

TECHNICAL BRIEFING SHEET
City Public Service
Permit Nos. 70492 and PSD-TX-1037

PROJECT DESCRIPTION: CPS has requested a permit to construction a new pulverized coal-fired utility boiler to be called Spruce 2 and ancillary equipment capable of producing approximately 750 net megawatts of electricity, with a heat input of approximately 8,000 MMBtu/hour. The primary fuel that will be fired in the boiler will be low-sulfur western subbituminous coal from the Powder River Basin (PBR). Emissions from the boiler will be controlled with combustion controls, a wet flue gas desulfurization system, a selective catalytic reduction system, and a fabric filter dust collection system. Associated ancillary equipment was also evaluated for BACT and impacts.

TYPE OF REVIEW: A PSD review was triggered for the following criteria pollutants: VOC, PM/PM₁₀, CO, H₂SO₄, Pb, and Fluorides (as HF). CPS was able to net out of PSD for NO_x and SO₂. CPS will enhance the existing Spruce 1 scrubber to net out of PSD for SO₂. CPS will over control NO_x from J.T. Deely Units 1 and 2, Spruce Unit 1, and O.W. Sommers Units 1 and 2.

PSD - BEST AVAILABLE CONTROL TECHNOLOGY (BACT):

Emissions from the utility boiler will be controlled with combustion controls, a wet flue gas desulfurization (FGD) system, a selective catalytic reduction system, and a fabric filter dust collection system. CPS proposes the emission limits listed below as BACT for the Utility boiler. Note that the hourly emissions include routine start-up, shut down, and maintenance emissions.

Pollutant	1- Hour Emission Rate (lb/MMBtu)	Annual Emission Rate (lb/MMBtu)
NO _x	0.2	0.069* and 0.05
SO ₂	0.36	0.10* and 0.06
CO	0.56	0.15
PM/PM ₁₀	0.033	0.022
Pb	2.2 E-5	8.4E-6
VOC	0.0036	0.0025
Fluorides (as HF)	0.008	0.0008
H ₂ SO ₄	0.0055	0.0037

* Note: 30-day rolling average

NAAQS & INCREMENT: Predicted impacts from the project are as follows:

Pollutant	Averaging Period	Maximum Impact (µg/m ³)	De Minimus Level (µg/m ³)	Increment Consumed (µg/m ³)	Allowable Increment (µg/m ³)	NAAQS Level (µg/m ³)
NO ₂	Annual	0.32	1	n/a	25	100
CO	1-hour	511	2,000	none	n/a	40,000
	8-hour	110	500	none	n/a	10,000
SO ₂	3-hour	52.7	25	n/a	512	1300
	24-hour	1.96	5	n/a	91	365
	Annual	0.00013	1	n/a	20	80
Pb	Quarter	0.0003	0.2	n/a	n/a	1.5
Flourides (as HF)	24-hour	0.12	n/a	n/a	n/a	n/a
PM ₁₀	24-hour	3.07	5	n/a	30	150
	Annual	0.33	1	none	17	50

ADDITIONAL IMPACTS: Project is not expected to affect the visibility, soils, nor vegetation in the area. There are no Class I areas within 430 km of the proposed facility.

PROCESSING TIME: Application received November 2003
Application technically complete November 2004