

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

LOCATED AT
Orange County, Texas
Latitude 30° 9' 0" Longitude 93° 42' 45"
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: _____

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, Subpart YY as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, §113.560 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 either before or 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)
4. Permit holder shall comply with the following 30 TAC Chapter 115, Subchapter C requirements:
- A. When filling stationary gasoline storage vessels (Stage I) for motor vehicle fuel dispensing facilities, constructed prior to November 15, 1992, with transfers to stationary storage tanks located at a facility which has dispensed no more than 10,000 gallons of gasoline in any calendar month after January 1, 1991, the permit holder shall comply with the following requirements specified in 30 TAC Chapter 115, Subchapter C:

- (i) Title 30 TAC § 115.222(3) (relating to Control Requirements), as it applies to liquid gasoline leaks, visible vapors, or significant odors
 - (ii) Title 30 TAC § 115.222(6) (relating to Control Requirements)
 - (iii) Title 30 TAC § 115.224(1) (relating to Inspection Requirements), as it applies to liquid gasoline leaks, visible vapors, or significant odors
 - (iv) Title 30 TAC § 115.226(2)(B) (relating to Recordkeeping Requirements)
5. 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.
6. The permit holder shall comply with certified registrations submitted to the TCEQ for purposes of establishing federally enforceable emission limits. A copy of the certified registration shall be maintained with the permit. Records sufficient to demonstrate compliance with the established limits shall be maintained. The certified registration and records demonstrating compliance shall be provided, on request, to representatives of the appropriate TCEQ regional office and any local air pollution control agency having jurisdiction over the site. The permit holder shall submit updated certified registrations when changes at the site require establishment of new emission limits. If changes result in emissions that do not remain below major source thresholds, the permit holder shall submit a revision application to codify the appropriate requirements in the permit.

Additional Monitoring Requirements

7. 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 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

8. 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, 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
9. 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.
10. 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

11. 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.
12. 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).
13. 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)(2)
 - (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)(2)
 - (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)
14. 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

15. 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

16. 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)

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

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

Unit Summary 16

Applicable Requirements Summary 19

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.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
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.
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	True Vapor Pressure = True vapor pressure is greater than or equal to 1.0 psia but less than 1.5 psia, Tank Description = Tank does not require emission controls
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

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
					psia
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.

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	PM (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	PM (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	§ 115.122(a)(1) § 115.121(a)(1)	Vent gas affected by §115.121(a)(1) must be	[G]§ 115.125 § 115.126(1)	§ 115.126 § 115.126(1)	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)
				Controls	§ 115.122(a)(1)(C)	controlled properly with a control efficiency > 90% or to a VOC concentration of no more than 20 ppmv (dry, corrected to 3% O ₂ for combustion devices).	§ 115.126(1)(C) § 115.126(2) ** See Periodic Monitoring Summary	§ 115.126(1)(C) § 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	PM (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% O ₂ 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	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	The permit holder shall comply with the applicable recordkeeping	The permit holder shall comply with the applicable reporting requirements of 40 CFR

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)
					limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY		testing requirements of 40 CFR Part 63, Subpart YY	requirements of 40 CFR Part 63, Subpart YY	Part 63, Subpart YY
9	EP	R1111-9	PM (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	[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)
						psia is exempt from the requirements of this division.			
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
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% O ₂ 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 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
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)

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)
									§ 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

Additional Monitoring Requirements

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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: PM (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%	
<p>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.</p>	

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.	
<p>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.</p> <p>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.</p>	

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: PM (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%	
<p>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.</p>	

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 44MW)
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.	
<p>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.</p>	

*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-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: PM (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%	
<p>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.</p>	

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 44MW)
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.	
<p>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.</p>	

*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.: 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: PM (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%	
<p>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.</p>	

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 44MW)
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.	
<p>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.</p>	

*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.

Permit Shield

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Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
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.
9	N/A	40 CFR Part 60, Subpart D	Boiler fossil fuel-firing capacity does not

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		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
			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.
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.

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		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
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).
SFTKLN	N/A	40 CFR Part 63, Subpart T	Solvent contains <5% of required chemicals as listed in § 63.640(a) to be applicable to 40 CFR 63, Subpart T.

New Source Review Authorization References

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New Source Review Authorization References by Emission Unit..... 39

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: 12/05/2014
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: 12/05/2014
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
GTANK	SMALL GASOLINE TANK (1,000 GAL)	106.412/09/04/2000
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

Appendix A

Acronym List 42

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
COMS	.....	continuous opacity monitoring system
CVS	.....	closed-vent system
D/FW	.....	Dallas/Fort Worth (nonattainment area)
DR	.....	Designated Representative
ELP	.....	El Paso (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
GF	.....	grandfathered
gr/100 scf	.....	grains per 100 standard cubic feet
HAP	.....	hazardous air pollutant
H/G/B	.....	Houston/Galveston/Brazoria (nonattainment area)
H ₂ S	.....	hydrogen sulfide
ID No.	.....	identification number
lb/hr	.....	pound(s) per hour
MMBtu/hr	.....	Million British thermal units per hour
MRRT	.....	monitoring, recordkeeping, reporting, and testing
NA	.....	nonattainment
N/A	.....	not applicable
NADB	.....	National Allowance Data Base
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
PM	.....	particulate matter
ppmv	.....	parts per million by volume
PSD	.....	prevention of significant deterioration
RO	.....	Responsible Official
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..... 44

Major NSR Summary Table

Permit Number: 9403B and PSDTX627M2				Issuance Date: 12/5/2014			
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
WG-CAP	Waste Gas Combustion Annual Emissions Cap	PM	---	202.9	11	11 24 25	
		PM ₁₀	---	121.74	11	11 24 25	
		PM _{2.5}	---	87.25	11	11 24 25	
		NO _x	---	628.3			
		SO ₂	---	5,821.2	5	5 24 25	
		CO	---	1,307.5			
		VOC (5)	---	50.7			
		H ₂ S	---	52.6	5	5 24 25	
		COS	---	13.9	3 5	3 5 24 25	3
		CS ₂	---	20.7	3 5	3 5 24 25	3
		HCN	---	9.63	3	3	3
BZ	---	0.51	3	3	3		

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
1 INC	VOC Incinerator	PM	29.3	(6)	11 12 13 14 16	11 12 13 14 15 24 25	13
		PM ₁₀	17.58	(6)	11 12 13 14 16	11 12 13 14 15 24 25	13
		PM _{2.5}	12.6	(6)	11 12 13 14 16	11 12 13 14 15 24 25	13
		NO _x	95.2	(6)	12 19	12 19 24 25	19
		SO ₂	968.8	(6)	5 12 19	5 12 19 24 25	19
		CO	204.0	(6)	12 19	12 19 24 25	19
		VOC (5)	8.3	(6)	12 19	12 19 24 25	19
		H ₂ S	8.8	(6)	5 12	5 12 24 25	

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		COS	2.3	(6)	3 5 12	3 5 12 24 25	3
		CS ₂	3.5	(6)	3 5 12	3 5 12 24 25	3
		HCN	1.5	(6)	3 12	3 12 24 25	3
		BZ	<0.1	(6)	3 12	3 12 24 25	3
1A	Waste Heat Boiler	PM	29.3	(6)	11 13 14 16	11 13 14 15 24 25	13
		PM ₁₀	17.58	(6)	11 13 14 16	11 13 14 15 24 25	13
		PM _{2.5}	12.6	(6)	11 13 14 16	11 13 14 15 24 25	13
		NO _x	95.2	(6)	20	20 24 25	
		SO ₂	968.8	(6)	5	5 24 25	

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		CO	204.0	(6)			
		VOC (5)	8.3	(6)			
		H ₂ S	8.8	(6)	5	5 24 25	
		COS	2.3	(6)	3 5	3 5 24 25	3
		CS ₂	3.5	(6)	3 5	3 5 24 25	3
		HCN	1.5	(6)	3	3	3
		BZ	<0.1	(6)	3	3	3
2	Dryer Filter No. 1	PM	1.0	(6)	8 11 13 14 16	8 11 13 14 15 24 25	13
		PM ₁₀	0.6	(6)	8 11 13 14 16	8 11 13 14 15 24 25	13
		PM _{2.5}	0.43	(6)	8 11 13 14 16	8 11 13 14 15 24 25	13
		NO _x	1.2	(6)			
		SO ₂	12.3	(6)	5	5 24 25	

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		VOC (5)	0.1	(6)			
		CO	2.6	(6)			
		H ₂ S	0.1	(6)	5	5 24 25	
		COS	<0.1	(6)	3 5	3 5 24 25	3
		CS ₂	<0.1	(6)	3 5	3 5 24 25	3
		HCN	<0.1	(6)	3	3	3
		BZ	<0.1	(6)	3	3	3
2a	Dryer Filter No. 2	PM	1.0	(6)	8 11 13 14 16	8 11 13 14 15 24 25	13
		PM ₁₀	0.6	(6)	8 11 13 14 16	8 11 13 14 15 24 25	13
		PM _{2.5}	0.43	(6)	8 11 13 14 16	8 11 13 14 15 24 25	13
		NO _x	1.2	(6)			
		SO ₂	12.3	(6)	5	5 24 25	

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		VOC (5)	0.1	(6)			
		CO	2.6	(6)			
		H ₂ S	0.1	(6)	5	5 24 25	
		COS	<0.1	(6)	3 5	3 5 24 25	3
		CS ₂	<0.1	(6)	3 5	3 5 24 25	3
		HCN	<0.1	(6)	3	3	3
		BZ	<0.1	(6)	3	3	3
3	Dryer Filter No. 3	PM	1.0	(6)	8 11 13 14 16	8 11 13 14 15 24 25	13
		PM ₁₀	0.6	(6)	8 11 13 14 16	8 11 13 14 15 24 25	13
		PM _{2.5}	0.43	(6)	8 11 13 14 16	8 11 13 14 15 24 25	13
		NO _x	1.2	(6)			
		SO ₂	12.3	(6)	5	5 24 25	

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		VOC (5)	0.1	(6)			
		CO	2.6	(6)			
		H ₂ S	0.1	(6)	5	5 24 25	
		COS	<0.1	(6)	3 5	3 5 24 25	3
		CS ₂	<0.1	(6)	3 5	3 5 24 25	3
		HCN	<0.1	(6)	3	3	3
		BZ	<0.1	(6)	3	3	3
4	Dryer Filter No. 4	PM	1.0	(6)	8 11 13 14 16	8 11 13 14 15 24 25	13
		PM ₁₀	0.6	(6)	8 11 13 14 16	8 11 13 14 15 24 25	13
		PM _{2.5}	0.43	(6)	8 11 13 14 16	8 11 13 14 15 24 25	13
		NO _x	67.5	(6)			
		SO ₂	12.3	(6)	5	5 24 25	

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		VOC (5)	0.1	(6)			
		CO	2.6	(6)			
		H ₂ S	0.1	(6)	5	5 24 25	
		COS	<0.1	(6)	3 5	3 5 24 25	3
		CS ₂	<0.1	(6)	3 5	3 5 24 25	3
		HCN	<0.1	(6)	3	3	3
		BZ	<0.1	(6)	3	3	3
9	Process Steam Boiler Stack	PM	3.0	(6)	11 13 14 16	11 13 14 15 24 25	13
		PM ₁₀	1.8	(6)	11 13 14 16	11 13 14 15 24 25	13
		PM _{2.5}	1.29	(6)	11 13 14 16	11 13 14 15 24 25	13
		NO _x	12.1	(6)			
		SO ₂	123.3	(6)	5	5 24 25	
		CO	26.0	(6)			
		VOC (5)	1.1	(6)			

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		H ₂ S	1.1	(6)	5	5 24 25	
		COS	0.3	(6)	3 5	3 5 24 25	3
		CS ₂	0.4	(6)	3 5	3 5 24 25	3
		HCN	0.2	(6)	3	3	3
		BZ	<0.1	(6)	3	3	3
20	Carbon Black Dryer No. 1 Stack	PM	3.0	(6)	11	11 24 25	
		PM ₁₀	1.8	(6)	11	11 24 25	
		PM _{2.5}	1.29	(6)	11	11 24 25	
		NO _x	12.1	(6)			
		SO ₂	111.0	(6)	5	5 24 25	
		CO	26.0	(6)			
		VOC (5)	1.0	(6)			
		H ₂ S	1.0	(6)	5	5 24 25	
		COS	0.3	(6)	3 5	3 5 24 25	3
		CS ₂	0.4	(6)	3 5	3 5 24 25	3

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		HCN	0.2	(6)	3	3	3
		BZ	<0.1	(6)	3	3	3
21	Carbon Black Dryer No. 2 Stack	PM	3.0	(6)	11	11 24 25	
		PM ₁₀	1.8	(6)	11	11 24 25	
		PM _{2.5}	1.29	(6)	11	11 24 25	
		NO _x	12.1	(6)			
		SO ₂	111.0	(6)	5	5 24 25	
		CO	26.0	(6)			
		VOC (5)	1.0	(6)			
		H ₂ S	1.0	(6)	5	5 24 25	
		COS	0.3	(6)	3 5	3 5 24 25	3
		CS ₂	0.4	(6)	3 5	3 5 24 25	3
		HCN	0.2	(6)	3	3	3
		BZ	<0.1	(6)	3	3	3

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
22	Carbon Black Dryer No. 3 Stack	PM	3.0	(6)	11	11 24 25	
		PM ₁₀	1.8	(6)	11	11 24 25	
		PM _{2.5}	1.29	(6)	11	11 24 25	
		NO _x	12.1	(6)			
		SO ₂	111.0	(6)	5	5 24 25	
		CO	26.0	(6)			
		VOC (5)	1.0	(6)			
		H ₂ S	1.0	(6)	5	5 24 25	
		COS	0.3	(6)	3 5	3 5 24 25	3
		CS ₂	0.4	(6)	3 5	3 5 24 25	3
		HCN	0.2	(6)	3	3	3
BZ	<0.1	(6)	3	3	3		

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
23	Carbon Black Dryer No. 4 Stack	PM	3.0	(6)	11	11 24 25	
		PM ₁₀	1.8	(6)	11	11 24 25	
		PM _{2.5}	1.29	(6)	11	11 24 25	
		NO _x	12.1	(6)			
		SO ₂	111.0	(6)	5	5 24 25	
		CO	26.0	(6)			
		VOC (5)	1.0	(6)			
		H ₂ S	1.0	(6)	5	5 24 25	
		COS	0.3	(6)	3 5	3 5 24 25	3
		CS ₂	0.4	(6)	3 5	3 5 24 25	3
		HCN	0.2	(6)	3	3	3
		BZ	<0.1	(6)	3	3	3
7	Rerun Line 2	PM	0.09	0.36	8 11	8 11 24 25	
		PM ₁₀	0.05	0.22	8 11	8 11 24 25	

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		PM _{2.5}	0.04	0.16	8 11	8 11 24 25	
8	Rerun Line 1	PM	0.04	0.15	8 11	8 11 24 25	
		PM ₁₀	0.02	0.09	8 11	8 11 24 25	
		PM _{2.5}	0.02	0.06	8 11	8 11 24 25	
19	Packaging and Shipping	PM	0.56	2.34	8 11	8 11 24 25	
		PM ₁₀	0.33	1.4	8 11	8 11 24 25	
		PM _{2.5}	0.24	1.01	8 11	8 11 24 25	
24	Rerun Line 3	PM	0.04	0.15	8 11	8 11 24 25	
		PM ₁₀	0.02	0.09	8 11	8 11 24 25	
		PM _{2.5}	0.02	0.06	8 11	8 11 24 25	

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
25	Rerun Line 3	PM	0.04	0.15	8 11	8 11 24 25	
		PM ₁₀	0.02	0.09	8 11	8 11 24 25	
		PM _{2.5}	0.02	0.06	8 11	8 11 24 25	
26	Packaging and Shipping	PM	0.04	0.15	8 11	8 11 24 25	
		PM ₁₀	0.02	0.09	8 11	8 11 24 25	
		PM _{2.5}	0.02	0.06	8 11	8 11 24 25	
27	Rerun West System	PM	0.04	0.15	8 11	8 11 24 25	
		PM ₁₀	0.02	0.09	8 11	8 11 24 25	
		PM _{2.5}	0.02	0.06	8 11	8 11 24 25	

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
28	Sealed Bin Transloading	PM	0.09	0.40	8 11	8 11 24 25	
		PM ₁₀	0.06	0.24	8 11	8 11 24 25	
		PM _{2.5}	0.04	0.17	8 11	8 11 24 25	
16	Fugitives (7) from BLR-VENT, Dryer Filters 1-4 (EPNs 2, 2a, 3, 4), Packaging & Shipping (EPN 19), Rerun EPNs (7, 8, 25, 27)	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 Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
WG-FUG	Waste Gas System Fugitives (7)	NO _x	<0.01	<0.01	17	17	
		SO ₂	<0.01	0.03	5 17	5 17 24 25	
		CO	0.41	1.72	17	17	
		VOC (5)	0.02	0.10	17	17	
		H ₂ S	<0.01	0.02	5 17	5 17 24 25	
		COS	<0.01	0.01	3 5 17	3 5 17 24 25	3
		CS ₂	<0.01	0.02	3 5 17	3 5 17 24 25	3
BLR-VENT	Cogen Boiler Planned Startup, Tailgas Vent to Atmosphere - MSS (8)	PM	0.22	<0.01	11	11 23 24 25 26	
		PM ₁₀	0.13	0.01	11	11 23 24 25 26	
		PM _{2.5}	0.09	0.01	11	11 23 24 25 26	
		NO _x	0.16	<0.01		23 24 25 26	

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		SO ₂	1.41	0.02	5	5 23 24 25 26	
		CO	123.43	1.85		23 24 25 26	
		VOC (5)	4.99	0.04		23 24 25 26	
		H ₂ S	1.12	0.02	5	5 23 24 25 26	
		COS	0.68	0.01	3 5	3 5 23 24 25 26	3
		CS ₂	0.86	0.01	3 5	3 5 23 24 25 26	3
		HCN	0.58	0.01	3	3 23 24 25 26	3
		BZ	0.03	<0.01	3	3 23 24 25 26	3

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Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
RX1-VENT, RX2-VENT, RX4-VENT, RX5-VENT, and RX9-VENT	Reactor Planned Startup, Combusted Natural Gas Vent to Atmosphere - MSS (9)	PM	0.27	0.10	11	11 23 24 25 26	
		PM ₁₀	0.27	0.1	11	11 23 24 25 26	
		PM _{2.5}	0.27	0.1	11	11 23 24 25 26	
		NO _x	3.60	1.30		23 24 25 26	
		SO ₂	0.02	0.01		23 24 25 26	
		CO	3.02	1.09		23 24 25 26	
		VOC	0.20	0.07		23 24 25 26	

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
L1-VENT, L2-VENT, and L3-VENT	Unit Bagfilter Planned Startup, Combusted Natural Gas Vent to Atmosphere - MSS (9)	PM	0.27	0.10	11	11 23 24 25 26	
		PM ₁₀	0.27	0.1	11	11 23 24 25 26	
		PM _{2.5}	0.27	0.1	11	11 23 24 25 26	
		NO _x	3.60	1.30		23 24 25 26	
		SO ₂	0.02	0.01		23 24 25 26	
		CO	3.02	1.09		23 24 25 26	
		VOC	0.20	0.07		23 24 25 26	

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			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
BAGFILTFUG	Bagfilter Changeout Fugitives -MSS (10)	PM	0.57	0.01	8 17 21	8 17 22 23 24 25 26	
		PM ₁₀	0.34	0.01	8 17 21	8 17 22 23 24 25 26	
		PM _{2.5}	0.24	0.01	8 17 21	8 17 22 23 24 25 26	
BRICKFUG	Re-bricking Fugitives - MSS (11)	PM	2.10	0.05		23 24 25 26	
		PM ₁₀	2.1	0.05		23 24 25 26	
		PM _{2.5}	0.53	0.01		23 24 25 26	

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			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
TG-FUG	Reactor Area Fugitives (7)	NO _x	0.01	0.01	17	17	
		SO ₂	0.01	0.02	5 17	5 17 24 25	
		CO	0.33	1.37	17	17	
		VOC	0.3	1.25	17	17	
		H ₂ S	0.01	0.02	5 17	5 17 24 25	
		COS	0.01	0.01	3 5 17	3 5 17 24 25	3
		CS ₂	0.01	0.01	3 5 17	3 5 17 24 25	3
		BZ	0.01	0.01	3 17	3 17	3
		HCN	0.01	0.01	3 17	3 17	3
		Ethane	0.03	0.11	17	17	
		Propane	0.01	0.01	17	17	
		Acetylene	0.01	0.05	17	17	

Footnotes:

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
 - NO_x - total oxides of nitrogen
 - SO₂ - sulfur dioxide
 - PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
 - PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented
 - PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
 - CO - carbon monoxide
 - H₂S - hydrogen sulfide

- COS - carbonyl sulfide
- CS₂ - carbon disulfide
- HCN - hydrogen cyanide
- BZ - benzene
- HAP - hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C

- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period and a maximum operating schedule of 8400 hours per year.
- (5) VOC includes (but is not limited to) Acetylene, COS, CS₂, HCN, and BZ.
- (6) Annual emissions are regulated under the waste gas combustion annual emissions cap, WG-CAP.
- (7) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (8) MSS emissions from Cogen Boiler startup do not occur simultaneously with production emissions from the boiler and are captured by EPN 1A.
- (9) Startup and shutdown emissions of products of natural gas combustion are captured in the emission rates for EPNs 1 INC and WG-CAP.
- (10) PM emissions from bag filter change outs 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.
- (11) 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
Carbon Black Production Facility
Located at **Orange, Orange County, Texas**
Latitude 30° 9' 9" Longitude -93° 43' 14"

Permits: 9403B and PSDTX627M2

Issuance Date : December 5, 2014

Expiration Date: December 5, 2024

For the Commission

- 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 116.116 (30 TAC 116.116)]
- 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(a), (b) and (c)]
- 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)]
- 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)(iii)]
- 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; comply with any additional recordkeeping requirements specified in special conditions attached to 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)]
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 for upsets and maintenance 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, regulations, 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 a condition of "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.

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. Within 180 days of the issuance date of this permit for existing, modified or reconstructed sources / facilities, and no later than the startup date of new sources/facilities, the holder of the permit shall physically identify and mark in a conspicuous location the EPN for each source listed in the MAERT. A listing containing the EPN and source/facility names shall be maintained at the site. Source/facility names shall be those established in this permit with the associated facility identification number (FIN) as established in the point source emissions inventory for the source. Fugitive emissions sources need not be labeled, but their location and the EPN for each shall be annotated on a current plot plan kept for that purpose. All of the sources will be marked in agreement with their identification on the plot plan submitted with the application for this permit dated December 30, 2009, as updated on March 4, 2011.

Federal Requirements

3. The relevant facilities authorized under this permit are subject to the applicable requirements of Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), National Emission Standards for Hazardous Air Pollutants for Source Categories (MACT standards) as follows:
 - A. MACT Subpart A, General Provisions (40 CFR § 63.1 et seq.); and,
 - B. MACT Subpart YY, Generic Maximum Achievable Control Technology Standards for Carbon Black Production (40 CFR § 63.1100 et seq.) and for the tail gas control devices, Subpart SS, Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process (40 CFR § 63.980 et seq.) as applicable.

Operational Limitations

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

5. The total sulfur content of the carbon black feedstock is limited to 3.0 percent by weight on annual basis and 3.2 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. The annual average shall be calculated on a rolling 12-month basis. The sulfur content of the feedstock oil shall be recorded daily based on analysis of each barge shipment. Records must contain sufficient information to readily demonstrate compliance with the above sulfur limits.
6. All fixed-roof carbon black oil storage tanks (EPNs 11 through 13) shall be equipped for bottom fill or equipped with submerged fill lines.
7. Fuel Sources
 - A. Carbon black reactor tail gas shall be combusted in the incinerator (EPN 1 INC), boilers (EPNs 1A and 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.
8. 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.
9. 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.
10. All baghouses shall have a maximum outlet grain loading of 0.01 grain/dry standard cubic feet.
11. 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. 11.B or 13 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. 11.B unless otherwise specified by the person requiring the observation to be conducted.

Main Stack Control Device

- 12. 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 insure 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 incinerator shall operate with a minimum temperature of 1300 °F.
 - B. The incinerator shall achieve and maintain destruction efficiency for VOC of at least 98 percent.
 - 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. 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 and combustion chamber temperature (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.
 - E. 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 within one of the following: \pm 2% of reading; or \pm 2.5 degrees Celsius.

Additional Particulate Matter Monitoring

13. The permit holder shall monitor PM using continuous particulate monitors or equivalent monitoring system approved by appropriate TCEQ Regional Office from the following stacks:
 - A. Process Boiler Stack (EPN 9).
 - B. Cogeneration Boilers Stack (EPN 1a).
 - C. Dryer Bagfilter Stacks (EPNs 2, 2a, 3 and 4).
 - D. Main Process Bagfilter Stack (Incinerator Stack) (EPN 1 INC).

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. 14 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.

- 14. 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, 1a, 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.

- 15. 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.

16. 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

17. 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. 11 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. 10 through 16 shall be used to demonstrate ongoing compliance for baghouses, boilers and dryer bagfilter stacks.
 - B. The oil feedstock rate limits of Special Condition No. 4 and the feedstock sulfur limits of Special Condition No. 5 shall be used to demonstrate ongoing compliance with the emission limits in the MAERT.
 - C. All enclosures, ductwork, and collection systems routing carbon black or tail gas originating in part or in whole from any furnace shall be effective in capturing emissions from the intended equipment and in preventing fugitive emissions. The duct and collection system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the emissions capture system. To the extent that design will allow, the exterior of all ventilation systems in this facility will be visually inspected on a daily basis by facility personnel. Visible leaks and cracks shall, with every reasonable effort, be mitigated as soon as possible and finally repaired within a week of detection. Inspections and repairs shall be documented as they occur. A log shall be kept on-site which notes each system or ductwork related maintenance and repair activities, the date of each inspection, name of the inspector, the purpose of the inspection, and the nature of any repairs and maintenance work performed.
 - D. Planned maintenance (re-bagging) on the 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

18. 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.
19. 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.
20. In order to demonstrate actual emission of NO_x, the permit holder shall perform testing for NO_x annually and either carbon dioxide or oxygen from EPN 1A. This testing may be accomplished by performing reference method testing (See Condition No. 19) or with a portable analyzer. If a portable analyzer is used, the permit holder shall submit, and obtain approval of, a testing protocol prior to such testing.

Bag Filter Replacement Schedule

- 21. 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.
- 22. 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.

23. 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

24. 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. 4.
 - B. Records of sulfur content of the carbon black feedstock to demonstrate compliance with Special Condition No. 5.
 - C. Records in sufficient detail to demonstrate compliance with Special Condition No. 7 for fuel sources.
 - D. Records in sufficient detail to demonstrate compliance with Special Condition Nos. 8, 9, 10, and 17D for fabric filter system.
 - E. Records demonstrating compliance with the incinerator required in Special Condition No. 12.
 - F. Records demonstrating compliance with particulate monitoring required in Special Condition Nos. 13 through 16.
 - G. Field records of any visible emissions and opacity observations, along with any corrective actions taken, as required under Special Condition No. 11.
 - H. Records of any performance tests conducted in accordance with Special Condition Nos. 19 and 20 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. 23 of this permit. The planned MSS activity records shall at least contain the information required in Special Condition No. 23.
 - J. Records of the number of hours during which nitric acid-treated black is produced.
25. 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. 24 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. 25A.

- 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.
26. 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.

Permits by Rule

27. 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: December 5, 2014

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	Waste Gas Combustion Annual Emissions Cap	PM	---	202.9
		PM ₁₀	---	121.74
		PM _{2.5}	---	87.25
		NO _x	---	628.3
		SO ₂	---	5,821.2
		CO	---	1,307.5
		VOC (5)	---	50.7
		H ₂ S	---	52.6
		COS	---	13.9
		CS ₂	---	20.7
		H ₂ CN	---	9.63
		BZ	---	0.51
1 INC	VOC Incinerator	PM	29.3	(6)
		PM ₁₀	17.58	(6)
		PM _{2.5}	12.6	(6)
		NO _x	95.2	(6)
		SO ₂	968.8	(6)
		CO	204.0	(6)
		VOC (5)	8.3	(6)
		H ₂ S	8.8	(6)

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		COS	2.3	(6)
		CS ₂	3.5	(6)
		HCN	1.5	(6)
		BZ	<0.1	(6)
1A	Waste Heat Boiler	PM	29.3	(6)
		PM ₁₀	17.58	(6)
		PM _{2.5}	12.6	(6)
		NO _x	95.2	(6)
		SO ₂	968.8	(6)
		CO	204.0	(6)
		VOC (5)	8.3	(6)
		H ₂ S	8.8	(6)
		COS	2.3	(6)
		CS ₂	3.5	(6)
		HCN	1.5	(6)
		BZ	<0.1	(6)
2	Dryer Filter No. 1	PM	1.0	(6)
		PM ₁₀	0.6	(6)
		PM _{2.5}	0.43	(6)
		NO _x	1.2	(6)
		SO ₂	12.3	(6)
		VOC (5)	0.1	(6)
		CO	2.6	(6)

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		H ₂ S	0.1	(6)
		COS	<0.1	(6)
		CS ₂	<0.1	(6)
		HCN	<0.1	(6)
		BZ	<0.1	(6)
2a	Dryer Filter No. 2	PM	1.0	(6)
		PM ₁₀	0.6	(6)
		PM _{2.5}	0.43	(6)
		NO _x	1.2	(6)
		SO ₂	12.3	(6)
		VOC (5)	0.1	(6)
		CO	2.6	(6)
		H ₂ S	0.1	(6)
		COS	<0.1	(6)
		CS ₂	<0.1	(6)
		BZ	<0.1	(6)
3	Dryer Filter No. 3	PM	1.0	(6)
		PM ₁₀	0.6	(6)
		PM _{2.5}	0.43	(6)
		NO _x	1.2	(6)
		SO ₂	12.3	(6)
		VOC (5)	0.1	(6)

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		CO	2.6	(6)
		H ₂ S	0.1	(6)
		COS	<0.1	(6)
		CS ₂	<0.1	(6)
		HCN	<0.1	(6)
		BZ	<0.1	(6)
4	Dryer Filter No. 4	PM	1.0	(6)
		PM ₁₀	0.6	(6)
		PM _{2.5}	0.43	(6)
		NO _x	67.5	(6)
		SO ₂	12.3	(6)
		VOC (5)	0.1	(6)
		CO	2.6	(6)
		H ₂ S	0.1	(6)
		COS	<0.1	(6)
		CS ₂	<0.1	(6)
		HCN	<0.1	(6)
		BZ	<0.1	(6)
9	Process Steam Boiler Stack	PM	3.0	(6)
		PM ₁₀	1.8	(6)
		PM _{2.5}	1.29	(6)
		NO _x	12.1	(6)
		SO ₂	123.3	(6)

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		CO	26.0	(6)
		VOC (5)	1.1	(6)
		H ₂ S	1.1	(6)
		COS	0.3	(6)
		CS ₂	0.4	(6)
		HCN	0.2	(6)
		BZ	<0.1	(6)
20	Carbon Black Dryer No. 1 Stack	PM	3.0	(6)
		PM ₁₀	1.8	(6)
		PM _{2.5}	1.29	(6)
		NO _x	12.1	(6)
		SO ₂	111.0	(6)
		CO	26.0	(6)
		VOC (5)	1.0	(6)
		H ₂ S	1.0	(6)
		COS	0.3	(6)
		CS ₂	0.4	(6)
		HCN	0.2	(6)
		BZ	<0.1	(6)
21	Carbon Black Dryer No. 2 Stack	PM	3.0	(6)
		PM ₁₀	1.8	(6)
		PM _{2.5}	1.29	(6)
		NO _x	12.1	(6)

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		SO ₂	111.0	(6)
		CO	26.0	(6)
		VOC (5)	1.0	(6)
		H ₂ S	1.0	(6)
		COS	0.3	(6)
		CS ₂	0.4	(6)
		HCN	0.2	(6)
		BZ	<0.1	(6)
22	Carbon Black Dryer No. 3 Stack	PM	3.0	(6)
		PM ₁₀	1.8	(6)
		PM _{2.5}	1.29	(6)
		NO _x	12.1	(6)
		SO ₂	111.0	(6)
		CO	26.0	(6)
		VOC (5)	1.0	(6)
		H ₂ S	1.0	(6)
		COS	0.3	(6)
		CS ₂	0.4	(6)
		HCN	0.2	(6)
		BZ	<0.1	(6)
23	Carbon Black Dryer No. 4 Stack	PM	3.0	(6)
		PM ₁₀	1.8	(6)
		PM _{2.5}	1.29	(6)

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		NO _x	12.1	(6)
		SO ₂	111.0	(6)
		CO	26.0	(6)
		VOC (5)	1.0	(6)
		H ₂ S	1.0	(6)
		COS	0.3	(6)
		CS ₂	0.4	(6)
		HCN	0.2	(6)
		BZ	<0.1	(6)
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	1.4
		PM _{2.5}	0.24	1.01
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

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		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
WG-FUG	Waste Gas System Fugitives (7)	NO _x	<0.01	<0.01
		SO ₂	<0.01	0.03
		CO	0.41	1.72
		VOC (5)	0.02	0.10
		H ₂ S	<0.01	0.02
		COS	<0.01	0.01
		CS ₂	<0.01	0.02

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
BLR-VENT	Cogen Boiler Planned Startup, Tailgas Vent to Atmosphere - MSS (8)	PM	0.22	<0.01
		PM ₁₀	0.13	0.01
		PM _{2.5}	0.09	0.01
		NO _x	0.16	<0.01
		SO ₂	1.41	0.02
		CO	123.43	1.85
		VOC (5)	4.99	0.04
		H ₂ S	1.12	0.02
		COS	0.68	0.01
		CS ₂	0.86	0.01
		HCN	0.58	0.01
		BZ	0.03	<0.01
RX1-VENT, RX2-VENT, RX4-VENT, RX5-VENT, and RX9- VENT	Reactor Planned Startup, Combusted Natural Gas Vent to Atmosphere - MSS (9)	PM	0.27	0.10
		PM ₁₀	0.27	0.1
		PM _{2.5}	0.27	0.1
		NO _x	3.60	1.30
		SO ₂	0.02	0.01
		CO	3.02	1.09
		VOC	0.20	0.07
L1-VENT, L2-VENT, and L3-VENT	Unit Bagfilter Planned Startup, Combusted Natural Gas Vent to Atmosphere - MSS (9)	PM	0.27	0.10
		PM ₁₀	0.27	0.1
		PM _{2.5}	0.27	0.1
		NO _x	3.60	1.30

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		SO ₂	0.02	0.01
		CO	3.02	1.09
		VOC	0.20	0.07
BAGFILTFUG	Bagfilter Changeout Fugitives - MSS (10)	PM	0.57	0.01
		PM ₁₀	0.34	0.01
		PM _{2.5}	0.24	0.01
BRICKFUG	Re-bricking Fugitives - MSS (11)	PM	2.10	0.05
		PM ₁₀	2.1	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
		VOC	0.3	1.25
		H ₂ S	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

Emission Sources - Maximum Allowable Emission Rates

- NO_x - total oxides of nitrogen
 - SO₂ - sulfur dioxide
 - PM - total particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}, as represented
 - PM₁₀ - total particulate matter equal to or less than 10 microns in diameter, including PM_{2.5}, as represented
 - PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
 - CO - carbon monoxide
 - H₂S - hydrogen sulfide
 - COS - carbonyl sulfide
 - CS₂ - carbon disulfide
 - HCN - hydrogen cyanide
 - BZ - benzene
 - HAP - hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period and a maximum operating schedule of 8400 hours per year.
 - (5) VOC includes (but is not limited to) Acetylene, COS, CS₂, HCN, and BZ.
 - (6) Annual emissions are regulated under the waste gas combustion annual emissions cap, WG-CAP.
 - (7) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
 - (8) MSS emissions from Cogen Boiler startup do not occur simultaneously with production emissions from the boiler and are captured by EPN 1A.
 - (9) Startup and shutdown emissions of products of natural gas combustion are captured in the emission rates for EPNs 1 INC and WG-CAP.
 - (10) 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.
 - (11) 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: December 5, 2014