SPECIAL CONDITIONS

Permit Numbers 18426 and PSDTX742M1

Emission Standards and Fuel Specifications

1. The total emissions of air contaminants from any of the sources shall not exceed the values stated on the attached table entitled "Emission Sources - Maximum Allowable Emission Rates." Standard Permit No. 52617 is hereby consolidated into this permit by reference. (11/07)

2. The 595 MW coal-fired boiler identified as Emission Point No. (EPN) U-5 shall comply with all requirements of Environmental Protection Agency (EPA) Regulations on Standards of Performance for New Stationary Sources promulgated for Electric Utility Generating Plants in Title 40 Code of Federal Regulations Part 60 (40 CFR 60), Subparts A and Da. (11/07)

   Specifically, the facility shall comply with the 70 percent reduction requirement provided for in 40 CFR 60.43a(a)(2) and Subpart Da for sulfur dioxide independently of the 30-day and 3-hour maximum allowable pound per hour emission rates for sulfur dioxide set forth in this permit.

3. Should a permit condition be more stringent than a condition specified in the applicable New Source Performance Standards (NSPS), the permit condition shall govern and be the standard by which compliance will be demonstrated.

4. Fuel used in the Auxiliary Boilers A-1 and A-2 shall be limited to pipeline quality sweet natural gas containing no more than 0.5 grains of hydrogen sulfide and 20 grains of total sulfur per 100 dry standard cubic feet. Use of any other fuel will require an amendment to the permit. Operation of Auxiliary Boilers A-1 and A-2 shall be limited to firing not more than 58,407,300 standard cubic feet of natural gas each in any consecutive 12-month period (annual capacity factor of 10.5 percent).

5. EPN A-1 and A-2 shall comply with all requirements of 40 CFR 60, Subparts A and Dc.

6. Emissions shall not exceed 10 percent opacity (6-minute average) at the point of measurement for the utility boiler, EPN U-5, except during periods of routine maintenance, start-up, or shutdown (MSS) or as otherwise allowed by law. During periods of MSS, the opacity shall not exceed 20 percent over a six-minute period. Opacity of emissions from the ash handling facilities described on the maximum allowable emission rates table shall not exceed 10 percent (six-minute average), except for those periods described in 30 TAC Section 111.111(a)(1)(E). Compliance will be determined using Reference Method 9. Disposal of ash must be accomplished in a manner that will prevent the ash from becoming airborne. (4/12)

7. Opacity of emissions from Auxiliary Boilers A-1 and A-2 must not exceed five percent averaged over a 6-minute period, except for those periods described in 30 TAC 111, § 111.111(a)(1)(E) of Regulation I.

8. Emissions from the Spruce Unit 1 Utility Boiler exhausting through EPN U-5 shall not exceed the heat input-based performance standards identified in the table below. The heat input shall be based upon the higher heating value of the fuel. The performance standards of this permit condition shall apply at all times except during periods of routine MSS. During periods of routine MSS, the holder of this permit shall operate the Spruce Unit 1 and associated air pollution control equipment in accordance with good air pollution control practices to minimize emissions. The averaging periods identified in the table shall be the basis for continuous compliance. (4/12)

Pollutant	Performance Standard	Averaging Period	Compliance Method
Nitrogen Oxides (NO_x)	0.30 lb/MMBtu	30-day roll	CEMS[1]
Sulfur Dioxide (SO_2)	0.35 lb/MMBtu	30-day roll	CEMS[1]
Sulfur Dioxide (SO_2)	0.60 lb/MMBtu	3-hour roll	CEMS[1]
Sulfur Dioxide (SO_2)	1.20 lb/MMBtu	1- hour roll	CEMS[1]
Particulate Matter[2]	0.03 lb/MMBtu	Average of three one hour stack sampling runs	Stack Sample

Notes:
[1] CEMS - Continuous Emission Monitoring System. CEMS are subject to the requirements of Special Condition No. 11.
[2] Particulate Matter emission rate is for front half only as determined by EPA Reference Method 5, excluding back half condensable.

Initial Determination of Compliance

9. Sampling ports and platform(s) shall be incorporated into the design of the steam generator stack according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities." Alternate sampling facility designs may be submitted for approval by the San Antonio Regional Director.

10. The holder of this permit, at his own expense, shall utilize the services of an independent contractor to perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants from EPN U-5. Sampling must be conducted in accordance with 40 CFR 60, Appendix A, Test

Method 10, "Determination of Carbon Monoxide (CO) Emissions from Stationary Sources;" Method 7, "Determination of Nitrogen Oxide (NOx) Emissions from Stationary Sources;" Method 8, "Determination of Sulfur Dioxide (SO2) and Sulfuric Acid (H2SO4) Mist Emissions from Stationary Sources;" Method 5, "Determination of Particulate Matter (PM) Emissions from Stationary Sources;" Method 9, "Visual Determination of Opacity from Stationary Sources;" Method 13A or 13B, "Determination of Total Fluoride Emissions from Stationary Sources;" Method 25, "Determination of Total Gaseous Non-Methane Organic Emissions as Carbon" and in accordance with 40 CFR 61, Appendix B, Test Method 101A, "Determination of Mercury (Hg) Emissions from Stationary Sources" and Test Method 104, "Determination of Beryllium (Be) Emissions from Stationary Sources." Test methods used to determine the concentration of other air contaminants to be sampled must be approved for, or any deviation from the specified test methods must be approved by, the permitting authority prior to sampling.

A. The appropriate Texas Commission on Environmental Quality (TCEQ) San Antonio 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 provisions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The San Antonio Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

Requests to waive testing for any pollutant specified in B of this provision shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for NSPS testing which must have EPA approval shall be submitted to the EPA and copied to the TCEQ Regional Office.

B. Air contaminants emitted from the Utility Boiler Stack (EPN U-5) to be tested for include (but are not limited to) opacity, CO, NOx, SO2, PM, volatile organic compounds (VOC), Hg, Be, hydrogen fluoride (HF) and H2SO4. The permitting authority may require additional testing if deemed appropriate.

C. Sampling shall occur within 60 days after commencement of commercial operation, but not later than 180 days after initial start-up of the boiler and at such other times as may be required by the Executive Director of the TCEQ. Requests for additional time to perform sampling shall be submitted to the TCEQ San Antonio Regional Office. Additional time to comply with the applicable requirements of 40 CFR 60 and 40 CFR 61 requires EPA approval and requests shall be submitted to the EPA and copied to the TCEQ Regional Office.

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

E. Four copies of the final sampling report shall be forwarded within 30 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 appropriate TCEQ San Antonio Regional Office.
One copy to the appropriate local air pollution control program.
One copy to the Air Enforcement Branch, EPA, Dallas.

Continuous Determination of Compliance

11. The holder of this permit shall install, calibrate and maintain a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of NOx (all, as in nitrogen oxide plus nitrogen dioxide), SO2, and CO from the boiler stack (EPN U-5). The holder of this permit shall also install, calibrate, and maintain a continuous opacity monitoring system (COMS) for measuring the effective opacity of emissions from the utility boiler. The COMS

may be located where no interference with opacity readings will be experienced due to water droplets from the FGD system; however, the location must meet the measurement path requirements of 40 CFR 60, Appendix B, Performance Specification 1, Section 4.2. The monitoring data collected from the COMS shall be reported as effective combined opacity using the procedures contained in EPA document NO. EPA625/6.79.005, Section 4.6, pages 4-13 through 4-16. Continuous flow monitoring of each baghouse duct will not be required under normal operating conditions provided initial performance testing demonstrates that the flows from each baghouse at or near the location of each opacity monitor are within plus or minus 10 percent of equal flow. The CEMS and COMS 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 Specifications No. 1 through 6, 40 CFR 60, Appendix B. The CEMS shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in 40 CFR 60, Appendix B. If applicable, 40 CFR 75, Appendix A and B may be used as an alternative to 40 CFR 60, Appendix B

The monitoring data collected from the CEMS for NOx, SO2 and CO shall be reduced to hourly average concentrations at least once every day using a minimum of four equally spaced data points over each one-hour period. The individual average concentrations of NOx, SO2 and CO shall be reduced to units of the permit allowable emission rate in ppm, lb/MMBtu and lb/hr as appropriate at least once every week. All monitoring data and quality assurance data shall be maintained by the source for a period of two years and shall be made available to the TCEQ San Antonio Regional Office in accordance with the conditions of 40 CFR 60.7(b) and (c). The data from the CEMS and COMS shall be used to demonstrate continuous compliance with the provisions of this permit. The CEMS and COMS required by this permit shall be subject to all future quality assurance requirements as they are published in the TCEQ Sampling Procedures Manual and the Federal Register.

A. Excess emission reports for CEMS shall be submitted quarterly following the provisions of 40 CFR 60.7(c). The report must include a summary of exceedances and monitor downtime by cause. Specific reporting requirements for SO2, NOx and opacity are described in 40 CFR 60.49(a) and shall be complied with by the permittee.

B. 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 applicable parts of Special Condition 11 and 11 A. (11/07)

C. During the initial compliance test required in Special Conditions No. 10, the holder of this permit shall demonstrate that at the allowable opacity, the allowable emission rate for Be and Hg will not be exceeded. Compliance with the opacity limitation for EPN U-5 shall be the best evidence of compliance with the allowable Be and Hg emission rates.

D. During the initial compliance test required in Special Conditions No. 10, the holder of this permit shall demonstrate that at the allowable emission rate for SO2, the allowable emission rate for HF will not be exceeded. Compliance with the allowable emission rate for SO2 shall be the best evidence of compliance with the allowable HF emission rate.

E. During the initial compliance test required in Special Conditions No. 10, the holder of this permit shall demonstrate that at the allowable emission rate for CO, the allowable emission rate for VOC will not be exceeded. Compliance with the allowable emission rate for CO shall be the best evidence of compliance with the VOC allowable emission rate.

Recordkeeping Requirements

12. The following records shall be maintained by the source at the site for a period of two years and shall be made available to the Executive Director or his designated representative upon request:

    A. Hours of operation of Auxiliary Boilers A-1 and A-2.

    B. Amount of fuel fired in Auxiliary Boilers A-1 and A-2 on a daily basis to ensure the 10.5 percent capacity factor authorized is not exceeded.

    C. Monitoring and quality assurance records required by Special Conditions No. 11 in accordance with the conditions of 40 CFR 60.7(b) and (c).

13. A copy of this permit shall be kept at the plant site and made available at the request of personnel from the TCEQ or any air pollution control agency with jurisdiction.

14. The holder of this permit shall physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows:

A. The facility identification numbers as submitted to the Emissions Inventory Section of the TECQ.

B. The EPNs as listed on the Maximum Allowable Emission Rates Table.

Routine Maintenance, Startup, and Shutdown

15. This permit authorizes the emissions from the planned maintenance, startup, and shutdown (MSS) activities listed in Attachment A, Attachment B, or the MAERT attached to this permit. Attachment A identifies the inherently low emitting (ILE) planned maintenance activities that this permit authorizes to be performed. Attachment B identifies the planned MSS activities that are non-ILE planned maintenance activities that this permit authorizes to be performed. (4/12)

16. The holder of this permit shall minimize emissions during planned MSS activities by operating the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility. (4/12)

17. Emissions during planned startup and shutdown activities will be minimized by limiting the duration of operation in planned startup and shutdown mode as follows: (4/12)

A. A planned cold startup of the electric generating facility (EGF), Spruce Unit 1, is defined as the period that begins with the first stage metal temperature being less than 300 degrees Fahrenheit, and a hot startup event is defined as a startup that is not a cold startup. Startup commences when the Induced Draft Fan is placed in service and is complete when the boiler is released to dispatch. A planned cold start event shall not exceed 840 minutes in duration and a hot startup event shall not exceed 480 minutes in duration. Extended startups lasting longer than either a cold or hot start duration are allowed provided the total hours of extended startups does not exceed 600 hours per unit per year.

B. A planned shutdown of the EGF, Spruce Unit 1, is defined as the period that commences when dispatched requests a shutdown due to market conditions or when plant personnel request a shutdown for maintenance, and ends when fuel is no longer fired. A planned shutdown event shall not exceed 360 minutes in duration.

18. When a planned maintenance activity identified in Attachment B is associated with a VOC liquid storage facility and may result in VOC emissions from that facility, the permit holder shall not open that facility to the atmosphere in connection with the planned maintenance activity until the VOC liquids are removed from that facility to the maximum extent practicable. (4/12)

19. No vacuum pump on a vacuum truck that is used to move solids (such as ash) during planned maintenance activities shall be operated unless the vacuum system exhaust is routed to a filtering system. (4/12)

20. Vacuum trucks that are used to move liquids during planned maintenance activities shall utilize submerged loading. (4/12)

21. Compliance with the emissions limits for planned MSS activities identified in the MAERT attached to this permit may be demonstrated as follows. (4/12)

A. For each pollutant emitted during ILE planned maintenance activities, the permit holder shall annually confirm the continued validity of the estimated potential to emit represented in the permit application for all ILE planned maintenance activities. The total emissions from all ILE planned maintenance activities (See Attachment A) shall be considered to be no more than the estimated potential to emit for those activities that are represented in the permit application.

B. For each pollutant emitted during non-ILE planned MSS activities (See Attachment B) whose emissions are measured using a CEMS, as per Special Condition No. 22A, the permit holder shall compare the pollutant's short-term (hourly) emissions during planned MSS activities as measured by the CEMS to the applicable short-term planned MSS emissions limit in the MAERT.

C. For each pollutant emitted during non-ILE planned MSS activities (See Attachment B) whose emissions occur through a stack, but are not measured using CEMS as per Special Condition No. 22A, the permit holder shall determine the total emissions of the pollutant through the stack that result from such non-ILE planned MSS activities in accordance with Special Condition No. 22B.

D. For each pollutant emitted during non-ILE planned MSS activities (See Attachment B) whose emissions do not occur through a stack, the permit holder shall do the following for each calendar month.

(1) Determine the total emissions of the pollutant from such non-ILE planned MSS activities in accordance with Special Condition No. 22B.

(2) Once monthly emissions have been determined in accordance with Special Condition No. 21D(1) for 12 months after the MSS permit amendment has been issued, the permit holder shall compare the sum of the rolling 12-month emissions for the pollutant

for all non-ILE planned MSS activities to the annual emissions limit for the pollutant in the MAERT.

22. The permit holder shall determine the emissions during planned MSS activities for use in Special Condition No. 21 as follows. (4/12)

A. For each pollutant whose emissions during normal facility operations are measured with a CEMS that has been certified to measure the pollutant's emissions over the entire range of a planned MSS activity, the permit holder shall measure the emissions of the pollutant during the planned MSS activity using the CEMS.

B. For each pollutant not described in Special Condition No. 22A, the permit holder shall calculate the pollutant's emissions during all occurrences of each type of planned MSS activity for each calendar month using the frequency of the planned MSS activity identified in work orders or equivalent records and the emissions of the pollutant during the planned MSS activity as represented in the planned MSS permit application. In lieu of using the emissions of the pollutant during the planned MSS activity as represented in the planned MSS permit application to calculate such emissions, the permit holder may determine the emissions of the pollutant during the planned MSS activity using an appropriate method, including but not limited to, any of the methods described in paragraphs 1 through 4 below, provided that the permit holder maintains appropriate records supporting such determination:

(1) Use of emission factor(s), facility-specific parameter(s), and/or engineering knowledge of the facility's operations.

(2) Use of emissions data measured (by a CEMS or during emissions testing) during the same type of planned MSS activity occurring at or on a similar facility, and correlation of that data with the facility's relevant operating parameters, including, but not limited to, electric load, temperature, fuel input, and fuel sulfur content.

(3) Use of emissions testing data collected during a planned MSS activity occurring at or on the facility, and correlation of that data with the facility's relevant operating parameters, including, but not limited to, electric load, temperature, fuel input, and fuel sulfur content.

(4) Use of parametric monitoring system (PEMS) data applicable to the facility.

23. With the exception of the emission limits in the MAERT attached to this permit, the permit conditions relating to planned MSS activities do not become effective until 60 days after issuance of the permit amendment that added such conditions. (4/12)

Permits by Rule and Standard Permits

24. The following maintenance activities at the site are currently authorized by permits by rule (PBR) under 30 TAC Chapter 106. The standard permit identified below was issued under 30 TAC Chapter 116. (4/12)

Description	PBR/Standard Perm No.
Brazing, Soldering, and Welding	106.227
Enclosed Dry Abrasive Blasting	106.263
Solvent Cleaning-Parts Degreaser	106.454
Hand-Held Equipment for Buffing, Polishing, Cutting, Drilling, Sawing, Grinding, Turning, or Machining Wood, Metal or Plastic	106.265
Standard Permit for Pollution Controls	52617

Date: April 10, 2012

Attachment A

Permit Nos. 18426 and PSDTX742M1

Inherently Low Emitting (ILE) Planned Maintenance Activities

Planned Maintenance Activity	Emissions					
	NH_3/Urea	VOC	NOx	CO	PM	SO_2
Miscellaneous particulate filter maintenance[1]					X	
Maintenance of storage vessels storing material with vapor pressure <0.5 psia	X	X				
Catalyst handling and maintenance					X	
Water based washing		X				
Organic chemical usage, not authorized by "manual surface coating or solvent cleaning operations" or by "use and disposal of aerosol products"		X				
Boiler general maintenance[2]					X	
Management of sludge from pits, ponds, sumps, and water conveyances[3]		X				
Inspection, repair, replacement, adjusting, testing, and calibration of analytical equipment, process instruments including sight glasses, meters, gauges, CEMS, PEMS.		X	X	X		X
Deslagging of boiler[4]		X	X	X	X	
Material handling system maintenance[5]					X	
Small equipment and fugitive component repair/replacement in VOC and inorganic service[6]	X	X				

Notes:

1. Includes, but is not limited to, baghouse filters, ash silo/transfer filters, coal handling filters, process-related building air filters, and combustion turbine air intake filters.
2. Includes pre-heater basket handling and maintenance, refractory change-out, fan maintenance and balancing, damper, air heater, and soot blower maintenance,

and any other general boiler maintenance that does not exceed the worst-case emissions representation in the application.

3. Includes, but is not limited to, management by vacuum truck/dewatering of materials in open pits and ponds, and sumps, tanks and other closed or open vessels. Materials managed include water and sludge mixtures containing miscellaneous VOCs such as diesel, lube oil, and other waste oils.
4. Includes, but is not limited to, explosive blasting, clinker shooting, and other boiler deslagging activities; does not include dry abrasive blasting that may occur in boilers.
5. Material handling system equipment includes, but is not limited to, silos, transport systems, coal bunkers, coal crushing equipment, coal handling, nuvafeeders, hoppers, FGD sludge handling system. Materials handled include coal, ash, limestone, gypsum, mercury, and sorbents.
6. Includes, but is not limited to, (i) repair/replacement of pumps, compressors, valves, pipes, flanges, transport lines, filters and screens in natural gas, fuel oil, diesel oil, ammonia, lube oil, and gasoline service, (ii) vehicle and mobile equipment maintenance that may involve small VOC emissions, such as oil changes, transmission service, and hydraulic system service, and (iii) off-line NOx control device maintenance (including maintenance of the anhydrous ammonia systems and aqueous ammonia systems associated with SCR systems and SNCR systems)

Attachment B

Permit Nos. 18426 and PSDTX742M1

Non-Inherently Low Emitting Planned MSS Activities

Planned Maintenance Activity	Emissions						
	EPN	NH_3/Urea	VOC	NO_X	CO	PM	SO_2
Combustion optimization[1]	U-5		X	X	X	X	X
Vacuum truck solids loading[2]	MSSFUG 4					X	
Vacuum truck solids unloading	MSSFUG 4					X	
Maintenance of storage vessels storing gasoline or other material with vapor pressure >0.5 psia that requires clearing of the vessels to allow for entry of personnel	MSSFUG 4	X	X				
Flue gas conditioning system maintenance - unit online	U-5	X				X	
Flue gas conditioning system maintenance fugitives - unit offline[3]	MSSFUG 4	X				X	
NOx control device maintenance - unit online	U-5	X		X			
PM control device maintenance - unit online	U-5					X	
SO_2 control device maintenance - unit online	U-5						X
Smoke test of boiler	U-5			X	X	X	X
Smoke test of boiler fugitives	MSSFUG 4			X	X	X	X
Use of fans during maintenance - unit offline	U-5					X	
Main unit Planned Startup and Planned Shutdown	U-5	X	X	X	X	X	X

Notes:

1. Includes, but is not limited to, (i) leak and operability checks (e.g., turbine over-speed tests, troubleshooting), (ii) balancing, and (iii) tuning activities that occur during seasonal tuning or after the completion of initial construction, a combustor change-out, a major repair, maintenance to a combustor, or other similar circumstances.
2. Includes site-wide solids vacuuming operations (e.g., SCR, baghouse, ESP, ducts, furnace, loop seals, stripper coolers, and airlocks).
3. Includes, but is not limited to, maintenance of anhydrous ammonia systems and aqueous ammonia systems used to condition flue gas before it is controlled by a PM control device.
4. Emission point MSSFUG represents permitted site-wide MSS fugitive emissions for J.T. Deely Units 1 and 2, and Spruce Units 1 and 2. MSSFUG emissions are quantified in the maximum allowable emissions rate table in Permit No. 70492 and PSDTX1037.