a comparison of county-wide emissions, population, and land use. The applicant had originally selected the Huisache St. monitor in Corpus Christi (EPA AIRS monitor 483550032) for the pre-application analysis. Once 2023 monitoring data became available, the monitor was determined to be too conservative because the monitor is sited between two unpaved/gravelly active lots that contributes to the higher monitored concentrations. Therefore, the applicant selected the Up River Rd. monitor, which is located along the Corpus Christi Ship Channel surrounded by industry similar to the Huisache St. monitor but without the undue influence of unpaved/gravelly lots adjacent to the site. The applicant used a different monitor for the NAAQS analysis below.

Since the project has a net emissions increase of 100 tons per year (tpy) or more of volatile organic compounds or nitrogen oxides, the applicant evaluated ambient $O_3$ monitoring data to satisfy the requirements for the pre-application air quality analysis.

A background concentration for $O_3$ was obtained from the EPA AIRS monitor 483550025 located at Corpus Christi State School (Airport Rd), Corpus Christi, Nueces County. A three-year average (2021-2023) of the annual fourth highest daily maximum 8-hr concentrations was used in the analysis (64 µg/m$^3$). The use of this monitor is reasonable based on a comparison of county- wide emissions, population, and land use.

## C. National Ambient Air Quality Standards (NAAQS) Analysis

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The De Minimis analysis modeling results indicate that 24-hr $PM_{10}$, 24-hr and annual $PM_{2.5}$, and 1-hr and 8-hr CO exceed the respective de minimis concentration and require a full impacts analysis. The full NAAQS modeling results indicate the total predicted concentrations will not result in an exceedance of the NAAQS.

**Table 4. Total Concentrations for PSD NAAQS (Concentrations > De Minimis)**

| Pollutant | Averaging Time | GLCmax (µg/m$^3$) | Background (µg/m$^3$) | Total Conc. = [Background + GLCmax] (µg/m$^3$) | Standard (µg/m$^3$) |
|---|---|---|---|---|---|
| $PM_{10}$ | 24-hr | 16.99 | 43 | 59.99 | 150 |
| $PM_{2.5}$ | 24-hr | 5.15 | 21 | 26.15 | 35 |
| $PM_{2.5}$ | Annual | 0.99 | 7.6 | 8.59 | 9 |
| CO | 1-hr | 7828 | 3207 | 11035 | 40000 |
| CO | 8-hr | 5387 | 1603 | 6990 | 10000 |

The 24-hr $PM_{10}$ GLCmax is the maximum high, sixth high (H6H) predicted concentration over five years of meteorological data. The 24-hr $PM_{2.5}$ GLCmax is the highest five-year average of the 98$^{th}$ percentile of the annual distribution of predicted 24-hr concentrations determined for each receptor. The annual $PM_{2.5}$ GLCmax is the maximum five-year average of the annual concentrations determined for each receptor. The GLCmax for 1-hr and 8-hr CO are the maximum high, second high (H2H) predicted concentrations across five years of meteorological data.

Background concentrations for $PM_{10}$ were obtained from the EPA AIRS monitor 483550034 located at 5707 Up River Rd., Corpus Christi, Nueces County. The H2H 24-hr concentration from the most recent three years of monitoring data (2021-2023) was used for the 24-hr value. The use of this monitor is reasonable based on a comparison of county-wide emissions, population, and land use.

Background concentrations for $PM_{2.5}$ were obtained from the EPA AIRS monitor 480391607 at 901 County Road 792, Freeport, Brazoria County. The applicant calculated a three-year average (2021-2023) of the 98$^{th}$ percentile of the annual distribution of 24-hr average concentrations for the 24-hr value. The applicant calculated a three-year average (2021-2023) of the annual concentrations for the annual value. The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site. In addition, the regional influences are similar such as topography and meteorological conditions. Note that the applicant included a robust off-property inventory in the modeling, which would make the monitor reasonable for capturing sources that were not explicitly modeled such as mobile and natural occurring sources.

As stated above, to evaluate secondary $PM_{2.5}$ impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's GAQM. Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as MERPs. Using data associated with worst-case hypothetical source, the applicant estimated 24-hr and annual secondary $PM_{2.5}$ concentrations of 0.31 µg/m$^3$ and 0.01 µg/m$^3$,

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respectively. When these estimates are added to the GLCmax listed in Table 4 above, the results are less than the NAAQS.

**D. Increment Analysis**

The De Minimis analysis modeling results indicate that 24-hr $PM_{10}$ and 24-hr and annual $PM_{2.5}$ exceed the respective de minimis concentrations and require a PSD increment analysis.

**Table 5. Results for PSD Increment Analysis**

| Pollutant | Averaging Time | GLCmax (µg/m$^3$) | Increment (µg/m$^3$) |
|---|---|---|---|
| $PM_{10}$ | 24-hr | 18.75 | 30 |
| $PM_{2.5}$ | 24-hr | 7.40 | 9 |
| $PM_{2.5}$ | Annual | 1.98 | 4 |

The GLCmax for the 24-hr $PM_{2.5}$ and 24-hr $PM_{10}$ is the maximum H2H predicted concentration across five years of meteorological data. For annual $PM_{2.5}$, the GLCmax is the highest annual predicted concentration associated with five years of meteorological data.

The GLCmax for 24-hr and annual $PM_{2.5}$ reported in the table above represent the total predicted concentration associated with modeling the direct $PM_{2.5}$ emissions and the contributions associated with secondary $PM_{2.5}$ formation (discussed above in the NAAQS Analysis section).

**E. Additional Impacts Analysis**

The applicant performed an Additional Impacts Analysis as part of the PSD AQA. The applicant conducted a growth analysis and determined that population will not significantly increase as a result of the proposed project. The applicant conducted a soils and vegetation analysis and determined that all evaluated criteria pollutant concentrations are below their respective secondary NAAQS. The applicant meets the Class II visibility analysis requirement by complying with the opacity requirements of 30 TAC Chapter 111. The Additional Impacts Analyses are reasonable and possible adverse impacts from this project are not expected.

The ADMT evaluated predicted concentrations from the proposed project to determine if emissions could adversely affect a Class I area. The nearest Class I area, Big Bend National Park, is located approximately 605 kilometers (km) from the proposed site.

The predicted concentrations of $PM_{10}$, $PM_{2.5}$, $NO_2$, and $SO_2$ for all averaging times, are all less than de minimis levels at a distance of 13 km from the proposed sources in the direction the Big Bend National Park Class I area. The Big Bend National Park Class I area is an additional 592 km from the location where the predicted concentrations of $PM_{10}$, $PM_{2.5}$, $NO_2$, and $SO_2$ for all averaging times are less than de minimis. Therefore, emissions from the proposed project are not expected to adversely affect the Big Bend National Park Class I area.

**F. Minor Source NSR and Air Toxics Review**

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**Table 6. Project-Related Modeling Results for State Property Line**

| Pollutant | Averaging Time | GLCmax (µg/m$^3$) | De Minimis (µg/m$^3$) |
|---|---|---|---|
| $SO_2$ | 1-hr | 1.54 | 20.42 |
| $H_2S$ | 1-hr | 0.88 | 2 |

**Table 7. Modeling Results for Minor NSR De Minimis**

| Pollutant | Averaging Time | GLCmax (µg/m$^3$) | De Minimis (µg/m$^3$) |
|---|---|---|---|
| $SO_2$ | 1-hr | 1.60 | 7.8 |
| $SO_2$ | 3-hr | 1.48 | 25 |
| $NO_2$ | 1-hr | 30.86 | 7.5 |
| $NO_2$ | Annual | 0.90 | 1 |

The 1-hr $SO_2$ and 1-hr $NO_2$ GLCmax are based on the highest five-year average of the maximum predicted concentrations determined for each receptor. For all other pollutants and averaging times, the GLCmax are the maximum predicted concentration associated with five years of meteorological data.

The primary NAAQS for 24-hr and annual $SO_2$ have been revoked for San Patricio County and are not reported above.

Intermittent guidance was relied on for the 1-hr $SO_2$ and 1-hr $NO_2$ De minimis analyses and 1-hr $NO_2$ minor NAAQS analysis. See section 4 for additional details.

The justification for selecting the EPA's interim 1-hr $NO_2$ and 1-hr $SO_2$ De Minimis levels was based on the assumptions underlying EPA's development of the 1-hr $NO_2$ and 1-hr $SO_2$ De Minimis levels. As explained in EPA guidance memoranda[2,3], the EPA believes it is reasonable as an interim approach to use a De Minimis level that represents 4% of the 1-hr $NO_2$ and 1-hr $SO_2$ NAAQS.

**Table 8. Total Concentrations for Minor NSR NAAQS (Concentrations > De Minimis)**

| Pollutant | Averaging Time | GLCmax (µg/m$^3$) | Background (µg/m$^3$) | Total Conc. = [Background + GLCmax] (µg/m$^3$) | Standard (µg/m$^3$) |
|---|---|---|---|---|---|
| $NO_2$ | 1-hr | 172 | Note background discussion below | 172 | 188 |

[2] www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf
[3] www.tceq.texas.gov/assets/public/permitting/air/memos/guidance_1hr_no2naaqs.pdf

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The 1-hr $NO_2$ GLCmax is the highest five-year average of the 98th percentile of the annual distribution of predicted daily maximum 1-hr concentrations determined for each receptor.

Background concentrations for $NO_2$ were obtained from the EPA AIRS monitor 480391016 located at 109B Brazoria Hwy 332 West, Lake Jackson, Brazoria County. For the 1-hr $NO_2$ NAAQS analysis, the applicant conducted their evaluation by combining $NO_2$ background concentrations with the predicted concentrations on a seasonal and hour-of-day basis for each modeled receptor. The applicant followed EPA guidance when developing seasonal-hourly background concentrations. The seasonal background concentrations were based on the maximum three-year average (2021-2023) of the 98th percentile of the annual distribution of the daily maximum 1-hr concentrations for each hour and season. These background values were then used in the model (as background scalars) to be combined with model predictions giving a total predicted concentration. The use of this monitor is reasonable based on the applicant's analysis of the surrounding land use and a quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site.

**Table 9. Generic Modeling Results**

| Source ID | 1-hr GLCmax (µg/m³ per lb/hr) | Annual GLCmax (µg/m³ per lb/hr) |
|---|---|---|
| 17 | 1.94 | 0.03 |
| 29 | 0.14 | 0.006 |
| 8 | 2.43 | 0.07 |
| 9 | 1.95 | 0.06 |
| 11 | 1.38 | 0.03 |
| 30A | 33.50 | 0.24 |
| 30B | 40.12 | 0.26 |

**Table 10. Minor NSR Project (Increases Only) Modeling Results for Health Effects**

| Pollutant & CAS# | Averaging Time | GLCmax (µg/m³) | 10% ESL (µg/m³) |
|---|---|---|---|
| Ammonia 7664-41-7 | Annual | 0.98 | 9.2 |
| n-hexane 110-54-3 | 1-hr | 0.06 | 560 |
| n-hexane 110-54-3 | Annual | 0.002 | 20 |

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**Table 11. Minor NSR Site-wide Modeling Results for Health Effects**

| Pollutant | CAS# | Averaging Time | GLCmax ($\mu g/m^3$) | ESL ($\mu g/m^3$) |
|---|---|---|---|---|
| ammonia | 7664-41-7 | 1-hr | 115 | 180 |

The applicant relied on generic modeling to evaluate 1-hr ammonia. See Section 3 for additional information.

### G. Greenhouse Gases

EPA has stated that unlike the criteria pollutants for which EPA has historically issued PSD permits, there is no National Ambient Air Quality Standard (NAAQS) for GHGs, including no PSD increment. The global climate-change inducing effects of GHG emissions, according to the "Endangerment and Cause or Contribute Finding", are far-reaching and multi-dimensional (75 FR 66497). Climate change modeling and evaluations of risks and impacts are typically conducted for changes in emissions that are orders of magnitude larger than the emissions from individual projects that might be analyzed in PSD permit reviews. Quantifying the exact impacts attributable to a specific GHG source obtaining a permit in specific places and points would not be possible [EPA's PSD and Title V Permitting Guidance for GHGs at 48]. Thus, EPA has concluded in other GHG PSD permitting actions it would not be meaningful to evaluate impacts of GHG emissions on a local community in the context of a single permit.

The TCEQ has determined that an air quality analysis would provide no meaningful data and has not required the applicant to perform one. As stated in the preamble to TCEQ's adoption of the GHG PSD program, the impacts review for individual air contaminants will continue to be addressed, as applicable, in the state's traditional minor and major NSR permits program per 30 TAC Chapter 116.

## VIII. Conclusion

The applicant demonstrated the project meets all applicable rules, regulations and requirements of the Texas and Federal Clean Air Acts. An amended air permit should be issued.

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