

# FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO

Cabot Corporation

AUTHORIZING THE OPERATION OF

Cabot Corporation Development and Manufacturing Center  
Carbon Black

LOCATED AT

Gray County, Texas

Latitude 35° 30' 11" Longitude 101° 2' 30"

Regulated Entity Number: RN100210582

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:   O1666   Issuance Date:   December 4, 2013  

---

For the Commission

## Table of Contents

<b>Section</b>	<b>Page</b>
General Terms and Conditions .....	1
Special Terms and Conditions .....	1
Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting .....	1
Additional Monitoring Requirements .....	6
New Source Review Authorization Requirements .....	7
Compliance Requirements.....	8
Permit Location.....	8
Permit Shield (30 TAC § 122.148) .....	9
Attachments .....	10
Applicable Requirements Summary .....	11
Additional Monitoring Requirements .....	25
Permit Shield.....	43
New Source Review Authorization References.....	53
Appendix A .....	59
Acronym List .....	60
Appendix B .....	61

## **General Terms and Conditions**

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

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

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

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

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

## **Special Terms and Conditions: Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting**

1. Permit holder shall comply with the following requirements:
  - A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.
  - B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.

- C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.
  - D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.
  - E. Emission units subject to 40 CFR Part 63, Subpart YY as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, § 113.560 which incorporates the 40 CFR Part 63 Subpart by reference.
  - F. Emission units subject to 40 CFR Part 63, Subpart ZZZZ as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, § 113.1090 which incorporates the 40 CFR Part 63 Subpart by reference.
  - G. Emission units subject to 40 CFR Part 63, Subpart DDDDD as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, § 113.1130 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. 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<sub>x</sub>, 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) 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.

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

- (i) Title 30 TAC § 111.111(a)(8)(A) (relating to Requirements for Specified Sources)
- (ii) Title 30 TAC § 111.111(a)(8)(B)(i) or (ii)

- (iii) For a source subject to 30 TAC § 111.111(a)(8)(A), complying with 30 TAC § 111.111(a)(8)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO<sub>x</sub>, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:
- (1) An observation of visible emissions from a source which is required to comply with 30 TAC § 111.111(a)(8)(A) shall be conducted at least once during each calendar quarter unless the source is not operating for the entire quarter.
  - (2) Records of all observations shall be maintained.
  - (3) Visible emissions observations of sources operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of sources operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each source in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each source during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.
  - (4) Compliance Certification:
    - (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(8) and (a)(8)(A)
    - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(8)(B) 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)
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.

### **Additional Monitoring Requirements**

5. The permit holder shall comply with the periodic monitoring requirements as specified in the attached “Periodic Monitoring Summary” upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is

operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time specified in the “Periodic Monitoring Summary,” for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

### **New Source Review Authorization Requirements**

6. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:
  - A. Are incorporated by reference into this permit as applicable requirements
  - B. Shall be located with this operating permit
  - C. Are not eligible for a permit shield
7. 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.
8. 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, material safety data sheets (MSDS), 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.
  - A. If applicable, monitoring of control device performance or general work practice standards shall be made in accordance with the TCEQ Periodic Monitoring Guidance document.
  - B. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

## **Compliance Requirements**

9. 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.
10. 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

## **Permit Location**

11. 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)**

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

## **Attachments**

**Applicable Requirements Summary**

**Additional Monitoring Requirements**

**Permit Shield**

**New Source Review Authorization References**

## **Applicable Requirements Summary**

**Unit Summary ..... 12**

**Applicable Requirements Summary ..... 16**

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
RD-01	Boilers/Steam Generators/Steam Generating Units	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
MUF-VNT	Closed Vent System And Control Device	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
RD-06B	Emission Points/Stationary Vents/Process Vents	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
RD-07B	Emission Points/Stationary Vents/Process Vents	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
RD-07C	Emission Points/Stationary Vents/Process Vents	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
RD-23	Emission Points/Stationary Vents/Process Vents	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
RD-26	Emission Points/Stationary Vents/Process Vents	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
ST-01	Emission Points/Stationary Vents/Process Vents	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
ST-02	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
ST-04	Emission Points/Stationary Vents/Process Vents	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
ST-06	Emission Points/Stationary Vents/Process Vents	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
ST-07	Emission Points/Stationary Vents/Process Vents	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
ST-09	Emission Points/Stationary Vents/Process Vents	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
ST-10	Emission Points/Stationary Vents/Process Vents	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
ST-12	Emission Points/Stationary Vents/Process Vents	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
ST-13	Emission Points/Stationary Vents/Process Vents	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
ST-15	Emission Points/Stationary Vents/Process Vents	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
ST-17	Emission Points/Stationary	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
	Vents/Process Vents				
ST-18	Emission Points/Stationary Vents/Process Vents	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
TB-01	Emission Points/Stationary Vents/Process Vents	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
TB-02	Emission Points/Stationary Vents/Process Vents	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
TB-03	Emission Points/Stationary Vents/Process Vents	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
TB-03	Emission Points/Stationary Vents/Process Vents	N/A	63YY	40 CFR Part 63, Subpart YY	No changing attributes.
TB-04	Emission Points/Stationary Vents/Process Vents	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
RD-02	Process Heaters/Furnaces	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
RD-04	Process Heaters/Furnaces	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
RD-06A	Process Heaters/Furnaces	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
RD-07A	Process Heaters/Furnaces	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
RD-08A	Process Heaters/Furnaces	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
RD-37	Process Heaters/Furnaces	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
RD-38	Process Heaters/Furnaces	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
ST-08	Process Heaters/Furnaces	N/A	R1111	30 TAC Chapter 111, Visible Emissions	No changing attributes.
RD-25	SRIC Engines	N/A	63ZZZZ-01	40 CFR Part 63, Subpart ZZZZ	No changing attributes.

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
RD-01	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
MUF-VNT	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
RD-06B	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
RD-07B	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63,	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					requirements of 40 CFR Part 63, Subpart YY		Subpart YY		
RD-07C	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
RD-23	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
RD-26	EU	63DDDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
ST-01	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%	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring	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)
						averaged over a six minute period for any source on which construction was begun after January 31, 1972.	Summary		
ST-02	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
ST-04	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
ST-06	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
ST-07	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	[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)
						CEMS is installed.			
ST-09	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
ST-10	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
ST-12	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
ST-13	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
ST-15	EP	R1111	OPACITY	30 TAC Chapter 111, Visible	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not	[G]§ 111.111(a)(1)(F) ** See Periodic	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)
				Emissions		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.	Monitoring Summary		
ST-17	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
ST-18	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
TB-01	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
TB-02	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	[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)
						100,000 acfm unless a CEMS is installed.			
TB-03	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
TB-03	EU	63YY	112(B) HAPS	40 CFR Part 63, Subpart YY	§ 63.1103 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart YY	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart YY
TB-04	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
RD-02	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD

## 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)
					CFR Part 63, Subpart DDDDD				
RD-04	EU	63DDDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
RD-06A	EU	63DDDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
RD-07A	EU	63DDDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
RD-08A	EU	63DDDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and	The permit holder shall comply with the applicable recordkeeping	The permit holder shall comply with the applicable reporting requirements of 40 CFR

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD		testing requirements of 40 CFR Part 63, Subpart DDDDD	requirements of 40 CFR Part 63, Subpart DDDDD	Part 63, Subpart DDDDD
RD-37	EU	63DDDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
RD-38	EU	63DDDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7505 The permit holder shall comply with the applicable limitation, standard and/or equipment specification requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 63, Subpart DDDDD	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 63, Subpart DDDDD
ST-08	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
RD-25	EU	63ZZZZ-01	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6602-Table2c.1	For each existing emergency stationary CI RICE and	§ 63.6625(f) § 63.6625(i)	§ 63.6625(i) § 63.6655(a)	§ 63.6640(b) § 63.6640(e)

### 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)
					§ 63.6595(a)(1) § 63.6605(a) § 63.6605(b) § 63.6625(e) § 63.6625(h) § 63.6625(i) § 63.6640(b) [G]§ 63.6640(f)(1)	black start stationary CI RICE, located at a major source, you must comply with the requirements as specified in Table 2c.1.a-c.	§ 63.6640(a) § 63.6640(a)-Table6.9.a.i § 63.6640(a)-Table6.9.a.ii § 63.6640(b)	§ 63.6655(a)(1) § 63.6655(a)(2) § 63.6655(a)(4) § 63.6655(a)(5) § 63.6655(d) § 63.6655(e) § 63.6655(f) § 63.6660(a) § 63.6660(b) § 63.6660(c)	§ 63.6650(f)

**Additional Monitoring Requirements**

**Periodic Monitoring Summary..... 26**

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: ST-01	
Control Device ID No.: ST-01	Control Device Type: Fabric Filter
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(B)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: n/a	
Deviation Limit: Visible emissions unless conducting a Method 9 observation within 24 hours of observing visible emissions. Method 9 observation with an opacity of 20%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: ST-02	
Control Device ID No.: ST-02	Control Device Type: Fabric Filter
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(B)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: n/a	
Deviation Limit: Visible emissions unless conducting a Method 9 observation within 24 hours of observing visible emissions. Method 9 observation with an opacity of 20%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: ST-04	
Control Device ID No.: ST-04	Control Device Type: Fabric Filter
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(B)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: n/a	
Deviation Limit: Visible emissions unless conducting a Method 9 observation within 24 hours of observing visible emissions. Method 9 observation with an opacity of 20%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: ST-06	
Control Device ID No.: ST-06	Control Device Type: Fabric Filter
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(B)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: n/a	
Deviation Limit: Visible emissions unless conducting a Method 9 observation within 24 hours of observing visible emissions. Method 9 observation with an opacity of 20%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: ST-07	
Control Device ID No.: ST-07	Control Device Type: Fabric Filter
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: n/a	
Deviation Limit: : Visible emissions unless conducting a Method 9 observation within 24 hours of observing visible emissions. Method 9 observation with an opacity of 15%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: ST-o8	
Control Device ID No.: ST-o8	Control Device Type: Fabric Filter
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(B)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: n/a	
Deviation Limit: Visible emissions unless conducting a Method 9 observation within 24 hours of observing visible emissions. Method 9 observation with an opacity of 20%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: ST-09	
Control Device ID No.: ST-09	Control Device Type: Fabric Filter
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: n/a	
Deviation Limit: Visible emissions unless conducting a Method 9 observation within 24 hours of observing visible emissions. Method 9 observation with an opacity of 15%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: ST-10	
Control Device ID No.: ST-10	Control Device Type: Fabric Filter
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: n/a	
Deviation Limit: Visible emissions unless conducting a Method 9 observation within 24 hours of observing visible emissions. Method 9 observation with an opacity of 15%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: ST-12	
Control Device ID No.: ST-12	Control Device Type: Fabric Filter
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: n/a	
Deviation Limit: Visible emissions unless conducting a Method 9 observation within 24 hours of observing visible emissions. Method 9 observation with an opacity of 15%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: ST-13	
Control Device ID No.: ST-13	Control Device Type: Fabric Filter
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: n/a	
Deviation Limit: Visible emissions unless conducting a Method 9 observation within 24 hours of observing visible emissions. Method 9 observation with an opacity of 15%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

## Periodic Monitoring Summary

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

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: ST-17	
Control Device ID No.: ST-17	Control Device Type: Fabric Filter
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: n/a	
Deviation Limit: Visible emissions unless conducting a Method 9 observation within 24 hours of observing visible emissions. Method 9 observation with an opacity of 15%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: ST-18	
Control Device ID No.: ST-18	Control Device Type: Fabric Filter
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(B)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: n/a	
Deviation Limit: Visible emissions unless conducting a Method 9 observation within 24 hours of observing visible emissions. Method 9 observation with an opacity of 20%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: TB-01	
Control Device ID No.: TB-01	Control Device Type: Fabric Filter
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: n/a	
Deviation Limit: Visible emissions unless conducting a Method 9 observation within 24 hours of observing visible emissions. Method 9 observation with an opacity of 15%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: TB-02	
Control Device ID No.: TB-02	Control Device Type: Fabric Filter
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: n/a	
Deviation Limit: Visible emissions unless conducting a Method 9 observation within 24 hours of observing visible emissions. Method 9 observation with an opacity of 15%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: TB-03	
Control Device ID No.: TB-03	Control Device Type: Fabric Filter
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: n/a	
Deviation Limit: Visible emissions unless conducting a Method 9 observation within 24 hours of observing visible emissions. Method 9 observation with an opacity of 15%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

## Periodic Monitoring Summary

<b>Unit/Group/Process Information</b>	
ID No.: TB-04	
Control Device ID No.: TB-04	Control Device Type: Fabric Filter
<b>Applicable Regulatory Requirement</b>	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
<b>Monitoring Information</b>	
Indicator: Visible Emissions	
Minimum Frequency: once per calendar quarter	
Averaging Period: n/a	
Deviation Limit: Visible emissions unless conducting a Method 9 observation within 24 hours of observing visible emissions. Method 9 observation with an opacity of 15%.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the opacity limit in the applicable requirement, the permit holder shall report a deviation.</p>	

**Permit Shield**

**Permit Shield .....44**

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
RD-01	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire a liquid or solid fuel.
RD-01	N/A	30 TAC Chapter 117, Subchapter B	Not located in an affected county.
RD-01	N/A	40 CFR Part 60, Subpart Dc	Capacity < 10 MMBtu/hr
MUF-VNT	N/A	30 TAC Chapter 115, Vent Gas Controls	Not located in an affected county.
RD-07B	N/A	30 TAC Chapter 115, Vent Gas Controls	Not located in an affected county.
RD-07C	N/A	30 TAC Chapter 115, Vent Gas Controls	Vent is not located in an affected county.
RD-23	N/A	30 TAC Chapter 115, Vent Gas Controls	Not in an affected county.
ST-01	N/A	30 TAC Chapter 115, Vent Gas Controls	Not in an affected county.
ST-02	N/A	30 TAC Chapter 115, Vent Gas Controls	Not in an affected county.
ST-04	N/A	30 TAC Chapter 115, Vent Gas Controls	Not located in an affected county.
ST-06	N/A	30 TAC Chapter 115, Vent Gas Controls	Not located in an affected county.
ST-07	N/A	30 TAC Chapter 115, Vent Gas Controls	Not located in an affected county.
ST-09	N/A	30 TAC Chapter 115, Vent Gas Controls	Not located in an affected county.
ST-10	N/A	30 TAC Chapter 115, Vent Gas Controls	Not located in an affected county.
ST-17	N/A	30 TAC Chapter 115, Vent Gas Controls	Not located in an affected county.
ST-18	N/A	30 TAC Chapter 115, Vent Gas Controls	Not located in an affected county.
ST-20	N/A	30 TAC Chapter 115, Vent Gas Controls	Not located in an affected county.

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
TB-03	N/A	30 TAC Chapter 115, Vent Gas Controls	Not in an affected county.
TB-04	N/A	30 TAC Chapter 115, Vent Gas Controls	Not in an affected county.
DEG	N/A	30 TAC Chapter 115, Degreasing Processes	Not located in an affected county.
DEG	N/A	40 CFR Part 63, Subpart T	Does not use a solvent containing the regulated compounds.
DIESELTK	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.
DIESELTK	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75 m <sup>3</sup> and constructed after 1984.
FU-01	N/A	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	Not located in an affected county.
GASTANK	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.
GASTANK	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75 m <sup>3</sup> and constructed after 1984.
KERTANK	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.
KERTANK	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75 m <sup>3</sup> and constructed after 1984.
RD-18	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
			county.
RD-18	N/A	40 CFR Part 60, Subpart K	Storage tank capacity less than 40,000 gallons.
RD-18	N/A	40 CFR Part 60, Subpart Ka	Storage tank under 40,000 gallons.
RD-18	N/A	40 CFR Part 60, Subpart Kb	Storage tank constructed prior to 7/23/1984.
RD-29	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.
RD-29	N/A	40 CFR Part 60, Subpart K	Storage tank under 40,000 gallons.
RD-29	N/A	40 CFR Part 60, Subpart Ka	Storage tank under 40,000 gallons.
RD-29	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75m <sup>3</sup> .
RD-30	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.
RD-30	N/A	40 CFR Part 60, Subpart K	Storage tank under 40,000 gallons.
RD-30	N/A	40 CFR Part 60, Subpart Ka	Storage tank under 40,000 gallons.
RD-30	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75m <sup>3</sup> .
RD-31	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
RD-31	N/A	40 CFR Part 60, Subpart K	Storage tank under 40,000 gallons.
RD-31	N/A	40 CFR Part 60, Subpart Ka	Storage capacity under 40,000 gallons.
RD-31	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75m <sup>3</sup> .
RD-32	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.
RD-32	N/A	40 CFR Part 60, Subpart K	Storage tank under 40,000 gallons.
RD-32	N/A	40 CFR Part 60, Subpart Ka	Storage tank under 40,000 gallons.
RD-32	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75m <sup>3</sup> .
RD-33	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.
RD-33	N/A	40 CFR Part 60, Subpart K	Storage tank under 40,000 gallons.
RD-33	N/A	40 CFR Part 60, Subpart Ka	Storage tank under 40,000 gallons.
RD-33	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75m <sup>3</sup> .
RD-34	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.
RD-34	N/A	40 CFR Part 60, Subpart K	Storage tank under 40,000 gallons.
RD-34	N/A	40 CFR Part 60, Subpart Ka	Storage tank under 40,000 gallons.
RD-34	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75m <sup>3</sup> .

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
RD-35	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.
RD-35	N/A	40 CFR Part 60, Subpart K	Storage tank under 40,000 gallons.
RD-35	N/A	40 CFR Part 60, Subpart Ka	Storage tank under 40,000 gallons.
RD-35	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75m <sup>3</sup> .
RD-36	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.
RD-36	N/A	40 CFR Part 60, Subpart K	Storage tank under 40,000 gallons.
RD-36	N/A	40 CFR Part 60, Subpart Ka	Storage tank under 40,000 gallons.
RD-36	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75m <sup>3</sup> .
RD-39	N/A	30 TAC Chapter 112, Sulfur Compounds	Water heaters natural gas fired.
RD-39	N/A	30 TAC Chapter 117, Subchapter B	Water heaters are not in an affected county.
RD-39	N/A	30 TAC Chapter 117, Subchapter E, Division 3	Water heaters are not in an affected county.
RD-39	N/A	30 TAC Chapter 117, Utility Electric Generation	Water heaters are not in an affected county.
RD-39	N/A	40 CFR Part 60, Subpart Dc	Water heater input 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		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
RD-41	N/A	30 TAC Chapter 115, Vent Gas Controls	Not in an affected county.
SB-01	N/A	30 TAC Chapter 115, Vent Gas Controls	Not in an affected county.
SB-02	N/A	30 TAC Chapter 115, Vent Gas Controls	Not in an affected county.
ST-19	N/A	30 TAC Chapter 115, Vent Gas Controls	Not located in an affected county.
TB-F-01	N/A	30 TAC Chapter 115, Vent Gas Controls	Not in an affected county.
RD-04	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire a liquid or solid fuel.
RD-04	N/A	30 TAC Chapter 117, Subchapter B	Not located in an affected county.
RD-06A	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire a liquid or solid fuel.
RD-06A	N/A	30 TAC Chapter 117, Subchapter B	Not located in an affected county.
RD-07A	N/A	30 TAC Chapter 112, Sulfur Compounds	Does not fire a liquid or solid fuel.
RD-07A	N/A	30 TAC Chapter 117, Subchapter B	Not located in an affected county.
RD-08A	N/A	30 TAC Chapter 117, Subchapter B	Not located in an affected county.
RD-37	N/A	30 TAC Chapter 112, Sulfur Compounds	Water heaters natural gas fired.
RD-37	N/A	30 TAC Chapter 117, Subchapter B	Water heaters are not in an affected county.
RD-37	N/A	30 TAC Chapter 117, Subchapter E, Division 3	Water heaters are not in an affected county.

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
RD-37	N/A	30 TAC Chapter 117, Utility Electric Generation	Water heaters are not in an affected county.
RD-37	N/A	40 CFR Part 60, Subpart Dc	Water heater input less than 10 MMBtu/hr.
RD-38	N/A	30 TAC Chapter 112, Sulfur Compounds	Water heaters natural gas fired.
RD-38	N/A	30 TAC Chapter 117, Subchapter B	Water heaters are not in an affected county.
RD-38	N/A	30 TAC Chapter 117, Subchapter E, Division 3	Water heaters are not in an affected county.
RD-38	N/A	30 TAC Chapter 117, Utility Electric Generation	Water heaters are not in an affected county.
RD-38	N/A	40 CFR Part 60, Subpart Dc	Water heater input less than 10 MMBtu/hr.
ST-08	N/A	30 TAC Chapter 115, Vent Gas Controls	Not located in an affected county.
RD-25	N/A	30 TAC Chapter 117, Subchapter B	Not located in an affected county.
RD-12	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.
RD-12	N/A	40 CFR Part 60, Subpart K	Storage tank under 40,000 gallons.
RD-12	N/A	40 CFR Part 60, Subpart Ka	Storage tank under 40,000 gallons.

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
RD-12	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75 m <sup>3</sup> .
RD-13	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.
RD-13	N/A	40 CFR Part 60, Subpart K	Storage tank capacity less than 40,000 gallons.
RD-13	N/A	40 CFR Part 60, Subpart Ka	Storage tank under 40,000 gallons.
RD-13	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75 m <sup>3</sup> .
RD-14	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.
RD-14	N/A	40 CFR Part 60, Subpart K	Storage tank capacity less than 40,000 gallons.
RD-14	N/A	40 CFR Part 60, Subpart Ka	Storage tank under 40,000 gallons.
RD-14	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75 m <sup>3</sup> .
RD-15	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.
RD-15	N/A	40 CFR Part 60, Subpart Ka	Storage tank under 40,000 gallons.
RD-15	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75 m <sup>3</sup> .
RD-16	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.

## Permit Shield

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

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
RD-16	N/A	40 CFR Part 60, Subpart K	Storage tank capacity less than 40,000 gallons.
RD-16	N/A	40 CFR Part 60, Subpart Ka	Storage tank under 40,000 gallons.
RD-16	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75 m <sup>3</sup> .
RD-17	N/A	30 TAC Chapter 115, Storage of VOCs	Storage tank is not located in an affected county.
RD-17	N/A	40 CFR Part 60, Subpart Ka	Storage tank under 40,000 gallons.
RD-17	N/A	40 CFR Part 60, Subpart Kb	Storage tank under 75 M <sup>3</sup> .

**New Source Review Authorization References**

**New Source Review Authorization References ..... 54**

**New Source Review Authorization References by Emission Unit..... 55**

## 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.

<b>Prevention of Significant Deterioration (PSD) Permits</b>	
PSD Permit No.: PSDTX956	Issuance Date: 11/25/2013
<b>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.</b>	
Authorization No.: 42233	Issuance Date: 11/25/2013
Authorization No.: 70263	Issuance Date: 06/21/2005
<b>Permits By Rule (30 TAC Chapter 106) for the Application Area</b>	
Number: 106.124	Version No./Date: 09/04/2000
Number: 106.144	Version No./Date: 09/04/2000
Number: 106.183	Version No./Date: 09/04/2000
Number: 106.227	Version No./Date: 09/04/2000
Number: 106.265	Version No./Date: 09/04/2000
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

### New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units. 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
DEG	DEGREASERS	106.454/07/08/1998
DIESELTK	DIESEL TANK	106.472/09/04/2000
FU-01	FUGITIVES	42233, PSDTX956
GASTANK	GAS TANK	106.473/09/04/2000
KERTANK	KEROSENE TANK	106.473/09/04/2000
MUF-VNT	MUF STACK (TAIL GAS)	42233, PSDTX956
RD-01	STEAM BOILER	42233, PSDTX956
RD-02	EAST FEEDSTOCK HEATER	42233, PSDTX956
RD-04	IONICS COMBUSTION AIR HEATER	42233, PSDTX956
RD-06A	CONVEYING AIR HEATER	42233, PSDTX956
RD-06B	EAST PROCESS FILTER	42233, PSDTX956
RD-07A	PELLET DRYER	42233, PSDTX956
RD-07B	PURGE FILTER	42233, PSDTX956
RD-07C	WEST PROCESS FILTER	42233, PSDTX956
RD-08A	DRY DRUM HEATER	42233, PSDTX956
RD-12	FEEDSTOCK TANK 1	42233, PSDTX956
RD-13	FEEDSTOCK TANK 2	42233, PSDTX956
RD-14	FEEDSTOCK TANK 3	42233, PSDTX956

### New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units. 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
RD-15	FEEDSTOCK TANK 4	42233, PSDTX956
RD-16	FEEDSTOCK TANK 5	42233, PSDTX956
RD-17	FEEDSTOCK TANK 6	42233, PSDTX956
RD-18	FEEDSTOCK TANK 7	42233, PSDTX956
RD-22	DUST FILTER FOR TB-02, PROCESS FILTER FOR TB-03	70263
RD-23	MAIN TAIL GAS THERMAL OXIDIZER	42233, PSDTX956
RD-25	DIESEL ENGINE	42233, PSDTX956
RD-26	TURBO DRYER	70263
RD-29	SOLVENT STORAGE TANK	106.473/09/04/2000
RD-30	REACTOR ADDITIVE TANK	106.472/09/04/2000
RD-31	REACTOR ADDITIVE TANK	106.472/09/04/2000
RD-32	REACTOR ADDITIVE TANK	106.472/09/04/2000
RD-33	REACTOR ADDITIVE TANK	106.472/09/04/2000
RD-34	FEEDSTOCK TESTING TANK	106.472/09/04/2000
RD-35	PORTABLE DIESEL STORAGE TANK	106.472/09/04/2000
RD-36	FIRE PUMP DIESEL STORAGE TANK	106.472/09/04/2000
RD-37	EAST PELLETIZER WATER HEATER	106.183/09/04/2000
RD-38	WEST PELLETIZER WATER HEATER	106.183/09/04/2000

### New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units. 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
RD-39	BATHHOUSE WATER HEATER	106.183/09/04/2000
RD-40	BURNER PILOT/OPEN BURNING OPERATIONS	106.124/09/04/2000
RD-41	FLUFFY PACKER DUST COLLETOR	106.144/09/04/2000
SB-01	PARTS WASHER	106.454/07/08/1998
SB-02	PARTS WASHER	106.454/07/08/1998
ST-01	STEAM BOILER	42233, PSDTX956
ST-02	EAST FEEDSTOCK HEATER	42233, PSDTX956
ST-04	IONICS COMBUSTION AIR HEATER	42233, PSDTX956
ST-06	CONVEYING AIR HEATER	42233, PSDTX956
ST-07	EAST PROCESS FILTER	42233, PSDTX956
ST-08	PELLET DRYER	42233, PSDTX956
ST-09	PURGE FILTER	42233, PSDTX956
ST-10	WEST PROCESS FILTER	42233, PSDTX956
ST-12	DUST FILTER	42233, PSDTX956
ST-13	VACUUM CLEAN-UP SYSTEM	42233, PSDTX956
ST-15	WAREHOUSE VACUUM SYSTEM	42233, PSDTX956
ST-17	THERMAL OXIDIZER	42233, PSDTX956
ST-18	FLUFFY PACKER DUST COLLETOR	106.144/09/04/2000

### **New Source Review Authorization References by Emissions Unit**

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

<b>Unit/Group/Process ID No.</b>	<b>Emission Unit Name/Description</b>	<b>New Source Review Authorization</b>
ST-19	EAST PELLITIZER WATR HEATER	70263
ST-20	WEST PELLITIZER WATER HEATER	70263
TB-01	TURBO DRYER	70263
TB-02	DUST FILTER	70263
TB-03	PROCESS FILTER	70263
TB-04	VACUUM FILTER	70263
TB-F-01	FUGITIVES	70263

**Appendix A**

**Acronym List .....60**

## Acronym List

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

ACFM	.....	actual cubic feet per minute
AMOC	.....	alternate means of control
ARP	.....	Acid Rain Program
ASTM	.....	American Society of Testing and Materials
B/PA	.....	Beaumont/Port Arthur (nonattainment area)
CAM	.....	Compliance Assurance Monitoring
CD	.....	control device
COMS	.....	continuous opacity monitoring system
CVS	.....	closed-vent system
D/FW	.....	Dallas/Fort Worth (nonattainment area)
DR	.....	Designated Representative
ELP	.....	El Paso (nonattainment area)
EP	.....	emission point
EPA	.....	U.S. Environmental Protection Agency
EU	.....	emission unit
FCAA Amendments	.....	Federal Clean Air Act Amendments
FOP	.....	federal operating permit
GF	.....	grandfathered
gr/100 scf	.....	grains per 100 standard cubic feet
HAP	.....	hazardous air pollutant
H/G/B	.....	Houston/Galveston/Brazoria (nonattainment area)
H <sub>2</sub> S	.....	hydrogen sulfide
ID No.	.....	identification number
lb/hr	.....	pound(s) per hour
MMBtu/hr	.....	Million British thermal units per hour
MRRT	.....	monitoring, recordkeeping, reporting, and testing
NA	.....	nonattainment
N/A	.....	not applicable
NADB	.....	National Allowance Data Base
NO <sub>x</sub>	.....	nitrogen oxides
NSPS	.....	New Source Performance Standard (40 CFR Part 60)
NSR	.....	New Source Review
ORIS	.....	Office of Regulatory Information Systems
Pb	.....	lead
PBR	.....	Permit By Rule
PM	.....	particulate matter
ppmv	.....	parts per million by volume
PSD	.....	prevention of significant deterioration
RO	.....	Responsible Official
SO <sub>2</sub>	.....	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..... 62**

**Cabot Corporation**  
**Pampa Development and Manufacturing Center**  
**Major NSR Summary Table**

Permit Number: 42233/PSD-TX-956					Issuance Date: November 25, 2013		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
ST-01	Steam Boiler	PM	0.01	0.04	18	2, 21	
		PM10	0.01	0.04	18	2, 21	
		PM2.5	0.01	0.04	18	2, 21	
		SO2	0.01	0.01	18	2, 21	
		NOx	0.12	0.51	18	2, 21	
		CO	0.10	0.43	18	2, 21	
		VOC	0.01	0.03	18	2, 21	
ST-02	East Feedstock Heater	PM	0.01	0.03	18	2, 7, 21	
		PM10	0.01	0.03	18	2, 7, 21	
		PM2.5	0.01	0.03	18	2, 7, 21	
		SO2	0.01	0.01	18, 21	2, 7, 21	
		NOx	0.08	0.34	18	2, 7, 21	
		CO	0.07	0.29	18	2, 7, 21	
		VOC	0.01	0.02	18	2, 7, 21	
ST-04	Ionics Combustion Air Heater	PM	0.04	0.16	18	2, 21	
		PM10	0.04	0.16	18	2, 21	
		PM2.5	0.04	0.16	18	2, 21	
		SO2	0.01	0.01	18	2, 21	
		NOx	0.49	2.15	18	2, 21	
		CO	0.41	1.80	18	2, 21	
		VOC	0.03	0.12	18	2, 21	
ST-06	Conveying Air Heater	PM	0.01	0.02	18	2, 21	
		PM10	0.01	0.02	18	2, 21	
		PM2.5	0.01	0.02	18	2, 21	
		SO2	0.01	0.01	18	2, 21	
		NOx	0.07	0.32	18	2, 21	
		CO	0.06	0.27	18	2, 21	
		VOC	0.01	0.02	18	2, 21	
ST-07	East Process Filter	PM	0.13	0.54	3, 12, 15, 16, 18, 19	2, 3, 12, 15, 16, 19, 21	3, 19
		PM10	0.13	0.54	3, 12, 15, 16, 18, 19	2, 3, 12, 15, 16, 19, 21	3, 19
		PM2.5	0.09	0.38	3, 12, 15, 16, 18, 19	2, 3, 12, 15, 16, 19, 21	3, 19
		SO2	0.40	1.40	18	2, 21	
		COS	0.63	2.76	18	2, 21	
		CS2	2.01	8.80	18	2, 21	
		H2S	5.40	23.65	18	2, 21	
		NOx	0.06	0.26	18	2, 21	
		NH3	0.03	0.13	18	2, 21	
		HCN	0.31	1.34	18	2, 21	
		CO	87.00	381.06	18	2, 21	
VOC	3.30	14.45	18	2, 21			
ST-08	Pellet Dryer	PM	0.03	0.13	18	2, 21	
		PM10	0.03	0.13	18	2, 21	
		PM2.5	0.03	0.13	18	2, 21	

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		SO2	0.01	0.01	18	2, 21	
		NOx	0.39	1.72	18	2, 21	
		CO	0.33	1.44	18	2, 21	
		VOC	0.02	0.09	18	2, 12, 19, 21	
ST-09	Purge Filter	PM	0.01	0.03	3, 12, 15, 16, 18, 19	2, 12, 15, 16, 19, 21	3, 19
		PM10	0.01	0.03	3, 12, 15, 16, 18, 19	2, 12, 15, 16, 19, 21	3, 19
		PM2.5	0.01	0.03	3, 12, 15, 16, 18, 19	2, 12, 15, 16, 19, 21	3, 19
		SO2	0.01	0.01	18	2, 21	
		NOx	0.08	0.07	18	2, 21	
		CO	0.07	0.06	18	2, 21	
ST-10	West Process Filter	PM	0.16	0.67	3, 12, 15, 16, 18, 19	2, 3, 12, 15, 16, 19, 21	3, 19
		PM10	0.16	0.67	3, 12, 15, 16, 18, 19	2, 3, 12, 15, 16, 19, 21	3, 19
		PM2.5	0.11	0.47	3, 12, 15, 16, 18, 19	2, 3, 12, 15, 16, 19, 21	3, 19
		SO2	0.40	1.40	18	2, 21	
		COS	0.63	2.76	18	2, 21	
		CS2	2.01	8.80	18	2, 21	
		H2S	5.40	23.65	18	2, 21	
		NOx	0.06	0.26	18	2, 21	
		NH3	0.03	0.13	18	2, 21	
		HCN	0.31	1.34	18	2, 21	
		CO	87.00	381.06	18	2, 21	
		VOC	3.30	14.45	18	2, 21	
ST-11	Dry Drum Heater	PM	0.01	0.03	18	2, 21	
		PM10	0.01	0.03	18	2, 21	
		PM2.5	0.01	0.03	18	2, 21	
		SO2	0.01	0.01	18	2, 21	
		NOx	0.10	0.43	18	2, 21	
		CO	0.08	0.36	18	2, 21	
		VOC	0.01	0.02	18	2, 21	
ST-12	Dust Filter	PM	0.14	0.60	3, 12, 15, 16, 18, 19	2, 3, 12, 15, 16, 19, 21	3, 19
		PM10	0.14	0.60	3, 12, 15, 16, 18, 19	2, 3, 12, 15, 16, 19, 21	3, 19
		PM2.5	0.1	0.42	3, 12, 15, 16, 18, 19	2, 3, 12, 15, 16, 19, 21	3, 19
ST-13	Vacuum Clean-up System	PM	0.03	0.10	3, 12, 15, 16, 18, 19	2, 3, 12, 15, 16, 19, 21	3, 19
		PM10	0.03	0.10	3, 12, 15, 16, 18, 19	2, 3, 12, 15, 16, 19, 21	3, 19
		PM2.5	0.02	0.07	3, 12, 15, 16, 18, 19	2, 3, 12, 15, 16, 19, 21	3, 19
ST-15	Warehouse Vacuum System	PM	0.01	0.02	3, 12, 15, 16, 18, 19	2, 12, 15, 16, 19, 21	3, 19
		PM10	0.01	0.02	3, 12, 15, 16, 18, 19	2, 12, 15, 16, 19, 21	3, 19
		PM2.5	0.01	0.02	3, 12, 15, 16, 18, 19	2, 12, 15, 16, 19, 21	3, 19
ST-16	Diesel Engine	PM	0.27	0.01	3, 10, 18	2, 3, 10, 21	3
		PM10	0.27	0.01	3, 10, 18	2, 3, 10, 21	3
		PM2.5	0.27	0.01	3, 10, 18	2, 3, 10, 21	3
		SO2	<0.01	<0.01	3, 10, 18	2, 3, 10, 21	3
		NOx	3.75	0.19	3, 10, 18	2, 3, 10, 21	3
		CO	0.81	0.04	3, 10, 18	2, 3, 10, 21	3
		VOC	0.30	0.02	3, 10, 18	2, 3, 10, 21	3
ST-17	Main Tail Gas Thermal Oxidizer	PM	3.33	14.58	12, 15, 16, 18, 19	2, 12, 15, 16, 19, 21	19
		PM10	3.33	14.58	12, 15, 16, 18, 19	2, 12, 15, 16, 17, 19, 21	19
		PM2.5	2.92	12.81	12, 15, 16, 18, 19	2, 12, 15, 16, 17, 19, 21	19

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
		SO2	278.61	1634.34	17, 18, 19	2, 17,19, 21	19
		COS	0.22	0.94	17, 18, 19	2, 17, 19, 21	19
		CS2	0.75	3.29	17, 18, 19	2, 17, 19, 21	19
		H2S	2.00	8.76	17, 18, 19	2, 17, 19, 21	19
		NOx	28.81	255.79	17, 18, 19	2, 17, 19, 21	19
		NH3	0.01	0.05	17, 18, 19	2, 17, 19, 21	19
		HCN	0.11	0.50	17, 18, 19	2, 17, 19, 21	19
		CO	33.85	148.25	17, 18,19	2, 17, 19, 21	19
		VOC	1.31	5.73	17, 18,19	2, 17, 19, 21	19
TK-01 thru TK-07	Carbon Black Feedstock Oil Tanks No. 1 through No.7 (Short Term limit, Maximum of 4 tanks/hr)	VOC	3.90	--	5	2, 5, 21	
TK-01 thru TK-07	Carbon Black Feedstock Oil Tanks No. 1 through No.7 (Annual limit, all 7 tanks inclusive)	VOC	--	1.60	5	2, 5, 21	
FU-01	Fugitives(5)	PM	0.27	1.19	9	2, 9	
		PM10	0.27	1.19	9	2, 9	
		PM2.5	0.14	0.60	9	2, 9	
		SO2	<0.01	0.01	9	2, 9	
		COS	<0.01	0.01	9	2,9	
		CS2	0.01	0.01	9	2,9	
		H2S	0.02	0.09	9	2,9	
		NOx	<0.01	<0.01	9	2,9	
		NH3	<0.01	<0.01	9	2,9	
		HCN	<0.01	<0.01	9	2,9	
		CO	0.32	1.41	9	2,9	
		VOC	0.01	0.05	9	2,9	
	Carbon Black Oil Process Equipment Fugitives	VOC	0.27	1.17		2	
FU-01-MSS (8)	Pump seal repair/replacement	VOC	0.02	<0.01	20	2, 20, 21	
	Flow meter change outs	VOC	<0.01	<0.01	20	2, 20, 21	
	Filter/strainer change outs	VOC	<0.01	<0.01	20	2, 20, 21	
	Feed tip change outs	VOC	0.07	0.03	20	2, 20, 21	
	Feedstock Sampling	VOC	<0.01	<0.01	20	2, 20, 21	
	Orifice change out	VOC	<0.01	<0.01	20	2, 20, 21	

Permit Number: 42233/PSD-TX-956				Issuance Date: November 25, 2013			
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY**	Spec. Cond.	Spec. Cond.	Spec. Cond.
	Vacuum Truck MSS	VOC	1.58	0.01	20	2, 20, 21	
	In-situ CB sampling	PM	<0.01	<0.01	20	2, 20, 21	
		PM10	<0.01	<0.01	20	2, 20, 21	
		PM2.5	<0.01	<0.01	20	2, 20, 21	
	Recasting furnace refractory	PM	0.02	<0.01	20	2, 20, 21	
		PM10	0.02	<0.01	20	2, 20, 21	
		PM2.5	<0.01	<0.01	20	2, 20, 21	

Footnotes:

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) Air Contaminants referenced in the MAERT are identified as follows:
  - COS - carbonyl sulfide
  - CS2 - carbon disulfide
  - HCN - hydrogen cyanide
  - H2S - hydrogen sulfide
  - NH3 - ammonia
  - VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
  - NOx - total oxides of nitrogen
  - SO2 - sulfur dioxide
  - PM - total particulate matter, suspended in the atmosphere, including PM10 and PM2.5, as represented
  - PM10 - total particulate matter equal to or less than 10 microns in diameter, including PM2.5, as represented
  - PM2.5 - particulate matter equal to or less than 2.5 microns in diameter
  - CO - carbon monoxide
  - HAP - hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (6) The East Feedstock may be heated by the natural gas fired heater, EPN ST-02, or by an electrically fired heater placed in parallel with ST-02 in accordance with Special Condition No. 7.
- (7) These emissions rates apply at all time, including during the planned MSS activities authorized by this permit and during normal operations.
- (8) The authorized planned Maintenance, Startup, and Shutdown (MSS) activities are as described in Special Condition No. 20.



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
AIR QUALITY PERMIT



A Permit Is Hereby Issued To  
**Cabot Corporation**

Authorizing the Continued Operation of  
**Pampa Development And Manufacturing Center**  
Located at **Pampa, Gray County, Texas**

Latitude 35° 30' 11" Longitude 101° 2' 30"

Permits: 42233 and PSDTX956

Issuance Date : November 25, 2013

Renewal Date: November 25, 2023

  
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 116.116 (30 TAC 116.116)]
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(a), (b) and (c)]
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)(iii)]
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; comply with any additional recordkeeping requirements specified in special conditions attached to the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC 116.115(b)(2)(E)]
8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC 116.115(b)(2)(F)]
9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification for upsets and maintenance in accordance with 30 TAC 101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC 116.115(b)(2)(G)]
10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to a condition of "air pollution" as defined in Texas Health and Safety Code (THSC) 382.003(3) or violate THSC 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit.

## Special Conditions

Permit Numbers 42233 and PSDTX956

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 the Pampa Development and Research Center, 8430 County Road 3, 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” (MAERT). The nature and rates of air contaminants authorized from each source/facility are limited to those listed in the MAERT for the named source/facility and its respective EPN.
  - B. Planned maintenance, startup, and shutdown (MSS) activities and related emissions are authorized for the sources and activities described in and limited by the Special Conditions and MAERT of this permit. No other MSS activities and emissions are authorized by this permit for the facilities listed on the MAERT.
  - C. The sources listed in Table 1 are not authorized by this permit:

**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 (Title 30 Texas Administrative Code)
Manual application (hand wipe cleaning) of cleaning solvents containing less than 1% 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)
Comfort air conditioning and ventilation systems	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 Heating	Sitewide	9/4/2000	§106.102

<b>Facility Description</b>	<b>Emission Point Number (EPN)</b>	<b>Registration Number/Date</b>	<b>Rule Citation (Title 30 Texas Administrative Code)</b>
Bench Scale Laboratory Equipment	Sitewide	9/4/2000	§106.122
Welding/Cutting/Brazing	Sitewide	9/4/2000	§106.227
Sanding and grinding using hand held and manually operated machinery	Sitewide	9/4/2000	§106.265
Vacuum Cleaning Units	Sitewide	9/4/2000	§106.266
Organic and Inorganic Liquid Loading and Unloading	TK-09	9/4/2000	§106..472
Organic Liquid Loading and Unloading	TK-08	9/4/2000	§106.473
Process station Turbo Dryer and supporting equipment	TB-01 through TB-04 and TB-F-01	Construction Permit No. 70263 6/21/2005	§116.110
Two remote reservoir degreasers using non-halogenated solvents	SB1 and SB2	PBR 43640 3/2/2000	§106.454
Reactor Burner Pilot Plant	ST-17, Sitewide	PBR 102831 6/25/2012	§106.124

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

plot plan submitted with the application for this permit dated December 21, 2009, as updated on November 30, 2010.

### Federal Requirements

3. The relevant facilities authorized under this permit are subject to the applicable requirements of Title 40 Code of Federal Regulations Part 63 (40 CFR Part 63), National Emission Standards for Hazardous Air Pollutants for Source Categories (MACT standards) as follows:
  - A. 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;
  - D. Subpart ZZZZ, Stationary Reciprocating Internal Combustion Engines; and
  - E. Subpart DDDDD, Industrial, Commercial, and Institutional Boilers and Process Heaters.

### Operational Limitations

4. The carbon black oil feedstock feed rate for the reactor shall not exceed the rates listed on the Texas Commission on Environmental Quality (TCEQ) Material Balance Table (Table 2) contained in the confidential permit application submittal dated December 21, 2009 as updated on November 30, 2010 and subsequent revisions to the application.
5. Sitewide feedstock sulfur limitations.
  - A. The total sulfur content of the carbon black feedstock is limited to 3.75 percent on an annual basis and 4.0 percent on an hourly average basis. 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 each time carbon black oil is added to the tank as follows:

Sulfur content =

$$\frac{VSP + V_1S_1P_1}{VP + V_1P_1}$$

- Where:
- $V$  = volume of feedstock in tank before addition of new feedstock
  - $S$  = percent by weight of sulfur in feedstock prior to addition of new feedstock
  - $P$  = density of feedstock in pounds per gallon
  - $V_1$  = volume of new feedstock added to tank
  - $S_1$  = percent by weight of sulfur in new feedstock added to tank

$P_1$  = density of new feedstock added to tank in pounds per gallon

- C. A sulfur content sampling and analysis of the feedstock being pumped directly to the reactor shall be performed weekly. If the calculated sulfur percentage varies from the weekly sulfur analysis by  $\pm 0.20$  percent by weight, the sulfur analysis will be repeated and then performed daily until the discrepancy is resolved. Records must contain sufficient information to readily demonstrate compliance with the above sulfur limits. The sampling and analysis is not required on weekends and plant holidays if technicians capable of performing the sampling and 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. MSS activities related to feedstock transfer, storage, handling, and sampling are listed in Special Condition No. 20.
- 6. All fixed-roof carbon black oil storage tanks shall be equipped for bottom fill or equipped with submerged fill lines.
  - 7. The feedstock oil may be heated by either the East Feedstock Heater (ST-02) or an electrically powered heater placed in parallel with the East Feedstock Heater provided that the amount of feedstock oil heated with the two heaters does not exceed the amount of feedstock oil processed by either heater operated individually. Records shall be kept to demonstrate which heat source is used at any given time.
  - 8. Carbon black reactor tail gas and the exhaust from the Main Unit Filter (MUF) shall only be combusted in the Thermal Oxidizer (TO, EPN ST-17).
  - 9. The MUF TO Bypass Emergency Relief Vent (EPN ST-05) shall be normally closed and shall be inspected for proper reseating after each emission event that results in the vent opening. Inspections and repairs shall be documented as they occur.
  - 10. The diesel firewater engine (EPN ST-16) testing and maintenance may not exceed 100 hours per year on a 12-month rolling period. Records shall be kept documenting any testing and maintenance performed.
  - 11. Fuel fired in all sources other than the TO (EPN ST-17) is limited to the following:
    - A. Fuel used in all other fired sources shall be limited to pipeline quality sweet natural gas containing no more than 0.25 grain of hydrogen sulfide and 5 grains total sulfur per dscf.
    - B. Fuel for the diesel fire water engine shall be limited to No. 2 distillate containing no more than 0.05 percent sulfur, by weight. Use of any other fuel requires authorization from the TCEQ.
  - 12. All fabric filter collection devices and control devices shall be operated and maintained in a manner consistent with the manufacturer's recommendations for the device. Copies of the manufacturers' recommended practices shall be kept on site and made available upon

request of the TCEQ or any pollution control program representative with jurisdiction. A log shall be kept on site which notes each device related maintenance and repair activities, the date of each inspection, name of the inspector, the purpose of the inspection, and the nature of any repairs and maintenance work performed.

13. 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.
14. Sources of particulate matter emissions controlled by fabric filter shall comply with the requirements of this Special Condition as follows:
  - A. Emissions that originate in reactor RD-05 pass through the MUF then through a tail gas control device (TO, EPN ST-17) to the atmosphere.
  - B. Dust, vacuum, and the purge filters (EPNs ST-09, ST-12, ST-13, and ST-15) shall have a maximum outlet grain loading of 0.01 grain/dscf.
15. Visible emissions and opacity related requirements that apply to the sources and emissions points authorized in this permit are as follows:
  - A. Visible emissions for more than 15 seconds from any source or EPN not identified in Special Condition No. 15.B shall be corrected immediately. Visible emissions lasting longer than 5 minutes shall be noted in the daily shift records including date, time, duration, location and corrective action taken.
  - B. Visible emissions observations of the TO stack (EPN ST-17) and the emissions points for sources controlled by fabric filter control devices or fabric filter collection device at the site (EPNs ST-07, ST-09, ST-10, ST-12, ST-13 and ST-15) shall be conducted and documented for each EPN at least once each day that emissions are routed to the respective EPN.

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 ST-17), and momentary for all other subject sources. 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 ST-17) for more than 12 seconds within at least a 15 second observation period, or if visible emissions of any duration are observed from other EPNs 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 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 EPN and documented in accordance with Test Method (TM) 9 of 40 CFR Part 60, Appendix A 4 (Method 9). The averaging period when conducting a TM 9 observation is six minutes. If visible emissions from the TO (EPN ST-17) exceed 5 minutes in duration or are greater than 10% opacity during the Method 9 observation, the TO is in violation of the prohibition of visible emissions of this provision. Opacity in excess of 5% for any other emission point referenced in this special condition 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 opacity, including an evaluation of the operating parameters of the source and any control systems governing the facility whose emission point is being observed for visible emissions, shall be conducted and documented within 24 hours of the observation. Steps shall be taken immediately to minimize and restore, if possible, a condition of no visible emissions for the facility and EPN. The steps necessary for the restoration to a condition of operations with no visible emissions for the facility and EPN shall be accomplished and documented by performance of a visible emissions observation within one week of first observation of visible emissions.
  - (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 Method 9 opacity observations, comprised of 10 six-minute observation periods, shall be conducted and documented each operating day until the source is restored to an operating condition of no visible emissions.

- C. Visible emissions or opacity observations for any source authorized by this permit shall be made upon demand of a representative of the TCEQ or any air pollution control program with jurisdiction. When such observations are required, the methods used and the observation period duration shall be as specified in Special Condition No. 15.B unless otherwise specified by the person requiring the observation to be conducted.

### **Continuous Demonstration of Compliance**

- 16. Continuous compliance with the emission limits in the MAERT for the Thermal Oxidizer (EPN ST-17), the East and West Process Filters (EPNs ST-07 and ST-10, respectively), and the Purge Filter (ST-09) and dust filters (EPNs ST-12, ST-13, and ST-15) shall be demonstrated as follows:

- A. The Process Filters and the Purge Filter shall be operated and maintained in accordance with the manufacturer's recommendations at all times when the carbon black processing equipment is in operation. The holder of this permit shall install, calibrate, and maintain a device to continuously monitor (minimum of one measurement every 15 seconds) pressure drop across the process filters. The monitoring device for each system shall be calibrated in accordance with the manufacturer's specifications, shall be calibrated at least annually, and shall be accurate to within a range of  $\pm 0.5$  inches water gauge pressure ( $\pm 125$  pascals) or  $\pm 0.5$  percent of span. Pressure drop shall be monitored continuously and the average recorded at least once every 15 minutes. The range of acceptable pressure drop shall be either established through the testing required in Special Condition No. 19.A or 19.B (as appropriate), or as recommended by the manufacturer to assure that the requirements of Special Condition No. 14.B and the MAERT are met. Any 15 minute average pressure drop reading that is outside the range established for the source in this special condition is evidence that the system is not properly operating. New pressure drop monitoring and recording systems for existing facilities shall be installed, calibrated, and begin monitoring and recording pressure drop no later than 180 days following issuance of the November 25, 2013 permit renewal.

Any time any of the filter system operating performance parameters (other than pressure drop) are outside of either the manufacturer's recommended normal operating range or that range established by testing that indicates that compliance with the emissions limitations of the MAERT are being met for the source, then the source is not operating properly. When this occurs prompt action must be taken to identify the source of the improper operation and to restore the system to proper operating conditions. Events of improper operation, their cause and actions taken to restore proper operations and the date that proper operations have been restored shall be documented as they occur.

- B. The results of the pressure drop monitoring requirements of Special Condition No. 16A and the visible emissions and opacity requirements of Special Condition No. 15 shall be used to demonstrate ongoing compliance with emissions limitations of the MAERT for the Process Filters (EPNs ST-07 and ST-10).

- C. For the purge, dust, and vacuum filters (EPNs ST-09, ST-12, ST-13, and ST-15), the visible emissions observations of Special Condition No. 15.A shall be used to make ongoing demonstrations of compliance with the outlet grain loading limitations of Special Condition No. 14.B and MAERT limitations of the filters.
  - D. All enclosures, ductwork, and collection systems routing carbon black or tail gas originating in part or in whole from the reactor shall be effective in capturing emissions from the intended equipment and in preventing fugitive emissions. The duct and collection system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the emissions capture system. To the extent that design will allow, the exterior of all ventilation systems in this facility will be visually inspected on a daily basis by facility personnel. Visible leaks and cracks shall, with every reasonable effort, be mitigated as soon as possible in accordance with 40 CFR Part 63, Subpart SS. Inspections and repairs shall be documented as they occur. A log shall be kept on-site which notes each system or ductwork related maintenance and repair activities, the date of each inspection, name of the inspector, the purpose of the inspection, and the nature of any repairs and maintenance work performed, including events that result in air contaminant releases from the MUF vent. Leaks of tail gas shall be addressed under the provisions of 40 CFR Part 63, Subpart SS.
  - 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 particulate matter (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.
17. The Thermal Oxidizer (EPN ST-17) shall operate with a minimum 99.0 percent destruction efficiency of total reduced sulfur compounds and hazardous air pollutants regulated under 40 CFR Part 63, Subpart YY. The incinerator firebox temperature shall be monitored and the oxidizer operated at that temperature necessary to achieve compliance at all times with the MAERT limitations and the destruction efficiency of this Special Condition, whichever is higher. The temperature monitoring device should be installed in the combustion chamber or immediately downstream of the combustion chamber. 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:  $\pm 2\%$  of reading; or  $\pm 2.5$  degrees Celsius. Each monitoring device shall monitor and record the temperature at least once every 15 minutes. New temperature monitoring and recording systems for existing facilities shall be installed, calibrated, and begin monitoring and recording temperatures no later than December 1, 2011.

### **Initial Determination of Compliance**

18. Sampling ports and platforms shall be incorporated into the design of all exhaust stacks according to the specifications set forth in the enclosure entitled "Chapter 2, Stack

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

19. Upon request of the TCEQ Regional office, 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 their expense. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the appropriate U.S. Environmental Protection Agency (EPA) Test Methods.
  - A. Thermal Oxidizer performance testing for particulate matter (including PM, PM<sub>10</sub> and PM<sub>2.5</sub>) for new or modified sources. Demonstrations of compliance with the Thermal Oxidizer particulate emission limits shall be made by sampling in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the appropriate EPA Test Methods. The mass particulate emission limitation not to be exceeded is 0.1% by weight of the maximum carbon black sent to the MUF as listed in the confidential Pampa DMC Thermal Oxidizer Emissions Spreadsheet version 2.2 spreadsheet. That spreadsheet is dated December 12, 1998 and is part of the confidential permit application submitted in 2002 in support of the development of the initial PSD permit.
    - (1) The sampling location is to be determined in consultation with the TCEQ and approved by the TCEQ during the pretest meeting required in Special Condition No. 19.E.
    - (2) Initial performance testing shall be conducted within 180 days of initial startup for new or modified sources. Specifically, a performance test shall be conducted for the Thermal Oxidizer (ST-17) to determine filterable and condensable PM, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions and to demonstrate that the emission limits in the MAERT are met.
    - (3) 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:
      - (a) Method 1 or 1A as appropriate for stack sample location selections and number of traverse points.
      - (b) Method 2, 2A, 2C, 2D, 2F, or 2G as appropriate for stack volumetric flow rate determination.
      - (c) Method 3, 3A, or 3B as appropriate for dry molecular weight of the stack gas.
      - (d) Method 4 for moisture content of the stack gas.
      - (e) Method 5, 5B, 5D, 201, and 202A as appropriate for PM emissions determinations. As an alternative, and if appropriate, Method 17 may be used.

- (4) 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).
  - (5) Sampling must be performed when the feedstock feed rate is at the maximum capacity referenced in Special Condition No. 4 while the unit is in makeload operating mode. Makeload is defined as that period of time in reactor 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. Should sampling occur at operating conditions other than listed then testing will be required prior to operating at a feedstock feed rate higher than the average rate documented during the most recent performance test.
  - (6) Concurrent with PM sampling, pressure drop across the filter media shall be determined so that the range of pressure drop readings that occur as the filter is being properly operated and tested can be established.
- B. Particulate matter emissions testing for the dust filters (EPNs ST-12 , ST-13 , and ST-15), the East and West Process Filters (EPNs ST-07 and ST-10, respectively), and the Purge Filter (EPN ST-09) shall be completed as follows:
- (1) Initial performance testing for new or modified sources listed in this special condition shall be conducted within 180 days of initial startup.
  - (2) Performance testing for demonstration of compliance with the maximum outlet grain loading requirements of Special Condition No. 14.B or to demonstrate compliance with the MAERT limitations for the particular source shall be conducted in accordance with the requirements of Special Condition Nos. 19.A(3) through 19.A(6) above.
- C. Air contaminants emitted from the thermal oxidizer to be tested for include (but are not limited to) nitrogen oxides, carbon monoxide, sulfur dioxide, and particulate matter. In addition, the thermal oxidizer shall be tested for destruction efficiency required in Special Condition No. 17.
- D. Sampling shall occur within 120 days after initial start-up or modification of the thermal oxidizer. If process modifications have not occurred which allows for a 10 percent production rate increase at the time of the thermal oxidizer sampling, additional sampling will occur within 120 days after sufficient modifications have occurred to increase production 10 percent over the existing potential base line based on maximum feedstock rates. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office. Additional time to comply with the applicable requirements of 40 CFR Part 60 and 40 CFR Part 63 requires the EPA approval, and requests shall be submitted to the TCEQ Office of Air, Air Permits Division.
- E. 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 specified in permit conditions, the TCEQ or the EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures. Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for New Source Performance Standards testing which must have the EPA approval shall be submitted to the TCEQ Office of Air, Air Permits Division in Austin.

- F. The plant shall operate at maximum production rates during stack emission testing. Primary operating parameters that enable determination of production rate shall be monitored and recorded during the stack test. These parameters shall be determined at the pretest meeting and shall 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.
- G. Two copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:
  - One copy to the TCEQ Amarillo Regional Office.
  - One copy to the Central File Room, Austin.
- H. Additional performance tests for combustion 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.
- I. Initial performance testing for the MUF was conducted in January 1995 and initial performance testing for the thermal oxidizer (EPN ST-17) was performed in May 2005.

### **Additional Authorized Planned MSS Specific Activities**

20. The following describes MSS activities at the site:

- A. The authorized planned MSS activities that result in volatile organic compound (VOC) emissions are as follows:

**Table 2: Planned MSS Activity Limits for VOC Sources**

<b>Planned MSS Activity</b>	<b>Emission Limit per Activity</b>	<b>Allowable No. of Activities per Year</b>
Filter/strainer change out	0.0005 lb of VOC	365
Pump and/or pump seals repair/replacement	0.0027 lb of VOC	4
Feed tip change out	0.0087 lb of VOC	4380
Feedstock sampling	0.001 lb of VOC	78
Flow meter change out	0.001 lb of VOC	3
Natural Gas Orifice Change out	0.1678 lb natural gas	240

- B. One carbon black feedstock oil storage tank turnover and tank cleaning using vacuum equipment for tank emptying per year will occur for the purposes of floor and wall corrosion inspections. Refilling the tank after the inspection will result in <0.043 tpy of VOC emissions per tank inspection event, with a total of 1 tank floor/wall inspections per year per tank.
- C. The authorized planned MSS activities that result in PM and PM<sub>10</sub> emissions are as follows:
- (1) In-situ manual sampling of carbon black for QA/QC and sulfur content determination purposes results in particulate matter emissions. Emissions are limited to 0.1598 lb PM per ton of material sampled and 0.0756 lb PM<sub>10</sub> per ton of material sampled. Carbon black sampling is limited to a maximum collection rate of 84 lbs per hour and 2.74 tons per year.
  - (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 300 lbs of castable will be transferred in any given hour, and a total of 10 tpy of castable powder will be used annually.
- D. The sources and EPNs listed in the MAERT annotated with Footnote 7 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 and subsequent revisions to the application. 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**

- 21. 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. The following information shall be maintained by the holder of this permit in a form suitable for inspection for a period of five years after collection and shall be made immediately available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction:
  - A. A copy of the plot plan required in Special Condition No. 2.
  - B. Daily records of tail gas combusted in the thermal oxidizer (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 required in Special Condition No. 5, Sitewide Feedstock Sulfur Limitations.
  - H. Records of pressure drop monitoring and facility inspections, maintenance, and corrective actions taken, as required under Special Condition No. 16.
  - I. Records demonstrating compliance with the fuel quality required in Special Condition No. 11.
  - J. Records of any visible emissions and opacity observations required under Special Condition No. 15 and records of any facility inspections, maintenance, and corrective actions taken, as required under Special Condition No. 15.
  - K. Records of engine testing and maintenance performed under Special Condition No. 10.
  - L. Records of the monitoring required in Special Condition No. 17.
  - M. Records of any performance tests conducted in accordance with Special Condition No. 19 shall be retained for the life of the unit.
  - N. Records of all work practices developed, and planned maintenance, startup, and shutdown activities conducted in accordance with Special Condition No. 20 of this permit. The planned MSS activity records shall at least contain the information required in Special Condition No. 20.
22. 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. 21 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 22.A.
  - B. For sources with daily, hourly, or annual usage limitations, monthly records shall be maintained to demonstrate compliance with the respective limitations. Compliance with annual usage limitations shall be on a 12 month rolling basis.
  - C. Examples of all calculations and the basis of all assumptions used to demonstrate compliance with any limitation or standard required in this permit shall be kept for

at least five years and made available upon demand of the TCEQ or representative of any air pollution control program with jurisdiction.

Date: November 25, 2013

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 42233 and PSDTX956

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	
			lb/hour	TPY (4)
ST-01	Steam Boiler	PM	0.01	0.04
		PM <sub>10</sub>	0.01	0.04
		PM <sub>2.5</sub>	0.01	0.04
		SO <sub>2</sub>	0.01	0.01
		NO <sub>x</sub>	0.12	0.51
		CO	0.10	0.43
		VOC	0.01	0.03
ST-02	East Feedstock Heater (6)	PM	0.01	0.03
		PM <sub>10</sub>	0.01	0.03
		PM <sub>2.5</sub>	0.01	0.03
		SO <sub>2</sub>	0.01	0.01
		NO <sub>x</sub>	0.08	0.34
		CO	0.07	0.29
		VOC	0.01	0.02
ST-04	Ionics Combustion Air Heater	PM	0.04	0.16
		PM <sub>10</sub>	0.04	0.16
		PM <sub>2.5</sub>	0.04	0.16
		SO <sub>2</sub>	0.01	0.01
		NO <sub>x</sub>	0.49	2.15
		CO	0.41	1.80
		VOC	0.03	0.12
ST-06	Conveying - Air Heater	PM	0.01	0.02
		PM <sub>10</sub>	0.01	0.02
		PM <sub>2.5</sub>	0.01	0.02

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
		SO <sub>2</sub>	0.01	0.01
		NO <sub>x</sub>	0.07	0.32
		CO	0.06	0.27
		VOC	0.01	0.02
ST-07	East Process Filter	PM	0.13	0.54
		PM <sub>10</sub>	0.13	0.54
		PM <sub>2.5</sub>	0.09	0.38
		SO <sub>2</sub>	0.40	1.40
		COS	0.63	2.76
		CS <sub>2</sub>	2.01	8.80
		H <sub>2</sub> S	5.40	23.65
		NO <sub>x</sub>	0.06	0.26
		NH <sub>3</sub>	0.03	0.13
		HCN	0.31	1.34
		CO	87.00	381.06
VOC	3.30	14.45		
ST-08	Pellet Dryer	PM	0.03	0.13
		PM <sub>10</sub>	0.03	0.13
		PM <sub>2.5</sub>	0.03	0.13
		SO <sub>2</sub>	0.01	0.01
		NO <sub>x</sub>	0.39	1.72
		CO	0.33	1.44
		VOC	0.02	0.09
ST-09	Purge Filter	PM	0.01	0.03
		PM <sub>10</sub>	0.01	0.03
		PM <sub>2.5</sub>	0.01	0.03
		SO <sub>2</sub>	0.01	0.01

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
		NO <sub>x</sub>	0.08	0.07
		CO	0.07	0.06
ST-10	West Process Filter	PM	0.16	0.67
		PM <sub>10</sub>	0.16	0.67
		PM <sub>2.5</sub>	0.11	0.47
		SO <sub>2</sub>	0.40	1.40
		COS	0.63	2.76
		CS <sub>2</sub>	2.01	8.80
		H <sub>2</sub> S	5.40	23.65
		NO <sub>x</sub>	0.06	0.26
		NH <sub>3</sub>	0.03	0.13
		HCN	0.31	1.34
		CO	87.00	381.06
		VOC	3.30	14.45
ST-11	Dry Drum Heater	PM	0.01	0.03
		PM <sub>10</sub>	0.01	0.03
		PM <sub>2.5</sub>	0.01	0.03
		SO <sub>2</sub>	0.01	0.01
		NO <sub>x</sub>	0.10	0.43
		CO	0.08	0.36
		VOC	0.01	0.02
ST-12	Dust Filter	PM	0.14	0.60
		PM <sub>10</sub>	0.14	0.60
		PM <sub>2.5</sub>	0.1	0.42
ST-13	Vacuum Clean-up System	PM	0.03	0.10
		PM <sub>10</sub>	0.03	0.10
		PM <sub>2.5</sub>	0.02	0.07

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
ST-15	Warehouse Vacuum System	PM	0.01	0.02
		PM <sub>10</sub>	0.01	0.02
		PM <sub>2.5</sub>	0.01	0.02
ST-16	Diesel Engine (7)	PM	0.27	0.01
		PM <sub>10</sub>	0.27	0.01
		PM <sub>2.5</sub>	0.27	0.01
		SO <sub>2</sub>	<0.01	<0.01
		NO <sub>x</sub>	3.75	0.19
		CO	0.81	0.04
		VOC	0.30	0.02
ST-17	Main Tail Gas Thermal Oxidizer	PM	3.33	14.58
		PM <sub>10</sub>	3.33	14.58
		PM <sub>2.5</sub>	2.92	12.81
		SO <sub>2</sub>	278.61	1634.34
		COS	0.22	0.94
		CS <sub>2</sub>	0.75	3.29
		H <sub>2</sub> S	2.00	8.76
		NO <sub>x</sub>	28.81	255.79
		NH <sub>3</sub>	0.01	0.05
		HCN	0.11	0.50
		CO	33.85	148.25
		VOC	1.31	5.73
TK-01 through TK-07	Carbon Black Feedstock Oil Tanks No. 1 through No. 7 (Short Term limit, Maximum of 4 tanks/hr)	VOC	3.90	---
TK-01 through TK-07	Carbon Black Feedstock Oil Tanks No. 1 through No. 7 (Annual limit, all 7 tanks inclusive)	VOC	---	1.60

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
FU-01	Fugitives (5)	PM	0.27	1.19
		PM <sub>10</sub>	0.27	1.19
		PM <sub>2.5</sub>	0.14	0.60
		SO <sub>2</sub>	<0.01	0.01
		COS	<0.01	0.01
		CS <sub>2</sub>	0.01	0.01
		H <sub>2</sub> S	0.02	0.09
		NO <sub>x</sub>	<0.01	<0.01
		NH <sub>3</sub>	<0.01	<0.01
		HCN	<0.01	<0.01
		CO	0.32	1.41
		VOC	0.01	0.05
	Carbon Black Oil Process Equipment Fugitives	VOC	0.27	1.17
FU-01-MSS (8)	Pump seals repair/replacement	VOC	0.02	<0.01
	Flow meter change outs	VOC	<0.01	<0.01
	Filter/strainer change outs	VOC	<0.01	<0.01
	Feed tip change outs	VOC	0.07	0.03
	Feedstock Sampling	VOC	<0.01	<0.01
	Orifice change out	VOC	<0.01	<0.01
	Vacuum Truck MSS	VOC	1.58	0.01
	In-situ CB sampling	PM	<0.01	<0.01
		PM <sub>10</sub>	<0.01	<0.01
		PM <sub>2.5</sub>	<0.01	<0.01
	Recasting furnace refractory	PM	0.02	<0.01
		PM <sub>10</sub>	0.02	<0.01
		PM <sub>2.5</sub>	<0.01	<0.01

Emission Sources - Maximum Allowable Emission Rates

- (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) Air Contaminants referenced in the MAERT are identified as follows:
  - COS - carbonyl sulfide
  - CS<sub>2</sub> - carbon disulfide
  - HCN - hydrogen cyanide
  - H<sub>2</sub>S - hydrogen sulfide
  - NH<sub>3</sub> - ammonia
  - VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
  - NO<sub>x</sub> - total oxides of nitrogen
  - SO<sub>2</sub> - sulfur dioxide
  - PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented
  - PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented
  - PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
  - CO - carbon monoxide
  - HAP - hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
- (6) The East Feedstock may be heated by the natural gas fired heater, EPN ST-02, or by an electrically fired heater placed in parallel with ST-02 in accordance with Special Condition No. 7.
- (7) These emissions rates apply at all time, including during the planned MSS activities authorized by this permit and during normal operations.
- (8) The authorized planned Maintenance, Startup, and Shutdown (MSS) activities are as described in Special Condition No. 20.

Date: November 25, 2013