FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
Cabot Corporation

AUTHORIZING THE OPERATION OF
Cabot Pampa Plant
Carbon Black Manufacturing

LOCATED AT
Gray County, Texas
Latitude 35° 30′ 38″ Longitude 101° 0′ 55″
Regulated Entity Number: RN100221761

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: O1623 Issuance Date: June 10, 2026

For the Commission

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General Terms and Conditions

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

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

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

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

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

Special Terms and Conditions:

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

1. Permit holder shall comply with the following requirements:

    A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.

    B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.

    C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.

    D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.

    E. Emission units subject to 40 CFR Part 63, Subparts YY, ZZZZ, or DDDDD as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter

113, Subchapter C, §§ 113.560, 113.1090, or 113.1130, respectively, which incorporates the 40 CFR Part 63 Subpart by reference.

2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):

   A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements

   B. Title 30 TAC § 101.3 (relating to Circumvention)

   C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ

   D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ

   E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)

   F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)

   G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)

   H. Title 30 TAC § 101.221 (relating to Operational Requirements)

   I. Title 30 TAC § 101.222 (relating to Demonstrations)

   J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)

3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:

   A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute 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. 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.

D. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).

E. 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)

F. Outdoor burning, as stated in 30 TAC § 111.201, shall not be authorized unless the following requirements are satisfied:

(i) Title 30 TAC § 111.205 (relating to Exception for Fire Training)

(ii) Title 30 TAC § 111.221 (relating to Responsibility for Consequences of Outdoor Burning)

4. 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.

5. 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

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

New Source Review Authorization Requirements

7. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule (including the terms, conditions, monitoring, recordkeeping, and reporting identified in registered PBRs and permits by rule identified in the PBR Supplemental Tables dated February 17, 2026 in the application for project 38729), 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

8. 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.

9. 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).

10. The permit holder shall comply with the following requirements for Air Quality Standard Permits:

    A. Registration requirements listed in 30 TAC § 116.611, unless otherwise provided for in an Air Quality Standard Permit

    B. General Conditions listed in 30 TAC § 116.615, unless otherwise provided for in an Air Quality Standard Permit

    C. Requirements of the non-rule Air Quality Standard Permit for Pollution Control Projects

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. 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

13. Permit holders at a site subject to Title VI of the FCAA Amendments shall meet the following requirements for protection of stratospheric ozone:

    A. Any on site servicing, maintenance, and repair on refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants or non-exempt substitutes shall be conducted in accordance with 40 CFR Part 82, Subpart F. Permit holders shall ensure that repairs on or refrigerant removal from refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants are performed only by properly certified technicians using certified equipment. Records shall be maintained as required by 40 CFR Part 82, Subpart F.

Permit Location

14. 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)

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

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

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

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
26	SRIC ENGINES	N/A	63ZZZZ	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
29	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
34	PROCESS HEATERS/FURNACES	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
34A	PROCESS HEATERS/FURNACES	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
34B	PROCESS HEATERS/FURNACES	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
34C	PROCESS HEATERS/FURNACES	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
35	PROCESS HEATERS/FURNACES	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
38	PROCESS HEATERS/FURNACES	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
43	PROCESS HEATERS/FURNACES	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
44	PROCESS HEATERS/FURNACES	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
45	PROCESS HEATERS/FURNACES	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
7	SRIC ENGINES	N/A	63ZZZZ	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
72	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1111	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
90	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
90	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
91	FLARES	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
91	FLARES	N/A	63A	40 CFR Part 63, Subpart A	No changing attributes.
92	FLARES	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
92	FLARES	N/A	63A	40 CFR Part 63, Subpart A	No changing attributes.
93 DRYER1	PROCESS HEATERS/FURNACES	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
93 DRYER2	PROCESS HEATERS/FURNACES	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
96	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
GP-2VENT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
GP-3VENT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
GP-4VENT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
GP-5VENT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
GP-6 DRYER	PROCESS HEATERS/FURNACES	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.
GP-9 DRYER	PROCESS HEATERS/FURNACES	N/A	63DDDDD-1	40 CFR Part 63, Subpart DDDDD	No changing attributes.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
26	EU	63ZZZZ	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6602-Table 2c.6 § 63.6595(a)(1) § 63.6605(a) § 63.6605(b) § 63.6625(e) § 63.6625(f) § 63.6625(h) § 63.6625(j) § 63.6640(f)(1) § 63.6640(f)(2) § 63.6640(f)(2)(i) § 63.6640(f)(3)	For each existing emergency stationary SI RICE and black start stationary SI RICE with a site rating less than or equal to 500 HP, located at a major source, you must comply with the requirements as specified in Table 2c.6.a-c.	§ 63.6625(j) § 63.6640(a) § 63.6640(a)-Table 6.9.a.i § 63.6640(a)-Table 6.9.a.ii	§ 63.6625(j) § 63.6655(e) § 63.6655(f) § 63.6660(a) § 63.6660(b) § 63.6660(c)	§ 63.6640(e) § 63.6650(f)
29	EU	63DDDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.1 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7500(e) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(12) § 63.7540(a)(13)	For a new or existing boiler or process heater with a heat input capacity of less than or equal to 5 million Btu per hour designed to burn gas 1, a tune-up of the boiler or process heater must be conducted every 5 years as specified in § 63.7540.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
34	EU	63DDDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.1 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7500(e) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(12) § 63.7540(a)(13)	For a new or existing boiler or process heater with a heat input capacity of less than or equal to 5 million Btu per hour designed to burn gas 1, a tune-up of the boiler or process heater must be conducted every 5 years as specified in § 63.7540.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
34A	EU	63DDDDD	112(B)	40 CFR Part 63,	§ 63.7500(a)(1)-	For a new or existing boiler	§ 63.7515(d)	§ 63.7555(a)	[G]§ 63.7521(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)
		-1	HAPS	Subpart DDDDD	Table 3.1 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7500(e) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(12) § 63.7540(a)(13)	or process heater with a heat input capacity of less than or equal to 5 million Btu per hour designed to burn gas 1, a tune-up of the boiler or process heater must be conducted every 5 years as specified in § 63.7540.	[G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	§ 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
34B	EU	63DDDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.1 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7500(e) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(12) § 63.7540(a)(13)	For a new or existing boiler or process heater with a heat input capacity of less than or equal to 5 million Btu per hour designed to burn gas 1, a tune-up of the boiler or process heater must be conducted every 5 years as specified in § 63.7540.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
34C	EU	63DDDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.1 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7500(e) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(12) § 63.7540(a)(13)	For a new or existing boiler or process heater with a heat input capacity of less than or equal to 5 million Btu per hour designed to burn gas 1, a tune-up of the boiler or process heater must be conducted every 5 years as specified in § 63.7540.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
35	EU	63DDDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.1 § 63.7500(a)(1)	For a new or existing boiler or process heater with a heat input capacity of less	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 63.7500(a)(3) § 63.7500(e) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(12) § 63.7540(a)(13)	than or equal to 5 million Btu per hour designed to burn gas 1, a tune-up of the boiler or process heater must be conducted every 5 years as specified in § 63.7540.	§ 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	§ 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
38	EU	63DDDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.1 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7500(e) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(12) § 63.7540(a)(13)	For a new or existing boiler or process heater with a heat input capacity of less than or equal to 5 million Btu per hour designed to burn gas 1, a tune-up of the boiler or process heater must be conducted every 5 years as specified in § 63.7540.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
43	EU	63DDDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.1 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7500(e) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(12) § 63.7540(a)(13)	For a new or existing boiler or process heater with a heat input capacity of less than or equal to 5 million Btu per hour designed to burn gas 1, a tune-up of the boiler or process heater must be conducted every 5 years as specified in § 63.7540.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
44	EU	63DDDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.1 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7500(e)	For a new or existing boiler or process heater with a heat input capacity of less than or equal to 5 million Btu per hour designed to	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b)

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)
					§ 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(12) § 63.7540(a)(13)	burn gas 1, a tune-up of the boiler or process heater must be conducted every 5 years as specified in § 63.7540.	§ 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7560(a) § 63.7560(b) § 63.7560(c)	§ 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
45	EU	63DDDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.1 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7500(e) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(12) § 63.7540(a)(13)	For a new or existing boiler or process heater with a heat input capacity of less than or equal to 5 million Btu per hour designed to burn gas 1, a tune-up of the boiler or process heater must be conducted every 5 years as specified in § 63.7540.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
7	EU	63ZZZZ	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6602-Table 2c.1 § 63.6595(a)(1) § 63.6605(a) § 63.6605(b) § 63.6625(e) § 63.6625(f) § 63.6625(h) § 63.6625(i) § 63.6640(f)(1) § 63.6640(f)(2) § 63.6640(f)(2)(i) § 63.6640(f)(3)	For each existing emergency stationary CI RICE and black start stationary CI RICE, located at a major source, you must comply with the requirements as specified in Table 2c.1.a-c.	§ 63.6625(i) § 63.6640(a) § 63.6640(a)-Table 6.9.a.i § 63.6640(a)-Table 6.9.a.ii	§ 63.6625(i) § 63.6655(e) § 63.6655(f) § 63.6660(a) § 63.6660(b) § 63.6660(c)	§ 63.6640(e) § 63.6650(f)
72	EP	R1111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(B) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 20% averaged over a six minute period for any source on which construction was	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	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)
						begun after January 31, 1972.			
90	EP	R1111	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
90	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103(f)(3)(i)-Table 8(b)(1)(ii) § 63.1102(a) § 63.1102(e) § 63.982(a)(2)	Reduce emissions of total HAP by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices meeting the requirements of § 63.982(a)(2).	§ 63.1103(f)(3) § 63.1103(f)(4) § 63.1103(f)(5)	§ 63.1109(a) § 63.1109(b) § 63.1109(c) § 63.1109(d)	§ 63.1110(a)(1) § 63.1110(a)(10) § 63.1110(a)(2) § 63.1110(a)(3) § 63.1110(a)(4) § 63.1110(a)(5) § 63.1110(a)(6) § 63.1110(a)(7) § 63.1110(a)(8) § 63.1110(e) § 63.1110(f) § 63.1110(g)
91	EU	R1111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period. Non-excessive upset events are subject to the provisions under §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
91	CD	63A	Opacity	40 CFR Part 63, Subpart A	§ 63.11(b)(4) § 63.11(b)(1) § 63.11(b)(2) § 63.11(b)(3) § 63.11(b)(5) § 63.11(b)(6)(ii) § 63.11(b)(7)(i)	Flares shall be designed and operated with no visible emissions, except for periods of a total of 5 minutes or less during any 2 consecutive hrs. Test Method 22 in App. A of part	§ 63.11(b)(4) § 63.11(b)(5) § 63.11(b)(7)(i)	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						60 of this chapter shall be used.			
92	EU	R1111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period. Non-excessive upset events are subject to the provisions under §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
92	CD	63A	Opacity	40 CFR Part 63, Subpart A	§ 63.11(b)(4) § 63.11(b)(1) § 63.11(b)(2) § 63.11(b)(3) § 63.11(b)(5) § 63.11(b)(6)(ii) § 63.11(b)(7)(i)	Flares shall be designed and operated with no visible emissions, except for periods of a total of 5 minutes or less during any 2 consecutive hrs. Test Method 22 in App. A of part 60 of this chapter shall be used.	§ 63.11(b)(4) § 63.11(b)(5) § 63.11(b)(7)(i)	None	None
93 DRYER1	EU	63DDDDD -1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.3 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(13)	A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater must conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
93 DRYER2	EU	63DDDDD -1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.3 § 63.7500(a)(1)	A new or existing boiler or process heater without a continuous oxygen trim	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(13)	system and with heat input capacity of 10 million Btu per hour or greater must conduct a tune-up of the boiler or process heater annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions.	§ 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	§ 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
96	EP	R1111	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(B) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 20% averaged over a six minute period for any source on which construction was begun after January 31, 1972.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
GP-2VENT	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103(f)(3)(i)-Table 8(b)(1)(ii) § 63.1102(a) § 63.1102(e) § 63.982(a)(2)	Reduce emissions of total HAP by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices meeting the requirements of § 63.982(a)(2).	§ 63.1103(f)(3) § 63.1103(f)(4) § 63.1103(f)(5)	§ 63.1109(a) § 63.1109(b) § 63.1109(c) § 63.1109(d)	§ 63.1110(a)(1) § 63.1110(a)(10) § 63.1110(a)(2) § 63.1110(a)(3) § 63.1110(a)(4) § 63.1110(a)(5) § 63.1110(a)(6) § 63.1110(a)(7) § 63.1110(a)(8) § 63.1110(e) § 63.1110(f) § 63.1110(g)
GP-3VENT	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103(f)(3)(i)-Table 8(b)(1)(ii) § 63.1102(a) § 63.1102(e) § 63.982(a)(2)	Reduce emissions of total HAP by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent, by venting emissions	§ 63.1103(f)(3) § 63.1103(f)(4) § 63.1103(f)(5)	§ 63.1109(a) § 63.1109(b) § 63.1109(c) § 63.1109(d)	§ 63.1110(a)(1) § 63.1110(a)(10) § 63.1110(a)(2) § 63.1110(a)(3) § 63.1110(a)(4) § 63.1110(a)(5)

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)
						through a closed vent system to any combination of control devices meeting the requirements of § 63.982(a)(2).			§ 63.1110(a)(6) § 63.1110(a)(7) § 63.1110(a)(8) § 63.1110(e) § 63.1110(f) § 63.1110(g)
GP-4VENT	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103(f)(3)(i)-Table 8(b)(1)(ii) § 63.1102(a) § 63.1102(e) § 63.982(a)(2)	Reduce emissions of total HAP by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices meeting the requirements of § 63.982(a)(2).	§ 63.1103(f)(3) § 63.1103(f)(4) § 63.1103(f)(5)	§ 63.1109(a) § 63.1109(b) § 63.1109(c) § 63.1109(d)	§ 63.1110(a)(1) § 63.1110(a)(10) § 63.1110(a)(2) § 63.1110(a)(3) § 63.1110(a)(4) § 63.1110(a)(5) § 63.1110(a)(6) § 63.1110(a)(7) § 63.1110(a)(8) § 63.1110(e) § 63.1110(f) § 63.1110(g)
GP-5VENT	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103(f)(3)(i)-Table 8(b)(1)(ii) § 63.1102(a) § 63.1102(e) § 63.982(a)(2)	Reduce emissions of total HAP by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices meeting the requirements of § 63.982(a)(2).	§ 63.1103(f)(3) § 63.1103(f)(4) § 63.1103(f)(5)	§ 63.1109(a) § 63.1109(b) § 63.1109(c) § 63.1109(d)	§ 63.1110(a)(1) § 63.1110(a)(10) § 63.1110(a)(2) § 63.1110(a)(3) § 63.1110(a)(4) § 63.1110(a)(5) § 63.1110(a)(6) § 63.1110(a)(7) § 63.1110(a)(8) § 63.1110(e) § 63.1110(f) § 63.1110(g)
GP-6 DRYER	EU	63DDDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.1 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7500(e) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10)	For a new or existing boiler or process heater with a heat input capacity of less than or equal to 5 million Btu per hour designed to burn gas 1, a tune-up of the boiler or process heater must be conducted every 5	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 63.7540(a)(12) § 63.7540(a)(13)	years as specified in § 63.7540.	[G]§ 63.7540(c)		§ 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
GP-9 DRYER	EU	63DDDDD-1	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.2 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7500(e) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(11) § 63.7540(a)(13)	A new or existing boiler or process heater with heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour, in a unit designed to burn gas 1 must conduct a tune-up of the boiler or process heater biennially as specified in § 63.7540.	§ 63.7515(d) [G]§ 63.7521(f) [G]§ 63.7521(g) § 63.7521(h) § 63.7521(i) § 63.7530(g) § 63.7540(a) [G]§ 63.7540(a)(10) [G]§ 63.7540(c)	§ 63.7555(a) § 63.7555(a)(1) § 63.7555(a)(2) § 63.7555(g) § 63.7555(h) § 63.7560(a) § 63.7560(b) § 63.7560(c)	[G]§ 63.7521(g) § 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) [G]§ 63.7545(f) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)

Additional Monitoring Requirements

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 72	
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
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(B)
Monitoring Information	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: N/A	
Deviation Limit: There shall be no visible emissions. If visible emissions are observed, the permit holder shall either report a deviation or perform Test Method 9 within 24 hours and opacity shall not exceed 20%.	
Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 90	
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
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Visible Emissions	
Minimum Frequency: once per week	
Averaging Period: N/A	
Deviation Limit: There shall be no visible emissions. If visible emissions are observed, the permit holder shall either report a deviation or perform Test Method 9 within 24 hours and opacity shall not exceed 15%.	
Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 96	
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
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(B)
Monitoring Information	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: N/A	
Deviation Limit: There shall be no visible emissions. If visible emissions are observed, the permit holder shall either report a deviation or perform Test Method 9 within 24 hours and opacity shall not exceed 20%.	
Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.	

Permit Shield

Permit Shield

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

Unit / Group / Process ID No.	Group / Inclusive Units	Regulation	Basis of Determination
26	N/A	40 CFR Part 60, Subpart JJJJ	The natural gas engine was constructed prior to June 12, 2006 and has not been modified or reconstructed after this date.
29	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire a solid or liquid fuel.
29	N/A	40 CFR Part 60, Subpart Dc	The unit has a maximum design heat input capacity less than 10 MMBtu/hr.
34	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire a solid or liquid fuel.
34A	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire a solid or liquid fuel.
34B	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire a solid or liquid fuel.
34C	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire solid or liquid fuel.
35	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire a solid or liquid fuel.
38	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire a solid or liquid fuel.
43	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire a solid or liquid fuel.
44	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire a solid or liquid fuel.
45	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire a solid or liquid fuel.
47A	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire a solid or liquid fuel.
47A	N/A	40 CFR Part 60, Subpart Dc	The unit has a maximum design capacity less than 10 MMBtu/hr.
47A	N/A	40 CFR Part 63, Subpart DDDDD	The unit is a hot water heater as defined in Subpart DDDDD.
47B	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire a solid or liquid fuel.
47B	N/A	40 CFR Part 60, Subpart Dc	The unit has a maximum design capacity less than 10 MMBtu/hr.

Permit Shield

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

Unit / Group / Process ID No.	Group / Inclusive Units	Regulation	Basis of Determination
47B	N/A	40 CFR Part 63, Subpart DDDDD	The unit is a hot water heater as defined in Subpart DDDDD.
47C	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire a solid or liquid fuel.
47C	N/A	40 CFR Part 60, Subpart Dc	The unit has a maximum design capacity less than 10 MMBtu/hr.
47C	N/A	40 CFR Part 63, Subpart DDDDD	The unit is a hot water heater as defined in Subpart DDDDD.
7	N/A	40 CFR Part 60, Subpart IIII	The diesel engine was constructed prior to July 11, 2005 and has not been modified or reconstructed after this date.
ATU TANK 1	N/A	40 CFR Part 60, Subpart K	Constructed prior to June 11, 1973 and has not been modified or reconstructed after this date.
ATU TANK 2	N/A	40 CFR Part 60, Subpart K	Constructed prior to June 11, 1973 and has not been modified or reconstructed after this date.
ATU TANK 3	N/A	40 CFR Part 60, Subpart K	Constructed prior to June 11, 1973 and has not been modified or reconstructed after this date.
DEG	N/A	40 CFR Part 63, Subpart T	Does not use a listed solvent in a concentration greater than 5%.
FSTK1	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than or equal to 151 cubic meters and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
FSTK2	N/A	40 CFR Part 60, Subpart Ka	Storage vessel stores a petroleum liquid with a Reid vapor pressure less than 6.9 kPa (1.0 psia) and maximum true vapor pressure is less than 6.9 kPa.

Permit Shield

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

Unit / Group / Process ID No.	Group / Inclusive Units	Regulation	Basis of Determination
FSTK3	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than or equal to 151 cubic meters and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
FSTK4	N/A	40 CFR Part 60, Subpart Kb	Storage vessel has a capacity greater than or equal to 151 cubic meters and stores a liquid with maximum true vapor pressure less than 3.5 kPa.
FSTK5	N/A	40 CFR Part 60, Subpart Kb	Storage vessel capacity is between 75 cubic meters and 151 cubic meters and stores a liquid with a maximum true vapor pressure less than 15 kPa.
FSTK6	N/A	40 CFR Part 60, Subpart K	Constructed prior to June 11, 1973 and has not been modified or reconstructed after this date.
NAT#1	N/A	40 CFR Part 60, Subpart K	Vessel does not store a petroleum liquid.
NAT#2	N/A	40 CFR Part 60, Subpart K	Vessel does not store a petroleum liquid.

New Source Review Authorization References

New Source Review Authorization References

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

Prevention of Significant Deterioration (PSD) Permits	
PSD Permit No.: GHGPSDTX213	Issuance Date: 11/17/2022
PSD Permit No.: PSDTX934M2	Issuance Date: 11/17/2022
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.: 40088	Issuance Date: 11/17/2022
Permits By Rule (30 TAC Chapter 106) for the Application Area	
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: 11/01/2003
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.265	Version No./Date: 09/04/2000
Number: 106.418	Version No./Date: 09/04/2000
Number: 106.452	Version No./Date: 03/14/1997
Number: 106.454	Version No./Date: 07/08/1998
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: 106.532	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**
26	200-HP WAUKASAU ENGINE/COMPRESSOR	40088, PSDTX934M2
29	BOILER	106.183/09/04/2000
34	U-5 AIR HEATER	40088, PSDTX934M2
34A	U-2 AIR HEATER	40088, PSDTX934M2
34B	INSTRUMENT AIR HEATER	40088, PSDTX934M2
34C	GP-4 MICRONIZER AIR HEATER	106.183/09/04/2000
35	U-5 FEEDSTOCK HEATER	40088, PSDTX934M2
38	ATU NATURAL GAS HEATER	106.183/09/04/2000
43	U-2 FEEDSTOCK HEATER	40088, PSDTX934M2
44	U-3/4 FEEDSTOCK HEATER	40088, PSDTX934M2
45	PETRO-CHEM FEEDSTOCK HEATER	40088, PSDTX934M2
47A	HOT WATER HEATER	40088, PSDTX934M2
47B	BATHHOUSE HEATER	40088, PSDTX934M2
47C	BATHHOUSE HEATER	40088, PSDTX934M2
7	140-HP WAUKASAU DIESEL ENGINE	40088, PSDTX934M2
72	GP-6 AND GP-9 ATU PROCESS VENT	40088, GHGPSDTX213, PSDTX934M2
90	MAIN TAIL GAS THERMAL OXIDIZER STACK	40088, PSDTX934M2
91	GP-3 FLARE	40088, PSDTX934M2
92	GP-4 FLARE	40088, PSDTX934M2
93 DRYER1	GP-2 PELLET DRYER 1	40088, PSDTX934M2
93 DRYER2	GP-2 PELLET DRYER 2	40088, PSDTX934M2

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**
96	ATU PROCESS FILTER VENT	40088, GHGPSDTX213, PSDTX934M2
ATU TANK 1	CARBON BLACK SURGE TANK	40088, GHGPSDTX213, PSDTX934M2
ATU TANK 2	DRY CARBON BLACK TANK	40088, GHGPSDTX213, PSDTX934M2
ATU TANK 3	FLUFFY TANK	40088, GHGPSDTX213, PSDTX934M2
DEG	DEGREASER	106.454/09/04/2000
FSTK1	FEEDSTOCK TANK 1	40088, PSDTX934M2
FSTK2	FEEDSTOCK TANK 2	40088, PSDTX934M2
FSTK3	FEEDSTOCK TANK 3	40088, PSDTX934M2
FSTK4	FEEDSTOCK TANK #4	40088, PSDTX934M2
FSTK5	FEEDSTOCK TANK 5	40088, PSDTX934M2
FSTK6	FEEDSTOCK TANK 6	40088, PSDTX934M2
GP-2VENT	GP-2 VENT	40088, PSDTX934M2, 106.183/09/04/2000, 106.262/09/04/2000
GP-3VENT	GP-3 VENT	40088, PSDTX934M2
GP-4VENT	GP-4 VENT	40088, PSDTX934M2
GP-5VENT	GP-5 VENT	40088, PSDTX934M2
GP-6 DRYER	GP-6 ATU DRYER	40088, GHGPSDTX213, PSDTX934M2
GP-9 DRYER	GP-9 DRYER	40088, GHGPSDTX213, PSDTX934M2
NAT#1	NITRIC ACID TANK #1	106.472/09/04/2000
NAT#2	NITRIC ACID TANK #2	106.472/09/04/2000

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

Appendix A

Acronym List

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

ACFM ..... actual cubic feet per minute
AMOC ..... alternate means of control
ARP ..... Acid Rain Program
ASTM ..... American Society of Testing and Materials
B/PA ..... Beaumont/Port Arthur (nonattainment area)
CAM ..... Compliance Assurance Monitoring
CD ..... control device
CEMS ..... continuous emissions monitoring system
CFR ..... Code of Federal Regulations
COMS ..... continuous opacity monitoring system
CVS ..... closed vent system
D/FW ..... Dallas/Fort Worth (nonattainment area)
EP ..... emission point
EPA ..... U.S. Environmental Protection Agency
EU ..... emission unit
FCAA Amendments ..... Federal Clean Air Act Amendments
FOP ..... federal operating permit
gr/100 scf ..... grains per 100 standard cubic feet
HAP ..... hazardous air pollutant
H/G/B ..... Houston/Galveston/Brazoria (nonattainment area)
H_2S ..... hydrogen sulfide
ID No. ..... identification number
lb/hr ..... pound(s) per hour
MACT ..... Maximum Achievable Control Technology (40 CFR Part 63)
MMBtu/hr ..... Million British thermal units per hour
NA ..... nonattainment
N/A ..... not applicable
NADB ..... National Allowance Data Base
NESHAP ..... National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
NO_x ..... nitrogen oxides
NSPS ..... New Source Performance Standard (40 CFR Part 60)
NSR ..... New Source Review
ORIS ..... Office of Regulatory Information Systems
Pb ..... lead
PBR ..... Permit By Rule
PEMS ..... predictive emissions monitoring system
PM ..... particulate matter
ppmv ..... parts per million by volume
PRO ..... process unit
PSD ..... prevention of significant deterioration
psia ..... pounds per square inch absolute
RO ..... Responsible Official
SIP ..... state implementation plan
SO_2 ..... sulfur dioxide
TCEQ ..... Texas Commission on Environmental Quality
TSP ..... total suspended particulate
TVP ..... true vapor pressure
U.S.C. ..... United States Code
VOC ..... volatile organic compound

Appendix B

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
5	Packing House Sweeper Vacuum Filter	PM	0.20	0.70	18, 20	2, 15, 18, 20, 25, 26	
		PM_{10}	0.20	0.70	18, 20	2, 15, 18, 20, 25, 26	
		$PM_{2.5}$	0.20	0.70	18, 20	2, 15, 18, 20, 25, 26	
6	GP-2 Process Filter A	PM	1.33	4.93	4, 18, 20, 23, 27	2, 4, 15, 18, 20, 23, 25, 26, 27	18, 24
		PM_{10}	1.10	4.90	4, 18, 20, 23, 27	2, 4, 15, 18, 20, 23, 25, 26, 27	18, 24
		$PM_{2.5}$	0.65	2.39	4, 18, 20, 23, 27	2 4, 15, 18, 20, 23, 25, 26, 27	18, 24
		SO_2	0.20	0.90	4, 5	2, 4, 5, 25, 26	
		COS	0.70	2.60	3, 4, 5	2, 3,4, 5, 25, 26	3
		CS_2	1.10	4.20	3, 4, 5	2, 3,4, 5, 25, 26	3
		H_2S	6.10	23.30	4, 5, 28	2, 4, 5, 25, 26, 28	28
		NO_x	0.21	0.94	4	2, 4, 25, 26	
		NH_3	0.10	0.33	4	2, 4, 25, 26	
		HCN	0.75	3.30	3, 4	2, 3,4, 25, 26	
		CO	316.79	1387.53	4	2, 4, 25, 26	
		VOC	3.30	13.50	4, 28	2, 4, 25, 26 , 28	28

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
7	140 brake horsepower (hp) Waukesha Diesel Engine (5)	PM	0.30	0.02	3	2, 3, 13, 14, 25, 26	3
		PM_{10}	0.30	0.02	3	2, 3, 13, 14, 25, 26	3
		$PM_{2.5}$	0.30	0.02	3	2, 3, 13, 14, 25, 26	3
		SO_2	0.28	0.01	3	2, 3, 13, 14, 25, 26	3
		NO_x	4.32	0.22	3	2, 3, 13, 14, 25, 26	3
		CO	0.93	0.05	3	2, 3, 13, 14, 25, 26	3
		VOC	0.35	0.02	3	2, 3, 13, 14, 25, 26	3
8	Pellet Packer Dust Vacuum Filter (5)	PM	0.20	0.80	18, 20	2, 15, 18, 20, 25, 26	15, 16
		PM_{10}	0.20	0.80	18, 20	2, 15, 18, 20, 25, 26	15, 16
		$PM_{2.5}$	0.20	0.80	18, 20	2, 15, 18, 20, 25, 26	15, 16
11	GP-3/4 Process Filter A (6)	PM	1.21	5.27	4, 18, 20	2, 4, 15, 18, 20, 25, 26	4, 15, 16
		PM_{10}	0.84	3.65	4, 18, 20	2, 4, 15, 18, 20, 25, 26	4, 15, 16
		$PM_{2.5}$	0.59	2.56	4, 18,20	2, 4, 15, 18, 20, 25, 26	4, 18,20
		SO_2	0.35	1.54	4, 5	2, 4, 5, 25, 26	
		COS	0.28	1.20	3, 4, 5	2, 3, 4, 5, 25, 26	3
		CS_2	1.05	4.60	3, 4, 5	2, 3, 4, 5, 25, 26	3

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		H_2S	1.31	4.37	4, 5	2, 4, 5, 25, 26	
		NO_x	0.10	0.44	4	2, 4, 25, 26	
		NH_3	0.19	0.82	4	2, 4, 25, 26	
		HCN	1.04	4.55	3, 4	2, 3, 4, 25, 26	3
		CO	109.91	481.41	4	2, 4, 25, 26	
		VOC	4.52	19.79	4	2, 4, 25, 26	
14	GP-2 Process Filter B	PM	1.10	4.90	4, 18,20	2, 4, 15, 18, 20, 25, 26	4, 18,20
		PM_{10}	1.10	4.90	4, 18,20	2, 4, 15, 18, 20, 25, 26	4, 18,20
		$PM_{2.5}$	1.10	4.90	4, 18,20	2, 4, 15, 18, 20, 25, 26	4, 18,20
15	GP- 3/4 Process Filter B (6)	PM	1.28	5.60	4, 18,20	2, 4, 15, 18, 20, 25, 26	4, 18,20
		PM_{10}	0.89	3.88	4, 18,20	2, 4, 15, 18, 20, 25, 26	4, 18,20
		$PM_{2.5}$	0.62	2.72	4, 18,20	2, 4, 15, 18, 20, 25, 26	4, 18,20
		SO_2	0.41	1.79	4, 5	2, 4, 5, 25, 26	
		COS	0.33	1.45	3, 4, 5	2, 3, 4, 5, 25, 26	3
		CS_2	1.07	4.68	3, 4, 5	2, 3, 4, 5, 25, 26	3
		H_2S	0.93	2.85	4, 5	2, 4, 5, 25, 26	

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		NO_x	0.10	0.40	4	2, 4, 25, 26	
		NH_3	0.18	0.76	4	2, 4, 25, 26	
		HCN	0.97	4.22	3, 4	2, 3, 4, 25, 26	3
		CO	94.28	412.92	4	2, 4, 25, 26	
		VOC	4.65	20.35	4	2, 4, 25, 26	
16	Warehouse Vacuum Filter	PM	0.09	0.40	18,20	2, 15, 18, 20, 25, 26	
		PM_{10}	0.09	0.40	18,20	2, 15, 18, 20, 25, 26	
		$PM_{2.5}$	0.09	0.40	18,20	2, 15, 18, 20, 25, 26	
21	GP-2 Rerun Vacuum Filter	PM	0.09	0.40	18,20	2, 15, 18, 20, 25, 26	
		PM_{10}	0.09	0.40	18,20	2, 15, 18, 20, 25, 26	
		$PM_{2.5}$	0.09	0.40	18,20	2, 15, 18, 20, 25, 26	
22	Durant Packers Vacuum Filter	PM	0.10	0.40	18,20	2, 15, 18, 20, 25, 26	
		PM_{10}	0.10	0.40	18,20	2, 15, 18, 20, 25, 26	
		$PM_{2.5}$	0.10	0.40	18,20	2, 15, 18, 20, 25, 26	
26	200 hp Waukesha Engine/Compressor (5)	PM	0.06	0.27	18, 20	2, 15, 18, 20, 25, 26	18, 20
		PM_{10}	0.06	0.27	18, 20	2, 15, 18, 20, 25, 26	18, 20

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		$PM_{2.5}$	0.06	0.27	18, 20	2, 15, 18, 20, 25, 26	18, 20
		SO_2	0.40	1.80	3	2, 3, 14, 25, 26	3
		NO_x	4.80	21.00	3	2, 3, 14, 25, 26	3
		CO	0.70	2.90	3	2, 3, 14, 25, 26	3
		VOC	0.20	0.80	3	2, 3, 14, 25, 26	3
31	GP-5 Process Filter	PM	0.20	0.92	18, 20, 23	2, 15, 18, 20, 23, 25, 26	23
		PM_{10}	0.20	0.92	18, 20, 23	2, 15, 18, 20, 23, 25, 26	23
		$PM_{2.5}$	0.20	0.92	18, 20, 23	2, 15, 18, 20, 23, 25, 26	23
		SO_2	0.10	0.30	5	2, 5, 25, 26	
		COS	0.30	1.00	3, 5, 23	2, 3, 5, 23, 25, 26	3, 23
		H_2S	2.30	8.80	3, 5	2, 5, 25, 26	
		NO_x	0.10	0.40		2, 25, 26	
		NH_3	0.03	0.10		2, 25, 26	
		HCN	0.30	1.40	3, 23	2, 3, 23, 25, 26	3, 23
		CO	76.10	338.40		2, 25, 26	

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		VOC	0.30	1.00		2, 25, 26	
34	GP-5 Air Heater (5)	PM	<0.01	0.02		2, 14, 25, 26	
		PM_{10}	<0.01	0.02		2, 14, 25, 26	
		$PM_{2.5}$	<0.01	0.02		2, 14, 25, 26	
		SO_2	<0.01	<0.01		2, 14, 25, 26	
		NO_x	0.05	0.20		2, 14, 25, 26	
		CO	0.04	0.20		2, 14, 25, 26	
		VOC	<0.01	0.02		2, 14, 25, 26	
34A	GP-2 Air Heater (5)	PM	<0.01	0.02		2, 14, 25, 26	
		PM_{10}	<0.01	0.02		2, 14, 25, 26	
		$PM_{2.5}$	<0.01	0.02		2, 14, 25, 26	
		SO_2	<0.01	<0.01		2, 14, 25, 26	
		NO_x	0.05	0.20		2, 14, 25, 26	
		CO	0.04	0.18		2, 14, 25, 26	
		VOC	<0.01	0.02		2, 14, 25, 26	
34B	Instrument Air Heater	PM	<0.01	0.02		2, 14, 25, 26	

Major NSR Summary Table

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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
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
	(5)	PM_{10}	<0.01	0.02		2, 14, 25, 26	
		$PM_{2.5}$	<0.01	0.02		2, 14, 25, 26	
		SO_2	<0.01	<0.01		2, 14, 25, 26	
		NO_x	0.05	0.20		2, 14, 25, 26	
		CO	0.04	0.20		2, 14, 25, 26	
		VOC	<0.01	0.02		2, 14, 25, 26	
35	GP-5 Feedstock Heater (5)	PM	0.01	0.03		2, 14, 25, 26	
		PM_{10}	0.01	0.03		2, 14, 25, 26	
		$PM_{2.5}$	0.01	0.03		2, 14, 25, 26	
		SO_2	<0.01	<0.01		2, 14, 25, 26	
		NO_x	0.10	0.40		2, 14, 25, 26	
		CO	0.08	0.40		2, 14, 25, 26	
		VOC	0.01	0.05		2, 14, 25, 26	
36	GP-5 Sweeper Vacuum Filter	PM	0.08	0.30	18, 20	2, 15, 18, 20, 25, 26	
		PM_{10}	0.08	0.30	18, 20	2, 15, 18, 20, 25, 26	
		$PM_{2.5}$	0.08	0.30	18, 20	2, 15, 18, 20, 25, 26	

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
39	Berquist Tank Vacuum Filter	PM	0.13	0.60	18, 20	2, 15, 18, 20, 25, 26	
		PM_{10}	0.13	0.60	18, 20	2, 15, 18, 20, 25, 26	
		$PM_{2.5}$	0.13	0.60	18, 20	2, 15, 18, 20, 25, 26	
40	Reactor Sample Vacuum Filter	PM	0.13	0.50	18, 20	2, 15, 18, 20, 25, 26	
		PM_{10}	0.13	0.50	18, 20	2, 15, 18, 20, 25, 26	
		$PM_{2.5}$	0.13	0.50	18, 20	2, 15, 18, 20, 25, 26	
43	GP-2 Feedstock Heater (2)	PM	0.01	0.05		2, 14, 25, 26	
		PM_{10}	0.01	0.05		2, 14, 25, 26	
		$PM_{2.5}$	0.01	0.05		2, 14, 25, 26	
		SO_2	<0.01	<0.01		2, 14, 25, 26	
		NO_x	0.20	0.70		2, 14, 25, 26	
		CO	0.10	0.60		2, 14, 25, 26	
		VOC	0.01	0.07		2, 14, 25, 26	
44	GP-3/4 Feedstock Heater (5)	PM	0.02	0.10		2, 14, 25, 26	
		PM_{10}	0.02	0.10		2, 14, 25, 26	
		$PM_{2.5}$	0.02	0.10		2, 14, 25, 26	

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		SO_2	<0.01	0.01		2, 14, 25, 26	
		NO_x	0.30	1.10		2, 14, 25, 26	
		CO	0.20	1.00		2, 14, 25, 26	
		VOC	0.01	0.06		2, 14, 25, 26	
45	Petro-Chem Feedstock Heater (5)	PM	<0.01	0.02		2, 14, 25, 26	
		PM_{10}	<0.01	0.02		2, 14, 25, 26	
		$PM_{2.5}$	<0.01	0.02		2, 14, 25, 26	
		SO_2	<0.01	<0.01		2, 14, 25, 26	
		NO_x	0.07	0.30		2, 14, 25, 26	
		CO	0.06	0.30		2, 14, 25, 26	
		VOC	0.01	0.02		2, 14, 25, 26	
47A	Hot Water Heater (5)	PM	<0.01	0.01		2, 14, 25, 26	
		PM_{10}	<0.01	0.01		2, 14, 25, 26	
		$PM_{2.5}$	<0.01	0.01		2, 14, 25, 26	
		SO_2	<0.01	<0.01		2, 14, 25, 26	
		NO_x	0.02	0.09		2, 14, 25, 26	

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		CO	0.02	0.07		2, 14, 25, 26	
		VOC	<0.01	0.01		2, 14, 25, 26	
47B	Bathhouse Heater (5)	PM	<0.01	0.01		2, 14, 25, 26	
		PM_{10}	<0.01	0.01		2, 14, 25, 26	
		$PM_{2.5}$	<0.01	0.01		2, 14, 25, 26	
		SO_2	<0.01	<0.01		2, 14, 25, 26	
		NO_x	0.02	0.09		2, 14, 25, 26	
		CO	0.02	0.07		2, 14, 25, 26	
		VOC	<0.01	0.01		2, 14, 25, 26	
47C	Bathhouse Heater (5)	PM	<0.01	0.01		2, 14, 25, 26	
		PM_{10}	<0.01	0.01		2, 14, 25, 26	
		$PM_{2.5}$	<0.01	0.01		2, 14, 25, 26	
		SO_2	<0.01	<0.01		2, 14, 25, 26	
		NO_x	0.02	0.09		2, 14, 25, 26	
		CO	0.02	0.07		2, 14, 25, 26	
		VOC	<0.01	0.01		2, 14, 25, 26	

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
48-52 & 55	Feedstock Tanks 1-6	VOC	1.34	2.09	5, 27	2, 5, 25, 26, 27	27
62	GP-2 Startup Scrubber No. 1	PM	7.09	0.26	9, 18	2, 9, 18, 25, 26	
		PM_{10}	5.07	0.19	9, 18	2, 9, 18, 25, 26	
		$PM_{2.5}$	3.75	0.15	9, 18	2, 9, 18, 25, 26	
		SO_2	0.01	0.01	9	2, 9, 25, 26	
		NO_x	1.70	0.96	9	2, 9, 25, 26	
		CO	1.43	0.81	9	2, 9, 25, 26	
		VOC	0.09	0.05	9	2, 9, 25, 26	
63	GP-2 Startup Scrubber No. 2	PM	8.77	0.27	9, 18	2, 9, 18, 25, 26	
		PM_{10}	6.27	0.20	9, 18	2, 9, 18, 25, 26	
		$PM_{2.5}$	4.62	0.15	9, 18	2, 9, 18, 25, 26	
		SO_2	0.01	0.01	9	2, 9, 25, 26	
		NO_x	1.70	1.25	9	2, 9, 25, 26	
		CO	1.43	1.05	9	2, 9, 25, 26	
		VOC	0.09	0.07	9	2, 9, 25, 26	
64	GP-3 Startup Scrubber	PM	13.04	0.38	9, 18	2, 9, 18, 25, 26	

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		PM_{10}	9.27	0.27	9, 18	2, 9, 18, 25, 26	
		$PM_{2.5}$	6.80	0.20	9, 18	2, 9, 18, 25, 26	
		SO_2	0.01	<0.01	9	2, 9, 25, 26	
		NO_x	1.46	0.28	9	2, 9, 25, 26	
		CO	1.23	0.23	9	2, 9, 25, 26	
		VOC	0.08	0.02	9	2, 9, 25, 26	
65	GP-4 Startup Scrubber	PM	13.31	0.47	9, 18	2, 9, 18, 25, 26	
		PM_{10}	9.46	0.34	9, 18	2, 9, 18, 25, 26	
		$PM_{2.5}$	6.94	0.25	9, 18	2, 9, 18, 25, 26	
		SO_2	<0.01	<0.01	9	2, 9, 25, 26	
		NO_x	1.28	0.17	9	2, 9, 25, 26	
		CO	1.08	0.15	9	2, 9, 25, 26	
		VOC	0.08	0.01	9	2, 9, 25, 26	
66	GP-5 Startup Scrubber	PM	8.08	0.16	9, 18	2, 9, 18, 25, 26	
		PM_{10}	5.76	0.11	9, 18	2, 9, 18, 25, 26	
		$PM_{2.5}$	4.24	0.09	9, 18	2, 9, 18, 25, 26	

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		SO_2	0.01	0.01	9	2, 9, 25, 26	
		NO_x	0.93	0.18	9	2, 9, 25, 26	
		CO	0.78	0.15	9	2, 9, 25, 26	
		VOC	0.05	0.01	9	2, 9, 25, 26	
67	GP-3/4 Process Filter C Filter (6)	PM	1.20	5.27	4, 18, 20	2, 4, 15, 18, 20, 25, 26	
		PM_{10}	0.83	3.65	4, 18, 20	2, 4, 15, 18, 20, 25, 26	
		$PM_{2.5}$	0.58	2.56	4, 18, 20	2, 4, 15, 18, 20, 25, 26	
		SO_2	0.35	1.53	4, 5	2, 4, 5, 25, 26	
		COS	0.27	1.20	3, 4, 5	2, 3, 4, 5, 25, 26	3
		CS_2	1.05	4.59	3, 4, 5	2, 3, 4, 5, 25, 26	3
		H_2S	1.31	4.37	4, 5	2, 4, 5, 25, 26	
		NO_x	0.10	0.43	4	2, 4, 25, 26	
		NH_3	0.19	0.82	4	2, 4, 25, 26	
		HCN	1.04	4.55	3, 4	2, 3, 4, 25, 26	3
		CO	109.91	481.40	4	2, 4, 25, 26	
		VOC	4.52	19.79	4	2, 4, 25, 26	

Major NSR Summary Table

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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
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
70	Process Fugitives (7)	PM	0.10	0.40	4, 20	2, 4, 20, 25, 26	
		PM_{10}	0.10	0.40	4, 20	2, 4, 20, 25, 26	
		$PM_{2.5}$	0.05	0.20	4, 20	2, 4, 20, 25, 26	
		SO_2	0.01	0.02	4, 5	2, 4, 5, 25, 26	
		COS	0.01	0.02	3, 4, 5	2, 3, 4, 5, 25, 26	3
		CS_2	0.01	0.04	3, 4, 5	2, 3, 4, 5, 25, 26	3
		H_2S	0.03	0.10	4, 5	2, 4, 5, 25, 26	
		NO_x	0.01	0.01	4	2, 4, 25, 26	
		NH_3	0.01	0.02	4	2, 4, 25, 26	
		HCN	0.02	0.09	3, 4	2, 3, 4, 25, 26	3
		CO	1.43	6.23	4	2, 4, 25, 26	
		VOC	0.06	0.24	4	2, 4, 25, 26	
71	Planned MSS Activity Emissions (7)						
	Filter/strainer changeouts	VOC	0.02	<0.01	24	2, 24, 25, 26	
	Pump seals repair/replacement	VOC	0.03	<0.01	24	2, 24, 25, 26	

Major NSR Summary Table

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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
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
	Feed tip changeouts	VOC	0.01	<0.01	24	2, 24, 25, 26	
	Feedstock sampling	VOC	<0.01	< 0.01	24	2, 24, 25, 26	
	Flow meter changeouts	VOC	<0.01	< 0.01	24	2, 24, 25, 26	
	Feedstock storage tank turnover	VOC	44.81	0.84	24	2, 24, 25, 26	
	Vacuum truck MSS	VOC	6.66	<0.02	24	2, 24, 25, 26	
	In-situ carbon black sampling	PM	<0.01	<0.01	24	2, 24, 25, 26	
		PM_{10}	<0.01	<0.01	24	2, 24, 25, 26	
		$PM_{2.5}$	<0.01	<0.01	24	2, 24, 25, 26	
	Recasting furnace refractory	PM	0.28	0.01	24	2, 24, 25, 26	
		PM_{10}	0.13	0.01	24	2, 24, 25, 26	
		$PM_{2.5}$	0.02	0.01	24	2, 24, 25, 26	
90	Main Tail Gas Thermal Oxidizer	PM	2.53	10.95	4, 18, 20, 23	2, 4, 14, 18, 20, 23, 25, 26, 27	23, 27
		PM_{10}	2.53	10.95	4, 18, 20, 23	2, 4, 14, 18, 20, 23, 25, 26, 27	23, 27
		$PM_{2.5}$	2.11	10.95	4, 18, 20, 23	2, 4, 14, 18, 20, 23, 25, 26, 27	23, 27
		SO_2	74.84	272.76	4, 5, 23	2, 4, 5, 14, 23, 25, 26, 27	23, 27

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		COS	0.20	0.60	3, 4, 5, 20, 23	2, 3, 4, 5, 14, 20, 23, 25, 26	3, 23
		CS_2	0.20	0.70	3, 4, 5, 20, 23	2, 3, 4, 5, 14, 20, 23, 25, 26	3, 23
		H_2S	1.50	5.70	4, 5, 20, 23, 27, 28	2, 4, 5, 14, 20, 23, 25, 26,27, 28	23, 27, 28
		NO_x	27.79	101.28	4, 23, 27	2, 4, 14, 23, 25, 26, 27	23, 27
		NH_3	0.14	0.80	4, 23	2, 4, 14, 23, 25, 26	23
		CO	0.26	1.11	4, 23, 27	2, 4, 14, 23, 25, 26, 27	23, 27
		VOC	0.70	2.60	4, 23, 27, 28	2, 4, 14, 23, 25, 26, 27, 28	23, 27, 28
		HCN	0.16	0.77			
91	GP-3 Flare	PM (8)	3.01	13.16	4, 18, 20	2, 4, 14, 18, 20, 25, 26	
		PM_{10} (8)	3.01	13.16	4, 18, 20	2, 4, 14, 18, 20, 25, 26	
		$PM_{2.5}$ (8)	3.01	13.16	4, 18, 20	2, 4, 14, 18, 20, 25, 26	
		SO_2	180.13	788.96	4, 5, 20	2, 4, 5, 14, 20, 25, 26	
		COS	0.21	0.89	3, 4, 5, 20	2, 3, 4, 5, 14, 20, 25, 26	3
		CS_2	0.78	3.41	3, 4, 5, 20	2, 3, 4, 5, 14, 20, 25, 26	3

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		H_2S	0.97	4.24	4, 5, 20	2, 4, 5, 14, 20, 25, 26	
		NO_x	26.86	117.61	4, 20	2, 4, 14, 20, 25, 26	
		NH_3	1.24	5.42	4, 20	2, 4, 14, 20, 25, 26	
		HCN	12.37	54.15	3, 4, 20	2, 3, 4, 14, 20, 25, 26	3
		CO	81.43	356.63	4, 20	2, 4, 14, 20, 25, 26	
		VOC	14.94	65.44	4, 20	2, 4, 14, 20, 25, 26	
92	GP-4 Flare	PM (8)	3.09	13.51	4, 18, 20	2, 4, 14, 18, 20, 25, 26	
		PM_{10} (8)	3.09	13.51	4, 18, 20	2, 4, 14, 18, 20, 25, 26	
		$PM_{2.5}$ (8)	3.09	13.51	4, 18, 20	2, 4, 14, 18, 20, 25, 26	
		SO_2	159.46	698.40	4, 5, 20	2, 4, 5, 14, 20, 25, 26	
		COS	0.25	1.07	3, 4, 5, 20	2, 3, 4, 5, 14, 20, 25, 26	3
		CS_2	0.80	3.47	3, 4, 5, 20	2, 3, 4, 5, 14, 20, 25, 26	3
		H_2S	0.69	3.02	4, 5, 20	2, 4, 5, 14, 20, 25, 26	
		NO_x	27.57	120.73	4, 20	2, 4, 14, 20, 25, 26	
		NH_3	1.27	5.56	4, 20	2, 4, 14, 20, 25, 26	

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		HCN	12.69	55.58	3, 20	2, 3, 14, 20, 25, 26	3
		CO	69.84	305.90	4, 20	2, 4, 14, 20, 25, 26	
		VOC	15.42	67.53	4, 20	2, 4, 14, 20, 25, 26	
93	GP-2 Dryers Stack (Combined Stack for GP-2 Pellet Dryer No. 1 and GP-2 Pellet Dryer No. 2)	PM (8)	5.88	25.74	4, 12, 18, 20, 23, 27	2, 4, 12, 14, 18, 20, 23, 25, 26, 27	23, 27
		PM_{10} (8)	5.88	25.74	4, 12, 18, 20, 23, 27	2, 4, 12, 14, 18, 20, 23, 25, 26, 27	23, 27
		$PM_{2.5}$ (8)	5.34	23.39	4, 12, 18, 20, 23, 27	2, 4, 12, 14, 18, 20, 23, 25, 26, 27	23, 27
		SO_2	7.41	29.75	4, 5, 12, 20, 27	2, 4, 5, 12, 14, 25, 26, 27	20, 27
		COS	0.14	1.07	4, 5, 12, 20	2, 4, 5, 12, 14, 20, 25, 26	20
		CS_2	0.46	3.47	4, 5, 12, 20	2, 4, 5, 12, 14, 20, 25, 26	20
		H_2S	0.50	3.02	4, 5, 12, 20, 27, 28	2, 4, 5, 12, 14, 20, 25, 26, 27, 28	20, 27, 28
		NO_x	5.76	23.13	4, 12, 20, 27	2, 4, 12, 14, 25, 26, 27	20, 27
		NH_3	0.73	6.09	4, 12	2, 4, 12, 14, 25, 26	
		HCN	7.27	55.88	4, 12, 20	2, 4, 12, 14, 20, 25, 26	
		CO	4.53	19.85	4, 12, 20, 27	2, 4, 12, 14, 25, 26, 27	20, 27

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		VOC	9.04	68.43	4, 12, 27, 28	2, 4, 12, 14, 25, 26, 27, 28	27, 28
94	GP-2 MUF (Thermal Oxidizer Bypass)	PM	33.00	0.78	4, 9, 10, 18, 23	2, 4, 9, 18, 23, 25, 26	23
		PM_{10}	31.64	0.75	4, 9, 10, 18, 23	2, 4, 9, 18, 23, 25, 26	23
		$PM_{2.5}$	27.98	0.66	4, 9, 10, 18, 23	2, 4, 9, 18, 23, 25, 26	23
		SO_2	8.27	1.22	4, 5, 9, 10	2, 4, 5, 9, 25, 26	
		COS	24.58	3.62	3, 4, 5, 9, 10	2, 3, 4, 5, 9, 25, 26	3
		CS_2	39.15	5.76	3, 4, 5, 9, 10	2, 3, 4, 5, 9, 25, 26	3
		H_2S	219.17	32.24	4, 5, 9, 10	2, 4, 5, 9, 25, 26	
		NO_x	7.70	1.30	4, 9, 10	2, 4, 9, 25, 26	
		NH_3	2.70	0.45	4, 9, 10	2, 4, 9, 25, 26	
		HCN	26.96	4.54	3, 4, 9, 10	2, 3, 4, 9, 25, 26	3
		CO	8487.32	1451.82	4, 9, 10	2, 4, 9, 25, 26	
		VOC	118.56	18.62	4, 9, 10	2, 4, 9, 25, 26	
95	GP-5 MUF (Thermal Oxidizer Bypass)	PM	14.35	0.43	4, 9, 10, 18, 23	2, 4, 9, 18, 23, 25, 26	23
		PM_{10}	13.76	0.41	4, 9, 10, 18, 23	2, 4, 9, 18, 23, 25, 26	23

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		$PM_{2.5}$	12.17	0.36	4, 9, 10, 18, 23	2, 4, 9, 18, 23, 25, 26	23
		SO_2	2.42	0.36	4, 5, 9, 10	2, 4, 5, 9, 25, 26	
		COS	9.29	1.37	3, 4, 5, 9, 10	2, 3, 4, 5, 9, 25, 26	3
		CS_2	0.00	0.00	3, 4, 5, 9, 10	2, 3, 4, 5, 9, 25, 26	3
		H_2S	82.24	12.13	4, 5, 9, 10	2, 4, 5, 9, 25, 26	
		NO_x	3.34	0.62	4, 9, 10	2, 4, 9, 25, 26	
		NH_3	1.17	0.20	4, 9, 10	2, 4, 9, 25, 26	
		HCN	11.68	1.96	3, 4, 9, 10	2, 3, 4, 9, 25, 26	3, 4
		CO	2744.00	467.81	4, 9, 10	2, 4, 9, 25, 26	
		VOC	9.29	1.37	4, 9, 10	2, 4, 9, 25, 26	
96	ATU Process Filter	PM	1.30	2.28	11, 17, 18, 20, 23	11, 17, 18, 20, 23	
		PM_{10}	0.10	0.17	11, 17, 18, 20, 23	11, 17, 18, 20, 23	
		$PM_{2.5}$	0.01	0.02	11, 17, 18, 20, 23	11, 17, 18, 20, 23	
		NO_x	5.84	10.22	11, 19, 22, 23	4, 11, 19, 23	19
		SO_2	12.63	22.11	11, 23	11, 23	
33	GP-6 ATU Dryer	NO_x	0.04	0.18			

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		CO	0.04	0.15			
		VOC	0.01	0.01			
		SO_2	0.01	0.01			
		PM	0.01	0.01	18	18	
		PM_{10}	0.01	0.01	18	18	
		$PM_{2.5}$	0.01	0.01	18	18	
13	Product Baghouse ATU	PM	2.10	9.20	17, 23	17, 23	
		PM_{10}	2.10	9.20	17, 23	17, 23	
		$PM_{2.5}$	2.10	9.20	17, 23	17, 23	
12D	GP-9 ATU Dryer	NO_x	0.97	4.25	23	23	
		CO	0.82	3.57	23	23	
		PM	0.07	0.32	23	23	
		PM_{10}	0.07	0.32	23	23	
		$PM_{2.5}$	0.07	0.32	23	23	
		SO_2	0.01	0.03	23	23	
		VOC	0.05	0.23	23	23	

Major NSR Summary Table

Permit Numbers: 40088 and PSDTX934M2					Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lbs/hour	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		NH_3	0.03	0.14	23	23	
72	GP-6 & 9 ATU EVX Tower	NO_x	39.70	173.89	4, 19, 21	4, 19, 21	19, 21
		CO	0.19	0.84	4	4	
		PM	5.82	25.49	4, 18	4, 18	
		PM_{10}	2.41	10.56	4, 18	4, 18	
		$PM_{2.5}$	2.16	9.44	4, 18	4, 18	
		SO_2	1.27	5.56	4	4	
		VOC	0.76	3.33	4	4	
97	ATU Process Filter Fugitives	PM	0.01	0.01	4, 20	2, 4, 20, 25, 26	
		PM_{10}	0.01	0.01	4, 20	2, 4, 20, 25, 26	
		$PM_{2.5}$	0.01	0.01	4, 20	2, 4, 20, 25, 26	
		NO_x	0.01	0.01	4	2, 4, 25, 26	
		SO_2	0.01	0.01	4, 5	2, 4, 5, 25, 26	

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide

PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
COS - carbonyl sulfide
CS_2 - carbon disulfide
HCN - hydrogen cyanide
H_2S - hydrogen sulfide
NH_3 - ammonia

(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
(5) These emissions rates apply at all times, including during the planned MSS activities authorized by this permit and during normal operations.
(6) At any time, no more than two of these three Process Filters (EPNs 11, 15, and 67) may be in operation simultaneously.
(7) Emission rate is an estimate of fugitive emissions and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(8) The emission rates for these sources represent only the front half catch of the sampling train (filterable PM, PM_{10}, $PM_{2.5}$).

Major NSR Summary Table

Permit Number: GHGPSDTX213				Issuance Date: November 17, 2022		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
90	Main Tail Gas Thermal Oxidizer	CH_4 (5)	<1	29, 30, 31, 32, 33	34, 35	
		CO_2 (5)	196,488	29, 30, 31, 32, 33	34, 35	
		CO_2e	196,488	29, 30, 31, 32, 33	34, 35	
93	Dryer Purge Gas Filter	CH_4 (5)	< 1	29, 30, 31, 32, 33	34, 35	
		CO_2 (5)	1,539	29, 30, 31, 32, 33	34, 35	
		CO_2e (4)	1,539	29, 30, 31, 32, 33	34, 35	

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) CO_2 - carbon dioxide
CH_4 - methane
CO_2e - carbon dioxide equivalents, based on the following Global Warming Potentials from 40 CFR Part 98, subpart A, Table A-1, effective January 1, 2015: CO_2 (1) and CH_4 (25).
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period. Annual emission limits include both normal and maintenance, startup, and shutdown (MSS) emissions.
(5) Emission rate is given for informational purposes only and does not constitute enforceable limit.
(6) Emission rate is an estimate and is enforceable through compliance with the applicable special conditions and permit application representations.

Texas Commission on Environmental Quality
Air Quality Permit

A Permit Is Hereby Issued To
Cabot Corporation
Authorizing the Construction and Operation of
Cabot Pampa Plant
Located at **Pampa, Gray County, Texas**
Latitude 35° 30′ 38″ Longitude −101° 0′ 55″

Permits: 40088, GHGPSDTX213, and PSDTX934M2

Revision Date: November 17, 2022

Expiration Date: April 29, 2032

For the Commission

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

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

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

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

Common Acronyms in Air Permits

°C = Temperature in degrees Celsius
°F = Temperature in degrees Fahrenheit
°K = Temperature in degrees Kelvin
µg = microgram
µg/m^3 = microgram per cubic meter
acfm = actual cubic feet per minute
AMOC = alternate means of control
AOS = alternative operating scenario
AP-42 = Air Pollutant Emission Factors, 5th edition
APD = Air Permits Division
API = American Petroleum Institute
APWL = air pollutant watch list
BPA = Beaumont/ Port Arthur
BACT = best available control technology
BAE = baseline actual emissions
bbl = barrel
bbl/day = barrel per day
bhp = brake horsepower
BMP = best management practices
Btu = British thermal unit
Btu/scf = British thermal unit per standard cubic foot or feet
CAA = Clean Air Act
CAM = compliance-assurance monitoring
CEMS = continuous emissions monitoring systems
cfm = cubic feet (per) minute
CFR = Code of Federal Regulations
CN = customer ID number
CNG = compressed natural gas
CO = carbon monoxide
COMS = continuous opacity monitoring system
CPMS = continuous parametric monitoring system
DFW = Dallas/ Fort Worth (Metroplex)
DE = destruction efficiency
DRE = destruction and removal efficiency
dscf = dry standard cubic foot or feet
dscfm = dry standard cubic foot or feet per minute
ED = (TCEQ) Executive Director
EF = emissions factor
EFR = external floating roof tank
EGU = electric generating unit
EI = Emissions Inventory
ELP = El Paso
EPA = (United States) Environmental Protection Agency
EPN = emission point number
ESL = effects screening level
ESP = electrostatic precipitator
FCAA = Federal Clean Air Act
FCCU = fluid catalytic cracking unit
FID = flame ionization detector
FIN = facility identification number
ft = foot or feet
ft/sec = foot or feet per second
g = gram
gal/wk = gallon per week
gal/yr = gallon per year
GLC = ground level concentration
GLC_{max} = maximum (predicted) ground-level concentration
gpm = gallon per minute
gr/1000scf = grain per 1000 standard cubic feet
gr/dscf = grain per dry standard cubic feet
H_2CO = formaldehyde
H_2S = hydrogen sulfide
H_2SO_4 = sulfuric acid
HAP = hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
HC = hydrocarbons
HCl = hydrochloric acid, hydrogen chloride
Hg = mercury
HGB = Houston/Galveston/Brazoria
hp = horsepower
hr = hour
IFR = internal floating roof tank
in H_2O = inches of water
in Hg = inches of mercury
IR = infrared
ISC3 = Industrial Source Complex, a dispersion model
ISCST3 = Industrial Source Complex Short-Term, a dispersion model
K = Kelvin; extension of the degree Celsius scaled-down to absolute zero
LACT = lease automatic custody transfer
LAER = lowest achievable emission rate
lb = pound
hp = horsepower
hr = hour lb/day = pound per day
lb/hr = pound per hour
lb/MMBtu = pound per million British thermal units
LDAR = Leak Detection and Repair (Requirements)
LNG = liquefied natural gas
LPG = liquefied petroleum gas
LT/D = long ton per day
m = meter
m^3 = cubic meter
m/sec = meters per second
MACT = maximum achievable control technology
MAERT = Maximum Allowable Emission Rate Table
MERA = Modeling and Effects Review Applicability
mg = milligram
mg/g = milligram per gram
mL = milliliter
MMBtu = million British thermal units
MMBtu/hr = million British thermal units per hour
MSDS = material safety data sheet
MSS = maintenance, startup, and shutdown
MW = megawatt
NAAQS = National Ambient Air Quality Standards
NESHAP = National Emission Standards for Hazardous Air Pollutants
NGL = natural gas liquids
NNSR = nonattainment new source review
NO_x = total oxides of nitrogen

NSPS = New Source Performance Standards
PAL = plant-wide applicability limit
PBR = Permit(s) by Rule
PCP = pollution control project
PEMS = predictive emission monitoring system
PID = photo ionization detector
PM = periodic monitoring
PM = total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
$PM_{2.5}$ = particulate matter equal to or less than 2.5 microns in diameter
PM_{10} = total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
POC = products of combustion
ppb = parts per billion
ppm = parts per million
ppmv = parts per million (by) volume
psia = pounds (per) square inch, absolute
psig = pounds (per) square inch, gage
PTE = potential to emit
RA = relative accuracy
RATA = relative accuracy test audit
RM = reference method
RVP = Reid vapor pressure
scf = standard cubic foot or feet
scfm = standard cubic foot or feet (per) minute
SCR = selective catalytic reduction
SIL = significant impact levels
SNCR = selective non-catalytic reduction
SO_2 = sulfur dioxide
SOCMI = synthetic organic chemical manufacturing industry
SRU = sulfur recovery unit
TAC = Texas Administrative Code
TCAA = Texas Clean Air Act
TCEQ = Texas Commission on Environmental Quality
TD = Toxicology Division
TLV = threshold limit value
TMDL = total maximum daily load
tpd = tons per day
tpy = tons per year
TVP = true vapor pressure
VOC = volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
VRU = vapor recovery unit or system

Special Conditions

Permit Numbers 40088, PSDTX934M2, and GHGPSDTX213

1. This permit authorizes carbon black manufacturing (furnace black), pelletizing, handling, storage, packaging, and shipping facilities and ancillary support facilities, including feedstock handling and storage facilities located at 11561 US Highway 60, Pampa, Gray County.

   A. This permit authorizes only those sources of emissions located at this site that, along with their emissions point numbers (EPNs), are listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates". The nature and rates of air contaminants authorized from each source/facility are limited to those listed in the maximum allowable emission rates table (MAERT) for the named source/facility and its respective EPN.

   B. Planned maintenance, startup, and shutdown (MSS) activities and related emissions are authorized for the sources and activities described in and limited by the special conditions and MAERT of this permit. No other MSS activities and emissions are authorized by this permit for the facilities listed on the MAERT.

   C. The following sources and/or activities are de minimis per Title 30 Texas Administrative Code 116.119 (30 TAC 116.119) or are authorized by permits by rule (PBR) by 30 TAC Chapter 106. These lists are not intended to be all inclusive and can be altered without modifications to this permit. These authorizations are listed here for reference purposes only. **(09/22)**

Table 1: Construction Authorizations for Sources at This Site Not Authorized by This Permit

Facility Description	Emission Point Number (EPN)	Registration Number/Date	Rule Citation (30 TAC)
Manual application (hand wipe cleaning) of cleaning solvents containing less than 1% volatile organic compounds (VOC)	Sitewide	De minimis	§116.119(a)(1)
Aerosol can puncturing	Sitewide	De minimis	§116.119(a)(1)
Aerosol solvent and lubricants usage	Sitewide	De minimis	§116.119(a)(1)
Totally enclosed dry abrasive blast cleaning cabinets	Sitewide	De minimis	§116.119(a)(1)
Application of coatings less than 100 gal per year	Sitewide	De minimis	§116.119(a)(1) and (2)
Comfort air conditioning and ventilation systems	Sitewide	De minimis	§116.119(a)(1)
Comfort Heating	Sitewide	9/4/2000	§106.102
Natural gas fired boilers and heaters	34C and 38	9/4/2000	§106.183
Welding/Cutting/Brazing	Sitewide	NA	§106.227
Routine maintenance	Sitewide	NA	§106.263

Facility Description	Emission Point Number (EPN)	Registration Number/Date	Rule Citation (30 TAC)
Sanding and grinding using hand held and manually operated machinery	Sitewide	NA	§106.265
Vacuum Cleaning Units	Sitewide	NA	§106.266
Bag Labeling Equipment	Sitewide	NA	§106.418
Outdoor Abrasive Blast Cleaning	80	41116 - 6/29/1999	§106.452
Organic and Inorganic Liquid Loading and Unloading	DIESELTK and KEROTK	NA	§106.472
Organic Liquid Loading and Unloading	GASTK	NA	§106.473
Remote Reservoir Parts Washers	81 and 82	43483 2/22/2000	§106.454
Portable Diesel Engines	Sitewide	NA	§106.511
Water and Wastewater Treatment	Sitewide	9/4/2000	§106.532
Alternative Raw Treatment Material at ATU	12 and 39	119852 – 07/17/2014	106.261
Nitric Acid Tanks, Pumps, and Piping	NAT#1 and NAT#2	NA	106.472

2. The holder of the permit shall ensure that the EPN for each source listed in the MAERT are physically identified and marked in a conspicuous location. 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 renewal application for this permit dated August 3, 2021 and amendment application for this permit received by TCEQ November 2, 2021. **(09/22)**

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 (HAPs) for Source Categories (MACT standards) as follows:

   A. Subpart A, General Provisions;

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

C. Subpart YY, Generic Maximum Achievable Control Technology Standards; and

D. Subpart ZZZZ, Stationary Reciprocating Internal Combustion Engines; and

E. Subpart DDDDD, Industrial, Commercial, and Institutional Boilers and Process Heaters. **(09/22)**

Operational Limitations

4. The carbon black oil feedstock feed rate for all reactors shall not exceed the emission calculations submitted December 12, 2011.

   The Acid Treating Units shall be limited to the carbon black throughputs and acid usage rates listed on the Table 2, Material Balance, contained in the confidential submittal dated August 30, 2001 for consolidated permit no. 49161. **(09/22)**

5. Sitewide feedstock sulfur limitations. **(09/22)**

   A. The total sulfur content of the carbon black feedstock input to each individual reactor is limited to 2.25 on an hourly average, 1.75 percent on a rolling 30 day average, and 1.5 percent on an annual average. The annual average shall be calculated on a rolling 12-month basis.

   B. The carbon black feedstock sulfur content shall be calculated for an individual storage tank as follows:

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

      (2) Within one business day of each feedstock delivery, calculating the feedstock sulfur content of each tank, through the following equation:

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

      where:

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

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

      S = sulfur content of the feedstock in the tank, prior to the delivery of feedstock into the tank, weight %

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

      V_1 = volume of feedstock delivered into the tank, gallons

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

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

C. An internal sulfur analysis of the feedstock being pumped directly to each unit shall be performed at least once per calendar week. If the calculated sulfur percentage varies from the weekly sulfur analysis by ±0.20 percent by weight, the internal sulfur analysis will be repeated and the internal sulfur analysis performed daily on the feedstock being pumped to each unit until the discrepancy is resolved. Records must contain sufficient information to readily demonstrate compliance with the above sulfur limits. The analysis is not required on weekends and plant holidays if technicians capable of performing the analysis are not normally scheduled on those days provided the necessary samples are collected and the analysis is performed on the next day technicians are available.

D. Planned MSS activities related to feedstock transfer, storage, handling, and sampling are listed in Special Condition No. 24.

6. Storage tanks (EPNs: 48 - 52 & 55) are subject to the following requirements:

A. Except for labels, logos, etc. not to exceed 15 percent of the tank total surface area, uninsulated tank exterior surfaces exposed to the sun shall be white or unpainted aluminum. Storage tanks must be equipped with permanent submerged fill pipes.

B. The permit holder shall maintain an emissions record which includes calculated emissions of VOC from all storage tanks during the previous calendar month and the past consecutive 12 month period. The record shall include tank identification number, control method used, tank capacity in gallons, name of the material stored, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average material temperature in psia, VOC throughput for the previous month and year-to-date. Records of VOC monthly average temperature are not required to be kept for unheated tanks which receive liquids that are at or below ambient temperatures.

7. The carbon black reactor tail gas exiting the Main Unit Filters (MUFs) for GP-2 and GP-5 shall be vented to the Thermal Oxidizer (TO, EPN 90). The carbon black reactor tail gas exiting the MUF for GP-3 shall be vented to either the GP-3 Flare (EPN 91) or the GP-2 Dryers (EPN 93). The carbon black reactor tail gas exiting the MUF for GP-4 shall be vented to either the GP-4 Flare (EPN 92) or the GP-2 Dryers (EPN 93).

8. The MUF Emergency Relief Vents (EPNs 1, 2, 3 and 30) shall be normally closed and shall be inspected for proper reseating after each emission event that results in opening. Inspections and repairs shall be documented as they occur.

9. The carbon black reactor tail gas streams exiting the GP-2 and GP-5 MUFs may bypass the TO and vent to the atmosphere during multi-reactor shutdown/start-up transitions, as limited by this condition and the applicable limitations in the MAERT. The following requirements also apply:

A. The multi-reactor start-up/shutdown transitions include two operating states: “heatload” and “makeload” during which emissions are generated. Heatload is defined as that period of time in reactor start-up/shutdown operations when only pipeline quality sweet natural gas is introduced into the reactor and combusted. Makeload is defined as that period of time in

reactor start-up/shutdown operations when pipeline quality sweet natural gas is introduced and combusted in the reactor with the concurrent introduction and processing of carbon black feedstock oil into carbon black. Pipeline-quality, sweet natural gas fuel must meet the requirements of Special Condition No. 14.

B. The Startup Scrubbers are limited to the operating hours in Table 2 below, as defined in the permit application submittals dated December 12, 2011 and June 25, 2014. Only heatload operations-related emissions are authorized for these EPNs.

Table 2: Operating Hour Limits for Startup Scrubbers

EPN	Source	Operating Hours per 12-Month Rolling Year
62	GP-2 Startup Scrubber 1	1130
63	GP-2 Startup Scrubber 2	1470
64	GP-3 Startup Scrubber	374
65	GP-4 Startup Scrubber	261
66	GP-5 Startup Scrubber	381

C. Emissions from the TO Bypass Stacks (EPNs 94 and 95) are subject to a combined maximum of 72 hours of operation on a rolling 12-month basis during multi-reactor shutdown / start-up transitions under makeload operations. Multi-reactor shutdown / startup transitions under makeload operations are limited to four hours in any consecutive 24-hour period. Heatload operations that are also part of the multi-reactor startup / shutdown transitions are limited by the MAERT limitations for the two EPNs. In no case may the rolling 12-month total annual emissions exceed the MAERT limitations for these EPNs for the combined heatload and makeload emissions from each EPN.

D. Operating records shall be kept for each reactor, and for each period of operation in which emissions are routed to any of the GP- 2, GP-3, GP-4 or GP-5 Startup Scrubbers (EPNs 62, 63, 64, 65 and 66), or to either or both of the TO Bypass Stacks (EPNs 94 and 95). For each event that emissions are routed to any of the EPNs, the records shall include the start and end date and time, the duration of emissions in hours, the reason emissions were routed to the EPN, and the reactor operating state (i.e., either makeload or heatload).

10. The following requirements apply to capture systems for the GP-2 and GP-5 MUFs.

A. If used to control pollutants other than particulate, either:

(1) Conduct a once a month visual, audible, and/or olfactory inspection of the capture system to verify there are no leaking components in the capture system; or

(2) Once a year, verify the capture system is leak-free by inspecting in accordance with 40 CFR Part 60, Appendix A, Test Method 21. Leaks shall be indicated by an instrument reading greater than or equal to 500 ppmv above background.

B. If there is a bypass for the control device, comply with either of the following requirements:

(1) Install a flow indicator that records and verifies zero flow at least once every fifteen minutes immediately downstream of each valve that if opened would allow a vent stream to bypass the control device and be emitted, either directly or indirectly, to the atmosphere; or

(2) Once a month, inspect the valves, verifying that the position of the valves and the condition of the car seals prevent flow out the bypass.

A bypass does not include authorized analyzer vents, highpoint bleeder vents, low point drains, or rupture discs upstream of pressure relief valves if the pressure between the disc and relief valve is monitored and recorded at least weekly. A deviation shall be reported if the monitoring or inspections indicate bypass of the control device when it is required to be in service.

C. Records of the inspections required shall be maintained and if the results of any of the above inspections are not satisfactory, the permit holder shall promptly take necessary corrective action.

11. The carbon black reactor tail gas streams exiting the GP-9 ATU dryer may bypass the ATU EVX Tower while running the specialized acid treated product, then route to the ATU process filter (EPN 96), as limited by this condition and the applicable limitations in the MAERT. The following requirements also apply: **(09/22)**

A. The carbon black feed rate into the specialized chemical acid treatment is limited to 2,520 metric tons per year. **(11/22)**

B. Bypass of ATU EVX Tower while running specialized chemical acid treated product is limited to 3,500 hours per year.

12. With the GP-2 Oxygen Enrichment project: **(09/22)**

A. Purge gas from the GP-2 Pellet Dryer #1 and #2 will be routed to a purge gas filter and emitted into the atmosphere from EPN 93.

B. Maximum tail gas throughput from GP-3, GP-4, and natural gas into EPN 93 shall be 140.68 kilo-dry standard cubic feet per hour (kdscf/hr) and 1,232,353.3 kdscf/year.

C. Low NOx burners shall be installed on the GP-2 Dryer #1 and #2 (EPN 93) in compliance with construction deadlines for the permit amendment (application received 11/2/2021).

13. The operation of the diesel firewater pump engine (140 brake horsepower Waukesha Diesel Engine, EPN 7) for testing and maintenance may not exceed 100 hours per year on a 12-month rolling basis. Records shall be kept documenting any testing and maintenance performed.

14. Fuel fired at the site shall be limited as follows:

A. Carbon black reactor tail gas shall be fired only in the TO (EPN 90), GP-2 Dryers (EPN 93), or GP-3 and GP-4 Flares (EPNs 91 and 92).

B. Fuel used in all other gas fired sources shall be limited to pipeline-quality natural gas containing no more than 0.25 grain of hydrogen sulfide (H_2S) and 5 grains total sulfur per dscf.

C. Fuel for the diesel fire water pump and compressor engines shall be limited to No. 2 distillate containing no more than 0.05 weight percent sulfur. Use of any other fuel requires authorization from the Texas Commission on Environmental Quality (TCEQ).

15. 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. Copies of the manufacturers' recommended practices or other written procedures for all new or modified sources 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 activity, the date of each activity, name of the person completing the work, the purpose of the maintenance or repair, and the nature of any repairs and maintenance work performed.

16. Particulate matter waste collected from any fabric filter system shall be managed in such a manner to minimize fugitive emissions while the waste material remains on site. Good housekeeping shall be used to promptly clean up any spills of materials that could become airborne, such as carbon black, in order to minimize entrainment of the materials into the ambient air.

17. Sources of particulate matter emissions served by fabric filters shall comply with the requirements of this Special Condition as follows:

    A. The reactors, their MUFs, and EPNs downstream of those MUFs are as listed in Table 3. Emissions that originate in a reactor pass through designated MUF, then through a tail gas control device (if any) to the atmosphere, as listed in Table 3.

Table 3: Reactor Furnace Units and Downstream EPNs

Reactor	Startup Scrubber EPN	Main Unit Filter	Tail Gas Control Device Bypass EPN	Tail Gas Control Device	Tail Gas Control Device EPN
GP-2	62 and 63	GP-2 MUF	94	TO	90
GP-3	64	GP-3 MUF	None	GP-3 Flare	91
GP-4	65	GP-4 MUF	None	GP-4 Flare	92
GP-5	66	GP-5 MUF	95	TO	90

    B. Vacuum Filters (EPNs 5, 8, 16, 21, 22, 36, 39, and 40) shall have a minimum design collection efficiency of 99.9%. The MUFs (GP-2, GP-3, GP-4, and GP-5) and Process Filters (EPNs 11, 14, 15, 31, and 67) shall have a minimum design collection efficiency of 99.95 percent for PM.

    The capture and control / ventilation system for the GP-2 Process Filter A (EPN 6), GP-2 Dryers Stack (EPN 93), and ATU process filter (EPN 96) shall each be equipped with a baghouse designed to achieve a filter efficiency of 99.99 percent or greater for PM. **(09/22)**

    The capture and control / ventilation system for the product baghouse ATU (EPN 13) shall be equipped with a baghouse designed to achieve a filter efficiency of 99.9 percent or greater for PM. **(09/22)**

18. Visible emissions and opacity related requirements that apply to the sources and emissions points authorized in this permit are as follows: **(09/22)**

    A. Visible emissions from any source of any duration and opacity of any emissions plume greater than zero percent (not including uncombined water) from any source (facility),

building containing a source, or EPN authorized in this permit are prohibited except as indicated in this Special Condition.

B. Visible emissions observations of the TO Stack (EPN 90), the GP-2 Dryers Stack (EPN 93), GP-3 Flare (EPN 91), GP-4 Flare (EPN 92) and Process Filter Stacks (EPNs 6, 11, 14, 15, 31, and 67), Carbon black storage tanks, silos, or bins, Carbon black pellet dryers, Reactors MUFs, Process filters and purge filters, shall be conducted and documented for each EPN at least once each operating day that emissions are routed to the respective EPN.

C. At least one time each calendar quarter, visible emissions or opacity observations of the Startup Scrubber Stacks (EPNs 62, 63, 64, 65, and 66), the Vacuum Filter Stacks (EPNs 5, 8, 16, 21, 22, 36, 39 and 40), and the ATU exhausts (EPNs 33, 72, and 96) shall be conducted and documented. For each of these EPNs, the observations will be done while emissions are routed to them.

D. Visible emissions from the Startup Scrubber Stacks (EPNs 62, 63, 64, 65, or 66) are limited to no greater than 10% opacity, on a rolling six-minute average basis.

E. The GP-3 Flare (EPN 91) and GP-4 Flare (EPN 92) shall be operated with no other visible emissions except periods not to exceed a total of five minutes during any two consecutive hours.

F. 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 duration for the TO Stack (EPN 90), and GP-2 Dryers Stack (EPN 93), and of momentary duration for each of the Process Filter Stacks (EPNs 6, 11, 14, 15, 31, and 67), Flares (EPNs 91 and 92), Startup Scrubber Stacks (EPNs 62, 63, 64, 65, and 66) Vacuum Filter Stacks (EPNs 5, 8, 16, 21, 22, 36, 39 and 40), Carbon black product storage tanks, silos, or bins, Carbon black pellet dryers, Reactors, MUFs, Process filters and purge filters. 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 at the TO Stack (EPN 90) or GP-2 Dryers Stack (EPN 93) for more than 12 seconds within any 15 second observation period, or if visible emissions of any duration are observed from any other sources referenced in this Special Condition, then the following requirements also apply:

(a) At Cabot's discretion, as a first step, corrective actions will be taken or the emissions unit will be shut down to eliminate visible emissions. The corrective actions may include change in operation, throughput, and other actions deemed appropriate without shutting down the unit. The corrective actions taken shall be documented. If the corrective action results in no visible emissions, no further action will be taken. If visible emissions continue, opacity observations will be conducted as described in (b) below.

(b) An opacity observation shall be conducted for the source 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 visible emissions from the TO Stack (EPN 90) or GP-2 Dryers Stack (EPN 93) exceed 5 minutes in duration or are greater than 10% opacity during the TM 9

observation, the TO Stack (EPN 90) or GP-2 Dryers Stack (EPN 93) will be in violation of the prohibition of visible emissions of this provision. If the opacity of visible emissions from a Startup Scrubber Stack (EPNs 62, 63, 64, 65, or 66) exceeds 10% as specified in Special Condition 18D, it will be a violation of the prohibition of visible emissions of this provision. Opacity in excess of 5% over a 6-minute average from any of the Process Filter stacks or other sources constitutes a violation of the prohibition of visible emissions from the emissions point. 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 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.

(c) 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.

(d) In the event that operations with no visible emissions are unable to be restored within the week of first observation of visible emissions, then TM 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.

G. 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. 18.F unless otherwise specified by the person requiring the observation to be conducted.

H. *Particulate Emissions Best Management Practices (PM BMP) Control Plan*: The best management practices for minimizing particulate emissions described in this plan shall be followed at each of the Facilities at all times:

(1) All operations and management personnel shall be trained to both recognize leaks and spills of carbon black, and to report them to the proper plant personnel for response. Visual observation of the physical condition of plan process equipment that coveys, stores, loads, unloads, and packages carbon black, including at connection points between equipment and/or sections of piping, and of the physical condition of containers and bags used to package carbon black, shall be part of the daily responsibilities of the operations and maintenance personnel to help ensure that potential leaks are addressed before they occur.

(2) All carbon black product shall be stored in tanks, silos, or closed bags. No carbon black product shall be stored in open piles.

(3) All product and off-quality carbon black shall be shipped off-site in closed bags or sealed rail cars, hoppers, or bulk transport trucks.

(4) All process equipment at the Facilities shall be designed, operated, and maintained in a manner intended to minimize leaks and spills of carbon black and fugitive particulate emissions. In addition, the Facilities shall develop and implement practices to collect carbon black dust otherwise emitted from product conveyance, packaging, and storage operations, and either recycle it back into the manufacturing process or convey it to a packaging system. Where practicable, the operation of such equipment, including carbon black product conveyors, elevators, and packing units, shall be conducted under negative pressure and served by vacuum systems that collect carbon black.

(5) All process equipment shall be located either indoors or in outdoor areas that have paved ground surfaces.

(6) Events that trigger the PM Early Warning System shall be handled pursuant to the protocol in item I of this Special Condition, from the 2013 Consent Decree, Appendix D. Leaks and spills of all carbon black that are otherwise identified shall be investigated and addressed (cleaned up and repaired) either immediately upon discovery or as quickly as practicable. When immediate repair is not feasible, a work order shall be developed and the actions taken to complete the repair shall be documented. Incident reports for spills or leaks of carbon black shall be created to document cause and corrective actions.

(7) Special precautions shall be taken during maintenance actions to minimize particulate emissions. Prior to conducting maintenance or baghouse bag replacement on equipment that is prone to accumulation of carbon black on its interior surfaces, including, but not limited to, on the Main Unit Filters, Process Filters, Purge Filters, elevators and conveyors, and storage tanks and silos, the responsible maintenance personnel shall identify and take steps necessary to minimize the generation of particulate emissions during the maintenance or bag replacement activity. The specific approaches taken to minimize particulate emissions during maintenance or bag replacement shall be developed on a case-specific basis based on the judgment of the maintenance personnel and shall include as relevant, but need not be limited to, activities such as the following:

(a) Vacuuming carbon black from the equipment prior to beginning the maintenance,

(b) Vacuuming or washing down the equipment when an appropriate stage in the maintenance activity has been reached,

(c) If units are equipped with vents, closing vents during maintenance to prevent drafting of PM, except when Cabot conducts a safety or hazard analysis and concludes in writing that closing the vent would create an unsafe or unhealthy work atmosphere, and

(d) Sealing filter bags removed from Main Unit Filters inside plastic bags.

(8) Accessible floor and/or ground surfaces in the carbon black production areas shall be swept or washed as needed in order to clean up (and therefore minimize particulate emissions attributable to) leaks or spills of carbon black that are not otherwise identified and/or addressed during the daily Visual Assessments as specified in Special Condition No. 18.B. All material collected through these actions shall either be incorporated into product for commercial distribution or properly disposed of in accordance with applicable regulatory standards.

I. PM Early Warning System

(1) The permit holder shall install a PM Early Warning System at each of its Facilities to monitor the PM emitted from each PM Monitor Point. Each PM Monitor Point shall be set to a specific alarm action level, such that the alarm is triggered when the PM at a PM Monitor Point exceeds the normal range of PM during operation of the Process System.

(2) The permit holder shall operate each PM Early Warning System at all times of Heat Load Operation and Process System Operation, except for during system breakdowns, repairs, maintenance, calibration checks, and zero and span adjustments of the applicable PM Early Warning System. The minimum degree of data availability shall be at least 90% for the first three years following the Effective Date of the Consent Decree and 95% thereafter, based on a quarterly average of the operating time of the emission unit or activity being monitored.

(3) In the event than an alarm is triggered for any PM Early Warning System, the permit holder shall investigate the cause of the alarm as expeditiously as practicable by performing each of the following tasks:

(a) Reviewing the data output for the relevant PM Early Warning System to determine whether the alarm corresponds to an actual increase in PM emissions;

(b) If review of the data confirms an increase in PM emissions, having a Method 9 Trained observer (i) conduct a visual assessment of the equipment monitored by the pertinent PM Early Warning System to determine if there are any detectable visual emissions, and (ii) in the event that any such visible emissions are observed, conduct a six minute observation in accordance with Method 9 to determine if opacity levels are greater than 20%, and (iii) if opacity levels are greater than 20%, conduct a six minute observation in accordance with Method 9 once every 8 hours until visible emissions are less than 20% of opacity levels.

(c) If the visual assessment or other observations identify a process, equipment or other condition(s) causing an increase in PM emissions that may be responsible for triggering the relevant alarm, determining whether the relevant equipment can be isolated to reduce the excess PM emissions below alarm levels, without requiring a Process System Shutdown;

(d) If the relevant equipment can be isolated without requiring Process System Shutdown, isolating and repairing such equipment prior to returning it to service;

(e) If the relevant equipment cannot be isolated without requiring Process System Shutdown, such as if there is a leak from a dryer, a broken bag in a baghouse, or a Malfunction of any other component that cannot be isolated to the extent necessary to prevent continued excess PM emissions, shutting down the relevant equipment and only returning it to service after the source of the excess emissions has been identified and repaired; and

(4) Notwithstanding the foregoing, to the extent that recorded information for the relevant PM Early Warning System indicates that PM emissions have returned to normal operating ranges, below levels triggering an alarm condition, the permit holder is not otherwise obligated to continue with implementation of the steps listed above, and may continue operation of the relevant equipment.

(5) The permit holder shall maintain a record of any event that triggers the alarm for any PM Early Warning System.

(6) Each operating day, personnel shall visually review the recorded data for each PM Early Warning System to identify any trends in relative PM emissions that may reflect an escalation in PM emissions from a monitored process unit.

(7) The permit holder shall perform routine maintenance of each PM Early Warning System in accordance with any manufacturer recommendations and the following:

(a) On at least a semiannual basis, the permit holder shall visually inspect and clean each sensor within the PM Early Warning System, evaluate the response of the sensor to variation in purge air flow rates to verify that flow is exiting the purge ports for each sensor, to the extent warranted based on the visual inspection and purge air flow test, perform any necessary maintenance to ensure continued effective operation of the PM Early Warning System.

(b) On at least an annual basis, the permit holder shall comprehensively inspect the PM Early Warning System and make any necessary repairs.

(8) The PM Early Warning System shall not be required to quantitatively measure PM emissions.

19. The permit holder shall operate the Acid Treatment Units (EPNs 72 and 96) to comply with the following nitrogen oxide (NO_x) emission limits. **(09/22)**

A. No greater than 17,000 ppmvd (at 0% O2) on a 7-day rolling average,

B. No greater than 8,600 ppmvd (at 0% O2) on a 365-day rolling average.

C. Compliance for EPN 96 shall be shown with initial stack testing as required by Special Condition Nos. 22 and 23, tracking of hourly and annual carbon black feed rate as required by Special Condition Nos. 4 and 11, and tracking of annual hours of operation as required by Special Condition No. 11.

D. From EPN 72, no greater than 1,457 ppmvd (at 0% O2) on an hourly average. Compliance for EPN 72 shall be shown using a CEMS meeting requirements in Special Condition No. 21.

E. Emissions from planned MSS activities as quantified in the MAERT and as described in Special Condition No. 24 are excluded from the above concentration limits.

Continuous Demonstration of Compliance

20. Continuous compliance with the emission limits in the MAERT for the TO, the process filters, the vacuum filters, and flares shall be demonstrated as follows:

A. The Process Filters shall be operated and maintained in accordance with the manufacturer's recommendations so as to assure that the minimum collection efficiency is met at all times when the carbon black processing equipment is in operation. The holder of this permit shall install, calibrate, and maintain devices to monitor pressure drop across the Process Filter fabric filter bags. Those pressure drop monitoring devices shall be capable of measuring differential pressure either between 1.0 and 4.0 inches water column, or as otherwise defined by the device manufacturer. The pressure drop monitoring device for each system shall be calibrated at least annually in accordance with the manufacturer's specifications and shall be accurate to either within a range of ± 0.5 inch water gauge pressure (± 125 pascals) or a span of ± 2.0 percent. Pressure drop readings shall be recorded at least once per day that the system is required to be operated. Process Filter fabric filter bags shall be replaced

whenever the pressure drop across the filter bags no longer meets the manufacturer's recommendation. Records of maintenance performed, including dates of filter bag replacement, shall be included in a log as they occur. If the Process Filter system operating performance parameters are outside of the differential pressure limits or the manufacturer's recommended operating range, the affected facility shall not operate until the collection equipment is repaired.

B. For the Process Filters (EPNs 6, 11, 14, 15, 31, 67, and 96), the results of the pressure drop monitoring requirements of Special Condition No. 20.A and the visible emissions and opacity requirements of Special Condition No. 18 shall be used to demonstrate ongoing compliance with PM emissions limitations of the MAERT. **(09/22)**

C. For the Vacuum Filters (EPNs 5, 8, 16, 21, 22, 36, 39, and 40), the visible emissions observations of Special Condition No. 18 shall be used to make ongoing demonstrations of compliance with the requirements of Special Condition No. 17.B and PM emissions limitations of the MAERT.

D. All enclosures, ductwork, and collection systems routing carbon black originating in part or in whole from any reactor shall be effective in collecting carbon black 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 efficiency of the carbon black collection 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. 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. Leaks of tail gas shall be addressed under the provisions of 40 CFR Part 63, Subpart YY.

E. Planned maintenance on the particulate matter 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.

F. Thermal Destruction of H_2S and HAPs:

(1) The Thermal Oxidizer (TO, EPN 90) shall operate with a minimum 99.5 percent destruction efficiency of H_2S and HAPs regulated under 40 CFR Part 63, Subpart YY.

(2) The GP-2 Dryers Stack (EPN 93) shall operate at the temperature necessary to achieve compliance with the MAERT limitations.

(a) The temperature monitoring device should be installed in the combustion chamber or immediately downstream of the combustion chamber.

(b) Each 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: ± 0.75% of reading; or ± 2.5 degrees Celsius (°C).

(c) Each monitoring device shall monitor and record the temperature at least once every 15 minutes.

(d) The temperature of the combustion chambers in the GP-2 dryers shall be maintained at a minimum of 750 °C, measured on a 1-hour rolling average.

G. The GP-3 and GP-4 Flares (EPNs 91 and 92) shall be designed and operated in accordance with the following requirements:

(1) The combined assist natural gas and waste stream to the Flare shall meet the 40 CFR § 63.11 specifications of minimum hydrogen content and maximum tip velocity under normal, upset, and maintenance flow conditions. Compliance with this condition shall be demonstrated by testing required in item (4) below. Flare testing per 40 CFR § 63.11 may be requested by the TCEQ Regional Office to demonstrate compliance with this condition.

(2) The Flares shall be operated with a flame present at all times tail gas is being produced or have a constant pilot flame. The pilot flame shall be monitored by a thermocouple or an infrared monitor and pilot flame monitoring.

(3) No visible emissions except as permitted in Special Condition No. 18.E.

(4) The holder of this permit shall perform testing per 40 CFR § 63.11 or approved equivalent to demonstrate the percent hydrogen in the waste stream to the Flare upon request of the TCEQ Amarillo Regional Director. Records of all test results shall be maintained for five years and shall be made available to the TCEQ Amarillo Regional Director upon request.

Continuous Emission Monitoring System (09/22)

21. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of NO_x from the Acid Treatment Unit (EPN 72).

A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.

B. Section 1 below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:

(1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.

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

weekends and plant holidays if instrument technicians are not normally scheduled on those days.

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

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

C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of pounds per hour at least once every week as follows:

The measured (averaging period) average concentration from the CEMS in ppmvd at 0% O2 shall be multiplied by the exhaust gas flow rate as measured by the CEMs to determine the hourly emission rate.

D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.

E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.

F. Quality-assured (or valid) data must be generated when the Acid Treatment Units are operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the Acid Treatment Units operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.

Initial Determination of Compliance

22. 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.” Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Director.

23. 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. 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) Reference Methods.

A. Initial performance testing shall be conducted within 180 days of initial startup following implementation of modifications to sources. Specifically, a performance test shall be conducted for the GP-2 Dryers Stack (EPN 93) to determine filterable and condensable PM,

PM_{10}, and $PM_{2.5}$ emissions and to demonstrate that the emission limits in the MAERT are met.

Air contaminants emitted from the GP-9 ATU Dryer (EPN 12D) to be tested for include (but are not limited to) nitrogen oxides. **(09/22)**

Air contaminants emitted from the Product Baghouse ATU (EPN 13) to be tested for include (but are not limited to) particulate matter / particulate matter less than 10 microns in diameter. **(09/22)**

Air contaminants emitted from the GP-9 ATU Process Filter (EPN 96) to be tested for include (but are not limited to) nitrogen oxides, CO, PM/PM10/PM2.5, and SO2 to demonstrate that emission limits in MAERT are met. **(09/22)**

B. Performance testing shall be conducted using the relevant EPA TM found in 40 CFR Part 60, Appendix A-1 through A-7. The TMs to be used include:

(1) Method 1 or 1A as appropriate for stack sample location selections and number of traverse points.

(2) Method 2, 2A, 2C, 2D, 2F, or 2G as appropriate for stack volumetric flow rate determination.

(3) Method 3, 3A, or 3B as appropriate for dry molecular weight of the stack gas.

(4) Method 4 for moisture content of the stack gas.

(5) Method 5, 5B, 5D, 201 and 202A as appropriate for PM emissions determinations. As an alternative, and if appropriate, Method 17 may be used.

(6) Method 5 or 202 as appropriate for condensable PM emissions determinations.

C. A minimum of three valid test runs are needed to comprise a PM performance test. The minimum sampling time for each test run shall be at least 60 minutes. The minimum sample volume for each test run shall be at least 30 dry standard cubic feet (dscf).

D. The TCEQ Amarillo 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 or methods 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 or methods. Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for New Source Performance

Standards testing which must have the EPA approval shall be submitted to the TCEQ Amarillo Regional Office.

E. The plant shall operate at representative operating conditions for the process, unless the Administrator specifies or approves alternate operating conditions during stack emissions 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 be stated in the sampling report. 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.

F. 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:

(1) One copy to the TCEQ Amarillo Regional Office.

(2) One copy to the Central File Room, Austin.

G. Additional performance tests for sources may be required by the TCEQ Amarillo Regional Director. Any required performance tests must be completed within the manner and timeframe requested by the Regional Director.

H. Performance testing was completed as shown in Table 4: **(09/22)**

Table 4: Completed Initial Performance Testing

EPN	Source Name	Date of Completion
6	GP-2 Process Filter	August 2002
12D	GP-9 ATU Dryer	April 2003
13	Product Baghouse ATU	April 2003
94	GP-2 TO Bypass	August 2002
31	GP-5 Process Filter	August 2002
90	Main Tail Gas TO	November 2005
93	GP-2 Dryers Stack	May 2005
93	GP -2 Dryers Stack	October 2013 (filterable and condensable PM, PM_{10} and $PM_{2.5}$)
95	GP-5 TO Bypass	May 2011

Authorized Planned MSS Specific Activities

24. The planned MSS activities authorized at this site are as follows:

A. The authorized planned MSS activities that result in VOC emissions are as shown in Table 5:

Table 5: Planned MSS Activity Limits for VOC Sources

Planned MSS Activity	Emission Limit per Activity	Allowable No. of Activities per Hour	Allowable No. of Activities per Year
Filter/strainer change out	0.004 pound (lb) of VOC	6	936
Pump and/or pump seals repair / replacement	0.017 lb of VOC	2	10
Feed tip change out	0.001 lb of VOC	20	4380
Feedstock sampling	0.001 lb of VOC	4	312
Flow meter change out	0.001 lb of VOC	1	12

B. Two carbon black feedstock oil storage tank turnovers and tank cleaning using vacuum equipment for tank emptying and filling per year will occur for the purposes of floor and wall corrosion inspections. Refilling the tank after the inspection will result in 0.42 tons of VOC emissions per tank inspection event, with a total of two tank floor/wall inspections per year, or 0.84 tons per year (tpy) of emissions. Tank vacuuming will result in 0.01 tons of VOC emissions per tank per inspection event with two tank inspection/vacuuming events occurring per year, for a total of 0.02 tpy.

C. The authorized planned MSS activities that result in PM and PM_{10} emissions are as follows:

(1) In-situ manual sampling of carbon black for quality assurance / quality control (QA/QC) and sulfur content determination purposes results in particulate matter emissions. Emissions are limited to 0.16 lb PM per ton of material sampled and 0.08 lb PM_{10} per ton of material sampled. Carbon black sampling is limited to a maximum collection rate of 6 lbs per hour and 3.65 tpy.

(2) Recasting furnace refractory requires that powdered castable refractory compound be mixed with water in a container. The dust free admixture is then applied to the walls of the furnace and allowed to air dry. A total of 2500 lbs of castable will be transferred in any given hour, and a total of 20 tpy of castable powder will be used annually. **(09/22)**

D. The sources and EPNs listed in the MAERT annotated with Footnote 5 have emissions profiles during normal operations that are not different than the emissions that occur during any planned MSS activities, and therefore, do not require any additional authorization.

E. 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.

F. 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 21, 2009 as updated on November 30, 2010, March 7, 2011, and April 15, 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.

G. 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;

(5) the estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it. The emissions shall be estimated using the methods identified in the permit application, consistent with good engineering practice.

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

Recordkeeping

25. General Condition No. 7 regarding information and data to be maintained on file is supplemented as follows and shall be used to demonstrate compliance with the requirements of the Special Conditions of the permit and the MAERT:

A. A copy of the plot plan required in Special Condition No. 2.

B. Daily records of tail gas combusted in the TO and each Flare (based on mass and/or energy balance).

C. Daily records of the calculated carbon black feedstock total sulfur content for each storage tank.

D. Copy of vendor analysis of sulfur content for each shipment of carbon black feedstock.

E. Record of the weekly (daily if required) analysis of the carbon black feedstock sulfur content of each storage tank.

F. Daily records of the carbon black feedstock reactor feed rate.

G. Records demonstrating compliance with the H_2S and total sulfur content of the plant natural gas and distillate fuel used as required in Special Condition No. 14. Records may include semi-annual natural gas analytical results or the Pampa Plant gas supplier's current statement of Operating Conditions equivalent contract documentation that establishes delivered gas sulfur compound specifications.

H. Records of pressure drop monitoring, facility inspections, GP-2 Dryers combustion temperature, maintenance, and corrective actions taken, as required under Special Condition No. 20.

I. Records of any visible emissions and opacity observations required under Special Condition No. 18 and records of any facility inspections, maintenance, and corrective actions taken, as required under Special Condition No. 18.

J. Records of engine testing and maintenance performed under Special Condition No. 11.

K. Records required in Special Condition No. 9 for any unit filter or TO bypass operations. Hourly and cumulative annual emissions vented to the atmosphere during TO bypass and cumulative annual hours of TO bypass.

L. Records of any performance tests conducted in accordance with Special Condition No. 23 shall be retained for the life of the unit.

M. Records of all work practices developed, and planned maintenance, startup, and shutdown activities conducted in accordance with Special Condition No. 24 of this permit. The planned MSS activity records shall at least contain the information required in Special Condition No. 24.

N. Records of hours of operation and CB feed rate showing compliance with Special Condition No. 11. **(09/22)**

O. Records of throughputs and installation of controls showing compliance with Special Condition No. 12. **(09/22)**

26. Demonstration of compliance with permit Special Conditions and MAERT limitations shall be as follows:

A. Unless otherwise noted in the individual special conditions of this permit, compliance with the limitations in the MAERT shall be demonstrated at least monthly for each source using the records identified in Special Condition No. 25 as follows:

(1) For sources with hourly emission limitations, compliance with pound per hour MAERT limits shall be based on data recorded daily and calculations shall be updated monthly.

(2) For sources with annual MAERT limitations whose method of calculation is not otherwise specified, the annual emissions shall be based on a rolling 12-month emissions total that is calculated using the most recent monthly totals calculated in Special Condition No 26.A(1).

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.

27. The modifications represented in the amendment application received October 10, 2018, were determined not to be subject to review under Prevention of Significant Deterioration (PSD) as demonstrated by conducting the evaluation required under 30 TAC §116.127 related to “Actual to Projected Actual and Emissions Exclusion Test for Emissions Increases.” These emissions rates are found in the Table 7 below. Actual emissions from those facilities shall be monitored, recorded, and reports made in accordance with 30 TAC §116.127 for the time period specified in 30 TAC §116.127(b)(1). Table 7 shall remain part of this permit for at least seven years, which is two years beyond the time required in 30 TAC §116.127(b)(1) from the date of the change. Annual emissions exceeding the ‘projected actual’ emissions rate, in tons per year, in Table 7 may result in a retroactive PSD review for the changes related to the unit replacement.

Table 7: Cabot Corporation, Pampa Plant. GP-2 Reactor 8 Rebuild Project

Emission Point No.	Source Name	Air Contaminant Name	Projected Actual Emission rate (tons per year)
6	GP-2 Process Filter A	PM	3.34
		PM_{10}	2.31
		$PM_{2.5}$	1.62
51	Feedstock Tank4	VOC	0.24
90	Main Tail Gas Thermal Oxidizer (7)	PM	6.17
		PM_{10}	6.17
		$PM_{2.5}$	6.17
		H_2S	0.03
		NO_x	67.78
		SO_2	182.54
		CO	0.62
		VOC	0.10
93	GP-2 Dryers Stack (Combined Stack for GP-2 Pellet Dryer No. 1 and GP-2 Pellet Dryer No. 2)	PM	6.32
		PM_{10}	6.32
		$PM_{2.5}$	6.32
		SO_2	21.76
		Lead	0.25
		H_2S	0.04
		NO_x	17.27
		CO	0.25
		VOC	5.65

Total actual emissions from the above-referenced facilities shall be monitored and recorded in accordance with 30 TAC §116.127(b).

28. The amendment project (TCEQ Project Number 334954) per the application received 11/2/2021 to NSR Permit 40088 and modification to PSDTX934M1 was determined not to be subject to PSD major source review for H2S and VOC by identifying projected actual emission rates for the facilities potentially affected by the projects. Projected actual emission rates for the potentially affected facilities are summarized as follows:

		Projected Actual Emissions, tpy	
Project	**EPNs**	**VOC**	**H_2S**
GP-2 Oxygen enrichment	6, 90, 93	15.77	1.11
Specialized Chemical Acid Treated Carbon Black	96, 97	0	0
MSS / Recasting Furnace Refractory	71	0	0
Other	90	0.12	0.03

Actual emissions from these facilities shall be monitored, recorded, and reports made in accordance with 30 TAC 116.127 for the time period specified in 30 TAC 116.127(b)(1). **(09/22)**

Greenhouse Gases Special Conditions (09/22)

29. Emissions from the GP-2 Process Unit shall not exceed 198,026.8 tons carbon dioxide equivalent (CO_2e) on a 12 month rolling average.

30. GP-2 is limited to production of no more than 15,418 tons of carbon black during a rolling 12-month period.

31. Upon offloading of a railcar containing feedstock into the GP-2 Process Unit feedstock tanks, its carbon content shall be measured and recorded within 24 hours of offloading the railcar.

32. Monitoring of GP-2 Process Unit feedstock usage rate and carbon black production rate shall occur.

33. Carbon content of GP-2 carbon black will be measured and recorded monthly.

Greenhouse Gases Recordkeeping Requirements (09/22)

34. Permit holders must keep records sufficient to demonstrate compliance with 30 TAC 116.164. Records shall be sufficient to demonstrate the amount of emissions of GHGs from the source as a result of construction; a physical change or a change in method of operation does not require authorization under 30 TAC 116.164(a). Records shall be maintained for a period of five years after collection.

35. The holder of this permit shall maintain the following records at the plant site in a form suitable for inspection for a period of five years after collection, and the records shall be made available upon request to representatives of the TCEQ, EPA, or any air pollution control agency with jurisdiction.

    A. Daily and monthly GP-2 feedstock usage and carbon black production rates.

    B. Records of the average monthly carbon content of GP-2 feedstock and GP-2 carbon black.

C. The monthly data from paragraphs A and B of this special condition data shall be used to calculate rolling 12-month total emission rates of CO_2 and CO_2e to demonstrate compliance with emissions limits in the MAERT.

Date: November 17, 2022

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 40088 and PSDTX934M2

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)
5	Packing House Sweeper Vacuum Filter	PM	0.20	0.70
		PM_{10}	0.20	0.70
		$PM_{2.5}$	0.20	0.70
6	GP-2 Process Filter A	PM	1.33	4.93
		PM_{10}	1.10	4.90
		$PM_{2.5}$	0.65	2.39
		SO_2	0.20	0.90
		COS	0.70	2.60
		CS_2	1.10	4.20
		H_2S	6.10	23.30
		NO_x	0.21	0.94
		NH_3	0.10	0.33
		HCN	0.75	3.30
		CO	316.79	1387.53
		VOC	3.30	13.50
7	140 brake horsepower (hp) Waukesha Diesel Engine (5)	PM	0.30	0.02
		PM_{10}	0.30	0.02
		$PM_{2.5}$	0.30	0.02
		SO_2	0.28	0.01
		NO_x	4.32	0.22
		CO	0.93	0.05
		VOC	0.35	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)
8	Pellet Packer Dust Vacuum Filter (5)	PM	0.20	0.80
		PM_{10}	0.20	0.80
		$PM_{2.5}$	0.20	0.80
11	GP-3/4 Process Filter A (6)	PM	1.21	5.27
		PM_{10}	0.84	3.65
		$PM_{2.5}$	0.59	2.56
		SO_2	0.35	1.54
		COS	0.28	1.20
		CS_2	1.05	4.60
		H_2S	1.31	4.37
		NO_x	0.10	0.44
		NH_3	0.19	0.82
		HCN	1.04	4.55
		CO	109.91	481.41
		VOC	4.52	19.79
14	GP-2 Process Filter B	PM	1.10	4.90
		PM_{10}	1.10	4.90
		$PM_{2.5}$	1.10	4.90
15	GP- 3/4 Process Filter B (6)	PM	1.28	5.60
		PM_{10}	0.89	3.88
		$PM_{2.5}$	0.62	2.72
		SO_2	0.41	1.79
		COS	0.33	1.45
		CS_2	1.07	4.68
		H_2S	0.93	2.85
		NO_x	0.10	0.40
		NH_3	0.18	0.76

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		HCN	0.97	4.22
		CO	94.28	412.92
		VOC	4.65	20.35
16	Warehouse Vacuum Filter	PM	0.09	0.40
		PM_{10}	0.09	0.40
		$PM_{2.5}$	0.09	0.40
21	GP-2 Rerun Vacuum Filter	PM	0.09	0.40
		PM_{10}	0.09	0.40
		$PM_{2.5}$	0.09	0.40
22	Durant Packers Vacuum Filter	PM	0.10	0.40
		PM_{10}	0.10	0.40
		$PM_{2.5}$	0.10	0.40
26	200 hp Waukesha Engine/Compressor (5)	PM	0.06	0.27
		PM_{10}	0.06	0.27
		$PM_{2.5}$	0.06	0.27
		SO_2	0.40	1.80
		NO_x	4.80	21.00
		CO	0.70	2.90
		VOC	0.20	0.80
31	GP-5 Process Filter	PM	0.20	0.92
		PM_{10}	0.20	0.92
		$PM_{2.5}$	0.20	0.92
		SO_2	0.10	0.30
		COS	0.30	1.00
		H_2S	2.30	8.80
		NO_x	0.10	0.40
		NH_3	0.03	0.10

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		HCN	0.30	1.40
		CO	76.10	338.40
		VOC	0.30	1.00
34	GP-5 Air Heater (5)	PM	<0.01	0.02
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
		SO_2	<0.01	<0.01
		NO_x	0.05	0.20
		CO	0.04	0.20
		VOC	<0.01	0.02
34A	GP-2 Air Heater (5)	PM	<0.01	0.02
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
		SO_2	<0.01	<0.01
		NO_x	0.05	0.20
		CO	0.04	0.18
		VOC	<0.01	0.02
34B	Instrument Air Heater (5)	PM	<0.01	0.02
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
		SO_2	<0.01	<0.01
		NO_x	0.05	0.20
		CO	0.04	0.20
		VOC	<0.01	0.02
35	GP-5 Feedstock Heater (5)	PM	0.01	0.03
		PM_{10}	0.01	0.03
		$PM_{2.5}$	0.01	0.03

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	<0.01	<0.01
		NO_x	0.10	0.40
		CO	0.08	0.40
		VOC	0.01	0.05
36	GP-5 Sweeper Vacuum Filter	PM	0.08	0.30
		PM_{10}	0.08	0.30
		$PM_{2.5}$	0.08	0.30
39	Berquist Tank Vacuum Filter	PM	0.13	0.60
		PM_{10}	0.13	0.60
		$PM_{2.5}$	0.13	0.60
40	Reactor Sample Vacuum Filter	PM	0.13	0.50
		PM_{10}	0.13	0.50
		$PM_{2.5}$	0.13	0.50
43	GP-2 Feedstock Heater (2)	PM	0.01	0.05
		PM_{10}	0.01	0.05
		$PM_{2.5}$	0.01	0.05
		SO_2	<0.01	<0.01
		NO_x	0.20	0.70
		CO	0.10	0.60
		VOC	0.01	0.07
44	GP-3/4 Feedstock Heater (5)	PM	0.02	0.10
		PM_{10}	0.02	0.10
		$PM_{2.5}$	0.02	0.10
		SO_2	<0.01	0.01
		NO_x	0.30	1.10
		CO	0.20	1.00
		VOC	0.01	0.06

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
45	Petro-Chem Feedstock Heater (5)	PM	<0.01	0.02
		PM_{10}	<0.01	0.02
		$PM_{2.5}$	<0.01	0.02
		SO_2	<0.01	<0.01
		NO_x	0.07	0.30
		CO	0.06	0.30
		VOC	0.01	0.02
47A	Hot Water Heater (5)	PM	<0.01	0.01
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
		SO_2	<0.01	<0.01
		NO_x	0.02	0.09
		CO	0.02	0.07
		VOC	<0.01	0.01
47B	Bathhouse Heater (5)	PM	<0.01	0.01
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
		SO_2	<0.01	<0.01
		NO_x	0.02	0.09
		CO	0.02	0.07
		VOC	<0.01	0.01
47C	Bathhouse Heater (5)	PM	<0.01	0.01
		PM_{10}	<0.01	0.01
		$PM_{2.5}$	<0.01	0.01
		SO_2	<0.01	<0.01
		NO_x	0.02	0.09
		CO	0.02	0.07
		VOC	<0.01	0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
48-52 & 55	Feedstock Tanks 1-6	VOC	1.34	2.09
62	GP-2 Startup Scrubber No. 1	PM	7.09	0.26
		PM_{10}	5.07	0.19
		$PM_{2.5}$	3.75	0.15
		SO_2	0.01	0.01
		NO_x	1.70	0.96
		CO	1.43	0.81
		VOC	0.09	0.05
63	GP-2 Startup Scrubber No. 2	PM	8.77	0.27
		PM_{10}	6.27	0.20
		$PM_{2.5}$	4.62	0.15
		SO_2	0.01	0.01
		NO_x	1.70	1.25
		CO	1.43	1.05
		VOC	0.09	0.07
64	GP-3 Startup Scrubber	PM	13.04	0.38
		PM_{10}	9.27	0.27
		$PM_{2.5}$	6.80	0.20
		SO_2	0.01	<0.01
		NO_x	1.46	0.28
		CO	1.23	0.23
		VOC	0.08	0.02
65	GP-4 Startup Scrubber	PM	13.31	0.47
		PM_{10}	9.46	0.34
		$PM_{2.5}$	6.94	0.25
		SO_2	<0.01	<0.01
		NO_x	1.28	0.17

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		CO	1.08	0.15
		VOC	0.08	0.01
66	GP-5 Startup Scrubber	PM	8.08	0.16
		PM_{10}	5.76	0.11
		$PM_{2.5}$	4.24	0.09
		SO_2	0.01	0.01
		NO_x	0.93	0.18
		CO	0.78	0.15
		VOC	0.05	0.01
67	GP-3/4 Process Filter C Filter (6)	PM	1.20	5.27
		PM_{10}	0.83	3.65
		$PM_{2.5}$	0.58	2.56
		SO_2	0.35	1.53
		COS	0.27	1.20
		CS_2	1.05	4.59
		H_2S	1.31	4.37
		NO_x	0.10	0.43
		NH_3	0.19	0.82
		HCN	1.04	4.55
		CO	109.91	481.40
		VOC	4.52	19.79
70	Process Fugitives (7)	PM	0.10	0.40
		PM_{10}	0.10	0.40
		$PM_{2.5}$	0.05	0.20
		SO_2	0.01	0.02
		COS	0.01	0.02
		CS_2	0.01	0.04

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		H_2S	0.03	0.10
		NO_x	0.01	0.01
		NH_3	0.01	0.02
		HCN	0.02	0.09
		CO	1.43	6.23
		VOC	0.06	0.24
71	Planned MSS Activity Emissions (7)			
	Filter/strainer changeouts	VOC	0.02	<0.01
	Pump seals repair/replacement	VOC	0.03	<0.01
	Feed tip changeouts	VOC	0.01	<0.01
	Feedstock sampling	VOC	<0.01	< 0.01
	Flow meter changeouts	VOC	<0.01	< 0.01
	Feedstock storage tank turnover	VOC	44.81	0.84
	Vacuum truck MSS	VOC	6.66	<0.02
	In-situ carbon black sampling	PM	<0.01	<0.01
		PM_{10}	<0.01	<0.01
		$PM_{2.5}$	<0.01	<0.01
	Recasting furnace refractory	PM	0.28	0.01
		PM_{10}	0.13	0.01
		$PM_{2.5}$	0.02	0.01
90	Main Tail Gas Thermal Oxidizer	PM	2.53	10.95
		PM_{10}	2.53	10.95
		$PM_{2.5}$	2.11	10.95
		SO_2	74.84	272.76
		COS	0.20	0.60
		CS_2	0.20	0.70

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		H_2S	1.50	5.70
		NO_x	27.79	101.28
		NH_3	0.14	0.80
		CO	0.26	1.11
		VOC	0.70	2.60
		HCN	0.16	0.77
91	GP-3 Flare	PM (8)	3.01	13.16
		PM_{10} (8)	3.01	13.16
		$PM_{2.5}$ (8)	3.01	13.16
		SO_2	180.13	788.96
		COS	0.21	0.89
		CS_2	0.78	3.41
		H_2S	0.97	4.24
		NO_x	26.86	117.61
		NH_3	1.24	5.42
		HCN	12.37	54.15
		CO	81.43	356.63
		VOC	14.94	65.44
92	GP-4 Flare	PM (8)	3.09	13.51
		PM_{10} (8)	3.09	13.51
		$PM_{2.5}$ (8)	3.09	13.51
		SO_2	159.46	698.40
		COS	0.25	1.07
		CS_2	0.80	3.47
		H_2S	0.69	3.02
		NO_x	27.57	120.73
		NH_3	1.27	5.56

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		HCN	12.69	55.58
		CO	69.84	305.90
		VOC	15.42	67.53
93	GP-2 Dryers Stack (Combined Stack for GP-2 Pellet Dryer No. 1 and GP-2 Pellet Dryer No. 2)	PM (8)	5.88	25.74
		PM_{10} (8)	5.88	25.74
		$PM_{2.5}$ (8)	5.34	23.39
		SO_2	7.41	29.75
		COS	0.14	1.07
		CS_2	0.46	3.47
		H_2S	0.50	3.02
		NO_x	5.76	23.13
		NH_3	0.73	6.09
		HCN	7.27	55.88
		CO	4.53	19.85
		VOC	9.04	68.43
94	GP-2 MUF (Thermal Oxidizer Bypass)	PM	33.00	0.78
		PM_{10}	31.64	0.75
		$PM_{2.5}$	27.98	0.66
		SO_2	8.27	1.22
		COS	24.58	3.62
		CS_2	39.15	5.76
		H_2S	219.17	32.24
		NO_x	7.70	1.30
		NH_3	2.70	0.45
		HCN	26.96	4.54
		CO	8487.32	1451.82
		VOC	118.56	18.62

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
95	GP-5 MUF (Thermal Oxidizer Bypass)	PM	14.35	0.43
		PM_{10}	13.76	0.41
		$PM_{2.5}$	12.17	0.36
		SO_2	2.42	0.36
		COS	9.29	1.37
		CS_2	0.00	0.00
		H_2S	82.24	12.13
		NO_x	3.34	0.62
		NH_3	1.17	0.20
		HCN	11.68	1.96
		CO	2744.00	467.81
		VOC	9.29	1.37
96	ATU Process Filter	PM	1.30	2.28
		PM_{10}	0.10	0.17
		$PM_{2.5}$	0.01	0.02
		NO_x	5.84	10.22
		SO_2	12.63	22.11
33	GP-6 ATU Dryer	NO_x	0.04	0.18
		CO	0.04	0.15
		VOC	0.01	0.01
		SO_2	0.01	0.01
		PM	0.01	0.01
		PM_{10}	0.01	0.01
		$PM_{2.5}$	0.01	0.01
13	Product Baghouse ATU	PM	2.10	9.20
		PM_{10}	2.10	9.20
		$PM_{2.5}$	2.10	9.20

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
12D	GP-9 ATU Dryer	NO_x	0.97	4.25
		CO	0.82	3.57
		PM	0.07	0.32
		PM_{10}	0.07	0.32
		$PM_{2.5}$	0.07	0.32
		SO_2	0.01	0.03
		VOC	0.05	0.23
		NH_3	0.03	0.14
72	GP-6 & 9 ATU EVX Tower	NO_x	39.70	173.89
		CO	0.19	0.84
		PM	5.82	25.49
		PM_{10}	2.41	10.56
		$PM_{2.5}$	2.16	9.44
		SO_2	1.27	5.56
		VOC	0.76	3.33
97	ATU Process Filter Fugitives	PM	0.01	0.01
		PM_{10}	0.01	0.01
		$PM_{2.5}$	0.01	0.01
		NO_x	0.01	0.01
		SO_2	0.01	0.01

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
COS - carbonyl sulfide
CS_2 - carbon disulfide
HCN - hydrogen cyanide

Emission Sources - Maximum Allowable Emission Rates

H_2S - hydrogen sulfide
NH_3 - ammonia

(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
(5) These emissions rates apply at all times, including during the planned MSS activities authorized by this permit and during normal operations.
(6) At any time, no more than two of these three Process Filters (EPNs 11, 15, and 67) may be in operation simultaneously.
(7) Emission rate is an estimate of fugitive emissions and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(8) The emission rates for these sources represent only the front half catch of the sampling train (filterable PM, PM_{10}, $PM_{2.5}$).

Date: September 14, 2022

Emission Sources - Maximum Allowable Emission Rates

Permit Number GHGPSDTX213

This table lists the maximum allowable emission rates of greenhouse gas (GHG) emissions, as defined in Title 30 Texas Administrative Code 101.1, for sources of GHG 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
			TPY (4)
90	Main Tail Gas Thermal Oxidizer	CH_4 (5)	<1
		CO_2 (5)	196,488
		CO_2e	196,488
93	Dryer Purge Gas Filter	CH_4 (5)	< 1
		CO_2 (5)	1,539
		CO_2e (4)	1,539

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) CO_2 - carbon dioxide
CH_4 - methane
CO_2e - carbon dioxide equivalents, based on the following Global Warming Potentials from 40 CFR Part 98, subpart A, Table A-1, effective January 1, 2015: CO_2 (1) and CH_4 (25).
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period. Annual emission limits include both normal and maintenance, startup, and shutdown (MSS) emissions.
(5) Emission rate is given for informational purposes only and does not constitute enforceable limit.
(6) Emission rate is an estimate and is enforceable through compliance with the applicable special conditions and permit application representations.

Date: September 14, 2022