FLORIDA GAS TRANSMISSION COMPANY

EXECUTIVE SUMMARY

Florida Gas Transmission Company (FGTC), a subsidiary of ENRON Corporation of Houston, Texas, applied for permits to construct (expand) its natural gas pipeline compressor stations at different locations through the State. The project involves three phases.

PHASE I

The majority of the existing engines (Phase I) were installed (1958 - 1968) prior to the Clean Air Amendments of 1977. The existing engines were not modified as part of the Phase II and Phase III expansion. These existing units received after-the-fact operating permits issued by the affected District offices.

PHASE II

The Department received applications for the Phase II expansion in 1990, these facilities are already in operation.

The scope of work for Phase II included the addition of state-of-the-art compressor stations at eight (8) existing locations and one (1) new location.

The permits issued in Phase II comprised the following:

* Station 12 - Permit No. AC57-188869/PSD-Fl-156
  Munson, Santa Rosa County, Florida

* Station 13 - Permit No. AC67-189220/PSD-FL-158
  Caryville, Washington County, Florida

* Station 14 - Permit No. AC20-189438/PSD-FL-159
  Quinsy, Gadsden County, Florida

* Station 15 - Permit No. AC62-189439/PSD-FL-160
  Perry, Taylor County, Florida

* Station 16 (new) - Permit No. AC04-189454/PSD-FL-161
  Brooker, Bradford County, Florida

* Station 17 - Permit No. AC42-189455/PSD-FL-162
  Salt Springs, Marion County, Florida

* Station 18 - Permit No. AC48-189456/PSD-FL-163
  Orlando, Orange County, Florida

* Station 19 - Permit No. AC05-189665
  Melbourne, Brevard County, Florida

* Station 20 - Permit No. AC56-189457/PSD-FL-164
  Ft. Pierce, St. Lucie County, Florida

The engines installed during Phase II are natural gas fired reciprocating internal combustion (IC) engines manufactured by Copper-Bessemer or Dresser Rand. Their brake horsepower (bhp) varies between 2600 and 4100 bhp.

Each compressor station (except Station No. 19) was reviewed under the PSD regulations for NO_X.

BACT was required for NO_X for the facilities subject to PSD regulations. BACT for this type of engines was determined to be lean-burn technology.

In the lean-burn design, a small, fuel rich mixture is combusted in a pre-ignition chamber. The hot combustion gases from the pre-ignition chamber then pass to the main combustion chamber where they ignite a lean mixture of fuel. Since most of the fuel entering the engine is burned in a lean state (i.e., high ratio of air to fuel), NO_X exhaust emissions are minimized.

There is no New Source Performance Standard (NSPS) applicable for internal combustion engines.

PHASE III

Applications for the Phase III project were received in April 1993. The scope of the work of **Phase III project** included expansion, through the addition of state-of the-art compressor engines and support equipment, at eight existing compressor stations and the development of three new compressor stations (six in Florida). The new pipeline is planned to follow much of the right-of-way of the existing system.

These engines will be used solely for the purpose of transporting natural gas from source wells in Texas and Louisiana for delivery throughout the Gulf Coast pipeline network.

Phase III project comprises the following stations:

* Station No. 15 - AC62-229319/PSD-FL-202
  Taylor County

* Station No. 19 - AC05-229322
  Brevard County

* Station No. 20 - AC56-230129/PSD-FL-203
  St. Lucie County

* Station No. 21 - AC50-229440
  Palm Beach County

* Station No. 26 - AC09-229441
  Citrus County

* Station No. 30 - AC29-228821
  Hillsborough County

As in Phase II, the engines to be installed during **Phase III** are reciprocating internal combustion (IC) engines manufactured by Copper Bessemer. Their brake horsepower (bhp) varies between 2600 and 4100 bhp. Four of the compressor stations will install natural gas fired Solar gas turbines. Their brake horse power varies between 1202 and 12,600 bhp.

Only two of this Phase III's compressor stations were reviewed under the PSD regulations.

BACT was required for NO_X for the facilities subject to PSD regulations. BACT for the reciprocating internal combustion engine was determined to be lean-burn technology to reduce NO_X emissions. In the lean-burn design, a small, fuel rich mixture is combusted in a pre-ignition chamber. The hot combustion gases from the pre-ignition chamber then pass to the main combustion chamber where they ignite a lean mixture of fuel. Since most of the fuel entering the engine is burned in a lean state (i.e., high ratio of air to fuel), NO_X exhaust emissions are minimized.

There is no New Source Performance Standard (NSPS) applicable for internal combustion engines.

BACT for NO_X for the 12,600 (ISO) bhp Solar Mars T natural gas fired turbine engine is the use of dry low NO_X combustion. The state-of-the-art concept in designing a low-NO_X turbine involves raising the air to fuel ratio in the combustion primary zone and thoroughly premixing primary combustion air and fuel. This reduces NO_X formation by lowering the average flame temperature in the combustor primary zone and avoiding localized hot spots. BACT emission levels were established at 42 ppmvd (up to 1/1/98) and 25 ppmvd (by 1/1/98) at 15% O_2 corrected to ISO conditions. All of the gas turbines proposed in this Phase III are subject to 40 CFR 60 Subpart GG-NSPS for Gas Turbines.

POLLUTANTS:

Pollutants	Emissions Factors	Basis
Nitrogen Oxides	0.58 grams/bhp-hr	Manufacturer Data
Carbon Monoxide	0.42 grams/bhp-hr	Manufacturer Data
Volatile Organic Compounds	0.024 grams/bhp-hr	Manufacturer Data
Particulate Matter	0.019 grams/bhp-hr	Manufacturer Data
Sulfur Dioxide	0.11 grams/bhp-hr	Manufacturer Data

The emission factors as stated above were used to calculate emissions for the smaller turbines also. The emissions, expressed in lb/hr, will vary according to the turbine size.

Permits were issued on September 27, 1993, with an expiration date of January 30, 1995.

APPLICABLE RULES

Chapters 17-210, 212, 275, 296, 297, and 17-4, Florida Administrative Code (FAC). Specifically, 17-296.800(2)(a), Standards of Performance for Stationary Gas Turbines; 17-296.320(2); Objectionable Odor; 17-210.700 Excess Emissions; 17-210.650 Circumvention; 17-212.400 Prevention of Significant Deterioration; 17-296.300 Best Available Control Technology and Chapter 17-297, Stationary Sources-Emissions Monitoring.

For compliance determination, these facilities are required to be tested for NO_x, SO_2, CO, VOCs, and visible emissions.

3/27 John Brown
Preston
Tokes CLAIR

Florida Gas Transmission Company

Wiley M. Cauthen
Vice President
Government Affairs

P. O. Box 945100
Maitland, Florida 32794-5100
(407) 875-5800
Fax (407) 875-5892

March 18, 1994

Mr. Howard Rhodes, Director
Division of Air Resources Management
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Rhodes:

To update you, we have enclosed a newspaper clipping covering our groundbreaking ceremony in Kissimmee on March 10 to launch our Phase III expansion project. This project, the largest natural gas pipeline project in Florida history, is expected to be completed in December of this year.

The people of Florida will benefit both economically and environmentally from this large new fifty-seven percent addition to Florida Gas Transmission Company's natural gas pipeline capacity. Florida Gas Transmission Company continues to work toward future expansions to meet Florida's natural gas needs.

Best wishes.

Sincerely,

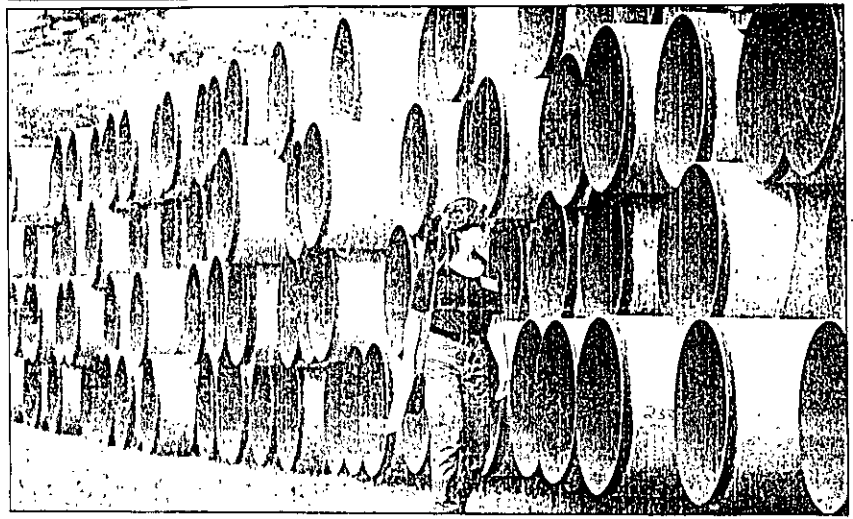
Wiley M. Cauthen

WMC/lsf

Enc.

The Orlando Sentinel
FRIDAY, March 11, 1994

815 miles of pipe



ED SACKETT/SENTINEL

Lilly Teng of Florida Gas Transmission Co. looks over some of the pipe in Kissimmee.

Future of natural gas brightens with mammoth project under way

By Jerry Jackson
OF THE SENTINEL STAFF

The largest natural gas pipeline expansion in Florida history was launched Thursday with a ceremony in Kissimmee at a pipeline storage yard.

Florida Gas Transmission Co. executives joined about 125 other businesspeople and a top federal energy official to commemorate the start of the $900 million project.

The expanded line will help the state meet its growing needs for natural gas as an alternative to oil, coal and other fuels.

The additional gas will fuel everything from power plants to home heaters and help the state reduce its reliance on foreign oil, officials said.

"Increased use of natural gas is good policy," said Elizabeth Moler, chairwoman of the Federal Energy Regulatory Commission in Washington.

Moler

The line will stretch 815 miles from gas fields in Louisiana to Central Florida. It will significantly expand the amount of cleaner burning natural gas for more than two dozen major customers in Orlando, Tampa and other communities.

"It will be on time and in service by Dec. 31, 1994," vowed Tom White, chief executive officer of Enron Operations Corp. Enron, also based in Houston, is one of the owners of Florida Gas and the pipeline.

Natural gas is abundant domestically, reducing the need for imports, and is more environmentally friendly than other fuels, Moler said. She joined with executives of Florida Gas and other companies at the pipe storage yard in Kissimmee for the ceremonial groundbreaking.

Work on expanding and enlarging compressors — huge motors that move the gas through the 30-inch diameter pipes — began in February. Laying of the pipe, including a more than 50-mile leg through portions of Orange, Osceola and Brevard counties, will begin in a few weeks, officials said.

"This is the biggest [pipeline project] in Florida history," said Bill Allison, president of Florida Gas.

Florida Gas operates the only natural gas pipeline serving the peninsula of Florida, a line that was installed over a period of years beginning in 1958. Other pipelines serve the Panhandle, and several others are proposed and under review.

Once complete, the expanded lines and bigger compressors will handle up to 1.4 billion cubic feet of gas a day, up from 925 million.

The additional Florida Gas capacity will serve a wide range of customers such as Citrus World Inc., a juice processing plant in Polk County, and the Lake Apopka Natural Gas District, which sells gas to homes and businesses in west Orange and east Lake counties.

Moler said the Florida Gas project is the first of its kind in the country to be installed under tougher guidelines by the Federal Energy Regulatory Commission, in cooperation with other state and federal oversight agencies.

Natural gas pipeline expansion

Owner: Florida Gas Transmission Co. of Houston
Cost: $900 million
Length: 815 miles from Louisiana to Central Florida
Purpose: To expand gas availability for everything from power plants to home heaters
Significance: Largest such pipeline project in Florida history

Source: Florida Gas Transmission Co.

P 710 058 532

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TOTAL Postage & Fees	$
Postmark or Date Mailed: 5-15-92 Permit: AC 57-189220 62-189439, 67-189220 etc.	

PS Form **3800**, June 1990