

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
Orion Engineered Carbons LLC

AUTHORIZING THE OPERATION OF
Borger Carbon Black Plant
Carbon Black Manufacturing

LOCATED AT
Hutchinson County, Texas
Latitude 35° 40' 5" Longitude 101° 25' 58"
Regulated Entity Number: RN100209659

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: O1661 Issuance Date: February 10, 2025

For the Commission

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General Terms and Conditions

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

Special Terms and Conditions:

Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting

1. Permit holder shall comply with the following requirements:
 - A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.
 - B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.
 - C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.
 - D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.
 - E. Emission units subject to 40 CFR Part 63, Subparts A, YY, ZZZZ and DDDDD, as identified in the attached Applicable Requirements Summary table, are subject to 30 TAC

Chapter 113, Subchapter C, §§ 113.100, 113.560, 113.1090 and 113.1130, respectively, which incorporate the 40 CFR Part 63 Subparts by reference.

2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):
 - A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements
 - B. Title 30 TAC § 101.3 (relating to Circumvention)
 - C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ
 - D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ
 - E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)
 - F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)
 - G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)
 - H. Title 30 TAC § 101.221 (relating to Operational Requirements)
 - I. Title 30 TAC § 101.222 (relating to Demonstrations)
 - J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)
3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:
 - A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1, shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:
 - (i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)
 - (ii) Title 30 TAC § 111.111(a)(1)(E)
 - (iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)
 - (iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that

does not obstruct the transmission of light. Vents, as specified in the “Applicable Requirements Summary” attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:

- (1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.
- (2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.
- (3) Records of all observations shall be maintained.
- (4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer’s eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.
- (5) Compliance Certification:
 - (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).
 - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is

determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

- (c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.

B. For visible emissions from a building, enclosed facility, or other structure; the permit holder shall comply with the following requirements:

- (i) Title 30 TAC § 111.111(a)(7)(A) (relating to Requirements for Specified Sources)
- (ii) Title 30 TAC § 111.111(a)(7)(B)(i) or (ii)
- (iii) For a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source subject to 30 TAC § 111.111(a)(7)(A), complying with 30 TAC § 111.111(a)(7)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:
 - (1) An observation of visible emissions from a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source which is required to comply with 30 TAC § 111.111(a)(7)(A) shall be conducted at least once during each calendar quarter unless the air emission source or enclosed facility is not operating for the entire quarter.
 - (2) Records of all observations shall be maintained.
 - (3) Visible emissions observations of air emission sources or enclosed facilities operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of air emission sources or enclosed facilities operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each emissions outlet in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each emissions outlet during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

- (4) Compliance Certification:
- (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(7) and (a)(7)(A).
 - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(7)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

C. For visible emissions from all other sources not specified in 30 TAC § 111.111(a)(1), (4), or (7); the permit holder shall comply with the following requirements:

- (i) Title 30 TAC § 111.111(a)(8)(A) (relating to Requirements for Specified Sources)
- (ii) Title 30 TAC § 111.111(a)(8)(B)(i) or (ii)
- (iii) For a source subject to 30 TAC § 111.111(a)(8)(A), complying with 30 TAC § 111.111(a)(8)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:
 - (1) An observation of visible emissions from a source which is required to comply with 30 TAC § 111.111(a)(8)(A) shall be conducted at least once during each calendar quarter unless the source is not operating for the entire quarter.
 - (2) Records of all observations shall be maintained.
 - (3) Visible emissions observations of sources operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of sources operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each source in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each source during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer

visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

- (4) Compliance Certification:
- (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(8) and (a)(8)(A)
 - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(8)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

- D. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.
- E. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).
- F. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:
 - (i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)
 - (ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)
 - (iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)
- G. Outdoor burning, as stated in 30 TAC § 111.201, shall not be authorized unless the following requirements are satisfied:
 - (i) Title 30 TAC § 111.205 (relating to Exception for Fire Training)

- (ii) Title 30 TAC § 111.207 (relating to Exception for Recreation, Ceremony, Cooking, and Warmth)
 - (iii) Title 30 TAC § 111.219 (relating to General Requirements for Allowable Outdoor Burning)
 - (iv) Title 30 TAC § 111.221 (relating to Responsibility for Consequences of Outdoor Burning)
- 4. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:
 - A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)
 - B. Title 40 CFR § 60.8 (relating to Performance Tests)
 - C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)
 - D. Title 40 CFR § 60.12 (relating to Circumvention)
 - E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)
 - F. Title 40 CFR § 60.14 (relating to Modification)
 - G. Title 40 CFR § 60.15 (relating to Reconstruction)
 - H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)
- 5. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 61, unless otherwise stated in the applicable subpart:
 - A. Title 40 CFR § 61.05 (relating to Prohibited Activities)
 - B. Title 40 CFR § 61.07 (relating to Application for Approval of Construction or Modification)
 - C. Title 40 CFR § 61.09 (relating to Notification of Start-up)
 - D. Title 40 CFR § 61.10 (relating to Source Reporting and Request Waiver)
 - E. Title 40 CFR § 61.12 (relating to Compliance with Standards and Maintenance Requirements)
 - F. Title 40 CFR § 61.13 (relating to Emissions Tests and Waiver of Emission Tests)
 - G. Title 40 CFR § 61.14 (relating to Monitoring Requirements)
 - H. Title 40 CFR § 61.15 (relating to Modification)
 - I. Title 40 CFR § 61.19 (relating to Circumvention)
- 6. For facilities where no benzene is present onsite in wastes, products, by-products or intermediates, the permit holder shall comply with the reporting requirement in 40 CFR § 61.357(a).

7. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.

Additional Monitoring Requirements

8. The permit holder shall comply with the periodic monitoring requirements as specified in the attached "Periodic Monitoring Summary" upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time or minimum frequency specified in the "Periodic Monitoring Summary," for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

New Source Review Authorization Requirements

9. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule (including the terms, conditions, monitoring, recordkeeping, and reporting identified in registered PBRs and permits by rule identified in the PBR Supplemental Tables dated March 30, 2026 in the application for project 39587), standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:
 - A. Are incorporated by reference into this permit as applicable requirements
 - B. Shall be located with this operating permit
 - C. Are not eligible for a permit shield
10. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.
11. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Compliance Requirements

12. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.
13. Use of Discrete Emission Credits to comply with the applicable requirements:
 - A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:
 - (i) Title 30 TAC Chapter 115
 - (ii) Title 30 TAC Chapter 117
 - (iii) If applicable, offsets for Title 30 TAC Chapter 116
 - (iv) Temporarily exceed state NSR permit allowables
 - B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:
 - (i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)
 - (ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4
 - (iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)
 - (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122
 - (v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

Protection of Stratospheric Ozone

14. Permit holders at a site subject to Title VI of the FCAA Amendments shall meet the following requirements for protection of stratospheric ozone:
 - A. Any on site servicing, maintenance, and repair on refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants or non-exempt substitutes shall be conducted in accordance with 40 CFR Part 82, Subpart F. Permit holders shall ensure that repairs on or refrigerant removal from refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants are performed only by properly certified technicians using certified equipment. Records shall be maintained as required by 40 CFR Part 82, Subpart F.

Permit Location

15. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

Permit Shield (30 TAC § 122.148)

16. A permit shield is granted for the emission units, groups, or processes specified in the attached "Permit Shield." Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment "Permit Shield." Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination. Provisional terms are not eligible for this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

Unit Summary 13

Applicable Requirements Summary 15

Note: A “none” entry may be noted for some emission sources in this permit’s “Applicable Requirements Summary” under the heading of “Monitoring and Testing Requirements” and/or “Recordkeeping Requirements” and/or “Reporting Requirements.” Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
B1-ENG	SRIC ENGINES	N/A	60III-01	40 CFR Part 60, Subpart IIII	No changing attributes.
B1-ENG	SRIC ENGINES	N/A	63ZZZZ-01	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
B2-ENG	SRIC ENGINES	N/A	63ZZZZ-01	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
E-100H	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-101H	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-10D	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-10FL	FLARES	N/A	R1111-E-10FL	30 TAC Chapter 111, Visible Emissions	No changing attributes.
E-10FL	FLARES	N/A	63A-E-10FL	40 CFR Part 63, Subpart A	No changing attributes.
E-11D	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-1B	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-20D	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-20FL	FLARES	N/A	R1111-E-20FL	30 TAC Chapter 111, Visible Emissions	No changing attributes.
E-20FL	FLARES	N/A	63A-E-20FL	40 CFR Part 63, Subpart A	No changing attributes.
E-21D	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-40D	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
E-40FL	FLARES	N/A	R1111-E-40FL	30 TAC Chapter 111, Visible Emissions	No changing attributes.
E-40FL	FLARES	N/A	63A-E-40FL	40 CFR Part 63, Subpart A	No changing attributes.
E-41D	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-50DH	FLARES	N/A	R1111-E-50DH	30 TAC Chapter 111, Visible Emissions	No changing attributes.
E-5B	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
E-6BN	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1111E-6B	30 TAC Chapter 111, Visible Emissions	No changing attributes.
EMER-GEN	SRIC ENGINES	N/A	60JJJJ-01	40 CFR Part 60, Subpart JJJJ	No changing attributes.
EMER-GEN	SRIC ENGINES	N/A	63ZZZZ-02	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRP-REACTOR	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	P-11B, P-21B, P-41B	63YY-CVSB	40 CFR Part 63, Subpart YY	Control Device Type = Boiler
GRP-REACTOR	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	P-11B, P-21B, P-41B	63YY-CVSFL	40 CFR Part 63, Subpart YY	Control Device Type = Flare
GRP-VENT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	E-50R, E-51R	R1111-GRP-VENT	30 TAC Chapter 111, Visible Emissions	No changing attributes.
INERT GEN	PROCESS HEATERS/FURNACES	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
B1-ENG	EU	60III-01	CO	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 60.4202(a)(1)(ii) § 60.4202(a)(1)(ii)-Table 2 § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 19 KW and less than 37 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a CO emission limit of 5.5 g/KW-hr, as stated in 40 CFR 60.4202(a)(1)(i)-(ii), 40 CFR 1039-Appendix I, and Table 2 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	None
B1-ENG	EU	60III-01	NMHC and NO _x	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 60.4202(a)(1)(ii) § 60.4202(a)(1)(ii)-Table 2 § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power less than 37 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with an NMHC+NO _x emission limit of 7.5 g/KW-hr, as stated in 40 CFR 60.4202(a)(1)(i)-(ii), 40 CFR 1039-Appendix I, and Table 2 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	None
B1-ENG	EU	60III-01	PM	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 60.4202(a)(1)(ii) § 60.4202(a)(1)(ii)-Table 2 § 60.4206 § 60.4207(b) [G]§ 60.4211(a)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 19 KW and less than 37 KW and a	§ 60.4209(a)	§ 60.4214(b)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.4211(c) [G]§ 60.4211(f)	displacement of less than 10 liters per cylinder and is a 2008 model year and later must comply with a PM emission limit of 0.30 g/KW-hr, as stated in 40 CFR 60.4202(a)(1)(ii) and Table 2 to this subpart.			
B1-ENG	EU	63ZZZZ-01	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.	None	None	None
B2-ENG	EU	63ZZZZ-01	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6602-Table 2c.1 § 63.6595(a)(1) § 63.6605(a) § 63.6605(b) § 63.6625(e) § 63.6625(f) § 63.6625(h) § 63.6625(i) § 63.6640(f)(1) § 63.6640(f)(2) § 63.6640(f)(2)(i) § 63.6640(f)(3)	For each existing emergency stationary CI RICE and black start stationary CI RICE, located at a major source, you must comply with the requirements as specified in Table 2c.1.a-c.	§ 63.6625(i) § 63.6640(a) § 63.6640(a)-Table 6.9.a.i § 63.6640(a)-Table 6.9.a.ii	§ 63.6625(i) § 63.6655(e) § 63.6655(f) § 63.6660(a) § 63.6660(b) § 63.6660(c)	§ 63.6640(e) § 63.6650(f)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
E-100H	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)- Table 3.3 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(13)	A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater must conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
E-101H	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)- Table 3.3 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(13)	A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater must conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
E-10D	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)- Table 3.3 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(13)	A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater must conduct a tune-up of the boiler or process heater	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions.	[G]§ 63.7540(c)		§ 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
E-10FL	CD	R1111-E-10FL	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period. Non-excessive upset events are subject to the provisions under §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
E-10FL	CD	63A-E-10FL	Opacity	40 CFR Part 63, Subpart A	§ 63.11(b)(4) § 63.11(b)(1) § 63.11(b)(2) § 63.11(b)(3) § 63.11(b)(5) § 63.11(b)(6)(i)(A) § 63.11(b)(6)(i)(B) § 63.11(b)(7)(i)	Flares shall be designed and operated with no visible emissions, except for periods of a total of 5 minutes or less during any 2 consecutive hrs. Test Method 22 in App. A of part 60 of this chapter shall be used.	§ 63.11(b)(4) § 63.11(b)(5) § 63.11(b)(7)(i)	None	None
E-11D	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.3 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(13)	A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater must conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) [G]§ 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						regulated emissions.			
E-1B	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.3 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(13)	A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater must conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
E-20D	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.3 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(13)	A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater must conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
E-20FL	EU	R1111-E-20FL	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period. Non-excessive upset events are subject to the provisions under	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						§101.222(b).			
E-20FL	CD	63A-E-20FL	Opacity	40 CFR Part 63, Subpart A	§ 63.11(b)(4) § 63.11(b)(1) § 63.11(b)(2) § 63.11(b)(3) § 63.11(b)(5) § 63.11(b)(6)(i)(A) § 63.11(b)(6)(i)(B) § 63.11(b)(7)(i)	Flares shall be designed and operated with no visible emissions, except for periods of a total of 5 minutes or less during any 2 consecutive hrs. Test Method 22 in App. A of part 60 of this chapter shall be used.	§ 63.11(b)(4) § 63.11(b)(5) § 63.11(b)(7)(i)	None	None
E-21D	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.3 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(13)	A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater must conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
E-40D	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.3 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(13)	A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater must conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						work practice for all regulated emissions.			
E-40FL	EU	R1111-E-40FL	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period. Non-excessive upset events are subject to the provisions under §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
E-40FL	CD	63A-E-40FL	Opacity	40 CFR Part 63, Subpart A	§ 63.11(b)(4) § 63.11(b)(1) § 63.11(b)(2) § 63.11(b)(3) § 63.11(b)(5) § 63.11(b)(6)(i)(A) § 63.11(b)(6)(i)(B) § 63.11(b)(7)(i)	Flares shall be designed and operated with no visible emissions, except for periods of a total of 5 minutes or less during any 2 consecutive hrs. Test Method 22 in App. A of part 60 of this chapter shall be used.	§ 63.11(b)(4) § 63.11(b)(5) § 63.11(b)(7)(i)	None	None
E-41D	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.3 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(13)	A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater must conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
E-50DH	EU	R1111-E-50DH	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than	§ 111.111(a)(4)(A)(i) §	§ 111.111(a)(4)(A)(ii)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						five minutes in any two-hour period. Non-excessive upset events are subject to the provisions under §101.222(b).	111.111(a)(4)(A)(ii)		
E-5B	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.3 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(13)	A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater must conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
E-6BN	EP	R1111E-6B	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
EMER-GEN	EU	60JJJJ-01	CO	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table 1 § 60.4234 § 60.4243(b) § 60.4243(b)(1) [G]§ 60.4243(d) § 60.4243(g)	Owners and operators of stationary emergency SI ICE with a maximum engine power greater than or equal to 130 HP and were manufactured on or after 01/01/2009 must comply with a CO emission limit of 4.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4237(b)	§ 60.4243(a)(1) § 60.4245(a) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(3) § 60.4245(b) § 60.4245(j)	[G]§ 60.4245(e) [G]§ 60.4245(g) [G]§ 60.4245(h) [G]§ 60.4245(i)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
EMER-GEN	EU	60JJJJ-01	NO _x	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table 1 § 60.4234 § 60.4243(b) § 60.4243(b)(1) [G]§ 60.4243(d) § 60.4243(g)	Owners and operators of stationary emergency SI ICE with a maximum engine power greater than or equal to 130 HP and were manufactured on or after 01/01/2009 must comply with a NO _x emission limit of 2.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4237(b)	§ 60.4243(a)(1) § 60.4245(a) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(3) § 60.4245(b) § 60.4245(j)	[G]§ 60.4245(e) [G]§ 60.4245(g) [G]§ 60.4245(h) [G]§ 60.4245(i)
EMER-GEN	EU	60JJJJ-01	VOC	40 CFR Part 60, Subpart JJJJ	§ 60.4233(e)-Table 1 § 60.4234 § 60.4243(b) § 60.4243(b)(1) [G]§ 60.4243(d) § 60.4243(g)	Owners and operators of stationary emergency SI ICE with a maximum engine power greater than or equal to 130 HP and were manufactured on or after 01/01/2009 must comply with a VOC emission limit of 1.0 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4237(b)	§ 60.4243(a)(1) § 60.4245(a) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(3) § 60.4245(b) § 60.4245(j)	[G]§ 60.4245(e) [G]§ 60.4245(g) [G]§ 60.4245(h) [G]§ 60.4245(i)
EMER-GEN	EU	63ZZZZ-02	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.	None	None	None
GRP-	EU	63YY-	HAPS	40 CFR Part 63,	§ 63.1103(f)(3)(i)-	Reduce emissions of total	§ 63.1108(b)(1)	§ 63.1109(a)	§ 63.1100(g)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
REACTOR		CVSBL		Subpart YY	Table8(a)(1)(ii) § 63.1103(f)(3)(i) § 63.1103(f)(3)(ii) § 63.1108(a)(1) § 63.1108(a)(3) § 63.1108(a)(5) § 63.1108(a)(6) § 63.1108(a)(7) § 63.1108(b)(3) § 63.1108(b)(4) § 63.1108(b)(4)(iii) § 63.1108(b)(5) § 63.1108(c) § 63.1108(d)(1) § 63.1108(d)(3) § 63.1111(a)(2) § 63.1111(a)(3) § 63.1111(a)(5) § 63.1112(a)(1) § 63.1112(b)(1) § 63.982(a)(2) § 63.982(c) § 63.982(c)(2) § 63.983(a)(1) § 63.983(a)(2) § 63.983(d)(1) § 63.983(d)(1)(i) § 63.983(d)(3) § 63.988(a)(1) § 63.988(a)(2) § 63.988(a)(3) § 63.988(b)(2) § 63.996(c)(1) § 63.996(c)(2) § 63.996(c)(2)(i) § 63.996(c)(3) § 63.996(c)(4) § 63.996(c)(5) § 63.996(c)(6) [G]§ 63.1100(d)(5)	HAP by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices meeting the requirements of §63.982(a)(2).	§ 63.1108(b)(4)(ii) § 63.983(b) § 63.983(c)(2) § 63.983(c)(3) § 63.983(d)(1) § 63.983(d)(1)(ii) § 63.996(b)(1) § 63.996(b)(1)(i) § 63.996(b)(2) [G]§ 63.1108(b)(4)(i) [G]§ 63.983(b)(1) [G]§ 63.983(b)(2) [G]§ 63.983(b)(3) [G]§ 63.983(c)(1)	§ 63.1109(b) § 63.1109(c) § 63.1109(d) § 63.983(b) § 63.996(c)(2)(ii) § 63.998(a)(2)(ii)(B)(5) § 63.998(c)(2)(i) § 63.998(c)(2)(ii) § 63.998(c)(2)(iii) § 63.998(d)(3)(i) § 63.998(d)(3)(ii) § 63.998(d)(5) [G]§ 63.1100(d)(4) [G]§ 63.983(d)(2) [G]§ 63.998(b)(1) [G]§ 63.998(b)(2) [G]§ 63.998(b)(3) [G]§ 63.998(b)(5) [G]§ 63.998(c)(1) [G]§ 63.998(d)(1)	§ 63.1103(f)(3)(ii) § 63.1109(b) § 63.1110(a) § 63.1110(a)(1) § 63.1110(a)(2) § 63.1110(a)(4) § 63.1110(a)(5) § 63.1110(a)(6) § 63.1110(a)(7) § 63.1110(a)(8) § 63.1110(b)(1) § 63.1110(b)(2) § 63.1110(d)(2) § 63.1110(g)(1) § 63.1110(g)(2) § 63.1110(g)(3) § 63.1110(g)(4) § 63.1110(h)(1) § 63.1110(h)(2) § 63.1110(h)(3) § 63.1110(h)(4) § 63.1110(h)(5) § 63.996(b)(2) § 63.996(c)(6) § 63.999(b)(5) § 63.999(c)(1) § 63.999(c)(2)(i) § 63.999(c)(6) § 63.999(c)(6)(iv) [G]§ 63.1100(d)(4) [G]§ 63.1100(d)(5) [G]§ 63.1110(c) [G]§ 63.1110(d)(1) [G]§ 63.1110(e) [G]§ 63.1110(f) [G]§ 63.998(b)(3) [G]§ 63.999(a)(1) [G]§ 63.999(b)(3) [G]§ 63.999(c)(6)(i) [G]§ 63.999(d)(1)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					[G]§ 63.1108(b)(2) [G]§ 63.1108(d)(2) [G]§ 63.1111(a)(1) [G]§ 63.1111(a)(4) [G]§ 63.983(d)(2)				[G]§ 63.999(d)(2)
GRP-REACTOR	EU	63YY-CVSFL	HAPS	40 CFR Part 63, Subpart YY	§ 63.1103(f)(3)(i)-Table8(a)(1)(ii) § 63.11(b) § 63.1103(f)(3)(i) § 63.1103(f)(3)(ii) § 63.1108(a)(1) § 63.1108(a)(3) § 63.1108(a)(5) § 63.1108(a)(6) § 63.1108(a)(7) § 63.1108(b)(3) § 63.1108(b)(4) § 63.1108(b)(4)(iii) § 63.1108(b)(5) § 63.1108(c) § 63.1108(d)(1) § 63.1108(d)(3) § 63.1111(a)(2) § 63.1111(a)(3) § 63.1111(a)(5) § 63.1112(a)(1) § 63.1112(b)(1) § 63.982(a)(2) § 63.982(b) § 63.983(a)(1) § 63.983(a)(2) § 63.983(d)(1) § 63.983(d)(1)(i) § 63.983(d)(3) § 63.987(a) § 63.987(b)(1) § 63.987(b)(3) § 63.997(c)(3) [G]§ 63.1100(d)(5)	Reduce emissions of total HAP by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices meeting the requirements of §63.982(a)(2).	§ 63.1108(b)(1) § 63.1108(b)(4)(ii) § 63.983(b) § 63.983(c)(2) § 63.983(c)(3) § 63.983(d)(1) § 63.983(d)(1)(ii) § 63.987(b)(3)(i) § 63.987(b)(3)(ii) § 63.987(b)(3)(iii) § 63.987(b)(3)(iv) § 63.987(c) § 63.997(a) § 63.997(c)(2) § 63.997(c)(3) § 63.997(c)(3)(i) § 63.997(c)(3)(ii) [G]§ 63.1108(b)(4)(i) [G]§ 63.983(b)(1) [G]§ 63.983(b)(2) [G]§ 63.983(b)(3) [G]§ 63.983(c)(1) [G]§ 63.997(c)(1) [G]§ 63.997(d)	§ 63.1109(a) § 63.1109(b) § 63.1109(c) § 63.1109(d) § 63.983(b) § 63.987(c) § 63.998(a)(1) § 63.998(a)(1)(iii)(A) § 63.998(a)(1)(iii)(B) § 63.998(d)(3)(i) § 63.998(d)(3)(ii) § 63.998(d)(5) [G]§ 63.1100(d)(4) [G]§ 63.983(d)(2) [G]§ 63.998(a)(1)(i) [G]§ 63.998(b)(1) [G]§ 63.998(b)(2) [G]§ 63.998(b)(3) [G]§ 63.998(b)(5) [G]§ 63.998(d)(1)	§ 63.1100(g) § 63.1103(f)(3)(ii) § 63.1109(b) § 63.1110(a) § 63.1110(a)(1) § 63.1110(a)(2) § 63.1110(a)(4) § 63.1110(a)(5) § 63.1110(a)(6) § 63.1110(a)(7) § 63.1110(a)(8) § 63.1110(b)(1) § 63.1110(b)(2) § 63.1110(d)(2) § 63.1110(g)(1) § 63.1110(g)(2) § 63.1110(g)(3) § 63.1110(g)(4) § 63.1110(h)(1) § 63.1110(h)(2) § 63.1110(h)(3) § 63.1110(h)(4) § 63.1110(h)(5) § 63.997(c)(3) § 63.998(a)(1)(iii)(A) § 63.999(b)(5) § 63.999(c)(1) § 63.999(c)(2)(i) § 63.999(c)(3) § 63.999(c)(6) § 63.999(c)(6)(iv) [G]§ 63.1100(d)(4) [G]§ 63.1100(d)(5) [G]§ 63.1110(c)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					[G]§ 63.1108(b)(2) [G]§ 63.1108(d)(2) [G]§ 63.1111(a)(1) [G]§ 63.1111(a)(4) [G]§ 63.983(d)(2) [G]§ 63.997(c)(1) [G]§ 63.997(d)				[G]§ 63.1110(d)(1) [G]§ 63.1110(e) [G]§ 63.1110(f) [G]§ 63.998(b)(3) [G]§ 63.999(a)(1) [G]§ 63.999(a)(2) [G]§ 63.999(c)(6)(i) [G]§ 63.999(d)(1) [G]§ 63.999(d)(2)
GRP-VENT	EP	R1111-GRP-VENT	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
INERT GEN	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.3 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(13)	A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater must conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)

Additional Monitoring Requirements

Periodic Monitoring Summary 28

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: E-6BN	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111E-6B
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Visible Emissions	
Minimum Frequency: once per week	
Averaging Period: N/A	
Deviation Limit: There shall be no visible emissions. If visible emissions are observed, the permit holder shall report a deviation or perform Test Method 9 and opacity shall not exceed 15%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRP-VENT	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-GRP-VENT
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Visible Emissions	
Minimum Frequency: once per week	
Averaging Period: N/A	
Deviation Limit: There shall be no visible emissions. If visible emissions are observed, the permit holder shall report a deviation or perform Test Method 9 and opacity shall not exceed 15%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

Permit Shield

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Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit / Group / Process ID No.	Group / Inclusive Units	Regulation	Basis of Determination
B2-ENG	N/A	40 CFR Part 60, Subpart IIII	Stationary CI that commenced construction prior to July 11, 2005.
E-10T	N/A	40 CFR Part 60, Subpart K	Vessel constructed/modified/reconstructed before 6/11/1973
E-11T	N/A	40 CFR Part 60, Subpart K	Vessel constructed/modified/reconstructed before 6/11/1973
E-12T	N/A	40 CFR Part 60, Subpart K	Vessel capacity less than 40,000 gallons
E-12T	N/A	40 CFR Part 60, Subpart Ka	Vessel capacity less than 40,000 gallons
E-12T	N/A	40 CFR Part 60, Subpart Kb	Vessel constructed/modified/reconstructed before 7/23/1984
E-13T	N/A	40 CFR Part 60, Subpart K	Vessel capacity less than 40,000 gallons
E-13T	N/A	40 CFR Part 60, Subpart Ka	Vessel capacity less than 40,000 gallons
E-13T	N/A	40 CFR Part 60, Subpart Kb	Vessel constructed/modified/reconstructed before 7/23/1984
E-1B	N/A	40 CFR Part 60, Subpart D	Heat input less than 250 MMBtu/hr
E-1B	N/A	40 CFR Part 60, Subpart Da	Boiler is not an electric utility steam generating unit
E-1B	N/A	40 CFR Part 60, Subpart Db	Boiler maximum rated capacity less than 100 MMBtu/hr
E-22T	N/A	40 CFR Part 60, Subpart K	Tank storage capacity is less than 40,000 gallons
E-22T	N/A	40 CFR Part 60, Subpart Ka	Vessel capacity less than 40,000 gallons
E-22T	N/A	40 CFR Part 60, Subpart Kb	Vessel capacity less than 75 cubic meters (19,800 gallons)

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit / Group / Process ID No.	Group / Inclusive Units	Regulation	Basis of Determination
E-50DH	N/A	40 CFR Part 60, Subpart A	Dehumidifier not used to meet requirements of 40 CFR Part 60
E-50DH	N/A	40 CFR Part 61, Subpart A	Dehumidifier not used to meet requirements of 40 CFR Part 61
E-50DH	N/A	40 CFR Part 63, Subpart A	Dehumidifier not used to meet requirements of 40 CFR Part 63
E-50DH	N/A	40 CFR Part 63, Subpart SS	Flare does not combust tailgas generated from reactor processes subject to MACT YY. The flare is not subject to MACT SS since it is only applicable when another subpart references the use of MACT SS for such air emission control.
E-5B	N/A	40 CFR Part 60, Subpart D	Boiler does not burn fossil fuel
E-5B	N/A	40 CFR Part 60, Subpart Da	Boiler is not an electric utility steam generating unit
E-5B	N/A	40 CFR Part 60, Subpart Db	Boiler constructed/modified/reconstructed before 06/19/1984
E-5B	N/A	40 CFR Part 60, Subpart Dc	Boiler constructed/modified/reconstructed before 06/09/1989
E-5B	N/A	40 CFR Part 63, Subpart SS	Boiler does not combust tail gas generated from reactor processes subject to MACT YY. The boiler is not subject to MACT SS since it is only applicable when another subpart references the use of MACT SS for such air emission control
E-6BN	N/A	30 TAC Chapter 115, Vent Gas Controls	Facility is not located in a county subject to 30 TAC Chapter 115.
E-6BN	N/A	40 CFR Part 60, Subpart D	Boiler does not burn fossil fuel

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit / Group / Process ID No.	Group / Inclusive Units	Regulation	Basis of Determination
E-6BN	N/A	40 CFR Part 60, Subpart Da	Boiler is not an electric utility steam generating unit
E-6BN	N/A	40 CFR Part 60, Subpart Db	Boiler constructed/modified/reconstructed before 6/19/1984
E-6BN	N/A	40 CFR Part 60, Subpart Dc	Boiler constructed/modified/reconstructed before 6/9/1989
E-BINT	N/A	40 CFR Part 60, Subpart K	Vessel capacity less than 40,000 gallons
E-BINT	N/A	40 CFR Part 60, Subpart Ka	Vessel capacity less than 40,000 gallons
E-BINT	N/A	40 CFR Part 60, Subpart Kb	Vessel constructed/modified/reconstructed before 7/23/1984
GRP-REACTOR	P-11B, P-21B, P-41B	40 CFR Part 60, Subpart III	Facility does not produce any chemicals listed in 40 CFR 60.617 as product, co-product, by-product, or intermediate
GRP-REACTOR	P-11B, P-21B, P-41B	40 CFR Part 60, Subpart RRR	Facility does not produce any chemicals listed in 40 CFR 60.707 as product, co-product, by-product, or intermediate
GRP-VENT	E-50R, E-51R	40 CFR Part 63, Subpart YY	The HAP concentration of the emission stream is less than 260 parts per million by volume.
P-50BT	N/A	40 CFR Part 63, Subpart YY	HAP concentration of emission stream less than 260 ppmv
P-51BT	N/A	40 CFR Part 63, Subpart YY	HAP concentration of emission stream less than 260 ppmv

New Source Review Authorization References

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New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Prevention of Significant Deterioration (PSD) Permits	
PSD Permit No.: PSDTX416M1	Issuance Date: 09/30/2025
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 8780	Issuance Date: 09/30/2025
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 7	Version No./Date: 09/12/1989
Number: 070	Version No./Date: 09/12/1989
Number: 106.102	Version No./Date: 09/04/2000
Number: 106.122	Version No./Date: 09/04/2000
Number: 106.123	Version No./Date: 09/04/2000
Number: 106.144	Version No./Date: 09/04/2000
Number: 106.183	Version No./Date: 09/04/2000
Number: 106.227	Version No./Date: 09/04/2000
Number: 106.244	Version No./Date: 09/04/2000
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.262	Version No./Date: 09/04/2000
Number: 106.262	Version No./Date: 11/01/2003
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.264	Version No./Date: 09/04/2000
Number: 106.265	Version No./Date: 09/04/2000
Number: 106.266	Version No./Date: 09/04/2000
Number: 106.371	Version No./Date: 09/04/2000
Number: 106.412	Version No./Date: 09/04/2000
Number: 106.452	Version No./Date: 09/04/2000
Number: 106.454	Version No./Date: 09/04/2000
Number: 106.454	Version No./Date: 11/01/2001
Number: 106.472	Version No./Date: 03/14/1997
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.473	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/04/2000
Number: 106.531	Version No./Date: 09/04/2000
Number: 106.532	Version No./Date: 09/04/2000

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Number: 111	Version No./Date: 09/12/1989
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New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization**
B1-ENG	B1 EMERGENCY AIR BLOWER/ENGINE	106.511/09/04/2000
B2-ENG	B2 EMERGENCY AIR BLOWER/ENGINE	106.511/09/04/2000
E-100H	MAIN OIL PREHEATER	7/09/12/1989
E-101H	SECONDARY OIL PREHEATER	7/09/12/1989
E-10D	NORTH B1 DRYER	8780, PSDTX416M1
E-10FL	B-1 FLARE	8780, PSDTX416M1
E-10T	OIL STORAGE TANK #1	106.472/09/04/2000
E-11D	SOUTH B1 DRYER	8780, PSDTX416M1
E-11T	OIL STORAGE TANK #2	106.472/09/04/2000
E-12T	EAST DAY TANK	106.472/09/04/2000
E-13T	WEST DAY TANK	106.472/09/04/2000
E-1B	FURNACE BOILER	7/09/12/1989
E-20D	NORTH B2 DRYER	8780, PSDTX416M1
E-20FL	B-2 FLARE	8780, PSDTX416M1
E-21D	SOUTH B2 DRYER	8780, PSDTX416M1
E-22T	DAY TANK #5	8780, PSDTX416M1
E-40D	NORTH B4 DRYER	8780, PSDTX416M1
E-40FL	B-4 FLARE	8780, PSDTX416M1
E-41D	SOUTH B4 DRYER	8780, PSDTX416M1
E-50DH	THERMAL DEHUMIDIFIER	8780, PSDTX416M1
E-50R	T-1 REACTOR NORTH STACK	8780, PSDTX416M1

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization**
E-51R	T-1 REACTOR SOUTH STACK	8780, PSDTX416M1
E-5B	THERMAL BOILER	8780, PSDTX416M1
E-6BN	WASTE HEAT BOILER STACK	8780, PSDTX416M1
E-BINT	BINDER TANK	106.472/03/14/1997
EMER-GEN	EMERGENCY GENERATOR	106.511/09/04/2000
INERT GEN	INERT GAS GENERATOR	7/09/12/1989
P-11B	B1-REACTOR	8780, PSDTX416M1
P-21B	B2-REACTOR	8780, PSDTX416M1
P-41B	B-4 REACTOR	8780, PSDTX416M1
P-50BT	T-1 REACTOR	8780, PSDTX416M1
P-51BT	T-2 REACTOR	8780, PSDTX416M1

**This column may include Permit by Rule (PBR) numbers and version dates, PBR Registration numbers in brackets, Standard Permit Registration numbers, Minor NSR permit numbers, and Major NSR permit numbers.

Appendix A

Acronym List 40

Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM	actual cubic feet per minute
AMOC	alternate means of control
ARP	Acid Rain Program
ASTM	American Society of Testing and Materials
B/PA	Beaumont/Port Arthur (nonattainment area)
CAM	Compliance Assurance Monitoring
CD	control device
CEMS	continuous emissions monitoring system
CFR	Code of Federal Regulations
COMS	continuous opacity monitoring system
CVS	closed vent system
D/FW	Dallas/Fort Worth (nonattainment area)
EP	emission point
EPA	U.S. Environmental Protection Agency
EU	emission unit
FCAA Amendments	Federal Clean Air Act Amendments
FOP	federal operating permit
gr/100 scf	grains per 100 standard cubic feet
HAP	hazardous air pollutant
H/G/B	Houston/Galveston/Brazoria (nonattainment area)
H ₂ S	hydrogen sulfide
ID No.	identification number
lb/hr	pound(s) per hour
MACT	Maximum Achievable Control Technology (40 CFR Part 63)
MMBtu/hr	Million British thermal units per hour
NA	nonattainment
N/A	not applicable
NADB	National Allowance Data Base
NESHAP	National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
NO _x	nitrogen oxides
NSPS	New Source Performance Standard (40 CFR Part 60)
NSR	New Source Review
ORIS	Office of Regulatory Information Systems
Pb	lead
PBR	Permit By Rule
PEMS	predictive emissions monitoring system
PM	particulate matter
ppmv	parts per million by volume
PRO	process unit
PSD	prevention of significant deterioration
psia	pounds per square inch absolute
RO	Responsible Official
SIP	state implementation plan
SO ₂	sulfur dioxide
TCEQ	Texas Commission on Environmental Quality
TSP	total suspended particulate
TVP	true vapor pressure
U.S.C.	United States Code
VOC	volatile organic compound

Appendix B

Major NSR Summary Table 42

Major NSR Summary Table

Permit Numbers: 8780 and PSDTX416M1					Issuance Date: September 30, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
E-6BN	Waste Heat Boiler (6)	PM	6.15	(5)	5, 6, 13, 14, 15, 18, 19, 20, 21, 23, 27, 28, 31, 34	16, 17, 25, 26	21, 23, 27, 35, 37
		PM ₁₀	6.15	(5)			
		PM _{2.5}	6.15	(5)			
		SO ₂	144.11	(5)			
		NO _x (routine)	47.43	(5)			
		NO _x (MSS)	169.78	(5)			
		VOC	25.62	(5)			
		CO	864.97	(5)			
		H ₂ S	18.73	(5)			
		COS	4.94	(5)			
		CS ₂	7.39	(5)			
		HCN	1.54	(5)			
		BZ	0.83	(5)			
		Al	0.67	(5)			
		Cl	0.87	(5)			
NH ₃	2.13	(5)					

Major NSR Summary Table

Permit Numbers: 8780 and PSDTX416M1					Issuance Date: September 30, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
E-6BN	Waste Heat Boiler MSS	NOx	169.78	(5)	5, 6, 13, 14, 15, 18, 19, 20, 21, 23, 27, 28, 31, 34	16, 17, 25, 26	21, 23, 27, 35, 37
E-10FL E-20FL E-40FL	Reactor Heat Load (12)	PM	0.68	0.78	29, 32	32	
		PM ₁₀	0.68	0.78			
		PM _{2.5}	0.68	0.78			
		SO ₂	0.19	0.22			
		NOx	44.06	50.00			
		VOC	0.50	0.56			
E-10FL	Unit 1 Reactor / Flare (7) (12)	PM	9.13	(5)	5, 6, 12, 22, 27	25, 26, 34	27, 35, 37
		PM ₁₀	5.48	(5)			
		PM _{2.5}	3.93	(5)			
		SO ₂	777.60	(5)			
		NO _x	62.82	(5)			
		VOC (6)	9.33	(5)			

Major NSR Summary Table

Permit Numbers: 8780 and PSDTX416M1					Issuance Date: September 30, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		CO	320.13	(5)			
		H ₂ S	7.02	(5)			
		COS	1.85	(5)			
		CS ₂	2.77	(5)			
		HCN	0.58	(5)			
		BZ	0.31	(5)			
		Al	0.25	(5)			
		Cl	0.33	(5)			
E-20FL	Unit 2 Reactor / Flare (7) (12)	PM	9.13	(5)	5, 6, 12, 22, 27	25, 26, 34	27, 35, 37
		PM ₁₀	5.48	(5)			
		PM _{2.5}	3.93	(5)			
		SO ₂	777.60	(5)			
		NO _x	62.82	(5)			
		VOC (6)	9.33	(5)			
		CO	320.13	(5)			
		H ₂ S	7.02	(5)			

Major NSR Summary Table

Permit Numbers: 8780 and PSDTX416M1					Issuance Date: September 30, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		COS	1.85	(5)			
		CS ₂	2.77	(5)			
		HCN	0.58	(5)			
		BZ	0.31	(5)			
		Al	0.25	(5)			
		Cl	0.33	(5)			
E-40FL	Unit 4 Reactor / Flare (7) (12)	PM	9.13	(5)	5, 6, 12, 22, 27	25, 26, 34	27, 35, 37
		PM ₁₀	5.48	(5)			
		PM _{2.5}	3.93	(5)			
		SO ₂	777.60	(5)			
		NO _x	62.82	(5)			
		VOC (6)	9.33	(5)			
		CO	320.13	(5)			
		H ₂ S	7.02	(5)			
		COS	1.85	(5)			
		CS ₂	2.77	(5)			

Major NSR Summary Table

Permit Numbers: 8780 and PSDTX416M1					Issuance Date: September 30, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		HCN	0.58	(5)			
		BZ	0.31	(5)			
		Al	0.25	(5)			
		Cl	0.33	(5)			
CFL	Combined Flare (12)	PM	24.34	(5)	5, 6, 12, 22, 27	25, 26, 34	27, 35, 37
		PM ₁₀	14.61	(5)			
		PM _{2.5}	10.47	(5)			
		SO ₂	750.05	(5)			
		NO _x	167.52	(5)			
		VOC	24.89	(5)			
		CO	853.69	(5)			
		H ₂ S	18.73	(5)			
		COS	4.94	(5)			
		CS ₂	7.39	(5)			
		HCN	1.54	(5)			
		BZ	0.83	(5)			

Major NSR Summary Table

Permit Numbers: 8780 and PSDTX416M1					Issuance Date: September 30, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		Al	0.67	(5)			
		Cl	0.87	(5)			
Emissions Cap (EPNs: E-6BN, E-10FL, E-20FL, E-40FL & CFL)	Tail Gas Cap (5) (12)	PM	---	77.66	5, 6, 12, 13, 14, 15, 18, 19, 20, 21, 22, 23, 27, 28, 31, 34	16, 17, 25, 26, 34	21, 23, 27, 35, 37
		PM ₁₀	---	46.29			
		PM _{2.5}	---	32.95			
		SO ₂	---	475.00			
		NO _x	---	290.00			
		VOC (6)	---	101.06			
		CO	---	3576.97			
		H ₂ S	---	76.56			
		COS	---	20.19			
		CS ₂	---	30.2			
		HCN	---	6.27			
		BZ	---	3.03			
		Al	---	1.93			
		Cl	---	2.50			

Major NSR Summary Table

Permit Numbers: 8780 and PSDTX416M1					Issuance Date: September 30, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		NH ₃	---	10.88			
E-10D/E-11D	B-1 Dryers (19 MMBtu/hr)	PM	0.30	1.30	6, 13, 29	6, 13, 25, 26	
		PM ₁₀	0.18	0.78			
		PM _{2.5}	0.13	0.56			
		SO ₂	0.02	0.10			
		NO _x	3.80	16.64			
		VOC	0.21	0.94			
		CO	3.27	14.34			
E-20D/E-21D	B-2 Dryers (19 MMBtu/hr)	PM	0.30	1.30	6, 13, 29	6, 13, 25, 26	
		PM ₁₀	0.18	0.78			
		PM _{2.5}	0.13	0.56			
		SO ₂	0.02	0.10			
		NO _x	3.80	16.64			
		VOC	0.21	0.94			
		CO	3.27	14.34			
E-40D/E-41D	B-4 Dryers (19	PM	0.30	1.30	6, 13, 29	6, 13, 25, 26	

Major NSR Summary Table

Permit Numbers: 8780 and PSDTX416M1					Issuance Date: September 30, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
	MMBtu/hr)	PM ₁₀	0.18	0.78			
		PM _{2.5}	0.13	0.56			
		SO ₂	0.02	0.10			
		NO _x	3.80	16.64			
		VOC	0.21	0.94			
		CO	3.27	14.34			
E-10DF and E-11DF	B-1 Dryer Bag Filter	PM	1.54	6.76	7, 8, 13, 24, 27, 30	7, 8, 10, 25, 26	
		PM ₁₀	0.93	4.05			
		PM _{2.5}	0.66	2.91			
		SO ₂	< 0.01	0.01			
		NO _x	0.38	1.66			
		VOC	2.87	12.58			
		CO	0.33	1.43			
E-20DF and E-21DF	B-2 Dryer Bag Filter	PM	1.54	6.76	7, 8, 13, 24, 27, 30	7, 8, 10, 25, 26	
		PM ₁₀	0.93	4.05			
		PM _{2.5}	0.66	2.91			

Major NSR Summary Table

Permit Numbers: 8780 and PSDTX416M1					Issuance Date: September 30, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		SO ₂	< 0.01	0.01			
		NO _x	0.38	1.66			
		VOC	3.19	13.97			
		CO	0.33	1.43			
E-41P and E-41DF	B-4 Dryer Bag Filter	PM	1.54	6.76	7, 8, 13, 24, 27, 30	7, 8, 10, 25, 26	
		PM ₁₀	0.93	4.05			
		PM _{2.5}	0.66	2.91			
		SO ₂	< 0.01	0.01			
		NO _x	0.38	1.66			
		VOC	2.87	12.58			
		CO	0.33	1.43			
E-10CU	B-1 Clean Up Bag Filter / Loop Vent Filter	PM	0.51	2.25	7, 8, 13, 24, 27, 30	7, 8, 10, 25, 26	
		PM ₁₀	0.31	1.35			
		PM _{2.5}	0.22	0.97			
E-20CU	B-2 Clean Up Bag Filter	PM	0.51	2.25	7, 8, 13, 24, 27, 30	7, 8, 10, 25, 26	
		PM ₁₀	0.31	1.35			

Major NSR Summary Table

Permit Numbers: 8780 and PSDTX416M1					Issuance Date: September 30, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		PM _{2.5}	0.22	0.97			
E-40CU	B-4 Clean Up Bag Filter	PM	0.51	2.25	7, 8, 13, 24, 27, 30	7, 8, 10, 25, 26	
		PM ₁₀	0.31	1.35			
		PM _{2.5}	0.22	0.97			
E-1VF	Furnace Vacuum Bag Filter	PM	0.38	1.65	7, 8, 13, 24, 27, 30	7, 8, 10, 25, 26	
		PM ₁₀	0.23	0.99			
		PM _{2.5}	0.16	0.71			
FURN-FUG	Furnace Area Fugitives (8)	PM	3.33	14.60	22, 27	25, 26	
		PM ₁₀	2.00	8.76			
		PM _{2.5}	1.43	6.28			
		VOC	0.09	0.38			
E-5B	Thermal Boiler	PM	0.16	0.66	6, 13	25, 26	
		PM ₁₀	0.16	0.66			
		PM _{2.5}	0.16	0.66			
		SO ₂	0.05	0.19			
		NO _x	2.1	8.67			

Major NSR Summary Table

Permit Numbers: 8780 and PSDTX416M1					Issuance Date: September 30, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		CO	1.76	7.28			
		VOC	0.12	0.48			
OIL-FUG	Oil Storage Fugitives (8)	VOC	0.16	0.68		25, 26	
P-60P	Waste Heat Boiler Planned Startup, Tail Gas Vent to Atmosphere - MSS (9)	PM	0.08	0.01		25, 26	
		PM ₁₀	0.05	0.01			
		PM _{2.5}	0.03	0.01			
		SO ₂	0.21	0.01			
		NO _x	0.38	0.01			
		VOC (6)	8.49	0.13			
		CO	143.72	2.16			
		H ₂ S	4.43	0.07			
		COS	0.34	0.01			
		CS ₂	1.51	0.02			
		HCN	0.63	0.01			
BZ	0.18	0.01					
BAGFILTFUG	Bag Filter Change-out	PM	0.57	0.01	7, 8, 13, 24, 27, 30	7, 8, 10, 25, 26	

Major NSR Summary Table

Permit Numbers: 8780 and PSDTX416M1					Issuance Date: September 30, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
	Fugitives - MSS (10)	PM ₁₀	0.34	0.01			
		PM _{2.5}	0.24	0.01			
BRICKFUG	Re-bricking Fugitives-MSS (11)	PM	2.10	0.05			
		PM ₁₀	2.10	0.05			
		PM _{2.5}	0.53	0.01			
AMM-FUG	Ammonia Fugitives	NH ₃	0.18	0.79	17	25, 26	
E-10LIMEF	Hydrated Lime Silo 1 Bin Vent	PM	0.14	0.60	7, 8, 13, 24, 27, 30	7, 8, 10, 25, 26	
		PM ₁₀	0.14	0.60			
		PM _{2.5}	0.14	0.60			
E10BYPRODF	CDS Byproduct Silo 1 Bin Vent	PM	0.14	0.60	7, 8, 13, 24, 27, 30	7, 8, 10, 25, 26	
		PM ₁₀	0.14	0.60			
		PM _{2.5}	0.14	0.60			
E20BYPRODF	CDS Byproduct Silo 2 Bin Vent	PM	0.14	0.60	7, 8, 13, 24, 27, 30	7, 8, 10, 25, 26	
		PM ₁₀	0.14	0.60			
		PM _{2.5}	0.14	0.60			
BYPRODPUGM	CDS Byproduct Pugmill	PM	0.02	0.07	11	25, 26	

Major NSR Summary Table

Permit Numbers: 8780 and PSDTX416M1					Issuance Date: September 30, 2025		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		PM ₁₀	0.01	0.04			
		PM _{2.5}	0.01	0.03			
BYPRODLOAD	CDS Byproduct Truck Loading	PM	0.08	0.35	11	25, 26	
		PM ₁₀	0.04	0.17			
		PM _{2.5}	0.01	0.03			

- (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
 - SO₂ - sulfur dioxide
 - PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
 - PM₁₀ - 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
 - H₂S - hydrogen sulfide
 - COS - carbonyl sulfide
 - CS₂ - carbon disulfide
 - HCN - hydrogen cyanide
 - BZ - benzene
 - Al - aluminum
 - Cl - chlorine
 - MSS - planned maintenance, startup and shutdown
 - EPN - emission point number
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) The total combined annual emissions of all sources combusting tail gas shall not exceed these allowable emission rates. The short-term emission rates for each source are listed separately. Short term and annual emission rates of natural gas combustion during startup and/or shutdown are authorized in the tail gas combustion cap in NSR Permit No. 8780.
- (6) VOC includes (but is not limited to) acetylene (C₂H₂), COS, CS₂, HCN and BZ.
- (7) Startup and shutdown emissions of products of natural gas combustion are captured in the emission rates for this source / EPN.
- (8) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (9) MSS emissions from the waste heat boiler startup do not occur simultaneously with production emissions and are captured by EPN E-6B.
- (10) PM/PM₁₀/PM_{2.5} emissions from bagfilter changeouts do not occur simultaneously with production emissions from the corresponding unit and are captured by the following corresponding unit EPNs: E-10FL, E-20FL, and E-40FL.
- (11) PM/PM₁₀/PM_{2.5} emissions from re-bricking are captured by EPNs E-10FL, E-20FL, and E-40FL. Production rate will be reduced to stay within the PM/PM₁₀/PM_{2.5} emission limits.
- (12) Flare EPNs E-10FL, E-20FL, and E-40FL shall not be used to combust materials once Flare EPN CFL is operational. Once EPN CFL is operational Flares stacks E-10FL, E-20FL, and E-40FL shall no longer be used to combust materials and only shall be used as vent stacks for Reactor Heat Load operations.



Texas Commission on Environmental Quality Air Quality Permit

A Permit Is Hereby Issued To
Orion Engineered Carbons LLC
Authorizing the Continued Operation of
Borger Carbon Black Plant
Located at **Borger, Hutchinson County, Texas**
Latitude 35.668055 Longitude -101.432777

Permit: 8780 and PSDTX416M1

Issuance Date: September 30, 2025

Expiration Date: September 30, 2035

For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code (TAC) Section 116.116 (30 TAC § 116.116)]¹
2. **Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1) the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of \$5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120]
3. **Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]
4. **Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]
5. **Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]
6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and

operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction in a timely manner; comply with any additional recordkeeping requirements specified in special conditions in the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]

1. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources-- Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)]¹
2. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification in accordance with 30 TAC §101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC § 116.115(b)(2)(G)]
3. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]
4. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]
5. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]
6. **Emissions** from this facility must not cause or contribute to "air pollution" as defined in Texas Health and Safety Code (THSC) §382.003(3) or violate THSC § 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
7. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit.¹

¹ Please be advised that the requirements of this provision of the general conditions may not be applicable to greenhouse gas emissions.

Common Acronyms in Air Permits

°C = Temperature in degrees Celsius
°F = Temperature in degrees Fahrenheit
°K = Temperature in degrees Kelvin
µg = microgram
µg/m³ = microgram per cubic meter
acfm = actual cubic feet per minute
AMOC = alternate means of control
AOS = alternative operating scenario
AP-42 = Air Pollutant Emission Factors, 5th edition
APD = Air Permits Division
API = American Petroleum Institute
APWL = air pollutant watch list
BPA = Beaumont/ Port Arthur
BACT = best available control technology
BAE = baseline actual emissions
bbl = barrel
bbl/day = barrel per day
bhp = brake horsepower
BMP = best management practices
Btu = British thermal unit
Btu/scf = British thermal unit per standard cubic foot or feet
CAA = Clean Air Act
CAM = compliance-assurance monitoring
CEMS = continuous emissions monitoring systems
cfm = cubic feet (per) minute
CFR = Code of Federal Regulations
CN = customer ID number
CNG = compressed natural gas
CO = carbon monoxide
COMS = continuous opacity monitoring system
CPMS = continuous parametric monitoring system
DFW = Dallas/ Fort Worth (Metroplex)
DE = destruction efficiency
DRE = destruction and removal efficiency
dscf = dry standard cubic foot or feet
dscfm = dry standard cubic foot or feet per minute
ED = (TCEQ) Executive Director
EF = emissions factor
EFR = external floating roof tank
EGU = electric generating unit
EI = Emissions Inventory
ELP = El Paso
EPA = (United States) Environmental Protection Agency
EPN = emission point number
ESL = effects screening level
ESP = electrostatic precipitator
FCAA = Federal Clean Air Act
FCCU = fluid catalytic cracking unit
FID = flame ionization detector
FIN = facility identification number
ft = foot or feet
ft/sec = foot or feet per second
g = gram
gal/wk = gallon per week
gal/yr = gallon per year

GLC = ground level concentration
GLC_{max} = maximum (predicted) ground-level concentration
gpm = gallon per minute
gr/1000scf = grain per 1000 standard cubic feet
gr/dscf = grain per dry standard cubic feet
H₂CO = formaldehyde
H₂S = hydrogen sulfide
H₂SO₄ = sulfuric acid
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
HC = hydrocarbons
HCl = hydrochloric acid, hydrogen chloride
Hg = mercury
HGB = Houston/Galveston/Brazoria
hp = horsepower
hr = hour
IFR = internal floating roof tank
in H₂O = inches of water
in Hg = inches of mercury
IR = infrared
ISC3 = Industrial Source Complex, a dispersion model
ISCST3 = Industrial Source Complex Short-Term, a dispersion model
K = Kelvin; extension of the degree Celsius scaled-down to absolute zero
LACT = lease automatic custody transfer
LAER = lowest achievable emission rate
lb = pound
lb/day = pound per day
lb/hr = pound per hour
lb/MMBtu = pound per million British thermal units
LDAR = Leak Detection and Repair (Requirements)
LNG = liquefied natural gas
LPG = liquefied petroleum gas
LT/D = long ton per day
m = meter
m³ = cubic meter
m/sec = meters per second
MACT = maximum achievable control technology
MAERT = Maximum Allowable Emission Rate Table
MERA = Modeling and Effects Review Applicability
mg = milligram
mg/g = milligram per gram
mL = milliliter
MMBtu = million British thermal units
MMBtu/hr = million British thermal units per hour
MSDS = material safety data sheet
MS = maintenance, startup, and shutdown
MW = megawatt
NAAQS = National Ambient Air Quality Standards
NESHAP = National Emission Standards for Hazardous Air Pollutants
NGL = natural gas liquids
NNSR = nonattainment new source review
NO_x = total oxides of nitrogen
NSPS = New Source Performance Standards

PAL = plant-wide applicability limit
PBR = Permit(s) by Rule
PCP = pollution control project
PEMS = predictive emission monitoring system
PID = photo ionization detector
PM = periodic monitoring
PM = total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
PM_{2.5} = particulate matter equal to or less than 2.5 microns in diameter
PM₁₀ = total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented
POC = products of combustion
ppb = parts per billion
ppm = parts per million
ppmv = parts per million (by) volume
psia = pounds (per) square inch, absolute
psig = pounds (per) square inch, gage
PTE = potential to emit
RA = relative accuracy
RATA = relative accuracy test audit
RM = reference method
RVP = Reid vapor pressure
scf = standard cubic foot or feet
scfm = standard cubic foot or feet (per) minute
SCR = selective catalytic reduction
SIL = significant impact levels
SNCR = selective non-catalytic reduction
SO₂ = sulfur dioxide
SOCMI = synthetic organic chemical manufacturing industry
SRU = sulfur recovery unit
TAC = Texas Administrative Code
TCAA = Texas Clean Air Act
TCEQ = Texas Commission on Environmental Quality
TD = Toxicology Division
TLV = threshold limit value
TMDL = total maximum daily load
tpd = tons per day
tpy = tons per year
TVP = true vapor pressure
VOC = volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
VRU = vapor recovery unit or system

Special Conditions

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1. This permit authorizes the continued operation of existing facilities and activities in support of a carbon black manufacturing (utilizing both furnace and thermal methods) plant located on Highway 1559 about a half mile north of State Highway 136 in Borger, Hutchinson County.
 - A. This permit authorizes only those sources of emissions located at this site that, along with their emissions point numbers (EPNs), are listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT). The nature and rates of air contaminants authorized from each source/facility are limited to those listed in the MAERT for the named source/facility and its respective EPN.
 - B. Planned maintenance, startup, and shutdown (MSS) activities and related emissions are authorized for the sources and activities described in and limited by the Special Conditions and MAERT of this permit. No other MSS activities and emissions are authorized by this permit for the facilities listed on the MAERT.
 - C. This permit does not include the facilities at the site or the planned MSS activities associated with these facilities listed in Attachment I except as noted in the MAERT. These facilities are authorized under a Permit by Rule (PBR) by Title 30 Texas Administrative Code (30 TAC) Chapter 106 or are authorized as a De Minimis source by 30 TAC § 116.119. These lists are not intended to be all inclusive and can be altered at the site without modifications to this permit.
2. Within 180 days of the issuance date of this permit for existing, modified or reconstructed sources / facilities, and no later than the startup date of new sources / facilities, the holder of the permit shall physically identify and mark in a conspicuous location the EPN for each source listed in the MAERT. A listing containing the EPN and source/facility names shall be maintained at the site. Source/facility names shall be those established in this permit with the associated facility identification number (FIN) as established in the point source emissions inventory for the source. Fugitive emissions sources need not be labeled, but their location and the EPN for each shall be annotated on a current plot plan kept for that purpose. All of the sources will be marked in agreement with their identification on the plot plan submitted with the application for this permit dated December 30, 2009, as updated on March 4, 2011, and September 19, 2024.

Federal Requirements

3. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63 (MACT):
 - A. Subpart A, General Provisions.
 - B. Subpart SS, National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process.
 - C. Subpart YY, National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards.

Operational Limitations

4. The carbon black oil feedstock feed rate for all reactors combined shall not exceed 96 gallons per minute and 50,457,600 gallons per year.
5. When tail gas is routed to the flare and the Waste Heat Boiler (WHB) SO₂ CEMS is not able to collect data, the total sulfur content of the carbon black feedstock is limited to 2.8 percent on annual basis and 3.0 percent on an hourly basis by weight as determined by American Society for Testing and Materials Method D 4294 or equivalent method approved by the permit holder and the appropriate Texas Commission on Environmental Quality (TCEQ) Regional Office. The annual average shall be calculated on a rolling 12-month basis. The sulfur content of the feedstock oil shall be based on the daily internal sulfur analysis of the feedstock going from the storage tank to the day tanks on days in which flaring occurs and SO₂ CEMS data is not available. Records must contain sufficient information to readily demonstrate compliance with the above sulfur limits.

The analysis is not required on weekends and plant holidays if technicians capable of performing the analysis are not normally scheduled on those days provided the necessary samples are collected, and the analysis is performed on the next day technicians are available.

Fuel Sources

6. Fuel gas for combustion units as defined in 30 TAC §101.1 shall meet the following:
 - A. Carbon black reactor tail gas shall be combusted in the Thermal Oxidizer and routed to the WHB Boiler (WHB)-CDS Stack (EPN E-6BN) or flared through the Combined Flare Stack (EPN CFL), or sources routed to the incinerator and/or CFL.
 - B. Fuel gas for all other sources as defined in 30 TAC §101.1 shall be fired with pipeline-quality, sweet natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf) on an hourly and rolling 12-month basis. Use of any other fuel requires authorization from the TCEQ.

The pipeline-quality, sweet natural gas shall be sampled at least every 6 months to determine total sulfur and net heating value. Test results from the fuel supplier may be used to satisfy this requirement.
 - C. Only natural gas shall be used as a fuel for the B-1 Dryers (EPN P-13B Cap), B-2 Dryers (EPN P-23B Cap) and B-4 Dryers (EPN P-43B Cap), and the Thermal Boiler (EPN E-5B).

Particulate Controls

7. Particulate matter outlet grain loading shall not exceed 0.01 grain per dscf of air from the bag filter vents. There shall be no visible emissions exceeding 30 seconds in any six-minute period as determined using EPA Test Method 22.
8. The bag filter vents covered by this permit shall not operate unless control devices and associated equipment are maintained in good working order and operating. All fabric filter collection and control devices that limit particulate matter emissions shall be operated and maintained in a manner consistent with the manufacturer's recommendations for the device or other written procedures for the proper operation and maintenance of each fabric filter. Copies of the manufacturers' recommended practices shall be kept on site and made available upon request of the TCEQ or any pollution control program representative with jurisdiction. All vents shall be inspected for visible emissions once per day and a spare-parts filter inventory shall be maintained on site. Records

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shall be maintained of all inspections and maintenance performed. Each record shall be kept on-site and note the maintenance and repair activity, the date of each inspection, name of the inspector, the purpose of the inspection, and the nature of any repairs and maintenance work performed.

9. The differential pressure across each bag filter shall be continuously monitored and be recorded at least once an hour. The minimum and maximum pressure drop for each filter shall be as follows.

EPN	Source	Minimum Pressure Drop (inches of water column)	Maximum Pressure Drop (inches of water column)
E-10LIMEF (FIN S-10LIME)	Hydrated Lime Silo 1 Bin Vent	1	12
E10BYPRODF (FIN S-10BYPROD)	CDS Byproduct Silo 1 Bin Vent	1	12
E20BYPRODF (FIN S-20BYPROD)	CDS Byproduct Silo 2 Bin Vent	1	12

Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or at least annually, whichever is more frequent, and shall be accurate to within 0.3 inches of water column.

Quality assured (or valid) data must be generated when the bag filters are 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 it does not exceed 5 percent of the time (in hours) that the bag house operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

10. Particulate matter waste collected from any fabric filter system shall be managed in such a manner to minimize fugitive emissions while the waste material remains on site. Good housekeeping shall be used to promptly clean up any spills of materials that could become airborne, such as carbon black, in order to minimize entrainment of the materials into the ambient air.
11. Material handling associated with the CDS Byproduct Pugmill, EPN BYPRODPUGM and CDS Byproduct Truck Loading, EPN BYPRODLOAD shall be fully enclosed to minimize particulate emissions until the byproduct is loaded into the truck.

Flare

12. The flare shall be designed and operated in accordance with the following requirements:
- A. 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 of minimum heating value and maximum tip velocity at all times when emissions may be vented to them.
- 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 appropriate regional office to demonstrate compliance with these requirements.
- B. 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, infrared monitor, or ultraviolet monitor. The time, date, and duration of any loss of pilot flame shall be

recorded. Each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with, the manufacturer's specifications.

- C. The flare shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. Visible emissions from the flare that are due to carbon black leaks from the primary bagfilter are an indication of improper operation of the baghouse but are not an indication of improper design or operation of the flare. Opacity attributable to sulfur trioxide formation associated with the combustion of reduced sulfur compounds shall not exceed 10 percent.
- D. The permit holder shall install a continuous flow monitor and composition analyzer (or calorimeter, if applicable) 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 (or Btu content) shall be recorded each hour.

The monitors shall be calibrated or have a calibration check performed on an annual basis to meet the following accuracy specifications: the flow monitor shall be $\pm 5.0\%$, temperature monitor shall be $\pm 2.0\%$ at absolute temperature, and pressure monitor shall be ± 5.0 mm Hg.

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).

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 heating value and actual exit velocity determined in accordance with 40 CFR §§60.18(f)(3) and 60.18(f)(4) shall be recorded at least once every hour. If a calorimeter is not used then 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 3, 2025.

- E. The Combined Flare, EPN CFL shall be constructed and operated in compliance with TAC §112.222. Operation of the Unit 1 Reactor/Flare (EPN E-10FL), Unit 2 Reactor/Flare (EPN E-20FL), and the Unit 4 Reactor/Flare (EPN E-40FL) shall also be in compliance with TAC §112.222.

Visible Emissions and Opacity

- 13. During normal operations, opacity of emissions from sources authorized by this permit shall not exceed 5 percent averaged over a six minute period. During periods of startup, shutdown or maintenance, the opacity from the stacks shall not exceed 15 percent over a six minute period. The permit holder shall demonstrate compliance with this Special Condition in accordance with the following procedures:

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- A. Visible emission observations shall be conducted and recorded at least once during each calendar quarter while the facility is in operation, unless the emission unit is not operating for the entire calendar quarter.
- B. Continuous demonstration of compliance with this special condition can be demonstrated by conducting and recording visible emissions observations during normal operations. This determination shall be made by first observing for visible emissions while each facility is in operation. Observations shall be made at least 15 feet and no more than 0.25 mile from the emission point(s). Up to three emissions points may be read concurrently, provided that all three emissions points are within a 70 degree viewing sector or angle in front of the observer such that the proper sun position (at the observer's back) can be maintained for all three emission points. A certified opacity reader is not required for these visible emission observations.
- C. If visible emissions are observed from an emission point, then opacity shall be determined and documented within 24 hours for that emission point using Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Appendix A, Reference Method 9. Contributions from uncombined water shall not be included in determining compliance with this condition.
- D. If the opacity limits of this Special Condition are exceeded, corrective action to eliminate the source of visible emissions shall be taken promptly and documented within one week of first observation.
- E. Visible emissions or opacity observations for any source authorized by this permit shall be made upon demand of a representative of the TCEQ or any air pollution control program with jurisdiction. When such observations are required, the methods used and the observation period duration shall be as specified in this Special Condition unless otherwise specified by the person requiring the observation to be conducted.
- F. Records (written or electronic) of visible emissions, opacity observations, and any corrective actions taken to demonstrate compliance with Special Condition No. 13 shall be maintained by the holder of this permit in a form suitable for inspection for a period of five years after collection and shall be made available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction.

Ammonia / Selective Catalytic Reduction (SCR)

14. The WHB, EPN E-6BN shall be equipped with a selective catalytic reduction (SCR) and circulating dry scrubber (CDS) system. The concentration of ammonia (NH_3) emitted from EPN E-6BN shall not exceed 10 parts per million by volume dry (ppmvd) corrected to 3 percent oxygen (O_2), on a rolling 24-hour average and an annual average. This concentration limit shall not apply to MSS activities, during which emissions are limited by the emission rates shown on the MAERT.
15. The NH_3 concentration in the stack of EPN E-6BN shall be tested or calculated according to one of the methods listed below and shall be monitored according to one of the methods listed below. Monitoring NH_3 slip is only required on days when the SCR unit is in operation.
 - A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH_3 . The NH_3 concentrations shall be corrected and reported in accordance with Special Condition No.14 above.
 - B. The NH_3 slip may be measured using a sorbent or stain tube device specific for NH_3 measurement in the appropriate range. The frequency of sorbent or stain tube testing shall be monthly.

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- (1) If the sorbent or stain tube testing indicates an ammonia (NH₃) slip concentration that exceeds 10 parts per million (ppm) at any time, the permit holder shall begin NH₃ testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the monthly sorbent or stain tube testing.
 - (2) If the quarterly testing indicates NH₃ slip is 10 ppm or less, the Phenol Nitroprusside Indophenol CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 10 ppm NH₃ slip or greater.
 - C. The permit holder may install and operate a second NO_x CEMS probe located before the SCR, upstream of the stack NO_x CEMS, which may be used in association with the SCR efficiency and NH₃ injection rate to estimate NH₃ slip. This condition shall not be construed to set a minimum NO_x reduction efficiency on the SCR unit.
 - D. The permit holder may install and operate a dual stream system of NO_x CEMS at the exit of the SCR. One of the exhaust streams would be routed, in an unconverted state, to one NO_x CEMS and the other exhaust stream would be routed through an NH₃ converter to convert NH₃ to NO_x and then to a second NO_x CEMS. The NH₃ slip concentration shall be calculated from the delta between the two NO_x CEMS readings (converted and unconverted).
 - E. Any other method used for measuring NH₃ slip shall require prior approval from the TCEQ Office of Air, Air Permits Division.
16. The permit holder shall maintain prevention and protection measures for the NH₃ storage system which includes marking and securing the NH₃ storage tank to protect the tank from accidents that could cause a rupture. Stored NH₃ must have a concentration of less than 20% NH₃ by weight.

Ammonia Monitoring

17. The permit holder shall maintain the piping and valves in NH₃ service as follows:
- A. Audio, olfactory, and visual checks for NH₃ leaks within the operating area shall be made twice per shift.
 - B. Immediately, but no later than 24 hours upon detection of a leak, plant personnel shall take one or more of the following actions:
 - (1) Locate and isolate the leak, if necessary.
 - (2) Commence repair or replacement of the leaking component.
 - (3) Use a leak collection or containment system to control the leak until repair or replacement can be made if immediate repair is not possible.

Records of AVO checks, any maintenance performed on piping and valves in NH₃ service, accidental releases, venting, and any corrective actions taken shall be maintained by the holder of this permit.

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WHB Thermal Oxidizer

18. The WHB Thermal Oxidizer shall maintain the VOC concentration in the exhaust gas less than 10 ppmv on a dry basis, corrected to 3 percent oxygen, or achieve a VOC destruction efficiency greater than 99.9 percent.
19. The WHB Thermal Oxidizer firebox exit temperature shall be maintained at not less than 1,300°F and exhaust oxygen concentration not less than 3 percent on a six-minute average while waste gas is being fed into the oxidizer prior to initial stack testing. After the initial stack test has been completed, the six minute average temperature shall be equal to, or greater than the respective hourly average maintained during the most recent satisfactory stack testing required by Special Condition No. 23.
20. The WHB Thermal Oxidizer exhaust temperature shall be continuously monitored and recorded when waste gas is directed to the oxidizer. The temperature measurement device shall reduce the temperature readings to an averaging period of 6 minutes or less and record it at that frequency. The temperature measurement device shall be installed, calibrated at least annually, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of ± 0.75 percent of the temperature being measured expressed in degrees Celsius or $\pm 2.5^\circ\text{C}$.

Quality assured (or valid) data must be generated when the thermal oxidizer is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the thermal oxidizer operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

Tail Gas Vent Continuous Emission Monitoring Systems

21. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of NO_x, SO₂, and O₂ from the WHB (thermal oxidizer), EPN E-6BN.
 - A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.
 - B. Section 1 below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:
 - (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.

- (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of +15 percent accuracy indicate that the CEMS is out of control.

- C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in tons per year at least once every month. Compliance with the annual allowable emission rates contained on the MAERT shall be based on a 12-month rolling average.
- D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
- E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.
- F. Quality-assured (or valid) data must be generated when the WHB is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the WHB operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.

Continuous Demonstration of Compliance

22. Continuous compliance with the emission limits in the MAERT shall be demonstrated as follows:
- A. The visible emissions observations and opacity requirements of Special Condition No. 13 shall be used to demonstrate ongoing compliance with emissions limitations of the MAERT for the flare and WHB stack. Further, outlet grain loading limitations of Special Condition No. 7 and the monitoring requirements specified in Special Condition No. 13 shall be used to demonstrate ongoing compliance for baghouses and flare, respectively.
- B. The oil feedstock rate limits of Special Condition No. 4 and the feedstock sulfur limits of Special Condition No. 5 shall be used to demonstrate ongoing compliance with the emission limits in the MAERT.
- C. All enclosures, ductwork, and collection systems routing carbon black or tail gas originating in part or in whole from any furnace shall be effective in capturing emissions from the intended equipment and in preventing fugitive emissions. The duct and collection system shall be maintained free of holes, cracks, and other conditions that would reduce the collection

efficiency of the emissions capture system. To the extent that design will allow, the exterior of all ventilation systems in this facility will be visually inspected on a daily basis by facility personnel. Visible leaks and cracks shall, with every reasonable effort, be mitigated as soon as possible and finally repaired within a week of detection. Inspections and repairs shall be documented as they occur. A log shall be kept on-site which notes each system or ductwork related maintenance and repair activities, the date of each inspection, name of the inspector, the purpose of the inspection, and the nature of any repairs and maintenance work performed.

- D. Planned maintenance (re-bagging) on the particulate matter (PM) collection and control system shall be performed only during periods when the facilities generating the emissions controlled by the PM collection and control system are not in operation. Preventative maintenance, scheduled maintenance, and repairs performed on any abatement device shall be recorded as they occur.

Initial Determination of Compliance

- 23. The permit holder shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the WHB and thermal oxidizer, EPN E-6BN to demonstrate compliance with the MAERT. The permit holder is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and the EPA Reference Methods.

Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60) testing which must have EPA approval shall be submitted to the TCEQ Regional Director.

- A. The appropriate TCEQ Regional Office shall be notified not less than 45 days prior to sampling. The notice shall include:
 - (1) Proposed date for pretest meeting.
 - (2) Date sampling will occur.
 - (3) Name of firm conducting sampling.
 - (4) Type of sampling equipment to be used.
 - (5) Method or procedure to be used in sampling.
 - (6) Description of any proposed deviation from the sampling procedures specified in this permit or TCEQ/EPA sampling procedures.

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 the test reports. The TCEQ Regional Director must approve any deviation from specified sampling procedures.

- B. Air contaminants emitted from the WHB to be tested for include (but are not limited to) VOC, NO_x, CO, SO₂, and PM.
- C. Sampling shall occur within 60 days after achieving the maximum operating rate, but no later than 180 days after initial start-up of the facilities (or increase in production, as appropriate) and at such other times (identify the need for any periodic sampling here) as may be required

by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the appropriate regional office.

- D. The plant shall operate at maximum production rates during stack emission testing. These conditions/parameters and any other primary operating parameters that affect the emission rate shall be monitored and recorded during the stack test. Any additional parameters shall be determined at the pretest meeting and shall be stated in the sampling report. Permit conditions and parameter limits may be waived during stack testing performed under this condition if the proposed condition/parameter range is identified in the test notice specified in paragraph A and accepted by the TCEQ Regional Office. Permit allowable emissions and emission control requirements are not waived and still apply during stack testing periods.

During subsequent operations, if the plant's production rates are greater than that recorded during the test period, stack sampling shall be performed at the new operating conditions within 120 days. This sampling may be waived by the TCEQ Air Section Manager for the region.

- E. Copies of the final sampling report shall be forwarded to the offices below within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions entitled "Chapter 14, Contents of Sampling Reports" of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:
 One copy to the TCEQ Amarillo Regional Office.
 One copy to each local air pollution control program.
- F. Sampling ports and platform(s) shall be incorporated into the design of (source stack and EPN) according to the specifications set forth in the attachment entitled "Chapter 2, Guidelines For Stack Sampling Facilities" of the TCEQ Sampling Procedures Manual. Alternate sampling facility designs must be submitted for approval to the TCEQ Regional Director.
- G. Stack sampling of the WHB stack was performed on December 20, 2022, for VOC, HAPs, and CO. Stack sampling for NO_x, SO₂, and particulates was performed on January 17, 2023.

Planned MSS Specific Activities

24. The authorized planned MSS activities that result in various emissions are as follows:

- A. Planned MSS Specific Activity Limits

Planned MSS Activity	Allowable No. of Activities or Hours per Year
Reactor and combustion device startup	720 hours
Tail gas purge for waste heat boiler startup	30 hours
Bag filter change-out	10,000 bags replaced
Refractory brick cutting and cement mixing	1500 bricks cut

- B. Work practices will be developed, implemented, and documented that are designed to minimize air contaminant emissions during each of these authorized MSS activities by limiting the duration of exposure of contaminants to atmosphere while the activities are underway and storing the spent materials, where possible, in closed containers until properly disposed of. The developed work practices shall be modified by the permit holder as found appropriate and maintained current in written form.

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- C. The methods used to estimate the emissions for each of the activities listed in this Special Condition are those based on the permit application dated December 30, 2009 as updated on March 4, 2011. The permit holder shall retain the calculation methods and example calculations for the life of the permit. An evaluation of the emissions factors developed will be conducted and documented by the permit holder annually, and if necessary, updated by permit alteration or amendment, as appropriate.
- D. Documentation of planned authorized MSS activities shall include at least the following:
 - (1) The process unit at which emissions from the MSS activity occurred, including the emission point number and common name of the process unit;
 - (2) The type of planned MSS activity and the reason for the planned activity;
 - (3) The common name and the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;
 - (4) The date and time of the MSS activity and its duration; and
 - (5) The estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it. The emissions shall be estimated using the methods identified in the permit application, consistent with good engineering practice.

All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis.

Recordkeeping

- 25. General Condition No. 7 regarding information and data to be maintained on file is supplemented as follows and shall be used to demonstrate compliance with the requirements of the Special Conditions of the permit and the MAERT. Also, these records and logs shall be retained for at least five years on-site at the Borger plant.
 - A. Daily records of carbon black oil feedstock reactor feed rate to demonstrate compliance with Special Condition No. 4.
 - B. Records of sulfur content of the carbon black feedstock to demonstrate compliance with Special Condition No. 5.
 - C. Records in sufficient detail to demonstrate compliance with Special Condition No. 6 for combustion sources. Also, daily records of tail gas combusted in the waste heat boiler and the flare (based on mass and energy balance).
 - D. Records in sufficient detail to demonstrate compliance with Special Condition Nos. 7, 8, 9 and 22D for fabric filter system.
 - E. Records demonstrating compliance with flare requirements in Special Condition No. 12.
 - F. Field records of any visible emissions and opacity observations, along with any corrective actions taken, as required under Special Condition No. 13.
 - G. Records demonstrating compliance with NH₃ requirements in Special Condition Nos. 15, 16, and 17.
 - H. Records demonstrating compliance with WHB Thermal Oxidizer requirements in Special Condition No. 18, 19, and 20.
 - I. Records of any performance tests conducted in accordance with Special Condition No. 23 shall be retained for the life of the unit.

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- J. Records of all planned maintenance, startup, and shutdown activities conducted in accordance with Special Condition No. 24 of this permit. The planned MSS activity records shall at least contain the information required in Special Condition No. 24.
26. Demonstration of compliance with permit Special Conditions and MAERT limitations shall be as follows:
- A. Unless otherwise noted in the individual special conditions of this permit, compliance with the limitations in the MAERT shall be demonstrated at least monthly for each source using the records identified in Special Condition No. 25 as follows:
 - (1) For sources with hourly emission limitations, compliance with pound per hour MAERT limits shall be based on data recorded daily and calculations shall be updated monthly.
 - (2) For sources with annual MAERT limitations whose method of calculation is not otherwise specified, the annual emissions shall be based on a rolling 12 month emissions total that is calculated using the most recent monthly totals calculated in Special Condition No 26A.
 - B. For sources with daily, hourly, or annual usage limitations, monthly records shall be maintained to demonstrate compliance with the respective limitations. Compliance with annual usage limitations shall be on a 12 month rolling basis.
 - C. Examples of all calculations and the basis of all assumptions used to demonstrate compliance with any limitation or standard required in this permit shall be kept for at least five years and made available upon demand of the TCEQ or representative of any air pollution control program with jurisdiction.

Compliance Assurance Monitoring (CAM)

27. The following requirements apply to capture systems for the following EPNs/Sources:

EPN	Source
E-6BN	WHB
CFL	Combined Flare
E-10DF and E-11DF	B-1 Dryer Bag Filter
E-20DF and E-21DF	B-2 Dryer Bag Filter
E-41P and E-41DF	B-4 Dryer Bag Filter
E-10CU	B-1 Clean Up Bag Filter
E-20CU	B-2 Clean Up Bag Filter
E-40CU	B-4 Clean Up Bag Filter
E-1VF	Furnace Vacuum Bag Filter

- A. If an EPN/Source is used for particulate control, complete either of the following once a year
 - (1) Inspect any fan and verify proper operation and inspect the capture system to verify there are no cracks, holes, tears, and other defects; or
 - (2) Verify there are no fugitive emissions escaping from the capture system by performing a visible emissions observation for a period of at least six minutes in accordance with 40 CFR Part 60, Appendix A, Test Method 22.
- B. If an EPN/Source is used to control pollutants other than particulate, either:

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- (1) Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or
 - (2) Once a year, verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.
- C. If the control device (EPN/Source) has a bypass comply with either of the following requirements:
- (1) Install a flow indicator that records and verifies zero flow at least once every fifteen minutes immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere; or
 - (2) Once a month, inspect the valves, verifying that the position of the valves and the condition of the car seals prevent flow out the bypass.
- A bypass does not include authorized analyzer vents, highpoint bleeder vents, low point drains, or rupture discs upstream of pressure relief valves if the pressure between the disc and relief valve is monitored and recorded at least weekly. A deviation shall be reported if the monitoring or inspections indicate bypass of the control device when it is required to be in service.
- D. Records of the inspections required shall be maintained and if the results of any of the above inspections are not satisfactory, the permit holder shall promptly take necessary corrective action.

Consent Decree No. 17-CV-1660 Requirements

28. PM emissions from the CDS stack shall be no greater than 0.0069 grains/dscf. The permit holder shall conduct stack test annually to demonstrate compliance with this limit. No two annual tests shall be conducted less than 11 Months apart. The reference methods and procedures for performing PM stack tests and for determining compliance with the applicable PM 3-hour Average Emissions Limit shall be those specified in 40 C.F.R. § 60.8(f) and 40 C.F.R. Part 60, Appendix A-3, Reference Method 5/5B. Each test shall consist of three separate runs performed under representative operating conditions, not including periods of Startup, Shutdown, or Malfunction. The sampling time for each run shall be at least 60 minutes and the minimum sample volume of each run shall be 30 ft³ (dry volume, standard temperature basis).
29. The permit holder shall install and continuously operate a Particulate Matter (PM) Early Warning System to monitor the PM emitted from each PM Monitor Point approved by US EPA. Each PM Monitor Point shall be set to a specific alarm action level, such that an alarm is triggered when the PM at a PM Monitor Point exceeds the normal range of PM during operation of the Process System.
- A. The PM Early Warning System shall be operated at all times of Heat Load Operation and Process System Operation, except for during system breakdowns, repairs, maintenance, calibration checks, and zero and span adjustments of the applicable PM Early Warning System.
- (1) "Process System" shall be defined as collectively, all Tail Gas generating and Tail Gas combustion equipment necessary for the manufacture of carbon black at the facility.

- (2) "Process System Operation" shall be defined as the operation of any Process System when there is oil feed to any reactor burners within such Process System, and the reactor is manufacturing carbon black. The Process System Operation ends when oil feed to the reactor burners within such Process System ceases; provided however that any period of operation meeting the definition of Heat Load Operation shall not constitute Process System Operation.
- B. In the event that an alarm is triggered for any PM Early Warning System, the permit holder shall investigate the cause of the alarm as expeditiously as practicable by performing each of the following tasks:
 - (1) Reviewing the data output for the relevant PM Early Warning System to determine whether the alarm corresponds to an actual increase in PM emissions
 - (2) If review of the data confirms an increase in PM emissions, having a Method 9 Trained Observer
 - (a) conduct a visual assessment of the equipment monitored by the pertinent PM Early Warning System to determine if there are any detectable visual emissions
 - (b) in the event that any such visible emissions are observed, conduct a six minute observation in accordance with Method 9 to determine if opacity levels are greater than 5%
 - (c) if opacity levels are greater than 20%, conduct a six minute observation in accordance with Method 9 once every 8 hours until visible emissions are less than 20% of opacity levels.
 - (3) If the visual assessment or other observations identify a process, equipment or other condition(s) causing an increase in PM emissions that may be responsible for triggering the relevant alarm, determining whether the relevant equipment can be isolated to reduce the excess PM emissions below alarm levels, without requiring a Process System shutdown
 - (4) If the relevant equipment can be isolated without requiring a Process System shutdown, isolating and repairing such equipment prior to returning it to service
 - (5) If the relevant equipment cannot be isolated without requiring Process System Shutdown, such as if there is a leak from a dryer, a broken bag in a baghouse, or a Malfunction of any other component that cannot be isolated to the extent necessary to prevent continued excess PM emissions, shutting down the relevant equipment and only returning it to service after it has been repaired
 - (6) If, after investigation, the source of any elevated PM emissions cannot be identified, shutting down the subject equipment as soon as practicable to prevent further alarms and to minimize emissions and ensure the safety of employees and the community and only returning the equipment to service after the source of the excess emissions has been identified and repaired
- C. The permit holder shall maintain records of all PM Early Warning System data collected, from the time a PM Early Warning System alarm is triggered until the PM Early Warning System data have returned to below the action levels triggering an alarm condition, and any explanation of any periods of PM Early Warning System downtime.
- D. Each operating day, the permit holder shall visually review the recorded data for each PM Early Warning System to identify any trends in relative PM emissions that may reflect an escalation in PM emissions from a monitored process unit.

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- E. The permit holder shall perform routine maintenance of each PM Early Warning System in accordance with any manufacturer recommendations and the following requirements:
 - (1) On at least a semiannual basis, the permit holder shall visually inspect and clean each sensor within the PM Early Warning System, evaluate the response of the sensor to variation in purge air flow rates to verify that flow is exiting the purge ports for each sensor, to the extent warranted based on the visual inspection and purge air flow test, perform any necessary maintenance to ensure continued effective operation of the PM Early Warning System.
 - (2) On at least an annual basis, the permit holder shall comprehensively inspect the PM Early Warning System and make any necessary repairs.
 - F. The PM Early Warning System shall not be required to quantitatively measure PM emissions.
30. The permit holder shall implement and follow best management practices for minimizing particulate emissions at all times set forth below:
- A. Key operations and maintenance personnel shall be trained to both recognize leaks and spills of carbon black, and to report them to the proper plant personnel for response. Visual observation of the physical condition of plant process equipment that conveys, stores, loads, unloads, and packages carbon black, including at connection points between equipment and/or sections of piping, and of the physical condition of containers and bags used to package carbon black, shall be part of the daily responsibilities of the operations and maintenance personnel to help ensure that potential leaks are addressed before they occur.
 - B. All carbon black product shall be stored in tanks, silos, hopper cars or trucks or closed bags. No carbon black product shall be stored unpackaged in open piles.
 - C. All product and off-quality carbon black shall be shipped off-site in closed bags or sealed rail cars, hoppers, or bulk transport trucks.
 - D. All process equipment at the facility shall be designed, operated, and maintained in a manner intended to minimize leaks and spills of carbon black and fugitive particulate emissions. In addition, the facility shall develop and implement practices to collect carbon black dust otherwise emitted from product conveyance, packaging, and storage operations, and either recycle it back into the manufacturing process or convey it to a packaging system. Where practicable, the operation of such equipment, including carbon black product conveyors, elevators, and packing units, shall be conducted under negative pressure and served by vacuum systems that collect carbon black.
 - E. All process equipment shall be located either indoors or in outdoor areas that have paved or rock/gravel ground surfaces.
 - F. After the PM Early Warning System is installed, events that trigger the PM Early Warning System shall be handled pursuant to the protocol in Special Condition 34. Leaks and spills of all carbon black that are otherwise identified shall be investigated and addressed (cleaned up and repaired) either immediately upon discovery or as quickly as practicable. When immediate repair is not feasible, a work order shall be developed and the actions taken to complete the repair shall be documented. Incident reports for spills or leaks of carbon black shall be created to document cause and corrective actions.
 - G. Special precautions shall be taken during maintenance actions to minimize particulate emissions. Prior to conducting maintenance or baghouse bag replacement on equipment that is prone to accumulation of carbon black on its interior surfaces, including, but not limited to, on the Main Unit Filters, Process Filters, Purge Filters, elevators and conveyors, and storage tanks and silos, the responsible maintenance personnel shall identify and take steps

necessary to minimize the generation of particulate emissions during the maintenance or bag replacement activity. The specific approaches taken to minimize particulate emissions during maintenance or bag replacement shall be developed on a case-specific basis based on the judgment of the maintenance personnel and shall include, as relevant, but need not be limited to, activities such as the following:

- (1) vacuuming carbon black from the equipment prior to beginning the maintenance
- (2) vacuuming or washing down the equipment when an appropriate stage in the maintenance activity has been reached
- (3) if units are equipped with vents, closing vents during maintenance to prevent drafting of PM, except when the permit holder conducts a safety or hazard analysis and concludes in writing that closing the vent would create an unsafe or unhealthy work atmosphere
- (4) sealing filter bags removed from Main Unit Filters inside plastic bags

31. The permit holder shall design, install, and continuously operate a selective catalytic reduction (SCR) unit and Circulating Dry Scrubber (CDS) as WHB control technology after the Thermal Oxidizer.
 - A. The SCR and CDS shall be designed to achieve a minimum of 90% removal of the NO_x and SO₂ emissions at all times.
 - B. A CEMS shall be used to continuously monitor the co-generation system's NO_x and SO₂ emissions to determine compliance with the emission rates established in this permit.
 - C. The Incinerator shall maintain a 7-day rolling average of no greater than 55 ppmvd NO_x at 0% oxygen, and a 365-day rolling average of no greater than 39 ppmvd NO_x at 0% oxygen and a 7-day rolling average of no greater than 120 ppmvd SO₂ at 0% oxygen, and a 365-day rolling average of no greater than 80 ppmvd SO₂ at 0% oxygen on the Waste Heat Boiler that constitutes the Co-Generation System.
32. The permit holder shall operate the reactors and boilers at the facility such that the NO_x emissions from Heat Load Operation, Startup, and Shutdown, are limited to 50 tons per year on a 365-day rolling sum basis.
 - A. Heat Load Operation shall be defined as the operation of any carbon black reactor at the facility under any of the following four conditions:
 - (1) when there is no oil feed but only natural gas (and/or) liquified petroleum gas and combustion air supplied to the reactor burner, and the reactor is not manufacturing carbon black and generating Tail Gas, including, but not limited to, during periods of Startup and Shutdown
 - (2) during the periods either prior to or at the conclusion of Process System Operation, each of which shall be as short as practicable and shall not exceed 13 minutes, when transitioning between
 - (a) an operational mode in which oil, natural gas (and/or) liquefied petroleum gas), and combustion air are all fed to the reactor burner and the reactor is manufacturing carbon black and generating Tail Gas
 - (b) an operational mode, including, but not limited to, during periods of Startup and Shutdown, in which no oil but only natural gas (and/or) liquefied petroleum gas) and combustion air are supplied to the reactor

- (3) at a boiler, when there is no oil feed to the reactors but only natural gas (and/or liquefied petroleum gas) and combustion air (and not Tail Gas generated by a reactor during Process System Operations) are fed to the boiler, including, but not limited to, periods of Startup and Shutdown
 - (4) at a dryer combustor during times other than Process System Operations, when only natural gas (and/or liquefied petroleum gas) and combustion air (and not Tail Gas generated by a reactor during Process System Operations) are fed to the dryer combustor, including, but not limited to, during periods of Startup and Shutdown.
- B. The following equation shall be used to derive the cumulative 365-day Rolling Sum NO_x emissions limit due to Heat Load Operation, Startup, and Shutdown, in tons:

Where:

“” = the cumulative NO_x emissions (tons) during preceding 365 days

“” = 0.48 lbs NO_x/MMBtu

“” = each day in the preceding 365 days

= the amount of energy input from fuel and feedstock (in MMBtu) to the Process System per day for each day of Heat Load Operation, Startup, or Shutdown. For any in which no Heat Load Operation, Startup, or Shutdown occur, shall equal zero.

- 33. The permit holder shall comply with a final site-wide NO_x emission cap and SO₂ emission cap as stated in MAERT.
- 34. The permit holder shall permanently cease operation of flares at the facility except in the case that the site is operating a Co-Generation System, flares may be used in the limited instance of the following:
 - A. Malfunctions at the facility that satisfies the requirements of Section XVII of Civil Action No. 17-CV-1660.
 - B. Inspection at the Co-Generation System of the facility
 - C. A Force Majeure event; an event that arises from causes beyond the control of the permit holder, its vendors or contractors, or entity controlled by the permit holder that causes a delay or impediment to performance in complying with any obligation in Civil Action No. 17-CV-1660 despite the permit holder's best efforts to fulfill the obligation.
- 35. Within 30 days after the end of each half Calendar Year (i.e., by January 30th and July 30th), the permit holder shall submit a semi-annual report to the EPA. The report shall contain the recordkeeping information as follows:
 - A. All information necessary to demonstrate compliance with all applicable emission limits, caps, NO_x and SO₂ control technology and monitoring requirements, PM control technology, best management practices, and Early Warning System requirements, and limitation on the use of flares.
 - B. All CEMS data collected for each Process System, from the time any emissions limit regarding NO_x control technology, monitoring requirements or caps is exceeded until compliance is achieved, and an explanation of any periods of downtime of such CEMS.

- C. All PM Early Warning System data collected, from the time a PM Early Warning System alarm is triggered until the PM Early Warning System data have returned to below the action levels triggering an alarm condition, and an explanation of any periods of PM Early Warning System downtime.
- D. A description of any potential violation of the requirements of the Civil Action No. 17-CV-1660 filed on December 22, 2017 incorporated into NSR Permit No. 9403B, including any exceedance resulting from malfunctions, any exceedance of an emissions limit, any exceedance of caps, any exceedance of a 30-day Rolling Average Sulfur Content Weight Percent or 365-day Rolling Average Sulfur Content Weight Percent, or any failure to install, commence operation or continuously operate any control technology or the PM Early Warning System.

Permits by Rule Authorizations

- 36. The following facilities at the site are authorized by permits by rule (PBR) under 30 TAC Chapter 106. These authorizations are listed here for reference purposes only.

EPNs	Registration Number	Rule Number
FURN FUG and OIL FUG	91592	106.261 and 106.262
E-10CU/B1, E-6VF/B1, OIL-FUG2, E-14T	114508	106.144, 106.264, and 106.472
E-10T, E-11T, E-12T, E-13T, E-22T	NA	106.472

Projected Actuals Emissions Tracking

- 37. The project associated with the permit application PI-1 dated September 19, 2024, TCEQ NSR Project No. 380364 and subsequent updates, was determined to not be subject to major new source review through the use of projected actual emission rates for one or more facilities associated with the project. Actual emissions from the sources using a projected actual as listed in the table of this special condition shall be monitored as represented in the application and records maintained, and reports provided in accordance with 30 TAC §116.127. Records shall be maintained for five calendar years from the resumption of regular operations. Records shall include the date of resumption of regular operations after the project change.

Pollutant: CO						
Application project emissions increase: 98.49 tpy						
FIN	EPN	Permit/Registration/ PBR No.	Baseline Actual Emissions (tpy)	Post Project Allowable (tpy)	Projected Actual Emissions (tpy)	Monitoring Special Condition Nos.
TAIL GAS	Emissions Cap	8780	2176.51	3576.97	2275.00	23
Total Baseline Actual (tpy)			2176.51			

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A report is due to the Executive Director in any calendar year in which the actual emissions for the project exceed the total baseline actual emissions in the tables above the 100 tpy netting significant emission rate for CO, and a projected actual emission for any facility is exceeded in accordance with 116.127(d).

Pollutant: PM						
Application project emissions increase: 24.10 tpy						
FIN	EPN	Permit/ Registration/ PBR No.	Baseline Actual Emissions (tpy)	Post Project Allowable (tpy)	Projected Actual Emissions (tpy)	Monitoring Special Condition Nos.
TAIL GAS	Emissions Cap	8780	48.90	77.66	73.00	23
Total Baseline Actual (tpy)			48.90			

A report is due to the Executive Director in any calendar year in which the actual emissions for the project exceed the total baseline actual emissions in the tables above the PM 25 tpy netting significant emission rate, and a projected actual emission for any facility is exceeded in accordance with 116.127(d).

Pollutant: Ozone (VOC)						
Application project emissions increase: 39.22 tpy						
FIN	EPN	Permit/ Registration/ PBR No.	Baseline Actual Emissions (tpy)	Post Project Allowable (tpy)	Projected Actual Emissions (tpy)	Monitoring Special Condition Nos.
TAIL GAS	Emissions Cap	8780	50.78	101.06	90.00	12, 18, 23
Total Baseline Actual (tpy)			50.78			

A report is due to the Executive Director in any calendar year in which the actual emissions for the project exceed the total baseline actual emissions in the tables above the 40 tpy netting significant emission rate for Ozone (VOC), and a projected actual emission for any facility is exceeded in accordance with 116.127(d).

Pollutant: H ₂ S						
Application project emissions increase: 7.46 tpy						
FIN	EPN	Permit/ Registration/ PBR No.	Baseline Actual Emissions (tpy)	Post Project Allowable (tpy)	Projected Actual Emissions (tpy)	Monitoring Special Condition Nos.
TAIL GAS	Emissions Cap	8780	32.54	76.56	40.00	4
Total Baseline Actual (tpy)			32.54			

A report is due to the Executive Director in any calendar year in which the actual emissions for the project exceed the total baseline actual emissions in the tables above the 10 tpy netting significant emission rate for H₂S, and a projected actual emission for any facility is exceeded in accordance with 116.127(d).

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Date: September 30, 2025

Attachment I

Planned MSS Activities and Authorizations for Permit Nos. 8780 and PSDTX416M1

Facility Description	Emission Point Location	Registration Number/Date	Rule Citation (30 TAC)
Manual application (hand wipe cleaning) of cleaning solvents containing less than 1% VOC	Sitewide	De minimis	§116.119(a)(1)
Aerosol solvent and lubricants usage	Sitewide	De minimis	§116.119(a)(1)
Application of coatings less than 100 gallons per year	Sitewide	De minimis	§116.119(a)(2)
Application of solvents less than 50 gallons per year	Sitewide	De minimis	§116.119(a)(2)
Comfort heating	Sitewide	09/04/2000	§106.102
Air conditioning and ventilation systems	Sitewide	09/04/2000	§106.103
Bench scale laboratory equipment	Sitewide	09/04/2000	§106.122
Vacuum producing devices for laboratory use	Sitewide	09/04/2000	§106.123
Boilers, heaters and other combustion devices	Sitewide	09/04/2000	§106.183
Welding/Cutting/Brazing	Sitewide	09/04/2000	§106.227
Ovens, Barbeque pits and cookers	Sitewide	09/04/2000	§106.244
Repairs and Maintenance	Sitewide	11/01/2001	§106.263
Replacement of facilities	Sitewide	09/04/2000	§106.264
Hand-held and manually operated machines	Sitewide	09/04/2000	§106.265
Vacuum cleaning systems	Sitewide	09/04/2000	§106.266
Cooling water units	Sitewide	09/04/2000	§106.371
Fuel dispensing	Sitewide	09/04/2000	§106.412
Remote reservoir parts washers	Maintenance Shop	11/01/2001	§106.454
Liquid loading and unloading	Sitewide	03/14/1997	§106.472
Organic liquid loading and unloading	Sitewide	09/04/2000	§106.473
Portable and emergency engines and turbines	Sitewide	09/04/2000	§106.511
Water and wastewater treatment	Sitewide	09/04/2000	§106.532
General facilities/fugitive components	Sitewide	91592 01/29/2010	§106.261 and §106.262

Date: September 30, 2025

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 8780 and PSDTX416M1

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	
			lbs/hour	TPY (4)
E-6BN	Waste Heat Boiler (6)	PM	6.15	(5)
		PM ₁₀	6.15	(5)
		PM _{2.5}	6.15	(5)
		SO ₂	144.11	(5)
		NO _x (routine)	47.43	(5)
		NO _x (MSS)	169.78	(5)
		VOC	25.62	(5)
		CO	864.97	(5)
		H ₂ S	18.73	(5)
		COS	4.94	(5)
		CS ₂	7.39	(5)
		HCN	1.54	(5)
		BZ	0.83	(5)
		Al	0.67	(5)
Cl	0.87	(5)		
NH ₃	2.13	(5)		
E-6BN	Waste Heat Boiler MSS	NO _x	169.78	(5)
E-10FL E-20FL E-40FL	Reactor Heat Load (12)	PM	0.68	0.78
		PM ₁₀	0.68	0.78
		PM _{2.5}	0.68	0.78
		SO ₂	0.19	0.22
		NO _x	44.06	50.00
		VOC	0.50	0.56
		CO	7.56	8.58

Emission Sources - Maximum Allowable Emission Rates

		PM ₁₀	5.48	(5)
		PM _{2.5}	3.93	(5)
		SO ₂	777.60	(5)
		NO _x	62.82	(5)
		VOC (6)	9.33	(5)
		CO	320.13	(5)
		H ₂ S	7.02	(5)
		COS	1.85	(5)
		CS ₂	2.77	(5)
		HCN	0.58	(5)
		BZ	0.31	(5)
		Al	0.25	(5)
		Cl	0.33	(5)
E-20FL	Unit 2 Reactor / Flare (7) (12)	PM	9.13	(5)
		PM ₁₀	5.48	(5)
		PM _{2.5}	3.93	(5)
		SO ₂	777.60	(5)
		NO _x	62.82	(5)
		VOC (6)	9.33	(5)
		CO	320.13	(5)
		H ₂ S	7.02	(5)
		COS	1.85	(5)
		CS ₂	2.77	(5)
		HCN	0.58	(5)
		BZ	0.31	(5)
		Al	0.25	(5)
		Cl	0.33	(5)

Emission Sources - Maximum Allowable Emission Rates

E-40FL	Unit 4 Reactor / Flare (7) (12)	PM	9.13	(5)
		PM ₁₀	5.48	(5)
		PM _{2.5}	3.93	(5)
		SO ₂	777.60	(5)
		NO _x	62.82	(5)
		VOC (6)	9.33	(5)
		CO	320.13	(5)
		H ₂ S	7.02	(5)
		COS	1.85	(5)
		CS ₂	2.77	(5)
		HCN	0.58	(5)
		BZ	0.31	(5)
		Al	0.25	(5)
		Cl	0.33	(5)
CFL	Combined Flare (12)	PM	24.34	(5)
		PM ₁₀	14.61	(5)
		PM _{2.5}	10.47	(5)
		SO ₂	750.05	(5)
		NO _x	167.52	(5)
		VOC	24.89	(5)
		CO	853.69	(5)
		H ₂ S	18.73	(5)
		COS	4.94	(5)
		CS ₂	7.39	(5)
		HCN	1.54	(5)
		BZ	0.83	(5)
		Al	0.67	(5)
		Cl	0.87	(5)

Emission Sources - Maximum Allowable Emission Rates

Emissions Cap (EPNs: E-6BN, E-10FL, E-20FL E-40FL & CFL)	Tail Gas Cap (5) (12)	PM	---	77.66
		PM ₁₀	---	46.29
		PM _{2.5}	---	32.95
		SO ₂	---	475.00
		NO _x	---	290.00
		VOC (6)	---	101.06
		CO	---	3576.97
		H ₂ S	---	76.56
		COS	---	20.19
		CS ₂	---	30.2
		HCN	---	6.27
		BZ	---	3.03
		Al	---	1.93
		Cl	---	2.50
		NH ₃	---	10.88
E-10D/E-11D	B-1 Dryers (19 MMBtu/hr)	PM	0.30	1.30
		PM ₁₀	0.18	0.78
		PM _{2.5}	0.13	0.56
		SO ₂	0.02	0.10
		NO _x	3.80	16.64
		VOC	0.21	0.94
		CO	3.27	14.34
E-20D/E-21D	B-2 Dryers (19 MMBtu/hr)	PM	0.30	1.30
		PM ₁₀	0.18	0.78
		PM _{2.5}	0.13	0.56
		SO ₂	0.02	0.10
		NO _x	3.80	16.64
		VOC	0.21	0.94
		CO	3.27	14.34
E-40D/E-41D	B-4 Dryers (19 MMBtu/hr)	PM	0.30	1.30
		PM ₁₀	0.18	0.78
		PM _{2.5}	0.13	0.56

Emission Sources - Maximum Allowable Emission Rates

E-10DF and E-11DF	B-1 Dryer Bag Filter	SO ₂	0.02	0.10
		NO _x	3.80	16.64
		VOC	0.21	0.94
		CO	3.27	14.34
		PM	1.54	6.76
		PM ₁₀	0.93	4.05
		PM _{2.5}	0.66	2.91
E-20DF and E-21DF	B-2 Dryer Bag Filter	SO ₂	< 0.01	0.01
		NO _x	0.38	1.66
		VOC	2.87	12.58
		CO	0.33	1.43
		PM	1.54	6.76
		PM ₁₀	0.93	4.05
		PM _{2.5}	0.66	2.91
E-41P and E-41DF	B-4 Dryer Bag Filter	SO ₂	< 0.01	0.01
		NO _x	0.38	1.66
		VOC	3.19	13.97
		CO	0.33	1.43
		PM	1.54	6.76
		PM ₁₀	0.93	4.05
		PM _{2.5}	0.66	2.91
E-10CU	B-1 Clean Up Bag Filter / Loop Vent Filter	NO _x	0.38	1.66
		VOC	2.87	12.58
		CO	0.33	1.43
		PM	0.51	2.25
		PM ₁₀	0.31	1.35
		PM _{2.5}	0.22	0.97
E-20CU	B-2 Clean Up Bag Filter	PM	0.51	2.25
E-40CU	B-4 Clean Up Bag Filter	PM ₁₀	0.31	1.35
		PM _{2.5}	0.22	0.97
		PM	0.51	2.25

Emission Sources - Maximum Allowable Emission Rates

E-1VF	Furnace Vacuum Bag Filter	PM ₁₀	0.31	1.35
		PM _{2.5}	0.22	0.97
		PM	0.38	1.65
		PM ₁₀	0.23	0.99
FURN-FUG	Furnace Area Fugitives (8)	PM _{2.5}	0.16	0.71
		PM	3.33	14.60
		PM ₁₀	2.00	8.76
		PM _{2.5}	1.43	6.28
E-5B	Thermal Boiler	VOC	0.09	0.38
		PM	0.16	0.66
		PM ₁₀	0.16	0.66
OIL-FUG	Oil Storage Fugitives (8)	PM _{2.5}	0.16	0.66
		SO ₂	0.05	0.19
		NO _x	2.1	8.67
		CO	1.76	7.28
		VOC	0.12	0.48
		VOC	0.16	0.68
P-60P	Waste Heat Boiler Planned Startup Tail Gas Vent to	PM	0.08	0.01
		PM ₁₀	0.05	0.01
		PM _{2.5}	0.03	0.01
		SO ₂	0.21	0.01
		NO _x	0.38	0.01
		VOC (6)	8.49	0.13
		CO	143.72	2.16
		H ₂ S	4.43	0.07
		COS	0.34	0.01
		CS ₂	1.51	0.02
		HCN	0.63	0.01
BAGFILTFUG	Bag Filter Change-out Fugitives MSS (10)	BZ	0.18	0.01
		PM	0.57	0.01
		PM ₁₀	0.34	0.01

Emission Sources - Maximum Allowable Emission Rates

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.		PM _{2.5}	0.24	0.01
(2) Specific point source name. For fugitive sources use area name or fugitive source name.		PM ₁₀	2.10	0.05
(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				
AMM-FUG Ammonia Fugitive		NH ₃	0.18	0.79
PM _{2.5} - particulate matter equal to or less than 2.5 microns in diameter				
E-10CMEF Hydrated lime Silo 1 Bin Vent		PM	0.14	0.60
H ₂ S - hydrogen sulfide				
COS - carbonyl sulfide		PM ₁₀	0.14	0.60
CS ₂ - carbon disulfide				
HCN - hydrogen cyanide		PM _{2.5}	0.14	0.60
BZ - benzene				
E10BYPRODF CDS Byproduct Silo 1 Bin Vent		PM	0.14	0.60
Al - aluminum				
Cl - chlorine				
MSS - planned maintenance, startup and shutdown		PM ₁₀	0.14	0.60
EPN - emission point number				
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.		PM _{2.5}	0.14	0.60
(5) The total combined annual emissions of all sources combusting tail gas shall not exceed these allowable emission rates. The short-term emission rates for each source are listed separately. Short term and annual emission rates of natural gas combustion during startup and/or shutdown are authorized in the tail gas combustion cap in NSR Permit No. 8780.		PM	0.14	0.60
E20BYPRODF CDS Byproduct Silo 2 Bin Vent		PM ₁₀	0.14	0.60
(6) VOC includes (but is not limited to) acetylene (C ₂ H ₂), COS, CS ₂ , HCN and BZ		PM _{2.5}	0.14	0.60
(7) Startup and shutdown emissions of products of natural gas combustion are captured in the emission rates for this				
BYPRODF CDS Byproduct Pugmill		PM	0.02	0.07
(8) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.		PM ₁₀	0.01	0.04
(9) MSS emissions from the waste heat boiler startup do not occur simultaneously with production emissions and are captured by EPN E-6B.		PM _{2.5}	0.01	0.03
(10) PM/PM ₁₀ /PM _{2.5} emissions from bagfilter changeouts do not occur simultaneously with production emissions from the				
BYPRODF CDS Byproduct Tunnel byproduct		PM	0.08	0.35
(11) PM/PM ₁₀ /PM _{2.5} emissions from re-bricking are captured by EPNs E-10FL, E-20FL, and E-40FL. Production rate will be reduced to stay within the PM/PM ₁₀ /PM _{2.5} emission limits.				
(12) Flare EPNs E-10FL, E-20FL, and E-40FL shall not be used to combust materials once Flare EPN CFL is operational. Once EPN CFL is operational Flares stacks E-10FL, E-20FL, and E-40FL shall no longer be used to combust materials and only shall be used as vent stacks for Reactor Heat Load operations.		PM ₁₀	0.04	0.17
		PM _{2.5}	0.01	0.03

Date: September 30, 2025