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Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

July 22, 2004

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Florida Gas Transmission Company
Rick Craig, Vice President Southeastern Operations
Compressor Station No. 14, Gadsden County
P.O. Box 4657
Houston, Texas 77010-4657

Re: DEP File No. 0390029-008-AC, Modification of Permit No. 0390029-003-AC

The applicant, Rick Craig, Vice President Southeastern Operations, applied on May 26, 2004, to the Department for a modification to air construction permit number 0390029-003-AC for its Compressor Station No. 14 located at Highway 65 S, Quincy, Gadsden County. The modification is to revise the CO emission rates and remove certain operating restrictions in the low and middle load ranges for Engine 1408. The changes will not cause any increases in the annual emissions of CO, although an incidental increase in VOC emissions may occur as a result (only) of the load limitation removal. The Department has reviewed the modification request. The referenced permit is hereby modified as follows:

Specific Condition A.2.

Permitted Capacity: The maximum heat input rate to the modified reciprocating compressor engine shall not exceed 16.5 MMBTU per hour while producing approximately 2000 bhp based on a higher heating value (HHV) of 1040 BTU per SCF for natural gas. [Rule 62-210.200(PTE), F.A.C.]

{Permitting Note: The maximum heat input rates are based on the manufacturer's equipment specifications for each gas turbine. They are included to identify the capacity of each emissions unit for purposes of confirming that tests are conducted within 90% to 100% of the emission unit's rated capacity (or to limit future operation to 105% of the test load, if applicable), to establish appropriate emissions limits, and to aid in determining future rule applicability.}

Specific Condition B.3.

Permitted Capacities: The maximum heat input rate to the gas turbine shall not exceed 112.8 MMBtu per hour while producing approximately 13,078 bhp based on a compressor inlet air temperature of 59° F, 100% load, and a higher heating value (HHV) of 1040 BTU per SCF for natural gas. Heat input rates will vary depending upon gas turbine characteristics, load, and ambient conditions. For the gas turbine, the permittee shall provide manufacturer's performance curves (or equations) that correct for site conditions to the Permitting and Compliance Authorities within 45 days of completing the initial testing. Performance data shall be adjusted for the appropriate site conditions in accordance with the performance curves and/or equations on file with the Department. [Rule 62-210.200(PTE), F.A.C.]

{Permitting Note: The maximum heat input rates are based on the manufacturer's equipment specifications for each gas turbine. They are included to identify the capacity of each emissions unit for purposes of confirming that tests are conducted within 90% to 100% of the emission unit's rated capacity (or to limit future operation to 105% of the test load, if applicable), to establish appropriate emissions limits, and to aid in determining future rule applicability.}

Specific Condition C.5.

Restricted Operation: The total hours of operation for the gas turbine are not limited (8760 hours per year). Except for startup and shutdown, operation below 50% base load is prohibited~~. Operation between 50% and 90% of base load shall not exceed 2190 hours during any consecutive 12 months. Of this authorized low-load operation,~~

~~operation between 50% and 60% of base load shall not exceed 876 hours during any consecutive 12 months.~~ [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

{Permitting Note: The maximum heat input rates are based on the manufacturer's equipment specifications for each gas turbine. They are included to identify the capacity of each emissions unit for purposes of confirming that tests are conducted within 90% to 100% of the emission unit's rated capacity (or to limit future operation to 105% of the test load, if applicable), to establish appropriate emissions limits, and to aid in determining future rule applicability.}

Specific Condition C.6.

Emissions Standards: Emissions from the gas turbine shall not exceed the following limits for carbon monoxide (CO), nitrogen oxides (NOx), opacity, particulate matter (PM), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

Pollutant	Standards		Equivalent Maximum Emissions [f]		Rule Basis [g]
	Load	Standards	lb/hour	TPY	
CO [a]	~~90~~ 50 -100%	~~15.0~~ 21.0 ppmvd @ 15% O2	~~5.1~~ 8.67	37.97	Avoid Rule 62-212.400, F.A.C.
	~~60-90%~~	~~55.0 ppmvd @ 15% O2~~	~~17.3~~		
	~~50-60%~~	~~75.0 ppmvd @ 15% O2~~	~~22.5~~		
NOx [b]	50-100%	25.0 ppmvd @ 15% O2	14.1	61.76	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
SO_2 [c]	50-100%	10.0 grains of sulfur per 100 SCF of natural gas	3.7	16.21	Avoid Rule 62-212.400, F.A.C. 40 CFR 60.332
Opacity [d]	50-100%	10% opacity, 6-minute average	Not Applicable		Avoid Rule 62-212.400, F.A.C.
PM [e]	50-100%	Good combustion practices	0.9	3.94	Avoid Rule 62-212.400, F.A.C.
VOC [e]	~~90-100%~~	~~Good combustion practices~~	~~0.3~~	~~2.43~~	Avoid Rule 62-212.400, F.A.C.
	~~60-90%~~	~~Good combustion practices~~	~~1.2~~	6.57	
	50-~~60~~ 100%	Good combustion practices	1.5		

a. The CO standards are based on 3-hour test average as determined by EPA Method 10. ~~Annual CO emissions were based on emissions standards and restricted hours of operation.~~
b. The NOx standards are based 3-hour test average as determined EPA Method 20.
c. The fuel sulfur specification is based on the maximum limit specified by Federal Energy Regulatory Commission (FERC) and effectively limits the potential SO2 emissions. Expected fuel sulfur levels are less than 1 grain per 100 SCF of natural gas from the pipeline.
d. The opacity standard is based on a 6-minute average, as determined by EPA Method 9.
e. For both PM and VOC, the efficient combustion of clean fuels is indicated by compliance with opacity and CO standards. Equivalent maximum PM emissions are based on data in Table 3.1-2a in AP-42. Equivalent maximum VOC emissions are based on vendor data. Annual VOC emissions were based on the vendor data ~~and restricted hours of operation~~. No testing required.
f. Equivalent maximum hourly emissions are the maximum expected emissions based on permitted capacity and a compressor inlet air temperature of 59° F. For comparison purposes, the permittee shall provide a reference table with the initial compliance test report of mass emission rates versus the compressor inlet temperatures. Each test report shall include measured mass emission rates for CO, NOx and SO2. Mass emission rates for SO2 shall be calculated based on actual fuel sulfur content and fuel flow rate. For tests conducted at 59° F or greater, measured mass emission rates shall be compared to the equivalent maximum emissions above. For tests conducted below 59° F, measured mass emission rates shall be compared to the tabled mass emission rates provided by the manufacturer based on compressor inlet temperatures.
g. Equivalent maximum annual emissions are based on 8760 hours of operation per year.
h. The emissions standards of this permit ensure that the project does not trigger the PSD preconstruction review requirements of Rule 62-212.400, F.A.C.

Specific Condition C.13.

Operational Data: ~~Using the automated gas turbine control system, the permittee shall monitor and record heat input (MMBtu), power output (bhp), and hours of gas turbine operation within each of the following load ranges: 50% to 60% load, 60% to 90% load; and 90% to 100% load. Within the first 10 days of each month, the permittee shall summarize the following information: average heat input (MMBtu per hour); average power output (bhp); total hours of gas turbine operation; hours of gas turbine operation between 50% to 60% load; hours of gas turbine operation between 60% to 90% load; and hours of gas turbine operation between and 90% to 100% load.~~ Operation of this turbine compressor shall be monitored by an automatic control system. At a minimum, this system shall maintain a continuous record of heat input (MMBtu), power output (bhp), and hours of turbine operation. Within the first ten days of each month, the permittee shall summarize the following information: average heat input (MMBtu per hour); average power output (bhp); and total hours of gas turbine operation. The average heat input for the month shall be based on the contracted heat content (MMBTU per SCF) of the natural gas for the given month. This information shall also be used for submittal of the required Annual Operating Report. [Rule 62-4.070(3), F.A.C.]

A copy of this letter shall be filed with the referenced permit and shall become part of the permit. This permit modification is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order (permit modification) has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Michael G. Cooke, Director
Division of Air Resources
Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 7/27/04 to the person(s) listed:

Mr. Rick Craig, FGT*
Mr. Jim Thompson, FGT
Mr. David Parham, P.E.
Mr. Gregg Worley, EPA

Mr. V. Duane Pierce, AQMcs
Ms. Sandra Veazey, NWD
Mr. Gerry Neubauer, NWD
Mr. Kevin White, NWD

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk) (Date) 7/27/04