Title V Air Operation Permit Renewal
Permit No. 1130037-016-AV

APPLICANT

The applicant for this project is Florida Gas Transmission Company. The applicant's responsible official and mailing address are: Mr. David W. Shellhouse, Vice President, Southeast Operations, Florida Gas Transmission Company, 2405 Lucien Way, Suite 200, Maitland, Florida 32751-7047.

FACILITY DESCRIPTION

The applicant operates the Compressor Station No. 12, which is located in Santa Rosa County at13100 Munson Highway, Milton, Florida.

This facility is part of a natural gas transmission pipeline system from source wells in Texas and Louisiana for delivery throughout Florida. This station consists of six natural gas fired internal combustion compressor engines, three natural gas-fired turbine compressor engines, miscellaneous support equipment and two new natural gas-fired emergency generator engines.

Emissions Units EU001 through EU003 (FGTC Engines 1201 – 1203) are 2,000 brake horsepower (bhp) Cooper-Bessemer Model LS-8-SG, four-stroke, lean burn (4SLB), spark-ignition, reciprocating internal combustion engines (RICE), installed in 1958, which have a maximum heat input of 15 MMBtu/hr for each engine. Nitrous Oxides (NOx) and carbon monoxide (CO) are emitted uncontrolled through raised stacks. These engines are subject to 40 CFR 63 subpart ZZZZ. However, pursuant to 40 CFR 63.6590(b)(3)(ii), existing 4SLB engines with a site rating greater than 500 Hp located at major HAP sources do not have to meet the requirements of 40 CFR 63 subparts A or ZZZZ, and are not required to submit an initial notification.

EU004 and EU005 (FGTC Engines 1204 and 1205) are also 2,000 bhp, four-stroke lean burn, spark-ignition, RICE, Cooper-Bessemer Model LS-8-SG, initially placed in service in 1966 and modified in November of 2001. Improved turbochargers were installed in November of 2001 to provide more air at increased pressure to reduce NOx emissions, and catalytic converters were added to reduce CO emissions to offset potential emission increases resulting from the up-rating and construction of compressor engines 1207 and 1208. Renewal Title V air operation permit 1130037-005-AV included specific emission limits for CO (0.8 gm/bhp-hr), NOx (5.4 gm/bhp-hr), SO_2 (10grains sulfur/100 SCF), and opacity (10%). Construction permit 1130037-007-AC authorized modification of the turbochargers for each engine to increase the air manifold pressure and airflow to each cylinder, and installation of jet cell pre-combustors to improve combustion. These changes increased the air-to-fuel mixture and decreased the cylinder temperature, resulting in lower NOx emissions.

EU006 (FGTC Engine 1206), initially placed in service in 1991, is a 4,100 bhp, two-stroke lean burn (2SLB), Dresser-Rand Model TCV-10, spark-ignition, RICE, which incorporates lean burn technology to minimize NOx emissions and is subject to a Best Available Control Technology (BACT) determination of 2 g/bhp-hr NOx established in accordance with Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD). Construction permit AC57-188869 (PSD-FL-156) was issued May 8, 1991 and included a BACT determination of 2.0 g/bhp-hr NOx, which was modified on September 17, 1993 to 1.95 g/bhp-hr. The construction permit included limits of NOx, 17.6 lbs/hr; CO, 22.1 lbs/hr; VOC, 8.8 lbs/hr; PM (TSP and PM_{10}), 0.14 lbs/hr; SO_2, 0.8 lbs/hr. Visible emissions were limited to 10% opacity. Construction permit 1130037-003-AC specified a maximum allowable emission rate for particulate matter (PM) based on an AP-42 emission factor. The permit did not specify any corresponding test method and did not impose initial or periodic testing to demonstrate compliance. The PM emission rate was incorporated into the construction permit as a reference of expected emissions and was not intended as a permit standard. Based on this determination (November 13, 2002 NSR Memorandum) and Florida Gas Transmission's November 14, 2002 request to modify the PM requirements, construction permit 0390029-006-AC was issued simultaneously with Title V renewal Permit 1130037-005-AV,

superseding the PM emission limit in construction permit AC57-188869 (PSD-FL-156) with the requirement that PM emissions be minimized by good combustion design with the exclusive firing of natural gas.

EU008 (FGTC Engine 1207), placed in service in January of 2001, is a 15,000 bhp, Solar Mars 100 T-15000S, internal combustion turbine compressor engine that incorporates dry, low NOx combustion and jet cell technology. Construction permit 1130037-002-AC was issued on April 21, 2000 for the initial construction of a 10,350 bhp Solar Mars 100 T1302S gas turbine compressor. The construction permit included limits for NOx of 25 ppmvd at 15% O_2 (equivalent emissions of 8.8 lbs/hr and 38.6 TPY ISO conditions) and CO of 50 ppmvd at 15% O_2. Sulfur content was limited to pipeline quality natural gas not exceeding 10 grains S per 100 SCF, and VE was limited to 10% opacity. Construction permit 1130037-003-AC, issued August 15, 2001, allowed this turbine compressor to be up-rated from 10,350 bhp to 13,078 bhp with similar limits for NOx, CO, SO_2 and opacity. Equivalent NOx emissions increased to 10.2 lbs/hr and 44.7 tons/year. Engines 1204 and 1205 were simultaneously modified to provide emissions offsets to avoid a NSR/PSD review resulting from the up-rating of this turbine compressor and the construction of another turbine compressor (No. 1208). Construction permit 1130037-007-AC, issued June 24, 2003, allowed this turbine compressor to be up-rated to 15,000 bhp, with similar limits for NOx, CO, SO_2 and opacity. Equivalent NOx emissions increased to 13.71 lbs/hr and 60.1 tons/year. Construction permit 1130027-008-AC, issued March 12, 2004, changed the CO emission rate and load restrictions for turbine engine 1208 and specified an incorrect power output for this emission unit, turbine engine 1207. This power output error was corrected by an administrative correction issued May 12, 2004. Based on review/technical evaluation by the Division of Air Resource Management and Florida Gas Transmission's request letter dated October 14, 2004, component replacement language, designed to facilitate prompt gas turbine component repair and return to original specification service, was incorporated into this emissions unit.

EU010 (FGTC Engine 1208), which began initial operation in March of 2002, is a 15,700 bhp, Nuovo Pignone Model PGT-10B, internal combustion turbine compressor engine that also incorporates dry, low NOx combustion technology. Permit 1130037-003-AC was issued August 15, 2001 for the initial construction of this turbine, and included limits of 25 ppmvd at 15% O_2 nitrogen oxides (equivalent emissions of 14.1 lbs/hr and 61.8 TPY ISO conditions), and 15, 30, and 75 ppmvd at 15% O_2 for carbon monoxide at 90 – 100% loading, 70 – 90% loading, and 50 – 70% loading, respectively (equivalent emissions of 30.8 TPY). Sulfur content was limited to pipeline quality natural gas not exceeding 10 grains S per 100 SCF, and VE was limited to 10% opacity. PM and VOC standards were identified as "Good combustion practices." Engines 1204 and 1205 were modified to offset potential emission increases to avoid PSD/NSR review, which resulted from the up-rating of turbine compressor 1207 and construction of this turbine compressor (No. 1208). Title V renewal operation Permit No. 1130037-005-AV was the initial operation permit for this turbine. Construction permit 1130037-008-AC was issued March 12, 2004 and replaced the specific load based carbon monoxide emission limits with a single carbon monoxide emission limit of 21.0 ppmvd @15% O_2 (equivalent emissions of 30.8 TPY) while retaining the other emission limits. Based on review/technical evaluation by the Division of Air Resource Management and Florida Gas Transmission's request letter dated October 14, 2004, component replacement language, designed to facilitate prompt gas turbine component repair and return to original specification service, has been incorporated into this emissions unit.

EU011 (FGTC Engine 1209) is a 20,500 bhp, Solar Titan Model 130-20502S, internal combustion turbine compressor engine which uses lean burn pre-mix combustion technology to minimize the formation of nitrogen oxides. This turbine compressor was initially permitted in construction permit 1130037-011-AC, issued April 16, 2009.

Compliance for FGTC Engines 1204 – 1209 is assured by annual testing using EPA methodology for NOx, CO and opacity, by submission of an annual operation report, and by submission of an annual certification of compliance. Compliance with the SO_2 standard is demonstrated by fuel monitoring. Compliance with the VOC standards is demonstrated by compliance with the CO standards.

The emergency generator RICE in EU012 (GEN04 and GEN05) are Generac Model SG300 four-stroke, lean burn, natural gas-fired, 454 bhp, spark-ignition, reciprocating internal combustion engines that were ordered on

July 21, 2010 and manufactured after January 1, 2009. These emergency generator engines are subject to applicable requirements in NSPS subparts A and JJJJ of 40 CFR 60, because the emergency generator engines are certified engines that were manufactured after January 1, 2009, and they must comply with the emission standards in Table 1 to 40 CFR 60 subpart JJJJ for emergency engines greater than 130 hp. Emissions Unit EU012 qualifies as an insignificant emissions unit pursuant to Rule 62-210.300(3)(a)(35), F.A.C.; however, EU012 is included in this permit as a regulated emission unit because it is subject to 40 CFR 60 subpart JJJJ. The engines coupled with the generators utilize a non-selective catalytic reduction or three-way catalyst as their primary control technology. These emergency generator engines will comply with manufacturer's certification.

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

PROJECT DESCRIPTION

The purpose of this permitting project is to renew the existing Title V permit 1130037-010-AV for the above referenced facility.

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Renewed Title V Air Operation Permit issued June 25, 2008**.**
Title V Air Operation Permit Administrative Correction issued February 5, 2010.
Title V Air Operation Permit Revision issued November 28, 2011.
Title V Air Operation Permit Administrative Correction issued April 23, 2012.
Application for a Title V Air Operation Permit Renewal received November 9, 2012.
Notice of Intent to Issue Air Permit issued February 1, 2013
Public Notice Published **[Month day, year]**

PRIMARY REGULATORY REQUIREMENTS

Title III: The facility is identified as a major source of hazardous air pollutants (HAP).

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is a Prevention of Significant Deterioration (PSD)-major stationary source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility operates units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60.

NESHAP: The facility operates units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

CAIR: The facility is not subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

CAM: Compliance Assurance Monitoring (CAM) does not apply to any of the units at the facility.

PROJECT REVIEW

This project renews the existing Title V permit 1130037-010-AV. Changes that were made as part of this renewal include reformatting and use of revised permitting template.

CONCLUSION

This project renews Title V air operation permit 1130037-010-AV, which was issued on June 25, 2008. This Title V air operation permit renewal is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210 and 62-213, F.A.C.