

Extension of Start of Construction Source Analysis & Technical Review

Company	Southwestern Public Service Company	Permit Number	135322 PSDTX1470 GHGPSDTX141
City	Seminole	Project Number	288574
County	Gaines	Regulated Entity Number	RN108733106
Project Type	Revision	Customer Reference Number	CN601481336
Project Reviewer	Kiet Nguyen		
Site Name	Gaines County Power Plant		

Project Overview

Southwestern Public Service Company (SPS) has proposed to construct an electric generating facility. The Gaines County Power Plant will be constructed in phases, with Siemens SGT6-5000F5 natural gas-fired simple cycle combustion turbines (SCCTs) with dry low NO_x burners (DLN) to be converted into 2-on-1 combined cycle combustion turbines (CCCTs) with selective catalytic reduction (SCRs), heat recovery steam generators (HRSGs, one per combustion turbine) and one steam turbine per two CCCTs. During Phase I of construction, two "peaking" SCCTs (each with up to 227.5 megawatt output) are to be constructed, and then converted into a 2-on-1 CCCTs/HRSGs/steam turbine. During Phase II, two additional SCCTs are to be constructed and then converted into a 2-on-1 CCCTs/HRSGs/steam turbine. Thus, the final build-out will have four CCCTs with HRSGs and steam turbines, with a site-wide output capacity of 1706 MW. The applicant is requesting authorization to operate the turbines as either simple cycle (limited hours) or combined cycle.

Along with the gas-fired turbines, additional equipment authorized by the permit includes four HRSGs, two steam turbines, one auxiliary boiler, one diesel-fired emergency generator, one diesel-fired firewater pump engine, two 300 gallon diesel storage tanks, and an ammonia (NH₃) storage and unloading system. Additional VOC emissions sources are lube oil systems and fugitives. Circuit breakers emit sulfur hexafluoride (SF₆), a greenhouse gas.

Federal applicability / Prevention of Significant Deterioration (PSD) review was for nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO₂), sulfuric acid (H₂SO₄), volatile organic compounds (VOC), particulate matter (PM, PM₁₀, PM_{2.5}), and greenhouse gases (GHG).

MSS activities are included within the emission calculations.

SPS is requesting an extension of start of construction (ESOC) for all three permits: NSR permit No. 135322, PSDTX1470 and GHGPSDTX141.

Review Summary

SPS has received authorization to construct the Gaines County Power Plant via NSR permit No. 135322, PSDTX1470 and GHGPSDTX141 that were issued on April 28, 2017, project No. 240891.

During the technical review of the non-GHG and GHG permit, the TCEQ determined the best available control technology (BACT) for the equipment authorized by this permit. There have been no new control techniques developed since the issuance of this permit; therefore, BACT for the equipment at the facility remains unchanged.

Pursuant to 30 Texas Administrative Code 116.120(b), Southwestern Public Service Company has requested a one-time 18-month extension to begin construction of their facility previously authorized on April 28, 2017. The company is requesting an 18-month extension for construction beyond the initial construction period, which ends October 28, 2018. This permit action will extend the construction deadline to April 28, 2020.

	8/9/2018		8/13/18
Project Reviewer	Date	Team Leader	Date
Kiet Nguyen		Chase Perry	