SPECIAL CONDITIONS

Permit Numbers 85013, HAP48, PAL41, and PSD-TX-1138

EMISSION RATES AND PERMIT REPRESENTATIONS

1. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in that attached table. This permit authorizes planned start-up and shutdown (SS) activities that comply with the emission limits in the maximum allowable emission rates table (MAERT) and the opacity limit of Special Condition No. 10. Compliance with the annual emission limits shall be based on throughput for a rolling 12-month year rather than the calendar year.

2. Emission limits are based upon representations in the permit application dated May 19, 2008, and subsequent updates dated October 3, November 12, December 11, December 29, and December 31, 2008; and January 5, 2009.

FEDERAL APPLICABILITY

3. The Circulating Fluidized Bed (CFB) Boilers, identified as Emission Point Nos. (EPNs) CFB1, CFB2, CFB3, and CFB4, shall comply with applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations in Title 40 Code of Federal Regulations (40 CFR) Part 60, Standards of Performance for New Stationary Sources, Subpart A, General Conditions, and Subpart Da, Standards of Performance for Electric Utility Steam Generating Units.

4. The Auxiliary Boilers, identified as EPNs AUX-BOIL1 and AUX-BOIL2, shall comply with the applicable requirements of 40 CFR Part 60, Subpart A and Subpart Db, Standards of Performance for Industrial, Commercial, and Institutional Steam Generating Units.

5. The Stationary Diesel Engines, identified as EPNs ENG-EG1, ENG-EG2, ENG-FWMAIN, ENG-FWB1, ENG-FWB2, ENG-FWB3, ENG-FWB4, ENG-BFWP1, ENG-BFWP2, ENG-BFWP3, and ENG-BFWP4, shall comply with the applicable requirements of 40 CFR Part 60, Subpart A and Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.

6. The Stationary Diesel Engines, identified as EPNs ENG-EG1, ENG-EG2, ENG-BFWP1, ENG-BFWP2, ENG-BFWP3, and ENG-BFWP4, shall comply with the initial notification requirements of 40 CFR § 63.6645(h), as specified in 40 CFR Part 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, § 63.6590(b)(1)(i).

7. If any condition of this permit is more stringent than the regulations identified in Special

Condition Nos. 3 through 6, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

FUEL SPECIFICATIONS, OPERATING LIMITATIONS, PERFORMANCE STANDARDS, AND CONSTRUCTION SPECIFICATIONS

8. Fuel fired in the CFB Boilers (EPNs CFB1, CFB2, CFB3, and CFB4) shall be limited to:

   A. Petroleum coke with:

      (1) elemental sulfur content not to exceed a 12-month rolling average of 4.9 pounds sulfur per million British thermal units (lb/MMBtu) of heat input, with the heat input based on fuel higher heating value (HHV); and

      (2) trace metal concentrations not to exceed the concentration limitations identified in Attachment A of this permit.

   B. Pipeline-quality natural gas.

   C. Propane.

   D. Use of any other fuel will require prior approval from the permitting authority.

   E. Upon request by the Executive Director of the Texas Commission on Environmental Quality (TCEQ) or any air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel fired in the CFB Boilers or shall allow air pollution control agency representatives to obtain a sample for analysis.

9. The CFB Boilers(EPNs CFB1, CFB2, CFB3, and CFB4) shall each be limited to a maximum heat input of 3,080 MMBtu/hr, averaged over a calendar month, based on the HHV of the fuel fired.

10. Opacity of emissions from EPNs CFB1, CFB2, CFB3, and CFB4 must not exceed 10 percent, averaged over a six-minute period, except for those periods described in Title 30 Texas Administrative Code § 111.111(a)(1)(E) [30 TAC § 111.111(a)(1)(E)], 40 CFR Part 60, § 60.11(c), or as otherwise allowed by rule or statute.

11. Emissions from the CFB Boilers (EPNs CFB1, CFB2, CFB3, and CFB4) shall not exceed the performance standards in the following tables. The performance standards in these tables shall apply at all times except during periods of start-up and shutdown as identified in the

permit application.

A. Standards demonstrated by Continuous Emissions Monitoring Systems (CEMS):

Pollutant[1]	**Performance Standard (lb/MMBtu)[2]**	**Compliance Averaging Period**
NO_x	0.10	Hourly
NO_x	0.070	30-day rolling
SO_2	0.178	30-day rolling
SO_2	0.15	12-month rolling
CO	0.11	12-month rolling
Hg	0.0000020	12-month rolling
	Performance Standard (ppmv)	
NH_3	10 ppmv	Hourly
NH_3	5 ppmv	12-month rolling

B. Standards demonstrated by Reference Method[3] (RM) testing:

Pollutant[1]	**Performance Standard (lb/MMBtu)[2]**	**Compliance Demonstration Period**
PM/PM_{10} (front-half catch)	0.011	3-hour average
PM/PM_{10} total	0.033[4]	3-hour average
VOC	0.0050	3-hour average
H_2SO_4	0.022	3-hour average
HCl	0.00089	3-hour average
HF	0.000082	3-hour average

Notes:

[1] NO_x - nitrogen oxides; SO_2 - sulfur dioxide; CO - carbon monoxide; PM_{10} - PM ≤ $10_{\mu m}$ in diameter; VOC - volatile organic compounds; H_2SO_4 - sulfuric acid mist; HF - hydrogen fluoride; Hg - mercury; NH_3 - ammonia

PM - particulate matter HCl - hydrogen chloride

[2] lb/MMBtu - pounds of emissions per million Btu of heat input. Heat input is based on fuel HHV. ppmv - parts per million by volume, dry, adjusted to 3 percent oxygen (O_2).

[3] RM - EPA Reference Methods, based on the average of three stack sampling runs to be conducted as prescribed by Special Condition Nos. 28 and 36.

[4] Total PM/PM_{10} including back-half (condensibles) catch of sampling train.

12. In the event that a CEMS for NO_x is not operating for a period longer than one hour while a CFB boiler is operating, the permit holder shall operate at no less than the ammonia feed rate to the selective non-catalytic reduction (SNCR) system that was established during a successful initial performance test (adjusted for load) or at the NO_x-compliant feed rate that was measured prior to the loss of the CEMS (adjusted to load), whichever feed rate is higher.

13. In the event that a CEMS for SO_2 is not operating for a period longer than one hour while a CFB boiler is operating, the permit holder shall operate at no less than the limestone feed rate to the boiler and lime feed rate to the polishing scrubber that were established during a successful initial performance test (adjusted for load) or at the SO_2-compliant feed rates that were measured prior to the loss of the CEMS (adjusted to load), whichever feed rates are higher.

14. A. The holder of this permit shall operate the CFB Boiler and associated air pollution control equipment in accordance with good air pollution control practice to minimize emissions during start-up, shutdown, and maintenance (SSM) activities, by operating in accordance with a written SSM plan. The plan shall include detailed procedures for review of relevant operating parameters of the CFB Boilers and associated air pollution control equipment during SSM to make adjustments to minimize excess emissions. The plan shall also address readily forseeable start-up scenarios, including hot start-ups, and provide for appropriate review of the operational condition of the boiler before initiating start-up. In addition, the plan shall address procedures for minimizing opacity and PM emissions while conducting on-line maintenance of the CFB boilers or their emission control equipment.

B. In order to limit maximum hourly emissions of SO_2, the start-up of the CFBs must be sequenced so that only one CFB at a time is firing petroleum coke while operating in start-up mode.

C. No bypassing of a CFB baghouse is allowed while the CFB is firing petroleum coke, regardless of whether the CFB is operating in start-up or shutdown mode.

D. Only planned and routine start-up/shutdown operations are authorized by this permit. Emissions resulting from any unscheduled and/or unplanned start-up/shutdown activity

associated with an upset (emissions event) are not authorized by this permit.

15. The CFB Boiler Stacks (EPNs CFB1, CFB2, CFB3, and CFB4) shall be approximately 500 feet tall with an exit diameter of approximately 16 feet. Stack sampling ports and platform(s) shall be constructed on each CFB boiler stack as specified in the attachment entitled "Chapter 2, Stack Sampling Facilities," or an alternate design may be approved by the TCEQ Corpus Christi Regional Director.

16. The Auxiliary Boilers (identified as EPNs AUX-BOIL1 and AUX-BOIL2) shall meet the following specifications:

    A. Emissions, averaged over 3 hours of operation, while operating at greater than 25 percent load, shall not exceed:

        (1) NO_x - 0.035 lb/MMBtu;

        (2) CO - 50 ppmvd, at 3 percent O_2; and

        (3) Filterable PM - 0.0019 lb/MMBtu.

    B. Emissions, averaged over three hours of operation, during start-up, shutdown, or while operating at less than 25 percent load, shall not exceed:

        (1) NO_x - 0.10 lb/MMBtu; and

        (2) CO - 500 ppmvd, 3 percent oxygen

    C. Opacity of emissions shall not exceed 5 percent, averaged over a six-minute period.

    D. Fuel shall be limited to pipeline-quality natural gas.

    E. Operation of each Auxiliary Boiler shall be limited to a maximum of a 28.5 percent annual capacity factor. Capacity factor is the ratio between the actual heat input during a period of 12 consecutive calendar months and the potential heat input had the boiler operated for 8,760 hours during that 12-month period at the maximum design heat input capacity.

17. The Propane Vaporizers (identified as EPNs PROP-VAP1 and PROP-VAP2) shall meet the following specifications:

    A. Emissions, averaged over 3 hours of operation, shall not exceed:

        (1) NO_x - 0.10 lb/MMBtu;

(2) CO - 100 ppmvd, at 3 percent O_2; and

(3) Filterable PM - 0.0019 lb/MMBtu.

B. Opacity of emissions shall not exceed 5 percent, averaged over a six-minute period.

C. Fuel shall be limited to propane.

D. Operation of each propane vaporizer shall be limited to a maximum of a 28.5 percent annual capacity factor. Capacity factor is the ratio between the actual heat input during a period of 12 consecutive calendar months and the potential heat input had the boiler operated for 8,760 hours during that 12-month period at the maximum design heat input capacity.

18. The 1,600-kW Diesel-Fired Emergency Generators (identified as EPNs ENG-EG1 and ENG-EG2) and the 2,000-hp Diesel-Fired Boiler Feed Water Pumps (identified as EPNs ENG-BFWP1, ENG-BFWP2, ENG-BFWP3, and ENG-BFWP4) shall meet the following specifications:

A. Fuel shall be limited to diesel engine fuel containing no more than 500 parts per million (ppm) by weight sulfur. Purchased diesel engine fuel shall comply with the EPA standards for nonroad diesel fuel in 40 CFR Part 80, Regulation of Fuels and Fuel Additives, in effect at the time of purchase.

B. Operation of each generator and pump shall be limited to a maximum of 500 hours per year.

19. The 360-hp Diesel-Fired Fire Water Pump (identified as EPN ENG-FWMAIN) and the 100-hp Diesel-Fired Fire Water Pumps (identified as EPNs ENG-FWB1, ENG-FWB2, ENG-FWB3, and ENG-FWB4) shall meet the following specifications:

A. Fuel shall be limited to diesel engine fuel containing no more than 500 ppm by weight sulfur. Purchased diesel engine fuel shall comply with the EPA standards for nonroad diesel fuel in 40 CFR Part 80, Regulation of Fuels and Fuel Additives, in effect at the time of purchase.

B. Operation of each pump shall be limited to a maximum of 500 hours per year unless a greater number of hours of operation is required to fight a fire.

CHEMICAL AND FUEL STORAGE

20. Anhydrous ammonia storage is subject to the following requirements.

A. Maximum on-site storage is limited to the two pressure tanks identified in the permit application, each with a nominal capacity of 10,000 gallons.

B. The tanks shall be located within

(1) a physical barrier to vehicular traffic; and

(2) a containment system which is capable of holding the entire volume of material stored.

C. Piping and unloading points shall be protected from impact by falling objects.

D. Each tank vent valve shall be equipped with an alarm which will notify personnel that the relief valve has opened.

E. Tanks shall be vapor balanced to the transport vessel during all tank filling operations. The vapor return line shall be purged back to either the transport vessel or the storage tank after every tank loading operation and prior to disconnection of the line. Interlocks shall be installed so that the unloading pump will not run unless the vapor return line to the transport vessel is connected.

F. All plant personnel assigned to anhydrous ammonia injection operations shall participate in continuing training in safety guidelines for the handling of anhydrous ammonia, to be conducted no less frequently than once every two years; new and transferred personnel shall complete all initial training required for their specific assignments prior to assumption of their new duties.

G. Overhead activity involving the lifting of heavy equipment above the anhydrous ammonia storage area shall not be permitted.

H. The holder of this permit shall maintain a complete emergency response plan at the plant site that describes the course of action to be taken by personnel in the event of an anhydrous ammonia tank or line rupture, or a severe anhydrous ammonia leak. This plan shall include water-mitigation methods, notification of the proper civil authorities, and any potentially affected residences and any other appropriate organizations. This plan shall be made available upon request to representatives of the TCEQ or any local program having jurisdiction.

21. Audio, olfactory, and visual checks for ammonia leaks shall be made once per shift within the operating area.

    A. No later than one hour following detection of a leak, plant personnel shall take one or more of the following actions:

        (1) Locate and isolate the leak; and/or

        (2) Stop the leak by bypassing the leaking equipment or taking equipment out of service.

    B. If the leaking equipment cannot be repaired or replaced within 6 hours, use clamping procedures to prevent the leak until replacement or repair can be performed.

22. In any consecutive 12-month period, the holder of this permit shall not receive more than the following quantities of diesel fuel:

Tank Number	12-Month Throughput (Gallons)
TNK-EG1	2,734
TNK-EG2	2,734
TNK-FWMAIN	9,841
TNK-FWB1	54,674
TNK-FWB2	54,674
TNK-FWB3	54,674
TNK-FWB4	54,674
TNK-BFWP1	63,100
TNK-BFWP2	63,100
TNK-BFWP3	63,100
TNK-BFWP4	63,100

MATERIAL HANDLING OPERATING LIMITATIONS AND STANDARDS

23. Permanent plant roads shall be paved with a cohesive hard surface which can be cleaned by sweeping or washing. Other roads shall be sprinkled with water and/or surface crusting agents as necessary to maintain compliance with all TCEQ rules and regulations.

24. No visible emissions may leave the plant property. If visible emissions do leave the plant property, further controls or measures shall be installed and/or implemented to limit visible emissions. A trained observer with delegation from the Executive Director of the TCEQ may determine compliance with this special condition by 40 CFR Part 60, Appendix A, RM 22, or equivalent. As represented in the permit application, petroleum coke and limestone will be brought into the facility property via enclosed conveyors only. Lime, soda ash, sand, and activated carbon will be unloaded pneumatically from trucks and conveyed to bins or silos equipped with baghouses. Fly ash from the boiler exhaust baghouses and bottom ash from the boilers will be pneumatically transferred to storage silos. No materials may be stored in open stockpiles on the facility property. Any spillage of material shall be cleaned up as soon as possible and handled in such a way as to minimize emissions.

25. As determined by a certified opacity observer with delegation from the Executive Director of the TCEQ and according to 40 CFR Part 60, Appendix A, Reference Method 9, or equivalent, opacity of emissions from any single fabric filter baghouse stack listed in Special Condition Nos. 26 and 27, and from load out of fly ash and bottom ash from the storage silos to trucks, shall not exceed 5 percent averaged over a six-minute period. Continuous demonstration of compliance with this special condition is not required.

26. Material handling baghouses, designed to meet an emission limit of 0.01 grain PM per dry standard cubic foot of exhaust, properly installed and in good working order, shall control PM emissions from the following sources:

Source	EPN
Limestone Bunker No. 1	SILO-LMST1
Limestone Bunker No. 2	SILO-LMST2
Limestone Bunker No. 3	SILO-LMST3
Limestone Bunker No. 4	SILO-LMST4
Carbon For ACI Silo No. 1	SILO-ACI1

Source	EPN
Carbon For ACI Silo No. 2	SILO-ACI2
Carbon For ACI Silo No. 3	SILO-ACI3
Carbon For ACI Silo No. 4	SILO-ACI4
Lime Silo No. 1	SILO-LIME1
Lime Silo No. 2	SILO-LIME2
Lime Silo No. 3	SILO-LIME3
Lime Silo No. 4	SILO-LIME4
Lime Silo No. 5	SILO-LIME5
Lime Silo No. 6	SILO-LIME6
Lime Silo No. 7	SILO-LIME7
Lime Silo No. 8	SILO-LIME8
Unit 1 Sand Day Bin	BIN-SAND1
Unit 2 Sand Day Bin	BIN-SAND2
Unit 3 Sand Day Bin	BIN-SAND3
Unit 4 Sand Day Bin	BIN-SAND4
Water Treatment Lime Silo	WT-LIME
Water Treatment Soda Ash Silo	WT-SODA

27. Material handling baghouses, designed to meet an emission limit of 0.005 grain PM per dry standard cubic foot of exhaust, properly installed and in good working order, shall control PM emissions from the following sources:

Source	EPN
Fly Ash Silo No. 1	SILO-FA1

Source	EPN
Fly Ash Silo No. 2	SILO-FA2
Fly Ash Silo No. 3	SILO-FA3
Fly Ash Silo No. 4	SILO-FA4
Bottom Ash Silo No. 1	SILO-BA1
Bottom Ash Silo No. 2	SILO-BA2
Bottom Ash Silo No. 3	SILO-BA3
Bottom Ash Silo No. 4	SILO-BA4
Coke Silo No. 1	SILO-COKE1
Coke Silo No. 2	SILO-COKE2
Coke Silo No. 3	SILO-COKE3
Coke Silo No. 4	SILO-COKE4
Coke Silo No. 5	SILO-COKE5
Coke Silo No. 6	SILO-COKE6
Coke Silo No. 7	SILO-COKE7
Coke Silo No. 8	SILO-COKE8

INITIAL DEMONSTRATION OF COMPLIANCE

28. The holder of this permit shall perform initial stack sampling and other testing to establish the actual quantities of air contaminants being emitted into the atmosphere. Unless otherwise specified in this Special Condition No. 28, the sampling and testing shall be conducted in accordance with the methods and procedures specified in Special Condition No. 29. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. The TCEQ Executive Director or his designated representative shall be afforded the opportunity to observe all such sampling.

A. For the CFB Boilers (EPNs, CFB1, CFB2, CFB3, and CFB4):

(1) Demonstrate compliance with the performance standards of Special Condition No. 11B and the hourly emission rates of the MAERT, applicable to normal operations, using the average of three one-hour stack sampling test runs for each contaminant.

(2) Air contaminants to be sampled and analyzed under (1) above include: NO_x, SO_2, CO, VOC, H_2SO_4, HCl, HF, PM, PM_{10}, NH_3, and Hg. Diluents to be measured include O_2 or carbon dioxide (CO_2).

(3) Demonstrate compliance with the performance standards of Special Condition No. 10 applicable to normal operations, using the average of 30 six-minute readings as provided in 40 CFR § 60.11(b).

(4) Demonstrate compliance with 40 CFR Part 60, Subparts A and Da, for NO_x, SO_2, PM, and opacity. For NO_x and SO_2, the 30-day test results shall also be used to demonstrate compliance with the 30-day performance specifications for NO_x and SO_2 in Special Condition No. 11A.

(5) Demonstrate compliance with the lb/MMBtu performance standards listed on Attachment A and the lb/hr emission rate for lead listed on the MAERT using the average of three one-hour stack sampling test runs.

(6) Boiler load during testing shall be maintained as follows.

(a) Operate at maximum firing rates for the atmospheric conditions occurring during the test as measured by millions of pounds of steam generated per hour or MW of electric generator output. If during subsequent operations the steam generated as measured by millions of pounds of steam generated per hour or MW of electric generator output is greater than that recorded during the test, stack sampling shall be performed at the new operating condition within 150 days. This sampling may be waived by the TCEQ Air Section Manager of the appropriate TCEQ regional office. At no time may the emission rate exceed the rates specified in the MAERT.

(b) During 30-day average emission testing, the boiler load does not have to be

maximum, but the load must be representative of future operating conditions and must include at least one 24-hour period at full load.

B. For the Auxiliary Boilers (EPNs AUX-BOIL1 and AUX-BOIL2):

(1) Demonstrate compliance with the NO_x, CO, and filterable PM performance standards of Special Condition No. 16A and the hourly NO_x and CO emission rates of the MAERT, using the average of three, one-hour stack sampling test runs for each contaminant.

(2) Demonstrate compliance with the opacity limitation of 40 CFR Part 60 Subpart Db and Special Condition No. 16C.

(3) Demonstrate compliance with the SO_2 emission rate of the MAERT through fuel sampling to demonstrate use of pipeline quality natural gas.

(4) Demonstrate compliance with the VOC emission rate of the MAERT through operation of the auxiliary boilers within their design limitations.

C. For the Propane Vaporizers (EPNs PROP-VAP1 and PROP-VAP2):

(1) Demonstrate compliance with the NO_x, CO, and filterable PM performance standards of Special Condition No. 17A and the hourly NO_x and CO emission rates of the MAERT, using the average of three, one-hour stack sampling test runs for each contaminant.

(2) Demonstrate compliance with the opacity limitation of Special Condition No. 17B.

(3) Demonstrate compliance with the SO_2 emission rate of the MAERT through fuel sampling of the propane.

(4) Demonstrate compliance with the VOC emission rate of the MAERT through operation of the propane vaporizers within their design limitations.

D. For at least two material handling/storage baghouses, one from Special Condition No. 26 and one from Special Condition No. 27, to be selected by the Corpus Christi Regional Director of the TCEQ, or his designated representative, sample PM emissions using Reference Method 5 testing to show compliance with the emission limits of Special Condition Nos. 26 and 27.

E. For the Diesel-Fired Emergency Generators (identified as EPNs ENG-EG1 and ENG-EG2) and the Diesel-Fired Boiler Feed Water Pumps (identified as EPNs ENG-BFWP1, ENG-BFWP2, ENG-BFWP3, and ENG-BFWP4) demonstrate compliance with the emission rates of the MAERT by showing compliance with the requirements of Special Condition No. 18. For the Diesel-Fired Fire Water Pump (identified as EPN ENG-FWMAIN) and the Diesel-Fired Fire Water Pumps (identified as EPNs ENG-FWB1, ENG-FWB2, ENG-FWB3, and ENG-FWB4) demonstrate compliance with the emission rates of the MAERT by showing compliance with the requirements of Special Condition No. 19.

F. For the Cooling Towers (identified as EPNs CTWR1 and CTWR2) demonstrate compliance with the emission rates of the MAERT by maintaining records that demonstrate that the drift eliminators are designed to limit drift as specified in the permit application, and by inspection of the modules, selected by the TCEQ Corpus Christi Regional Director or his designated representative, for consistency with the specified design, flow bypassing the drift eliminators, and damage to the drift eliminators. The manufacturer's specifications and drawings of the internals shall be provided to facilitate inspection.

G. Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Permitting and Registration, Air Permits Division. Test waivers and alternate or equivalent procedure proposals for New Source Performance Standards testing which must have EPA approval shall be submitted to the TCEQ Corpus Christi Regional Office.

H. For each CFB Boiler, sampling as required by this condition shall occur within 60 days after the particular boiler achieves a fuel firing rate of 3,080 MMBtu/hr, but no later than 180 days after initial start-up. The first boiler operating day of 30-day average initial performance testing required by 40 CFR § 60.46a(f) must commence within this time.

I. The deadlines established by this condition may be extended by the TCEQ Corpus Christi Regional Office for good cause shown.

TEST METHODS AND PROCEDURES

29. A. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual, EPA Methods in 40 CFR Part 60, Appendix A and 40 CFR Part 51, Appendix M, EPA Conditional Test Methods, and American Society for Testing and Materials (ASTM) as follows:

(1) Appendix A, Methods 1 through 4, as appropriate, for exhaust flow, diluent, and moisture concentration;

(2) Appendix A, Method 5, 5a through 5i, or 17, modified to include back-half condensibles, for the concentration of PM;

(3) Appendix A, Method 5, 5a through 5i, or 17, for the filterable concentration of PM (front-half catch);

(4) Appendix A, Method 6, 6a, 6c, or 8, for the concentration of SO_2;

(5) Appendix A, Method 7E for the concentrations of NO_x and O_2, or equivalent methods;

(6) Appendix A, Method 8 or a modified Method 8 for H_2SO_4;

(7) Appendix A, Method 9 for opacity, as provided in 40 CFR § 60.11(b);

(8) Appendix A, Method 10 for the concentration of CO;

(9) Appendix A, Method 19, for applicable calculation methods;

(10) Appendix A, Method 25A, modified to exclude methane and ethane, for the concentration of VOC (to measure total carbon as propane);

(11) Appendix A, Method 26 or 26A for HCl and HF;

(12) EPA Conditional Test Method 27 (CTM-027), for NH_3;

(13) Appendix A, Method 29 for the metals listed in Attachment A;

(14) Appendix M, Methods 201A and 202, or Appendix A, Reference Method 5, modified to include back-half organic condensables, for the concentration of PM less than 10 microns in diameter, PM_{10}. For inorganic condensables, a parallel controlled condensation method (NCASI Method 8A) shall be used. (Any method, procedures, or apparatus not identified in the CFR must be approved by the TCEQ and EPA prior to use);

(15) Appendix M, Methods 201A or Appendix A, Reference Method 5, for the filterable concentration of PM less than 10 microns in diameter, PM_{10} (front-half catch); and

(16) ASTM D6784-02, Standard Test Method for Elemental, Oxidized, Particle-Bound, and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (also known as the Ontario Hydro Method), Appendix A, Method 30A or 30B, or other approved EPA methods.

B. Any deviations from the procedures in A. must be approved by the Executive Director of the TCEQ or his designated representative prior to sampling.

C. The TCEQ Corpus Christi Regional Office shall be given notice as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting.

(1) The notice shall include:

(a) Date for pretest meeting.
(b) Date sampling will occur.
(c) Name of firm conducting sampling.
(d) Type of sampling equipment to be used.
(e) Method or procedure to be used in sampling.
(f) Projected date of commencement of the 30-day rolling average initial performance tests for SO_2 and NO_x, in accordance with 40 CFR § 60.46a(f) and Special Condition No. 11A.

(2) 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. The permit holder shall present at the pretest meeting the manner in which stack sampling will be executed in order to demonstrate compliance with emission standards found in this permit and 40 CFR Part 60, Subparts Da and Db.

(3) Prior to the pretest meeting, a written proposed description of any deviation from sampling procedures specified in permit conditions or TCEQ, EPA or ASTM sampling procedures shall be made available to the TCEQ. The TCEQ Corpus Christi Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

D. Information in the test report shall include the following data for each test run:

(1) hourly petroleum coke firing rate (in tons);

(2) average petroleum coke Btu (HHV)/lb as-received and dry weight;

(3) average steam production rate (in millions of pounds per hour) or average

generator output (in MW);

(4) daily sulfur content and heat content of the fuel measured in accordance with EPA Reference Method 19 to show compliance with 40 CFR Part 60, Subpart Da;

(5) control device operating rates, including SNCR reagent injection and solids injection rates (limestone, lime, and activated carbon);

(6) emissions in the units of the limits of this permit, lb/hr and lb/MMBtu, and three-hour or 30-day average, as appropriate; and

(7) any additional records deemed necessary during the stack sampling pre-test meeting.

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

One copy to the TCEQ Corpus Christi Regional Office.

One copy to the TCEQ Austin Office of Permitting and Registration, Air Permits Division.

E. The deadlines established by this condition may be extended by the TCEQ Corpus Christi Regional Office for good cause shown.

CONTINUOUS DEMONSTRATION OF COMPLIANCE

30. The holder of this permit shall install, calibrate, maintain, and operate continuous emission monitoring systems (CEMS) to measure and record the concentrations of NO_x, CO, and SO_2 from EPNs CFB1, CFB2, CFB3, and CFB4. Diluents to be measured include O_2 or CO_2. The CEMS data shall be used to determine continuous compliance with the NO_x, CO, and SO_2 emission limitations in Special Condition No. 3 (NO_x and SO_2), Special Condition No. 11A, and the attached MAERT. Continuous compliance with the performance standards of Special Condition No. 11A shall commence on the first boiler operating day of the 30-day initial performance testing required by NSPS Subpart Da.

A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60,

Appendix B or an acceptable EPA alternative. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Permitting and Registration, Air Permits Division in Austin for requirements to be met.

B. The holder of this permit shall assure that the CEMS meets the applicable quality assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1, or an acceptable EPA alternative. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3, any CEMS downtime, and all cylinder gas audit exceedances of ±15 percent accuracy shall be reported semiannually to the TCEQ Corpus Christi Regional Director; necessary corrective action shall be taken on a timely basis. Supplemental stack concentration measurements may be required at the discretion of the TCEQ Corpus Christi Regional Director.

C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using normally a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emissions rate in pounds per hour at least once every day. Pound per hour data shall be summed on a monthly basis to tons per rolling 12 months and used to determine compliance with the annual emissions limits of this permit. If the CEMS malfunctions, then the recorded concentrations may be reduced to units of the permit allowable as soon as practicable after the CEMS resumes normal operation.

D. The TCEQ Corpus Christi Regional Office shall be notified at least 30 days prior to any required relative accuracy test audits in order to provide it the opportunity to observe the testing.

E. If applicable, each CEMS will be required to meet the design and performance specifications, pass the field tests, and meet the installation requirements and data analysis and reporting requirements specified in the applicable performance specifications in 40 CFR Part 75, Appendix A and B, as an acceptable alternative to paragraph A. of this condition.

F. Each CEMS shall be operational during 95 percent of the operating hours of the CFB Boiler, exclusive of the time required for zero and span checks. If this operational criterion is not met for a calendar quarter, the holder of this permit shall develop and implement a monitor quality improvement plan within the following calendar quarter. The plan should address the downtime issues to improve availability and reliability. The plan should provide additional assurance of compliance including record keeping of appropriate SNCR reagent and solids flow rates for monitor downtime periods.

31. The holder of this permit shall install, calibrate, operate, and maintain a continuous opacity monitoring system (COMS) to measure and record the opacity of emissions from EPNs CFB1,

CFB2, CFB3, and CFB4. The COMS data shall be used to determine continuous compliance with the opacity emission limitations in Special Condition Nos. 3 and 10 and the baghouse performance monitoring requirements of 40 CFR § 60.48Da(o)(2).

A. The COMS shall satisfy all of the Federal NSPS requirements for COMS as specified in 40 CFR Part 60, Appendix B, Performance Specification 1 (PS-1). In order to demonstrate compliance with PS-1, the COMS shall meet the manufacturer's design and performance specifications, and undergo performance evaluation testing as outlined in 40 CFR Subpart A , § 60.13. The TCEQ Corpus Christi Regional Director shall be notified 30 days prior to the certification.

B. The COMS shall be zeroed and spanned daily as specified in 40 CFR § 60.13. Corrective action shall be taken when the 24-hour span drift exceeds two times the amounts specified in PS-1, or as specified by the TCEQ if not specified in PS-1.

C. If the EPA promulgates a quality assurance, quality control standard for the COMS, a Quality Assurance Plan (QAP) shall be prepared in accordance with the EPA standard for the COMS and adhered to, within six months after promulgation. The QAP shall be maintained to reflect changes to component technology. At the request of the TCEQ Corpus Christi Regional Director, the holder of this permit shall submit documentation demonstrating compliance with these standards.

D. The data shall be reduced to six-minute opacity averages, using a minimum of 36 equally-spaced data points from each six-minute period, as specified in 40 CFR § 60.13.

E. The COMS shall be operational during 95 percent of the operating hours of the CFB Boiler, exclusive of the time required for zero and span checks. If this operational criteria is not met for a calendar quarter, the holder of this permit shall develop and implement a monitor quality improvement plan within the following calendar quarter. The plan should address the downtime issues to improve availability and reliability. The plan should provide additional assurance of compliance including EPA Reference Method 9 support during daytime monitor downtime periods and parametric support for nighttime monitor downtime periods.

F. Recertification, if required, shall be based on the requirements of 40 CFR Part 60, Appendix B, PS-1 in effect at the time of initial certification.

32. The holder of this permit shall install, calibrate, operate, and maintain CEMS to measure and record the concentration of NH_3 from EPNs CFB1, CFB2, CFB3, and CFB4. The NH_3 concentrations shall be corrected and reported in accordance with Special Condition No. 11A. The CEMS data shall be used to determine continuous compliance with the NH_3 performance specifications in Special Condition No. 11A and the MAERT. Any other method used for

measuring NH_3 slip shall require prior approval from the TCEQ Corpus Christi Regional Office, with consultation between the Regional Office and the TCEQ Air Permits Division.

33. The holder of this permit shall install, calibrate, operate, and maintain CEMS or sorbent trap monitoring system to measure and record the concentration of mercury from EPNs CFB1, CFB2, CFB3, and CFB4, as described in 40 CFR Parts 60 and 75 (the rule versions in effect immediately prior to February 8, 2008 vacatur of Clean Air Mercury Rule). The CEMS data shall be used to demonstrate continuous compliance with the emission limitations of Special Condition No. 11A and the MAERT.
34. Each CEMS shall be operational on a rolling 12-month average for at least 95 percent of the corresponding operating hours of the CFB boiler it is designed to monitor (excluding time required for zero and span). If any CEMS fails to meet the performance standards specified in this permit, it shall be repaired or replaced as soon as reasonably possible.

35. The as-fired petroleum coke shall be sampled at least once per calendar quarter and analyzed for sulfur, metals, and HHV, to demonstrate on-going compliance after the initial demonstration of compliance with the sulfur content limit of Special Condition No. 8, the non-mercury metal performance standards identified in Attachment A of this permit, and the emission rates for lead in the MAERT. The analyses shall be obtained from a NELAC (National Environmental Laboratory Accreditation Conference) accredited laboratory under the Texas Laboratory Accreditation Program.

36. After the initial demonstration of compliance, on-going stack sampling of EPNs CFB1, CFB2, CFB3, and CFB4 for H_2SO_4, HCl, HF, VOC, and total PM/PM_{10} shall be used to demonstrate ongoing compliance and shall meet the following specifications:

    A. Stack sampling shall be performed once annually during periods of normal operation, except as follows:

        (1) If the annual test does not establish compliance with a performance standard of Special Condition No. 11B, the holder of this permit must conduct additional tests (under similar operating rates and fuel charge rates as used in the initial test, or under scenarios reviewed and approved by the TCEQ Corpus Christi Regional Office) during the year to be averaged with the previous test(s) to demonstrate compliance with Special Condition No. 11B; or

        (2) if, after three years of stack sampling, the average of the three annual stack sampling results for a pollutant is less than 70 percent of the applicable performance standard identified in Special Condition No. 11B, then compliance stack sampling for such pollutant may be conducted once every three years.

    B. Sampling required in A. of this special condition shall demonstrate compliance with

the performance standards of Special Condition No. 11B and the lb/hr emission limits of the MAERT applicable to normal operations.

C. Sampling required in A. of this special condition shall be conducted in accordance with the methods, procedures, and notification protocol specified in Special Condition No. 29.

D. Ongoing compliance with the H_2SO_4, HF, HCl, VOC, and PM/PM_{10} tons per year emission rates in the MAERT shall be demonstrated by calculating rolling 12-month annual emissions from emission factors (lb/MMBtu, HHV) obtained from the sampling required in (A.) of this condition and the monthly total heat input (MMBtu, HHV) from petroleum coke.

37. Compliance with the following emission rates in the MAERT, applicable to periods of planned start-up and shutdown, shall be demonstrated as follows:

A. Compliance with the lead, PM and PM_{10} (front half and total) emission rates in the MAERT applicable during start-up and shutdown shall be demonstrated if the recorded pressure drop across the baghouse meets manufacturer guidelines for proper operation during start-up and shutdown.

B. Compliance with the VOC emission rate in the MAERT applicable during start-up and shutdown shall be demonstrated if the CO emissions during start-up and shutdown are in compliance with the CO emission rate in the MAERT for start-up and shutdown.

C. Compliance with the H_2SO_4, HF, and HCl emission rates in the MAERT for start-up and shutdown shall be demonstrated if the SO_2 emissions during start-up and shutdown are in compliance with the SO_2 emission rate in the MAERT for start-up and shutdown.

38. Following the initial demonstration of compliance, ongoing compliance with the emission limits for the sources and emission limitations listed in this condition shall be through source operation in accordance with manufacturer's specifications, or in accordance with written procedures that are shown to maintain operating conditions necessary for emission compliance. The Executive Director of the TCEQ or his designated representative may also require direct measurement of emissions using the sampling methods and procedures specified in Special Condition No. 29 to establish compliance with the limitations, in which case the sampled emission rate will be used to determine compliance.

A. The Auxiliary Boilers (EPNs AUX-BOIL1 and AUX-BOIL2) emission limitations of Special Condition No. 16A and 16B and the MAERT.

B. The Propane Vaporizers (EPNs PROP-VAP1 and PROP-VAP2) emission limitations of

Special Condition No. 17A and the MAERT.

C. The Diesel Engines (EPNs ENG-EG1, ENG-EG2, ENG-FWMAIN, ENG-FWB1, ENG-FWB2, ENG-FWB3, ENG-FWB4, ENG-BFWP1, ENG-BFWP2, ENG-BFWP3, and ENG-BFWP4) emission limitations in the MAERT.

39. Following the initial demonstration of compliance, ongoing compliance with the emission rates in the MAERT for the Cooling Towers (EPNs CTWR1 and CTWR2) will be based on annual inspections of modules, and repair as necessary to maintain drift eliminator structural integrity and minimize bypassing of flow around drift eliminators.

40. Following the initial demonstration of compliance, ongoing compliance with the emission rates in the MAERT for the petroleum coke, ash, limestone, lime, sand, and carbon material handling baghouses will be demonstrated by annual opacity testing using Reference Method 9 for those EPNs listed in Special Condition Nos. 26 and 27. The Executive Director of the TCEQ or his designated representative may also require sampling conducted in accordance with the methods and procedures specified in Special Condition No. 29 to directly measure the lb/hr emission rate, in which case the sampled lb/hr emission rate will be used to determine compliance with the applicable emission rate in the MAERT.

40. Compliance with the emission rates in the MAERT for the Fuel Storage Tanks (EPNs TNK-FWMAIN, TNK-EG1, TNK-EG2, TNK-FWB1, TNK-FWB2, TNK-FWB3, TNK-FWB4, TNK-BFWP1, TNK-BFWP2, TNK-BFWP3, and TNK-BFWP4) will be demonstrated by compliance with Special Condition No. 22.

CASE-BY-CASE MACT

41. This case-by-case MACT permit, Permit No. HAP48, establishes federally enforceable MACT emission limits for CO (CO is a surrogate of organic HAPs) and filterable PM (filterable PM is a surrogate for non-mercury HAP metals) for the natural gas-fired Auxiliary Boilers (identified as EPNs AUX-BOIL1 and AUX-BOIL2) and the Propane Vaporizers (identified as EPNs PROP-VAP1 and PROP-VAP2). These facilities shall comply with all applicable requirements of 30 TAC Chapter 113, 30 TAC Chapter 116, and the EPA regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63, promulgated for:

A. Applicable General Provisions, Subpart A; and

B. Federal Clean Air Act Section 112(g), case-by-case MACT determination.

PLANTWIDE APPLICABILITY LIMIT (PAL)

42. A. The PAL for each pollutant listed in B. of this special condition was calculated as the individual sum of the allowable 12-month rolling average emission rates of these pollutants in the MAERT of this permit.

B. Any project to be authorized by permit by rule, permit amendment, or other TCEQ permitting mechanism, including the modification of existing facilities or the addition of new facilities, shall not be subject to federal new source review (FNSR) for the air pollutants listed below provided the total plant wide emissions from the Las Brisas Energy Center do not exceed the PAL of:

Pollutant	PAL, Tons per rolling 12-month period
NO_x	3,824
CO	5,977
SO_2	8,096
VOC	283
PM_{10}	1,664
H_2SO_4	1,025

C. Compliance with the PALs specified in B. of this special condition shall be demonstrated on a 12-month rolling basis by totaling the calendar month actual emissions from each of the facilities listed in the MAERT using the CEMS, calendar month fuel use records, calendar month tank throughput records, calendar month hours of operation, and emission factors identified in Section 7 of the permit application as updated November 12, 2008.

D. The PAL of this special condition is subject to the requirements of 30 TAC Chapter 116, Subchapter C, Plant-Wide Applicability Limits.

E. If the authorization to construct any of the individual facilities listed in the MAERT authorized by this permit expires for lack of timely construction in accordance with 30 TAC § 116.120, within 30 days after expiration, the permit holder shall submit a request to the TCEQ to alter this permit by removing the facilities not constructed from the MAERT and subtracting their allowable emission rates from the PAL specified in B. of this special condition.

F. If future actual emission rates calculated for an air pollutant exceed the PAL thresholds listed above, the permittee shall be subject to FNSR for that air pollutant. Only the changes that cause the new emission rate to exceed the PAL threshold are subject to FNSR. The permit holder shall submit to the TCEQ a FNSR permit application for the changes that cause actual emissions to exceed the PAL.

G. The PALs specified in B. of this Special Condition must be reduced, to become effective on the future compliance date(s), of any applicable new federal or state regulatory requirement(s). Within 12 months of the effective date of the regulation, the permittee shall submit a request to alter or amend the permit to reflect the more stringent emission rates.

H. This PAL is effective for a period of ten years. The permit holder shall submit a request to alter or amend this permit special condition to re-evaluate the PAL at least six months, but not earlier than 18 months prior to the date of permit expiration.

RECORDKEEPING REQUIREMENTS

43. The following records shall be kept at the plant for the life of the permit. All records required in this permit shall be made available at the request of personnel from the TCEQ, the EPA, or any air pollution control agency with jurisdiction.

A. A copy of this permit.

B. Permit application dated May 19, 2008 and subsequent representations submitted to the TCEQ prior to permit issuance.

C. A complete copy of the testing reports and records of the initial air emissions performance testing completed pursuant to the Initial Demonstration of Compliance.

D. Required stack sampling results or other air emissions testing (other than CEMS or COMS data) that may be conducted on units authorized under this permit after the date of issuance of this permit.

44. The following records shall be kept for a minimum of five years after collection and shall be made immediately available upon request to representatives of the TCEQ, the EPA, or any local air pollution control program having jurisdiction. Records shall be legible and maintained in an orderly manner. The following records shall be maintained:

A. Continuous emission monitoring data for opacity, SO_2, NO_x, CO, Hg, NH_3, and diluent gases, O_2 or CO_2, from CEMS to demonstrate compliance with the emission rates listed in the MAERT and performance standards listed in this permit for pollutants that are monitored by CEMS or COMS. Data retention at intervals less than one hour is not required. Records must identify the times when emissions data have been excluded from the calculation of performance standards because of start-up, shutdown, maintenance, and malfunction along with the justification for excluding data. Records should also identify factors used in calculations that are used to demonstrate compliance with emissions limits and performance standards.

B. Files of all CEMS or COMS quality assurance measures including calibration checks, adjustments and maintenance performed on these systems.

C. Written, certified petroleum coke analysis, to include HHV, for all petroleum coke received from each petroleum coke supplier, to show compliance of the as-fired fuel with the sulfur and trace metal concentration limits of this permit, and written certified analysis provided by natural gas and diesel fuel suppliers to show compliance with the sulfur content limitations of this permit.

D. Average petroleum coke feed rate to the CFB Boilers in pounds per hour and the corresponding average heat input (HHV) in MMBtu/hr, based upon an average over each calendar month.

E. Ammonia, limestone, and lime feed rates established during a successful initial performance test to fulfill the requirements of Special Condition Nos. 12 and 13.

F. Hours of operation of the emergency generators, fire water pumps, boiler feed water pumps, propane vaporizers, and auxiliary boilers to show compliance with the hourly operating limitations of this permit.

G. The amount of fuel received for storage in EPNs TNK-FWMAIN, TNK-EG1, TNK-EG2, TNK-FWB1, TNK-FWB2, TNK-FWB3, TNK-FWB4, TNK-BFWP1, TNK-BFWP2, TNK-BFWP3, and TNK-BFWP4 and the consecutive 12-month total of fuel received for each storage tank to show compliance with the throughput requirements of this permit.

H. Records of cleaning and maintenance performed on abatement equipment, including records of replacement maintenance performed on baghouses. A log should be kept with descriptions of the activity performed, any parts or subassemblies replaced, and the time period over which the cleaning or maintenance was performed.

I. Records required to show compliance with 40 CFR Part 60, Subparts Da, Db, and III, including daily average SO_2 removal efficiency, baghouse performance monitoring, and records of required reporting.

J. Records of all venting of the anhydrous ammonia storage tanks to show compliance with Special Condition No. 20D.

K. Records of personnel training related to anhydrous ammonia injection operations and emergency response planning, including names of trainers and trainees, dates of training, and material covered, to show compliance with Special Condition No. 20F.

L. Records of audio, olfactory, and visual checks for ammonia leaks and repairs to show compliance with Special Condition No. 21.

M. Records, including dates performed, of road maintenance for dust control to show compliance with Special Condition No. 23.

REPORTING

45. The holder of this permit shall submit to the TCEQ Corpus Christi Regional Office quarterly or semiannual reports of excess emissions and monitoring systems performance, as described in 40 CFR § 60.7(c), for each emission unit which is required to be continuously monitored pursuant to 40 CFR Part 60. In addition, these reports shall identify:

A. Any emissions of continuously monitored CO, ammonia, and mercury in excess of any of the limits of this permit and monitoring systems performance, following the format of 40 CFR § 60.7(c);

B. The pollutant, emission rates, and test dates of any stack emission tests conducted during the reporting period which is in excess of any of the limits of this permit.

AS-BUILT INFORMATION

46. The holder of this permit shall submit to the TCEQ Corpus Christi Regional Office and the TCEQ Air Permits Division change pages to the permit application reflective of the final plans and engineering specifications on the CFB Boilers, auxiliary boilers, emergency engines, and other sources, including their respective control equipment, no later than 30 days before initial start-up of the CFB Boilers. This information shall include:
A. All TCEQ Tables in the permit application, updated with manufacturer and other specified data.

B. Revised plot plans and equipment drawings as required to reflect the constructed facility.

C. Identification of any maximum inputs of raw materials for the as-built facility, and any diesel fuel sulfur or engine manufacturer's emission specification that is lower than the values represented in the permit application and used for calculating or establishing emissions. Accompanying this information shall be a request for permit alteration. The TCEQ may alter the permit special conditions and MAERT to reflect any such reduction in emissions. Increases in allowable emission rates shall require authorization before construction begins.

OPTIMIZATION STUDIES

47. Within 60 days after completing the first annual compliance sampling required by Special Condition No. 36, the holder of this permit shall submit a request to adjust the performance standards for the control of H_2SO_4, HCl, HF, Hg, VOC, and front half and total PM/PM_{10} identified in Special Condition No. 11B to reflect the results of the sampling of these compounds conducted to that date, with appropriate consideration given for data variability. The adjustment on a pollutant-by-pollutant basis to the performance standard for the control of H_2SO_4, HCl, HF, Hg, VOC, or front half and total PM/PM_{10} shall only be required if the average of the sampling for any such pollutant is 50 percent or less of the currently permitted value. At a minimum, this submittal shall include the Initial Demonstration of Compliance sampling required by this permit and the first annual compliance sampling required by Special Condition No. 36.

Attachment A
Permit Numbers 85013 and PSD-TX-1138
Non-Mercury Metal Concentrations in Petroleum Coke
and Emission Performance Standards

Constituent	Maximum Concentration (ppmw)	Performance Standard (lb/MMBtu)
Arsenic	14.25	4.82E-05
Cadmium	3	1.01E-05
Beryllium	2.25	7.61E-06
Lead	18	6.09E-05
Chromium	98.13	3.32E-04
Copper	5.25	1.78E-05
Manganese	945	3.20E-03
Selenium	397.5	1.34E-03
Silicon	25.5	8.62E-05
Aluminum	69	2.33E-04
Iron	375	1.27E-03
Calcium	28.5	9.64E-05
Sodium	97.5	3.30E-04
Potassium	42	1.42E-04
Titanium	1.5	5.07E-06
Magnesium	9	3.04E-05
Nickel	880.5	2.98E-03
Vanadium	42,000	1.42E-02