FEDERAL OPERATING PERMIT

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

AUTHORIZING THE OPERATION OF
Orange Carbon Black Plant
Carbon Black Manufacturing

LOCATED AT
Orange County, Texas
Latitude 30° 9′ 4″ Longitude 93° 43′ 19″
Regulated Entity Number: RN100209386

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: O1660 Issuance Date: June 12, 2026

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 YY or ZZZZ as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113,

Subchapter C, §113.560 or §113.1090, respectively, which incorporates the 40 CFR Part 63 Subpart 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. For storage vessels maintaining working pressure as specified in 30 TAC Chapter 115, Subchapter B, Division 1: "Storage of Volatile Organic Compounds," the permit holder shall comply with the requirements of 30 TAC § 115.112(a)(1).

5. 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)

6. 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)

7. For facilities where total annual benzene quantity from waste is less than 1 megagram per year and subject to emission standards in 40 CFR Part 61, Subpart FF, the permit holder shall comply with the following requirements:

   A. Title 40 CFR § 61.355(a)(1)(iii), (a)(2), (a)(5)(i) - (ii), (a)(6), (b), and (c)(1) - (3) (relating to Test Methods, Procedures, and Compliance Provisions), for calculation procedures

   B. Title 40 CFR § 61.356(a) (relating to Recordkeeping Requirements)

   C. Title 40 CFR § 61.356(b), and (b)(1) (relating to Recordkeeping Requirements)

   D. Title 40 CFR § 61.357(a), and (b) (relating to Reporting Requirements)

8. 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

9. 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

10. 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 December 16, 2025 in the application for project 39249), 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:

11. 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 February 26, 2021 in the application for project 31385), 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

12. 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.

13. 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

14. 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.

15. Permit holder shall comply with the following 30 TAC Chapter 117 requirements:

A. The permit holder shall comply with the compliance schedules and submit written notification to the TCEQ Executive Director as required in 30 TAC Chapter 117, Subchapter H, Division 1:

(i) For sources in the Beaumont-Port Arthur Nonattainment area, 30 TAC § 117.9000

B. The permit holder shall comply with the Initial Control Plan unit listing requirement in 30 TAC § 117.150(c) and (c)(1).

16. Use of Emission Credits to comply with applicable requirements:

A. Unless otherwise prohibited, the permit holder may use 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) Offsets for Title 30 TAC Chapter 116

B. The permit holder shall comply with the following requirements in order to use the emission credits to comply with the applicable requirements:

(i) The permit holder must notify the TCEQ according to 30 TAC § 101.306(c)-(d)

(ii) The 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 1

(iii) The executive director has approved the use of the credit according to 30 TAC § 101.306(c)-(d)

(iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.302(g) and 30 TAC Chapter 122

(v) Title 30 TAC § 101.305 (relating to Emission Reductions Achieved Outside the United States)

17. 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

18. 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.

B. The permit holder shall comply with 40 CFR Part 82, Subpart H related to Halon Emissions Reduction requirements as specified in 40 CFR § 82.250 - § 82.270 and the applicable Part 82 Appendices.

Permit Location

19. 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)

20. 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

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
1 INC	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1111-1INC	30 TAC Chapter 111, Visible Emissions	No changing attributes.
1 INC	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-1INC	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
1 INC	CHEMICAL MANUFACTURING PROCESS	N/A	63YY-1INC	40 CFR Part 63, Subpart YY	No changing attributes.
1A-1	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1111-1A1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
1A-1	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-1A1	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
1A-1	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	63YY-1A1	40 CFR Part 63, Subpart YY	No changing attributes.
1A-2	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1111-1A2	30 TAC Chapter 111, Visible Emissions	No changing attributes.
1A-2	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-1A2	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
1A-2	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	63YY-1A2	40 CFR Part 63, Subpart YY	No changing attributes.
9	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1111-9	30 TAC Chapter 111, Visible Emissions	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
9	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-9	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
9	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	63YY-9	40 CFR Part 63, Subpart YY	No changing attributes.
BINT	STORAGE TANKS/VESSELS	N/A	R5111	30 TAC Chapter 115, Storage of VOCs	Tank Description = Tank does not require emission controls, True Vapor Pressure = True vapor pressure is greater than or equal to 1.0 psia but less than 1.5 psia
BINT	STORAGE TANKS/VESSELS	N/A	R5116-BINT	30 TAC Chapter 115, Storage of VOCs	True Vapor Pressure = True vapor pressure is less than 1.0 psia
FP_ENG	SRIC ENGINES	N/A	60IIII	40 CFR Part 60, Subpart IIII	No changing attributes.
FP_ENG	SRIC ENGINES	N/A	60ZZZZ	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRP-DRY	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	20, 21, 22, 23	R5121-DRY	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
GRP-DRY	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	20, 21, 22, 23	63YY-DRY	40 CFR Part 63, Subpart YY	No changing attributes.
GRP-RXT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	RCT1, RCT2, RCT4, RCT5, RCT9	63YY-RXT	40 CFR Part 63, Subpart YY	No changing attributes.
GRP-TNK1	STORAGE TANKS/VESSELS	T11, T12, T13	R5111	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
NG_GEN1	SRIC ENGINES	N/A	60JJJJ1	40 CFR Part 60, Subpart JJJJ	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
NG_GEN1	SRIC ENGINES	N/A	60ZZZZ1	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
NG_GEN2	SRIC ENGINES	N/A	60JJJJ2	40 CFR Part 60, Subpart JJJJ	No changing attributes.
NG_GEN2	SRIC ENGINES	N/A	60ZZZZ2	40 CFR Part 63, Subpart ZZZZ	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)
1 INC	EP	R1111-1INC	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
1 INC	EP	R5121-1INC	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(a)(1) § 115.121(a)(1) § 115.122(a)(1)(A)	Vent gas affected by §115.121(a)(1) must be controlled properly with a control efficiency > 90% or to a VOC concentration of no more than 20 ppmv (dry, corrected to 3% O2 for combustion devices).	[G]§ 115.125 § 115.126(1) § 115.126(1)(A) § 115.126(1)(A)(i) § 115.126(2) ** See Periodic Monitoring Summary	§ 115.126 § 115.126(1) § 115.126(1)(A) § 115.126(1)(A)(i) § 115.126(2)	None
1 INC	EU	63YY-1INC	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1100 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
1A-1	EP	R1111-1A1	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
1A-1	EP	R5121-1A1	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(a)(1) § 115.121(a)(1) § 115.122(a)(1)(C)	Vent gas affected by §115.121(a)(1) must be controlled properly with a	[G]§ 115.125 § 115.126(1) § 115.126(1)(C)	§ 115.126 § 115.126(1) § 115.126(1)(C)	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)
						control efficiency > 90% or to a VOC concentration of no more than 20 ppmv (dry, corrected to 3% O2 for combustion devices).	§ 115.126(2) ** See Periodic Monitoring Summary	§ 115.126(2)	
1A-1	EU	63YY-1A1	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
1A-2	EP	R1111-1A2	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
1A-2	EP	R5121-1A2	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(a)(1) § 115.121(a)(1) § 115.122(a)(1)(C)	Vent gas affected by §115.121(a)(1) must be controlled properly with a control efficiency > 90% or to a VOC concentration of no more than 20 ppmv (dry, corrected to 3% O2 for combustion devices).	[G]§ 115.125 § 115.126(1) § 115.126(1)(C) § 115.126(2) ** See Periodic Monitoring Summary	§ 115.126 § 115.126(1) § 115.126(1)(C) § 115.126(2)	None
1A-2	EU	63YY-1A2	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY

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)
					specification requirements of 40 CFR Part 63, Subpart YY		CFR Part 63, Subpart YY		
9	EP	R1111-9	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
9	EP	R5121-9	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(a)(1) § 115.121(a)(1) § 115.122(a)(1)(C)	Vent gas affected by §115.121(a)(1) must be controlled properly with a control efficiency > 90% or to a VOC concentration of no more than 20 ppmv (dry, corrected to 3% O2 for combustion devices).	[G]§ 115.125 § 115.126(1) § 115.126(1)(C) § 115.126(2) ** See Periodic Monitoring Summary	§ 115.126 § 115.126(1) § 115.126(1)(C) § 115.126(2)	None
9	EU	63YY-9	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
BINT	EU	R5111	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	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)
BINT	EU	R5116-BINT	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
FP_ENG	EU	60IIII	CO	40 CFR Part 60, Subpart IIII	§ 60.4205(c)-Table 4 § 60.4206 § 60.4207(b) § 60.4211(b) § 60.4211(b)(1) [G]§ 60.4211(f)	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power greater than or equal to 75 KW and less than 130 KW and a displacement of less than 30 liters per cylinder and is a 2009 model year or earlier must comply with a CO emission limit of 5.0 g/KW-hr, as listed in Table 4 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
FP_ENG	EU	60IIII	NMHC and NO_X	40 CFR Part 60, Subpart IIII	§ 60.4205(c)-Table 4 § 60.4206 § 60.4207(b) § 60.4211(b) § 60.4211(b)(1) [G]§ 60.4211(f)	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power greater than or equal to 75 KW and less than 130 KW and a displacement of less than 30 liters per cylinder and is a 2009 model year or earlier must comply with an NMHC+NOx emission limit of 10.5 g/KW-hr, as listed in Table 4 to this subpart.	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)
FP_ENG	EU	60IIII	PM	40 CFR Part 60, Subpart IIII	§ 60.4205(c)-Table 4 § 60.4206 § 60.4207(b) § 60.4211(b)	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power greater than or equal to75	§ 60.4209(a)	§ 60.4214(b)	[G]§ 60.4214(d)

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(b)(1) [G]§ 60.4211(f)	KW and less than 130 KW and a displacement of less than 30 liters per cylinder and is a 2009 model year or earlier must comply with a PM emission limit of 0.80 g/KW-hr, as listed in Table 4 to this subpart.			
FP_ENG	EU	60ZZZZ	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-DRY	EP	R5121-DRY	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.122(a)(1) § 115.121(a)(1) § 115.122(a)(1)(C)	Vent gas affected by §115.121(a)(1) must be controlled properly with a control efficiency > 90% or to a VOC concentration of no more than 20 ppmv (dry, corrected to 3% O2 for combustion devices).	[G]§ 115.125 § 115.126(1) § 115.126(1)(A) § 115.126(1)(A)(iii) § 115.126(2)	§ 115.126 § 115.126(1) § 115.126(1)(A) § 115.126(1)(A)(iii) § 115.126(2)	None
GRP-DRY	EU	63YY-DRY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY

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)
					and/or equipment specification requirements of 40 CFR Part 63, Subpart YY		requirements of 40 CFR Part 63, Subpart YY	Part 63, Subpart YY	
GRP-RXT	EU	63YY-RXT	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1100(a) § 63.1100(b) § 63.1100(d)(1) § 63.1102(a)(2)(i) § 63.1102(b) § 63.1103(f)(3)(i) [G]§ 63.1111(a)	This subpart applies to source categories and affected sources specified in §63.1103(a) through (h).	None	§ 63.1109(a) § 63.1109(b) § 63.1109(c)	§ 63.1110(a)(5) § 63.1110(a)(6) § 63.1110(a)(7) § 63.1110(c)(1) § 63.1110(c)(7) [G]§ 63.1110(e) [G]§ 63.1110(f) [G]§ 63.1110(g) § 63.1110(h)(1) § 63.1110(h)(7) [G]§ 63.1111(b)
GRP-TNK1	EU	R5111	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.111(a)(1)	Except as provided in § 115.118, a storage tank storing VOC with a true vapor pressure less than 1.5 psia is exempt from the requirements of this division.	[G]§ 115.117	§ 115.118(a)(1) § 115.118(a)(5) § 115.118(a)(7)	None
NG_GEN1	EU	60JJJJ1	CO	40 CFR Part 60, Subpart JJJJ	§ 60.4233(d)-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 25 HP and less than 100 HP and were manufactured on or after 01/01/2009 must comply with a CO emission limit of 387 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4237(c)	§ 60.4243(a)(1) § 60.4245(a) § 60.4245(a)(2) § 60.4245(a)(3) § 60.4245(b)	None
NG_GEN1	EU	60JJJJ1	HC and NO_X	40 CFR Part 60, Subpart JJJJ	§ 60.4233(d)-Table 1 § 60.4234	Owners and operators of stationary emergency SI ICE with a maximum engine	§ 60.4237(c)	§ 60.4243(a)(1) § 60.4245(a) § 60.4245(a)(2)	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)
					§ 60.4243(b) § 60.4243(b)(1) [G]§ 60.4243(d) § 60.4243(g)	power greater than 25 HP and less than 100 HP and were manufactured on or after 01/01/2009 must comply with an HC+NOx emission limit of 10 g/HP-hr, as listed in Table 1 to this subpart.		§ 60.4245(a)(3) § 60.4245(b)	
NG_GEN1	EU	60ZZZZ1	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
NG_GEN2	EU	60JJJJ2	CO	40 CFR Part 60, Subpart JJJJ	§ 60.4233(a) § 1054.105(a) § 60.4231(a) § 60.4234 § 60.4243(a) [G]§ 60.4243(d) § 60.4243(e) § 60.4243(g)	Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW and manufactured on or after 07/01/2008 must comply with a CO emission limit of 610 g/KW-hr, as stated in 40 CFR 60.4231(a) and 40 CFR 1054.105(a)-Table 1 and 40 CFR 1054-Appendix I(b)(2)-Table 4.	§ 60.4243(e)	§ 60.4243(a)(1) § 60.4243(e) § 60.4245(a) § 60.4245(a)(2) § 60.4245(a)(3)	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)
NG_GEN2	EU	60JJJJ2	HC and NO_X	40 CFR Part 60, Subpart JJJJ	§ 60.4233(a) § 1054.105(a) § 60.4231(a) § 60.4234 § 60.4243(a) [G]§ 60.4243(d) § 60.4243(e) § 60.4243(g)	Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW and a displacement of greater than or equal to 225cc and manufactured in the 2011 model year or later must comply with an HC+NOx emission limit of 8.0 g/KW-hr, as stated in 40 CFR 60.4231(a) and 40 CFR 1054.105(a)-Table 1.	§ 60.4243(e)	§ 60.4243(a)(1) § 60.4243(e) § 60.4245(a) § 60.4245(a)(2) § 60.4245(a)(3)	None
NG_GEN2	EU	60ZZZZ2	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

Additional Monitoring Requirements

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 1 INC	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-1INC
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Opacity	
Minimum Frequency: Once per quarter	
Averaging Period: 6 minutes = 24 observations x 15-second intervals	
Deviation Limit: Maximum Opacity = 15%	
Periodic Monitoring Text: If visible emissions are detected during quarterly observations noted in general terms and condition 3 , Opacity shall be monitored, by a certified observer, for at least one, six-minute period in accordance with Title 40 Code of Federal Regulations Part 60, Appendix A, Test Method 9. The deviation limit is the maximum opacity corresponding to the underlying applicable requirement. If there is no applicable or corresponding opacity limit, a maximum opacity shall be established using the most recent performance test. Any opacity readings that are above the opacity limit from the underlying applicable requirement shall be reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 1 INC	
Control Device ID No.: 1 INC	Control Device Type: Thermal incinerator (direct flame incinerator/regenerative thermal oxidizer)
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R5121-1INC
Pollutant: VOC	Main Standard: § 115.122(a)(1)
Monitoring Information	
Indicator: Combustion Temperature / Exhaust Gas Temperature.	
Minimum Frequency: Once per week	
Averaging Period: N/A	
Deviation Limit: Minimum Temperature = 1300 degrees Fahrenheit.	
Periodic Monitoring Text: Measure and record the combustion temperature in the combustion chamber or immediately downstream of the combustion chamber into which the volatile organic compound is introduced. Any monitoring data below the minimum limit shall be considered and reported as a deviation. The permit holder may elect to collect monitoring data on a more frequent basis and calculate the average as specified by the minimum frequency, for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis and shall not be collected and used in particular instances to avoid reporting deviations.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 1A-1	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-1A1
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Opacity	
Minimum Frequency: Once per quarter	
Averaging Period: 6 minutes = 24 observations x 15-second intervals	
Deviation Limit: Maximum Opacity = 15%	
Periodic Monitoring Text: If visible emissions are detected during quarterly observations noted in general terms and condition 3, Opacity shall be monitored, by a certified observer, for at least one, six-minute period in accordance with Title 40 Code of Federal Regulations Part 60, Appendix A, Test Method 9. The deviation limit is the maximum opacity corresponding to the underlying applicable requirement. If there is no applicable or corresponding opacity limit, a maximum opacity shall be established using the most recent performance test. Any opacity readings that are above the opacity limit from the underlying applicable requirement shall be reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 1A-1	
Control Device ID No.: 1A-1	Control Device Type: Steam generating unit (boiler)/process heater (design heat input is less than 44 megawatts)
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R5121-1A1
Pollutant: VOC	Main Standard: § 115.122(a)(1)
Monitoring Information	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: once per week	
Averaging Period: N/A	
Deviation Limit: Minimum Temperature = 1300 degrees Fahrenheit.	
Periodic Monitoring Text: Measure and record the combustion temperature in the combustion chamber or immediately downstream of the combustion chamber into which the volatile organic compound is introduced. The monitoring instrumentation shall be maintained, calibrated and operated in accordance with manufacturer's specifications or other written procedures. Any monitoring data below the deviation limit shall be considered and reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 1A-2	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-1A2
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Opacity	
Minimum Frequency: Once per quarter	
Averaging Period: 6 minutes = 24 observations x 15-second intervals	
Deviation Limit: Maximum Opacity = 15%	
Periodic Monitoring Text: If visible emissions are detected during quarterly observations noted in general terms and condition 3, Opacity shall be monitored, by a certified observer, for at least one, six-minute period in accordance with Title 40 Code of Federal Regulations Part 60, Appendix A, Test Method 9. The deviation limit is the maximum opacity corresponding to the underlying applicable requirement. If there is no applicable or corresponding opacity limit, a maximum opacity shall be established using the most recent performance test. Any opacity readings that are above the opacity limit from the underlying applicable requirement shall be reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 1A-2	
Control Device ID No.: 1A-2	Control Device Type: Steam generating unit (boiler)/process heater (design heat input is less than 44 megawatts)
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R5121-1A2
Pollutant: VOC	Main Standard: § 115.122(a)(1)
Monitoring Information	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: once per week	
Averaging Period: N/A	
Deviation Limit: Minimum Temperature = 1300 degrees Fahrenheit.	
Periodic Monitoring Text: Measure and record the combustion temperature in the combustion chamber or immediately downstream of the combustion chamber into which the volatile organic compound is introduced. The monitoring instrumentation shall be maintained, calibrated and operated in accordance with manufacturer's specifications or other written procedures. Any monitoring data below the deviation limit shall be considered and reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 9	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-9
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Opacity	
Minimum Frequency: Once per quarter	
Averaging Period: 6 minutes = 24 observations x 15-second intervals	
Deviation Limit: Maximum Opacity = 15%	
Periodic Monitoring Text: If visible emissions are detected during quarterly observations noted in general terms and condition 3, Opacity shall be monitored, by a certified observer, for at least one, six-minute period in accordance with Title 40 Code of Federal Regulations Part 60, Appendix A, Test Method 9. The deviation limit is the maximum opacity corresponding to the underlying applicable requirement. If there is no applicable or corresponding opacity limit, a maximum opacity shall be established using the most recent performance test. Any opacity readings that are above the opacity limit from the underlying applicable requirement shall be reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 9	
Control Device ID No.: 9	Control Device Type: Steam generating unit (boiler)/process heater (design heat input is less than 44 megawatts)
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Vent Gas Controls	SOP Index No.: R5121-9
Pollutant: VOC	Main Standard: § 115.122(a)(1)
Monitoring Information	
Indicator: Combustion Temperature / Exhaust Gas Temperature	
Minimum Frequency: once per week	
Averaging Period: N/A	
Deviation Limit: Minimum Temperature = 1300 degrees Fahrenheit.	
Periodic Monitoring Text: Measure and record the combustion temperature in the combustion chamber or immediately downstream of the combustion chamber into which the volatile organic compound is introduced. The monitoring instrumentation shall be maintained, calibrated and operated in accordance with manufacturer's specifications or other written procedures. Any monitoring data below the deviation limit shall be considered and reported as a deviation.	

Permit Shield

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
1A-1	N/A	40 CFR Part 60, Subpart D	Boiler does not burn fuel that meets the definition of fossil fuel.
1A-1	N/A	40 CFR Part 60, Subpart Da	Boiler does not meet the definition of an electric utility steam generating unit.
1A-1	N/A	40 CFR Part 60, Subpart Db	Boiler was constructed, modified, or reconstructed before June 19, 1984.
1A-1	N/A	40 CFR Part 60, Subpart Dc	The heat input to the waste heat boiler, excluding heat derived from the tail gas, will be less than 10MMBTU/hr.
1A-1	N/A	40 CFR Part 63, Subpart DDDDD	Boiler is used as a control device to comply with another subpart of this part.
1A-2	N/A	40 CFR Part 60, Subpart D	Boiler does not burn fuel that meets the definition of fossil fuel.
1A-2	N/A	40 CFR Part 60, Subpart Da	Boiler does not meet the definition of an electric utility steam generating unit.
1A-2	N/A	40 CFR Part 60, Subpart Db	Boiler was constructed, modified, or reconstructed before June 19, 1984.
1A-2	N/A	40 CFR Part 60, Subpart Dc	The heat input to the waste heat boiler, excluding heat derived from the tail gas, will be less than 10MMBTU/hr.
1A-2	N/A	40 CFR Part 63, Subpart DDDDD	Boiler is used as a control device to comply with another subpart of this part.
9	N/A	40 CFR Part 60, Subpart D	Boiler fossil fuel-firing capacity does not exceed 250 MMBtu/hr.
9	N/A	40 CFR Part 60, Subpart Da	Boiler does not meet the definition of an electric utility steam generating unit.

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
9	N/A	40 CFR Part 60, Subpart Db	Boiler was constructed, modified, or reconstructed prior to June 19, 1984.
9	N/A	40 CFR Part 60, Subpart Dc	Boiler was constructed, modified or reconstructed before June 9, 1989.
9	N/A	40 CFR Part 63, Subpart DDDDD	Boiler is used as a control device to comply with another subpart of this part.
BINT	N/A	40 CFR Part 60, Subpart K	Tank was constructed prior to June 11, 1973.
GRP-RXT	RCT1, RCT2, RCT4, RCT5, RCT9	40 CFR Part 60, Subpart III	Facility does not produce any of the chemicals listed as a product, co-product, by-product or intermediate.
GRP-RXT	RCT1, RCT2, RCT4, RCT5, RCT9	40 CFR Part 60, Subpart RRR	Facility does not produce any of the chemicals listed as a product, co-product, by-product or intermediate.
GRP-TNK1	T11, T12, T13	40 CFR Part 60, Subpart K	Tank has a capacity greater than 246,052 liters (65,000 gallons) but commenced construction or modification prior to June 11, 1973.
GRP-TNK2	DTNK1, DTNK2	30 TAC Chapter 115, Storage of VOCs	Storage tank has a capacity less than 1000 gallons.
GRP-TNK2	DTNK1, DTNK2	40 CFR Part 60, Subpart Kb	Tank constructed, or modification was commenced after July 23, 1984 but capacity is less than 40 cubic meters (10,567 gallons).
GTANK	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank has a capacity less than 1000 gallons.
GTANK	N/A	40 CFR Part 60, Subpart Kb	Tank constructed, or modification was commenced after July 23, 1984 but capacity is less than 40 cubic meters (10,567 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
SFTKLN	N/A	40 CFR Part 63, Subpart T	Solvent contains less than 5 percent of required chemicals as listed in § 63.640(a) to be subject to 40 CFR 63, Subpart T.

New Source Review Authorization References

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.: PSDTX627M2	Issuance Date: 01/29/2025
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.: 9403B	Issuance Date: 01/29/2025
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.102	Version No./Date: 09/04/2000
Number: 106.122	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: 106.261	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 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**
1 INC	VOC INCINERATOR	9403B, PSDTX627M2
1A-1	WASTE HEAT BOILER	9403B, PSDTX627M2
1A-2	WASTE HEAT BOILER	9403B, PSDTX627M2
20	LINE 1 DRYER	9403B, PSDTX627M2
21	LINE 1 DRYER	9403B, PSDTX627M2
22	LINE 3 DRYER	9403B, PSDTX627M2
23	LINE 2 DRYER	9403B, PSDTX627M2
9	PROCESS STEAM BOILER	9403B, PSDTX627M2
BINT	BINDER TANK	106.472/03/14/1997
DTNK1	SMALL DIESEL TANK (1,000 GAL)	106.412/09/04/2000
DTNK2	SMALL DIESEL TANK (1,000 GAL)	106.412/09/04/2000
FP_ENG	FIRE PUMP ENGINE	106.511/09/04/2000
GTANK	SMALL GASOLINE TANK (1,000 GAL)	106.412/09/04/2000
NG_GEN1	NATURAL GAS GENERATOR 1	106.511/09/04/2000
NG_GEN2	NATURAL GAS GENERATOR 2	106.511/09/04/2000
RCT1	REACTOR #1 (LINE 1)	9403B, PSDTX627M2
RCT2	REACTOR #2 (LINE 1)	9403B, PSDTX627M2
RCT4	REACTOR #4 (LINE 3)	9403B, PSDTX627M2
RCT5	REACTOR #5 (LINE 1)	9403B, PSDTX627M2
RCT9	REACTOR #9 (LINE 1)	9403B, PSDTX627M2
SFTKLN	SFTKLN (DEGREASING OPERATIONS)	106.454/11/01/2001

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**
T11	FEED OIL TANKS 1	9403B, PSDTX627M2
T12	FEED OIL TANKS 2	9403B, PSDTX627M2
T13	FEED OIL TANKS 3	9403B, PSDTX627M2

**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

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_2S ..... 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

Permit Numbers 9403B and PSDTX627M2					Issuance Date: 01/29/2025		
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**
WG-CAP (EPNs: 1 INC, 2, 2a, 3, 4, 9, 20, 21, 22, and 23)	Waste Gas Combustion Annual Emissions Cap (5)	PM	-	202.15	3, 5, 11	3, 5, 11, 27, 28	3
		PM_{10}	-	120.99			
		$PM_{2.5}$	-	86.50			
		NO_x	-	378.00			
		SO_2	-	3880.74			
		CO	-	1310.59			
		VOC	-	50.16			
		H_2S	-	35.00			
		COS	-	9.20			
		CS_2	-	13.80			
		HCN	-	9.63			
		BZ	-	0.51			
		NH_3	-	3.15			
1 INC	VOC Incinerator (5,6)	PM	29.30	-			

Major NSR Summary Table

Permit Numbers 9403B and PSDTX627M2					Issuance Date: 01/29/2025		
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}	17.58	-	3, 5, 11, 12, 13, 16, 17, 18, 21, 23, 30, 32, 33	3, 5, 11, 12, 13, 16, 17, 21, 18, 19, 23, 27, 28, 30, 32, 33	3, 12, 13, 17, 22, 23, 37
		$PM_{2.5}$	12.60	-			
		NO_x	9.47	-			
		NO_x (MSS)	94.70	-			
		SO_2	756.2	-			
		CO	204.0	-			
		VOC	8.30	-			
		H_2S	6.85	-			
		COS	1.80	-			
		CS_2	2.70	-			
		HCN	1.50	-			
		BZ	0.08	-			
		NH_3	0.75	-			
2	Dryer Filter No. 1 (5,6)	PM	1.00	-			

Major NSR Summary Table

Permit Numbers 9403B and PSDTX627M2					Issuance Date: 01/29/2025		
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}	0.60	-	3, 5, 8, 11, 17, 18, 21, 30, 32	3, 5, 8, 11, 17, 21, 18, 19, 27, 28, 30, 32	3, 17, 37
		$PM_{2.5}$	0.43	-			
		NO_x	0.99	-			
		SO_2	9.61	-			
		VOC	0.10	-			
		CO	2.60	-			
		H_2S	0.09	-			
		COS	0.02	-			
		CS_2	0.04	-			
		HCN	0.02	-			
		BZ	<0.01	-			
2a	Dryer Filter No. 2 (5,6)	PM	1.00	-			
		PM_{10}	0.60	-			
		$PM_{2.5}$	0.43	-			

Major NSR Summary Table

Permit Numbers 9403B and PSDTX627M2					Issuance Date: 01/29/2025		
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
		NO_x	0.99	-	3, 5, 8, 11, 17, 18, 21, 30, 32	3, 5, 8, 11, 17, 21, 18, 19, 27, 28, 30, 32	3, 17, 37
		SO_2	9.61	-			
		VOC	0.10	-			
		CO	2.60	-			
		H_2S	0.09	-			
		COS	0.02	-			
		CS_2	0.04	-			
		HCN	0.02	-			
		BZ	<0.01	-			
3	Dryer Filter No. 3 (5,6)	PM	1.00	-			
		PM_{10}	0.60	-			
		$PM_{2.5}$	0.43	-			
		NO_x	0.99	-			
		SO_2	9.61	-			

Major NSR Summary Table

Permit Numbers 9403B and PSDTX627M2					Issuance Date: 01/29/2025		
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
		VOC	0.10	-	3, 5, 8, 11, 17, 18, 21, 30, 32	3, 5, 8, 11, 17, 21, 18, 19, 27, 28, 30, 32	3, 17, 37
		CO	2.60	-			
		H_2S	0.09	-			
		COS	0.02	-			
		CS_2	0.04	-			
		HCN	0.02	-			
		BZ	<0.01	-			
4	Dryer Filter No. 4 (5,6)	PM	1.00	-	3, 5, 8, 11, 17, 18, 21, 30, 32	3, 5, 8, 11, 17, 21, 18, 19, 27, 28, 30,	3, 17, 37
		PM_{10}	0.60	-			
		$PM_{2.5}$	0.43	-			
		NO_x	0.99	-			
		SO_2	9.61	-			
		VOC	0.10	-			
		CO	2.60	-			

Major NSR Summary Table

Permit Numbers 9403B and PSDTX627M2					Issuance Date: 01/29/2025		
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
		H_2S	0.09	-		32	
		COS	0.02	-			
		CS_2	0.04	-			
		HCN	0.02	-			
		BZ	<0.01	-			
9	Process Steam Boiler Stack (5,6)	PM	3.00	-			
		PM_{10}	1.80	-			
		$PM_{2.5}$	1.29	-			
		NO_x	12.10	-			
		SO_2	96.31	-			
		CO	26.00	-	3, 5, 11, 17, 18, 21, 30, 32	3, 5, 11, 17, 18, 19, 21, 27, 28, 30, 32	3, 17, 37
		VOC	1.10	-			
		H_2S	0.87	-			
		COS	0.23	-			

Major NSR Summary Table

Permit Numbers 9403B and PSDTX627M2					Issuance Date: 01/29/2025		
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
		CS_2	0.34	-			
		HCN	0.20	-			
		BZ	<0.01	-			
20	Carbon Black Dryer No. 1 Stack (5,6)	PM	3.00	-	3, 5, 11, 17, 21, 30, 32	3, 5, 11, 17, 21, 27, 28, 30, 32	3, 17, 37
		PM_{10}	1.80	-			
		$PM_{2.5}$	1.29	-			
		NO_x	9.88	-			
		SO_2	86.68	-			
		CO	26.00	-			
		VOC	1.00	-			
		H_2S	0.78	-			
		COS	0.21	-			
		CS_2	0.31	-			
		HCN	0.20	-			

Major NSR Summary Table

Permit Numbers 9403B and PSDTX627M2					Issuance Date: 01/29/2025		
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**
		BZ	<0.01	-			
21	Carbon Black Dryer No. 2 Stack (5,6)	PM	3.00	-	3, 5, 11, 17, 21, 30, 32	3, 5, 11, 17, 21, 27, 28, 30, 32	3, 17, 37
		PM_{10}	1.80	-			
		$PM_{2.5}$	1.29	-			
		NO_x	9.88	-			
		SO_2	86.88	-			
		CO	26.00	-			
		VOC (5)	1.00	-			
		H_2S	0.78	-			
		COS	0.21	-			
		CS_2	0.31	-			
		HCN	0.20	-			
		BZ	<0.01	-			
22	Carbon Black Dryer	PM	3.00	-			

Major NSR Summary Table

Permit Numbers 9403B and PSDTX627M2					Issuance Date: 01/29/2025		
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**
	No. 3 Stack (5,6)	PM_{10}	1.80	-	3, 5, 11, 17, 21, 30, 32	3, 5, 11, 17, 21, 27, 28, 30, 32	3, 17, 37
		$PM_{2.5}$	1.29	-			
		NO_x	9.88	-			
		SO_2	86.68	-			
		CO	26.00	-			
		VOC	1.00	-			
		H_2S	0.78	-			
		COS	0.21	-			
		CS_2	0.31	-			
		HCN	0.20	-			
		BZ	<0.01	-			
23	Carbon Black Dryer No. 4 Stack (5,6)	PM	3.00	-			
		PM_{10}	1.80	-			
		$PM_{2.5}$	1.29	-			

Major NSR Summary Table

Permit Numbers 9403B and PSDTX627M2					Issuance Date: 01/29/2025		
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
		NO_x	9.88	-	3, 5, 11, 17, 21, 30, 32	3, 5, 11, 17, 21, 27, 28, 30, 32	3, 17, 37
		SO_2	86.88	-			
		CO	26.00	-			
		VOC	1.00	-			
		H_2S	0.78	-			
		COS	0.21	-			
		CS_2	0.31	-			
		HCN	0.20	-			
		BZ	<0.01	-			
AMMF-FUG	Ammonia Fugitives	NH_3	0.17	0.74	15	15	
7	Rerun Line 2	PM	0.09	0.36	8, 11	8, 11, 27, 28	
		PM_{10}	0.05	0.22			
		$PM_{2.5}$	0.04	0.16			
8	Rerun Line 1	PM	0.04	0.15			

Major NSR Summary Table

Permit Numbers 9403B and PSDTX627M2					Issuance Date: 01/29/2025		
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}	0.02	0.09	8, 11	8, 11, 27, 28	
		$PM_{2.5}$	0.02	0.06			
19	Packaging and Shipping	PM	0.56	2.34	8, 11	8, 11, 27, 28	
		PM_{10}	0.33	1.40			
		$PM_{2.5}$	0.24	1.01			
24	Rerun Line 3	PM	0.04	0.15	8, 11	8, 11, 27, 28	
		PM_{10}	0.02	0.09			
		$PM_{2.5}$	0.02	0.06			
25	Rerun Line 3	PM	0.04	0.15	8, 11	8, 11, 27, 28	
		PM_{10}	0.02	0.09			
		$PM_{2.5}$	0.02	0.06			
26	Packaging and Shipping	PM	0.04	0.15	8, 11	8, 11, 27, 28	
		PM_{10}	0.02	0.09			
		$PM_{2.5}$	0.02	0.06			

Major NSR Summary Table

Permit Numbers 9403B and PSDTX627M2					Issuance Date: 01/29/2025		
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
27	Rerun West System	PM	0.04	0.15	8, 11	8, 11, 27, 28	
		PM_{10}	0.02	0.09			
		$PM_{2.5}$	0.02	0.06			
28	Sealed Bin Transloading	PM	0.09	0.40	8, 11	8, 11, 27, 28	
		PM_{10}	0.06	0.24			
		$PM_{2.5}$	0.04	0.17			
16	Fugitives (7)	PM	2.13	8.93			
		PM_{10}	1.28	5.36			
		$PM_{2.5}$	0.91	3.84			
11	CBO Tank 1	VOC	1.79	0.20			
12	CBO Tank 2	VOC	1.79	0.20			
13	CBO Tank 3	VOC	1.29	0.30			
RX1-VENT, RX2-VENT, RX4-VENT,	Reactor Planned Startup, Combusted Natural Gas Vent to	PM	0.27	0.38			
		PM_{10}	0.27	0.38			

Major NSR Summary Table

Permit Numbers 9403B and PSDTX627M2					Issuance Date: 01/29/2025		
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**
RX5-VENT, and RX9-VENT	Atmosphere - MSS (8)	$PM_{2.5}$	0.27	0.38	11	11, 24, 25, 26, 27, 28	
		NO_x	17.63	25.00			
		SO_2	0.02	0.03			
		CO	3.02	4.16			
		VOC	0.20	0.27			
L1-VENT, L2-VENT, and L3-VENT	Unit Bagfilter Planned Startup, Combusted Natural Gas Vent to Atmosphere - MSS (8)	PM	0.27	0.38	11	11, 24, 25, 26, 27, 28	
		PM_{10}	0.27	0.38			
		$PM_{2.5}$	0.27	0.38			
		NO_x	17.63	25.00			
		SO_2	0.02	0.03			
		CO	3.02	4.16			
		VOC	0.20	0.27			
HL_COMB (EPNs RX1-VENT, RX2-	Annual Emissions cap from Heat load operations including	VOC	-	0.54			
		PM	-	0.76			

Major NSR Summary Table

Permit Numbers 9403B and PSDTX627M2					Issuance Date: 01/29/2025		
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**
VENT, RX4-VENT, RX5-VENT, RX9 VENT, L1-VENT, L2-VENT, and L3-VENT)	startup and shutdown	PM10	-	0.76	11	11, 24, 25, 26, 27, 28	
		PM2.5	-	0.76			
		NOx	-	50.00			
		CO	-	8.32			
		SO2	-	0.06			
BAGFILTFUG	Bagfilter Changeout Fugitives -MSS (9)	PM	0.57	0.01	8, 17, 21	8, 17, 24, 25, 26, 27, 28	
		PM_{10}	0.34	0.01			
		$PM_{2.5}$	0.24	0.01			
BRICKFUG	Re-bricking Fugitives - MSS (10)	PM	2.10	0.05		26, 27, 28	
		PM_{10}	2.10	0.05			
		$PM_{2.5}$	0.53	0.01			
TG-FUG	Reactor Area Fugitives (7)	NO_x	0.01	0.01			
		SO_2	0.01	0.02			
		CO	0.33	1.37			

Major NSR Summary Table

Permit Numbers 9403B and PSDTX627M2					Issuance Date: 01/29/2025		
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
		VOC	0.30	1.25	3, 5, 17	3, 5, 17, 24, 25	3
		H_2S	0.01	0.02			
		COS	0.01	0.01			
		CS_2	0.01	0.01			
		BZ	0.01	0.01			
		HCN	0.01	0.01			
		Ethane	0.03	0.11			
		Propane	0.01	0.01			
		Acetylene	0.01	0.05			

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
H_2S - hydrogen sulfide
COS - carbonyl sulfide
CS_2 - carbon disulfide
HCN - hydrogen cyanide
BZ - benzene
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period and a maximum operating schedule of 8400 hours per year.
(5) VOC includes (but is not limited to) Acetylene, COS, CS_2, and BZ.
(6) Annual emissions are regulated under the waste gas combustion annual emissions cap, EPN: WG-CAP.
(7) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(8) Startup and shutdown emissions of products of natural gas combustion are captured in the emission rates for EPNs 1 INC and WG-CAP.
(9) PM emissions from bagfilter changeouts do not occur simultaneously with production emissions from the corresponding unit and are captured by EPNs 1 INC and WG-CAP. Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(10) PM emissions from re-bricking are captured by EPNs 1 INC and WG-CAP. Production rates will be reduced to stay within the PM emission limits. Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Texas Commission on Environmental Quality
Air Quality Permit

A Permit Is Hereby Issued To
Orion Engineered Carbons LLC
Authorizing the Continued Operation of
Orange Carbon Black Plant
Located at **Orange, Orange County, Texas**
Latitude 30.151388 Longitude -93.721944

Permits: 9403B and PSDTX627M2

Issuance Date: January 29, 2025

Expiration Date: January 29, 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)]

8. **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]
9. **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)]
10. **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)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]
12. **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)]
13. **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.
14. **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
$\mu g/m^3$ = 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
H_2CO = formaldehyde
H_2S = hydrogen sulfide
H_2SO_4 = 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 H_2O = 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
m^3 = 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
MSS = 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 PM_{10} and $PM_{2.5}$, as represented
$PM_{2.5}$ = particulate matter equal to or less than 2.5 microns in diameter
PM_{10} = 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
SO_2 = 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

Permit Numbers 9403B and PSDTX627M2

1. This permit authorizes the continued operation of existing facilities and activities in support of a carbon black manufacturing plant located at 1513 Echo Road in Orange, Texas.

    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. This permit does not include the facilities at the site or the planned maintenance, startup or shutdown (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 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. 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 June 22, 2022.

Federal Requirements

3. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60):

    A. Subpart A, General Provisions.

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

    C. Subpart JJJJ, Stationary Spark Ignition Internal Combustion Engines.

4. 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 in 40 CFR Part 61:

    A. Subpart A, General Provisions.

    B. Subpart M, Asbestos.

    C. Subpart FF, Benzene Waste Operations.

5. 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:

    A. Subpart A, General Provisions.

B. Subpart YY, Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process.

C. Subpart SS, Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards.

Operational Limitations

6. The feedstock usage rate for all reactors combined shall not exceed 34,650 pounds per hour averaged on a daily basis.

7. The total sulfur content of the carbon black feedstock is limited to the following:

   A. 2.0 percent by weight on annual basis, 2.25 percent by weight on a 30-day rolling average basis, and 2.5 percent maximum 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.

   B. The annual average shall be calculated on a rolling 365-day basis.

   C. The sulfur content of the feedstock oil shall be recorded daily based on analysis of each barge shipment and according to the procedures in Special Condition 34 and 35.

   D. Records must contain sufficient information to readily demonstrate compliance with the above sulfur limits.

8. Storage tank throughput and service shall be limited to the following:

Tank Identifier	Service	Fill/Withdrawal rate (gallons/hour)	Rolling 12 Month Throughput (gallons)
11	Carbon Black Oil	70,000	28,167,185
12	Carbon Black Oil	70,000	28,167,185
13	Carbon Black Oil	70,000	56,334,371

The permit holder shall maintain a record of tank throughput for the previous month and the past consecutive 12 month period for each tank.

Emissions from tanks shall be calculated using the methods that were used to determine the MAERT limits in the renewal application, Form PI-1 received October 2nd, 2024.

9. All fixed-roof carbon black oil storage tanks (EPNs: 11 through 13) shall be equipped for bottom fill or equipped with submerged fill lines.

10. Fuel Sources

    A. Carbon black reactor tail gas shall be combusted in the incinerator (EPN 1 INC), boiler (EPN: 9), and the carbon black dryers (EPNs: 20, 21, 22, and 23).

    B. Fuel used in all other fired sources shall be limited to pipeline-quality, sweet natural gas as supplied by the gas company. Use of any other fuel requires authorization from the TCEQ.

11. All fabric filter collection and control devices that limit particulate matter (PM) 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. A log shall be kept on-site which notes each device 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.

12. PM 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.

13. All baghouses shall have a maximum outlet grain loading of 0.01 grain/dry standard cubic feet.

14. Visible emissions and opacity related requirements that apply to the sources and emissions points authorized in this permit are as follows:

    A. Visible emissions for more than 15 seconds from any source or EPN not identified in Special Condition Nos. 14.B or 16 shall be corrected immediately. Visible emissions lasting longer than 5 minutes shall be noted in the daily shift records including date, time, duration, location and corrective action taken.

    B. Visible emissions observations for the carbon black dryer stacks (EPNs: 20, 21, 22 and 23) shall be conducted and documented once per week.

       The visible emissions observations shall be performed as follows. Observations shall be made at least 15 feet and no more than 0.25 miles 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 (i.e., at the observer's back) can be maintained for all three emission points. Contributions from uncombined water shall not be included in determining compliance with this condition. Visible emissions observations shall be of at least 15 seconds. Visible emissions observations shall be documented and recorded when they are conducted. The source shall be operating when the visible emissions observation is made.

(1) If visible emissions are observed for more than 12 seconds within a 15 second observation period for the carbon black dryers, then the following requirements also apply:

(a) An opacity observation shall be conducted for the EPN and documented in accordance with Test Method (TM) 9 of 40 CFR Part 60, Appendix A-4 (Method 9). The averaging period when conducting a TM 9 observation is six minutes. If any carbon black dryer stacks exceed 10% (average over six minutes) opacity, then this constitutes a violation of visible emissions. If a violation has been identified then an evaluation of the source of the visible emissions and opacity, including an evaluation of the operating parameters of the source and any control systems governing the facility whose emission point is being observed for visible emissions shall be conducted and documented within 24 hours of the observation. Steps shall be taken immediately to minimize and restore, if possible, a condition of no visible emissions for the facility and EPN. The steps necessary for the restoration to a condition of operations with no visible emissions for the facility and EPN, shall be accomplished and documented by performance of a visible emissions observation within one week of first observation of visible emissions.

(b) The documentation of the evaluation of the source of the visible emissions shall include at least the date, time, and results of the visible emissions and opacity observations conducted. The documentation shall also include the cause of the visible emissions, the steps taken to restore the system to a condition of no visible emissions, including a description of any corrective action taken, the person or persons conducting the various observations and restoration activities, and the results of the visible emissions observation used to demonstrate that the system has been restored to a condition of no visible emissions.

(c) In the event that operations with no visible emissions are unable to be restored within the week of first observation of visible emissions, then Method 9 opacity observations, comprised of 10 six-minute observation periods, shall be conducted and documented each operating day until the source is restored to an operating condition of no visible emissions.

C. 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 Special Condition No. 14.B unless otherwise specified by the person requiring the observation to be conducted.

Continuous Emissions Monitoring (CEMS)

15. 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 and O_2 from the VOC Incinerator (EPN: 1 INC).

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 NO_x emissions from the Incinerator shall be limited to 70 ppmvd at 0% oxygen in normal operations on a 1-hour basis.

D. 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 pounds per hour:

E. The measured (averaging period) average concentration from the CEMS shall be multiplied by the exhaust gas flow rate calculated by the fuel flow rate as measured by the incinerator's flow meter and Fd factors to determine the hourly emission rate.

F. 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.

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.

G. Quality-assured (or valid) data must be generated when the incinerator 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 incinerator 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.

16. The NH_3 concentration in in the VOC Incinerator (EPN: 1 INC) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to the frequency listed below. Testing for NH_3 slip is only required on days when the SCR unit is in operation.

    A. Ammonia slip emission shall be estimated based on a maximum outlet concentration of 10 parts per million by dry volume (ppmvd) at 3% oxygen (% O_2)

    B. 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 limitations in this permit.

    C. As an approved alternative to sorbent or stain tube testing or an NH_3 CEMS, the permit holder may install and operate a second NO_x CEMS probe located upstream of the SCR, which may be used in association with the SCR efficiency and NH_3 injection rate to estimate NH_3 slip using the mass balance equation. This condition shall not be construed to set a minimum NO_x reduction efficiency on the SCR unit. These results shall be recorded and used to determine compliance with the limitations in this permit.

    D. As an approved alternative to sorbent or stain tube testing, NH_3 CEMS, or a second NO_x CEMS, 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 a NH_3 converter to convert NH_3 to NO_x and then to a second NO_x CEMS. The NH_3 slip concentration shall be calculated from the delta between the two NO_x CEMS readings (converted and unconverted). These results shall be recorded and used to determine compliance with the limitations in the permit

    E. Any other method used for measuring NH_3 slip shall require prior approval from the appropriate TCEQ Regional Office.

Aqueous Ammonia (NH3)

17. The permit holder shall maintain prevention and protection measures for the NH_3 storage system. The NH_3 storage tank area will be diked and protected to protect the NH_3 storage area from accidents that could cause a rupture.

18. The permit holder shall maintain the piping and valves in NH_3 service as follows:

    A. Audio, visual, and olfactory (AVO) checks for NH_3 leaks shall be made once a shift.

    B. Immediately, but no later than 24 hours upon detection of a leak, following the 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.

Main Stack Control Device

19. All excess process bag filter emissions shall be routed to the VOC incinerator (EPN 1 INC), designed to burn approximately 65 percent of all of the waste gas which may be generated, with sufficient capacity to incinerate all of the excess gases which normally go to the main bag filter stack plus those which are normally diverted to the cogeneration system. This will ensure that, under all normal operations and most conceivable upset conditions, all of the gases generated in the process are burned before they are emitted to the atmosphere. The following control and recordkeeping requirements shall apply:

    A. The thermal oxidizer firebox exit temperature shall be maintained at not less than 1300 °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 the initial stack test. As 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. 26.

    B. The thermal oxidizer (EPN 1 INC) shall maintain the VOC concentration in the exhaust gas less than 10 ppmvd on a dry basis and on a 1-hour basis, corrected to 3 percent oxygen (11.68 ppmvd corrected to 0 percent oxygen), or achieve a VOC destruction efficiency greater than 99.9 percent.

    The VOC incinerator is exempt from the minimum temperature requirements of Special Condition 19A while the above concentration limit is maintained.

    C. If a future nuisance violation is issued by the TCEQ and the violation is directly attributable to particulate being emitted from the main stack, the TCEQ Executive Director may require the permit holder to install additional control devices which would remove at least 90 percent of the particulate entering the main process bagfilter stack.

    D. Startup operations of the incinerator begin when oil is first introduced into the reactor and lasts until tail gas is separated from the product by the primary bag filter. Shutdown operations begin when tail gas is no longer being separated from the product and ends when oil stops being fired to the reactor.

    E. The permit holder shall maintain records which are sufficient to demonstrate proper functioning of the control device to design specifications. These shall include (but not limited to) the following:

    (1) Continuous monitoring of the incinerator inlet gas flow rate on an hourly average basis and combustion chamber temperature on a six-minute average basis (as described in the Title V Permit O-1660 per 30 TAC 115.121(a)(1)).

    (2) Recording of incinerator failure and notation of appearances of black smoke from the incinerator.

    (3) The date and reason for any maintenance and repair of the required control device and the estimated quantity and duration of emissions during such activities.

    F. The 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 monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications, other written procedures that provide an adequate assurance that the device is calibrated accurately,

or at least annually, whichever is more frequent, and shall be accurate to the greater of one of the following: ± 0.75% of the temperature being measured in degrees Celsius; or ± 2.5 degrees Celsius.

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 (type) oxidizer operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded.

Additional Particulate Matter Monitoring

20. The permit holder shall monitor PM using continuous particulate monitors or equivalent monitoring system approved by appropriate TCEQ Regional Office from the streams going to the following locations:

    A. Process Boiler Stack (EPN: 9).

    B. Dryer Bagfilter Stacks (EPNs: 2, 2a, 3 and 4).

    C. Main Primary Bag filter Vents (which are venting to Incinerator - EPN: 1 INC).

    D. Dryer Stacks (EPNs: 20, 21, 22, and 23)

    The continuous particulate monitors (or equivalent monitoring system) shall be operated in the normal operating range established and documented during initial start-up and testing of the continuous particulate monitor (or equivalent monitoring system). The continuous particulate monitors (or equivalent monitoring system) shall be designed and operated with a minimum of 95 percent on-line time. If a continuous particulate monitor is not operational, the permit holder shall implement backup monitoring as defined in Special Condition No. 21 below.

    The TCEQ can require the permit holder to lower the failure level blackness rating if there are continuing confirmed nuisance conditions attributable to a bagfilter and monitoring has not shown exceedances of the present failure blackness rating.

    If a continuous particulate monitor (or equivalent monitoring system) signals that there has been an exceedance of a particulate level, immediate action shall be taken to determine and isolate the source (e.g., isolate a bag by turning off the pulse jet, block in a compartment, shutdown operation of the reaction process in question) until repairs can be made.

    Prior to the installation of a monitoring system, the permit holder will submit for review a report and supporting documentation for the appropriate TCEQ Regional Office review of the testing and evaluation of the particulate monitoring system. The appropriate TCEQ Regional Office will review and compare the clean-side baghouse checks to the testing data of the monitoring system. The review will be conducted so an exceedance of particulate level for the monitoring system can be established.

    The permit holder shall monitor and record on a continuous basis all continuous particulate monitoring data and develop a log which contains the following information:

A. Date of exceedance of particulate;

B. Process which had exceedance of particulate;

C. Time exceedance of particulate was detected;

D. Time bagfilter process in question was shutdown or blocked in; and

E. Corrective action taken.

All continuous particulate monitoring data (or equivalent monitoring system) and backup monitoring (in the event a monitor malfunctions) records and logs shall be retained for at least five years on-site at the Orange Facility. They shall be made available upon the request of the Executive Director of the TCEQ, his designated representative, or any local air pollution agency having jurisdiction.

21. In the event that a continuous particulate monitor (or equivalent monitoring system) is not operational, backup emission monitoring shall be implemented as follows:

A. Manually record the particulate monitor readings every four hours; or

B. If the particulate monitor is down, conduct visual inspections of the stack for visual PM emissions every four hours. If visual inspections indicate the presence of PM from EPNs: 9, 2, 2a, 3, 4, or 1 INC, the permit holder will immediately sample for total suspended particulate using the Baghouse Particulate Sampling Protocol. Immediate action will be taken if the results indicate a rating of "3" or higher as described below; or

C. If continuous monitor downtime exceeds 5 percent per calendar quarter, develop, and implement a quality improvement plan.

Baghouse Particulate Sampling Protocol:

A Bacharach True-Spot Smoke Detector, Model RCC (No. 21-7006), will be utilized when the continuous particulate monitor (or equivalent monitoring system) is down. The detector tube is inserted into the subject outlet duct and the sampler is pumped one time, drawing a sample of gas through the instrument and the sampling filter. There is a scale supplied with the detector which has a "blackness" rating from 0 to 9. The sample strip is compared to the scale, and a value of 0 to 9 is assigned. A rating of "3" or higher requires immediate action as described below.

If a check shows that a dryer baghouse or process bagfilter has a failure, immediate action must be taken to determine and isolate the source (e.g., isolate a bag by turning off the pulse jet, block in a compartment, shutdown operation of the reaction process in question) so repairs can be made. The definition of a failure shall be any sample which has a blackness rating of "3" or higher according to the scale supplied with the True-Spot Smoke Detector used for the testing.

22. The permit holder shall maintain a file of all measurements including a continuous monitoring system (CMS), monitoring devices, performance testing measurements, all CMS performance evaluations, all CMS or monitoring device calibration checks, adjustment and maintenance performed on these systems or devices, and visual stack inspections, Bacharach True-Spot Smoke Detector results for CMS backup. This information shall be recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurements, maintenance, reports, and records. The file shall be available for inspection by federal, state, and local air pollution control agencies.

23. The permit holder shall calibrate, maintain, and operate the continuous particulate monitors (or equivalent monitoring system) according to the manufacturers' specifications and recommendations and/or the TCEQ-approved specifications and recommendations.

Demonstration of Compliance

24. 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. 14 shall be used to demonstrate ongoing compliance with emissions limitations of the MAERT for the carbon black dryer stacks. Further, the monitoring requirements specified in Special Condition Nos. 13 through 14, and 19 through 23 shall be used to demonstrate ongoing compliance for baghouses, boilers and dryer bagfilter stacks.

    B. The oil feedstock rate limits of Special Condition No. 6 and the feedstock sulfur limits of Special Condition No. 7 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 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.

Testing/Sampling

25. Sampling ports and platforms shall be incorporated into the design of all exhaust stacks according to the specifications set forth in the enclosure entitled "Chapter 2, Stack Sampling Facilities" before testing. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Director.

26. The holder of this permit 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 VOC incinerator (EPN 1 INC). The unit shall be tested while operating at maximum capacity. The holder of this permit 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 in accordance with the appropriate U.S. Environmental Protection Agency (EPA) Test Methods.

A. The TCEQ Beaumont Regional Office shall be contacted as soon as testing is scheduled, but not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:

(1) 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.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports. A written proposed description of any deviation from sampling procedures specified in permit conditions, the TCEQ or the EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures. 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 New Source Performance Standards testing which must have the EPA approval shall be submitted to the TCEQ Regional Office.

B. Air contaminants emitted from the VOC incinerator to be tested for include (but are not limited to) VOC, nitrogen oxides (NO_x), sulfur dioxide, and carbon monoxide. Methods to be used are Methods 2, 6C, 7E, 10 and 18 of 40 CFR Part 60, Appendix A.

C. Sampling shall occur within 60 days after initial start-up of the facilities. Sampling may also occur at such other times as may be required by the Executive Director of the TCEQ. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office. Additional time to comply with the applicable requirements of 40 CFR Part 60 and 40 CFR Part 61 requires the EPA approval, and requests shall be submitted to the TCEQ Regional Office.

D. The plant shall operate at maximum production rates during stack emission testing. Primary operating parameters that enable determination of production rate shall be monitored and recorded during the stack test. These parameters shall be determined at the pretest meeting and shall include, at a minimum, the combined feedstock rate to all reactors. If the plant is unable to operate at maximum rates during testing, then future production rates may be limited to the rates established during testing. Additional stack testing may be required when higher production rates are achieved.

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

One copy to the TCEQ Beaumont Regional Office.

One copy to the Central File Room, Austin.

F. Initial performance testing for the VOC incinerator was completed in May 2000.

Bag Filter Replacement Schedule

27. The permit holder shall replace all bags and/or filters so no bag/filter will be in use which exceeds 80 percent of its expected average life. The projected average life shall be determined by the manufacturer with supporting information being supplied by the permit holder. The 80 percent should be calculated from the average that the manufacturer recommends. Example: if the manufacturer recommends a bag life of 48 to 52 months, the average bag life would be 50 months; therefore, 80 percent of the bag life would be 40 months.

28. The permit holder shall maintain the following records:

    A. Location of a newly installed bag/filter.

    B. The date when a new bag/filter is installed.

    C. The date when a bag/filter was replaced.

    D. Note the reason the bag/filter was replaced: due to either a failure in the bag/filter or replaced because the bag/filter reached the designated percentage of the projected bag/filter life.

29. Additional Authorized Planned Specific Activities

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

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
Bagfilter 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.

    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 and as updated on March 11, 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

30. 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 Orange Facility .

A. Daily records of carbon black oil feedstock reactor feed rate to demonstrate compliance with Special Condition No. 6.

B. Records of sulfur content of the carbon black feedstock to demonstrate compliance with Special Condition No. 7. and 36.

C. Records in sufficient detail to demonstrate compliance with Special Condition No. 10 for fuel sources.

D. Records in sufficient detail to demonstrate compliance with Special Condition Nos. 11, 12, 13, and 24.D for fabric filter system.

E. Records demonstrating compliance with the incinerator required in Special Condition Nos. 15, 16, 19, and 37.

F. Records demonstrating compliance with particulate monitoring required in Special Condition Nos. 20 through 23, 34, and 35.

G. Field records of any visible emissions and opacity observations, along with any corrective actions taken, as required under Special Condition No. 14.

H. Records of any performance tests conducted in accordance with Special Condition Nos. 26 and 27 shall be retained for the life of the unit.

I. Records of all planned maintenance, startup, and shutdown activities conducted in accordance with Special Condition No. 29 of this permit. The planned MSS activity records shall at least contain the information required in Special Condition No. 29.

J. Records of the number of hours during which nitric acid-treated black is produced.

K. Records as dictated by Special Condition 40 shall be retained and preserved in electronic form until five years from termination.

31. 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. 30 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. 31.A

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.

32. With the exception of the MAERT emission limits, these planned maintenance startup and shutdown permit conditions become effective 180 days after this permit amendment has been issued. Emissions shall be estimated using good engineering practice and methods to provide reasonably accurate representations for emissions. The basis used for determining the quantity of air contaminants to be emitted shall be recorded.

Consent Decree

33. 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 (EPNs: 2, 2a, 3, 4, 9, 20, 21, 22, 23, and streams venting EPN – 1 INC). 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.

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.

34. 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

35. The permit holder shall process carbon black feedstock with a sulfur content of no greater than 2.25% weight percent on a 30-day rolling average and 2.0% weight percent on a 365-day rolling average .

A. Demonstration of compliance for the above feedstock sulfur content shall be met by:

(1) At least once per calendar week, analyzing the sulfur content of the feedstock in each storage tank on a weight % basis and the liquid density in pounds per gallon (lb/gallon), or

(2) Within one Business Day of each feedstock delivery, calculating the feedstock sulfur content of each tank, through the following equation;

$$S_t = \frac{VS\rho + V_1 S_1 \rho_1}{V\rho + V\rho_1}$$

Where:

S_t= Tank-specific feedstock sulfur content, after the delivery of feedstock into the tank, weight %

V= Volume of the feedstock in the tank, prior to the delivery of feedstock into the tank, gallons

ρ= Liquid density of the feedstock in the tank, prior to the delivery of feedstock into the tank, lb/gallon

V_1= Volume of feedstock delivered into the tank, gallons

S_1= Sulfur content of the feedstock delivered into the tank as certified by the feedstock supplier, weight %

ρ_1= Liquid density of the feedstock delivered into the tank as certified by the feedstock supplier, lb/gallon

36. The permit holder shall design, install, and continuously operate a selective catalytic reduction unit as the VOC Incinerator's (EPN: 1 INC) or Co-Generation System's control technology .

A. The SCR shall be designed to achieve a minimum of 90% removal of the incinerator's NO_x emissions at all times.

B. A CEMS shall be used to continuously monitor the incinerator's or co-generation system's NO_x 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 on the incinerator or the Waste Heat Boiler that constitutes the Co-Generation System.

37. 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:

$$X = \left(\sum_{i=1}^{365} \left[\frac{\varphi + consumption_i}{2000\ lbs} \right] \right)$$

Where:

"X" = the cumulative NO_x emissions (tons) during preceding 365 days

"φ" = 0.48 lbs NO_x/MMBtu

"i" = each day in the preceding 365 days

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

38. The permit holder shall comply with a final site-wide NO_x emission cap of 378 tons per year .

39. 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.

40. 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, 365-day Rolling Average sulfur Content Weight Percent, feedstock sulfur content monitoring requirements, NO_x 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 data collected for each Orange Process System, from the time any 30-day Rolling Average Sulfur Content Weight Percent and/or 365-day Rolling Average Sulfur Content Weight Percent is exceeded until compliance is achieved, and any explanation of any periods of downtime of any relevant equipment that prohibited the collection of such data.

    C. All CEMS data collected for each Process System, from the time any emissions limit regarding NOx control technology, monitoring requirements or caps is exceeded until compliance is achieved, and an explanation of any periods of downtime of such CEMS.

    D. 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.

    E. 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

41. 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.

Description	Registration Date (if applicable)	Rule Number
Boilers, heaters and other combustion devices	09/04/2000	§106.183
Welding/Cutting/Brazing	09/04/2000	§106.227
General facilities	11/01/2003	§106.261
General facilities	09/04/2000	§106.262
General facilities	11/01/2003	§106.262
Hand-held and manually operated machines	09/04/2000	§106.265
Cooling water units	09/04/2000	§106.371
Portable and emergency engines and turbines	09/04/2000	§106.511
Sewage treatment facility	09/04/2000	§106.531
Water/wastewater treatment	09/04/2000	§106.532

Dated: January 29, 2025

Attachment I
Planned MSS Activities and Authorizations for Permit Nos. 9403B and PSDTX627M2

De Minimis Facilities (30 TAC Chapter 116)	
Source or Activity – De Minimis	**Authorization**
Manual application (hand wipe cleaning) of cleaning solvents containing less than 1% VOC	§116.119(a)(1)
Aerosol solvent and lubricants usage	§116.119(a)(1)
Application of coatings less than 100 gallons per year	§116.119(a)(2)
Application of solvents less than 50 gallons per year	§116.119(a)(2)

Permit By Rule Facilities (30 TAC Chapter 106)		
Source or Activity – PBR	**Registration Date (if applicable)**	**Authorization**
Repairs and Maintenance	11/01/2001	§106.263
Replacement of facilities	9/04/2000	§106.264
Fuel dispensing	9/04/2000	§106.412
Dry abrasive cleaning	9/04/2000	§106.452
Remote reservoir parts washers at Maintenance Shop	9/04/2000	§106.454
Degreasing units	11/01/2001	§106.454
Liquid loading and unloading	3/14/1997	§106.472
Liquid loading and unloading	9/04/2000	§106.473

Date: December 5, 2014

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 9403B and PSDTX627M2

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)
WG-CAP (EPNs: 1 INC, 2, 2a, 3, 4, 9, 20, 21, 22, and 23)	Waste Gas Combustion Annual Emissions Cap (5)	PM	-	202.15
		PM_{10}	-	120.99
		$PM_{2.5}$	-	86.50
		NO_x	-	378.00
		SO_2	-	3880.74
		CO	-	1310.59
		VOC	-	50.16
		H_2S	-	35.00
		COS	-	9.20
		CS_2	-	13.80
		HCN	-	9.63
		BZ	-	0.51
		NH_3	-	3.15

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
1 INC	VOC Incinerator (5,6)	PM	29.30	-
		PM_{10}	17.58	-
		$PM_{2.5}$	12.60	-
		NO_x	9.47	-
		NO_x (MSS)	94.70	-
		SO_2	756.2	-
		CO	204.0	-
		VOC	8.30	-
		H_2S	6.85	-
		COS	1.80	-
		CS_2	2.70	-
		HCN	1.50	-
		BZ	0.08	-
		NH_3	0.75	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
2	Dryer Filter No. 1 (5,6)	PM	1.00	-
		PM_{10}	0.60	-
		$PM_{2.5}$	0.43	-
		NO_x	0.99	-
		SO_2	9.61	-
		VOC	0.10	-
		CO	2.60	-
		H_2S	0.09	-
		COS	0.02	-
		CS_2	0.04	-
		HCN	0.02	-
		BZ	<0.01	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
2a	Dryer Filter No. 2 (5,6)	PM	1.00	-
		PM_{10}	0.60	-
		$PM_{2.5}$	0.43	-
		NO_x	0.99	-
		SO_2	9.61	-
		VOC	0.10	-
		CO	2.60	-
		H_2S	0.09	-
		COS	0.02	-
		CS_2	0.04	-
		HCN	0.02	-
		BZ	<0.01	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
3	Dryer Filter No. 3 (5,6)	PM	1.00	-
		PM_{10}	0.60	-
		$PM_{2.5}$	0.43	-
		NO_x	0.99	-
		SO_2	9.61	-
		VOC	0.10	-
		CO	2.60	-
		H_2S	0.09	-
		COS	0.02	-
		CS_2	0.04	-
		HCN	0.02	-
		BZ	<0.01	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
4	Dryer Filter No. 4 (5,6)	PM	1.00	-
		PM_{10}	0.60	-
		$PM_{2.5}$	0.43	-
		NO_x	0.99	-
		SO_2	9.61	-
		VOC	0.10	-
		CO	2.60	-
		H_2S	0.09	-
		COS	0.02	-
		CS_2	0.04	-
		HCN	0.02	-
		BZ	<0.01	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
9	Process Steam Boiler Stack (5,6)	PM	3.00	-
		PM_{10}	1.80	-
		$PM_{2.5}$	1.29	-
		NO_x	12.10	-
		SO_2	96.31	-
		CO	26.00	-
		VOC	1.10	-
		H_2S	0.87	-
		COS	0.23	-
		CS_2	0.34	-
		HCN	0.20	-
		BZ	<0.01	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
20	Carbon Black Dryer No. 1 Stack (5,6)	PM	3.00	-
		PM_{10}	1.80	-
		$PM_{2.5}$	1.29	-
		NO_x	9.88	-
		SO_2	86.68	-
		CO	26.00	-
		VOC	1.00	-
		H_2S	0.78	-
		COS	0.21	-
		CS_2	0.31	-
		HCN	0.20	-
		BZ	<0.01	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
21	Carbon Black Dryer No. 2 Stack (5,6)	PM	3.00	-
		PM_{10}	1.80	-
		$PM_{2.5}$	1.29	-
		NO_x	9.88	-
		SO_2	86.88	-
		CO	26.00	-
		VOC (5)	1.00	-
		H_2S	0.78	-
		COS	0.21	-
		CS_2	0.31	-
		HCN	0.20	-
		BZ	<0.01	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
22	Carbon Black Dryer No. 3 Stack (5,6)	PM	3.00	-
		PM_{10}	1.80	-
		$PM_{2.5}$	1.29	-
		NO_x	9.88	-
		SO_2	86.68	-
		CO	26.00	-
		VOC	1.00	-
		H_2S	0.78	-
		COS	0.21	-
		CS_2	0.31	-
		HCN	0.20	-
		BZ	<0.01	-

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
23	Carbon Black Dryer No. 4 Stack (5,6)	PM	3.00	-
		PM_{10}	1.80	-
		$PM_{2.5}$	1.29	-
		NO_x	9.88	-
		SO_2	86.88	-
		CO	26.00	-
		VOC	1.00	-
		H_2S	0.78	-
		COS	0.21	-
		CS_2	0.31	-
		HCN	0.20	-
		BZ	<0.01	-
AMMF-FUG	Ammonia Fugitives	NH_3	0.17	0.74
7	Rerun Line 2	PM	0.09	0.36
		PM_{10}	0.05	0.22
		$PM_{2.5}$	0.04	0.16
8	Rerun Line 1	PM	0.04	0.15
		PM_{10}	0.02	0.09
		$PM_{2.5}$	0.02	0.06
19	Packaging and Shipping	PM	0.56	2.34
		PM_{10}	0.33	1.40
		$PM_{2.5}$	0.24	1.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
24	Rerun Line 3	PM	0.04	0.15
		PM_{10}	0.02	0.09
		$PM_{2.5}$	0.02	0.06
25	Rerun Line 3	PM	0.04	0.15
		PM_{10}	0.02	0.09
		$PM_{2.5}$	0.02	0.06
26	Packaging and Shipping	PM	0.04	0.15
		PM_{10}	0.02	0.09
		$PM_{2.5}$	0.02	0.06
27	Rerun West System	PM	0.04	0.15
		PM_{10}	0.02	0.09
		$PM_{2.5}$	0.02	0.06
28	Sealed Bin Transloading	PM	0.09	0.40
		PM_{10}	0.06	0.24
		$PM_{2.5}$	0.04	0.17
16	Fugitives (7)	PM	2.13	8.93
		PM_{10}	1.28	5.36
		$PM_{2.5}$	0.91	3.84
11	CBO Tank 1	VOC	1.79	0.20
12	CBO Tank 2	VOC	1.79	0.20
13	CBO Tank 3	VOC	1.29	0.30

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
RX1-VENT, RX2-VENT, RX4-VENT, RX5-VENT, and RX9-VENT	Reactor Planned Startup, Combusted Natural Gas Vent to Atmosphere - MSS (8)	PM	0.27	0.38
		PM_{10}	0.27	0.38
		$PM_{2.5}$	0.27	0.38
		NO_x	17.63	25.00
		SO_2	0.02	0.03
		CO	3.02	4.16
		VOC	0.20	0.27
L1-VENT, L2-VENT, and L3-VENT	Unit Bagfilter Planned Startup, Combusted Natural Gas Vent to Atmosphere - MSS (8)	PM	0.27	0.38
		PM_{10}	0.27	0.38
		$PM_{2.5}$	0.27	0.38
		NO_x	17.63	25.00
		SO_2	0.02	0.03
		CO	3.02	4.16
		VOC	0.20	0.27
HL_COMB (EPNs RX1-VENT, RX2-VENT, RX4-VENT, RX5-VENT, RX9 VENT, L1-VENT, L2-VENT, and L3-VENT)	Annual Emissions cap from Heat load operations including startup and shutdown	VOC	-	0.54
		PM	-	0.76
		PM10	-	0.76
		PM2.5	-	0.76
		NOx	-	50.00
		CO	-	8.32
		SO2	-	0.06
BAGFILTFUG	Bagfilter Changeout Fugitives -MSS (9)	PM	0.57	0.01
		PM_{10}	0.34	0.01
		$PM_{2.5}$	0.24	0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
BRICKFUG	Re-bricking Fugitives - MSS (10)	PM	2.10	0.05
		PM_{10}	2.10	0.05
		$PM_{2.5}$	0.53	0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
TG-FUG	Reactor Area Fugitives (7)	NO_x	0.01	0.01
		SO_2	0.01	0.02
		CO	0.33	1.37
		VOC	0.30	1.25
		H_2S	0.01	0.02
		COS	0.01	0.01
		CS_2	0.01	0.01
		BZ	0.01	0.01
		HCN	0.01	0.01
		Ethane	0.03	0.11
		Propane	0.01	0.01
		Acetylene	0.01	0.05

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
H_2S - hydrogen sulfide
COS - carbonyl sulfide
CS_2 - carbon disulfide
HCN - hydrogen cyanide
BZ - benzene
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period and a maximum operating schedule of 8400 hours per year.
(5) VOC includes (but is not limited to) Acetylene, COS, CS_2, and BZ.
(6) Annual emissions are regulated under the waste gas combustion annual emissions cap, EPN: WG-CAP.
(7) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(8) Startup and shutdown emissions of products of natural gas combustion are captured in the emission rates for EPNs 1 INC and WG-CAP.

Emission Sources - Maximum Allowable Emission Rates

(9) PM emissions from bagfilter changeouts do not occur simultaneously with production emissions from the corresponding unit and are captured by EPNs 1 INC and WG-CAP. Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(10) PM emissions from re-bricking are captured by EPNs 1 INC and WG-CAP. Production rates will be reduced to stay within the PM emission limits. Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: January 29, 2025