**Florida Department of**

# Environmental Protection

## Memorandum

**TO:** Charles Harp
**THROUGH:** Armando I. Sarasua, P.E.
**FROM:** Howard Ard
**DATE:** January 29, 2013
**SUBJECT:** Evaluation Summary for Florida Gas Transmission Company, Compressor Station No. 12, 1130037-015-AV, Santa Rosa County

We recommend issuing a Title V air operating permit renewal to Florida Gas Transmission Company to operate their existing Compressor Station No. 12, which is located in Santa Rosa County at 13100 Munson Highway in Milton, Florida. This is a renewal of Title V air operation permit 1130037-010-AV, effective date June 25, 2008.

Process Description: 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 reciprocating internal combustion compressor engines, three natural gas-fired turbine compressor engines, miscellaneous support equipment and two new emergency generator natural gas-fired reciprocating internal combustion engines.

Pollution Control Equipment: None. All of the compressor engines are fired exclusively with pipeline natural gas (pipeline natural gas contains little or no ash, sulfur or other contaminants, which minimizes emissions of particulate matter and sulfur dioxide). The emergency generator engines in EU012 will utilize a non-selective catalytic reduction or three-way catalyst as their primary control technology.

Environmental Impact

| Airborne Contaminant Emitted | FAC Rule | Estimated Emissions | | Allowable Emissions | |
|---|---|---|---|---|---|
| | | lbs/hr | T/yr | lb/hr | T/yr |
| PM | AC permit | N/A | 15.9 | N/A | N/A |
| SO2 | N/A | N/A | 64.0 | N/A | N/A |
| VOC | N/A | N/A | 82.7 | N/A | N/A |
| NOx | N/A | N/A | 1074.2 | N/A | N/A |
| CO | N/A | N/A | 339.9 | N/A | N/A |
| Objectionable Odors | 62-296.320(2) | N/A | N/A | None allowed off plant property | |
| VE | AC permit | N/A | N/A | Not more than 10% opacity for EU 004, 005, 006, 008, 010 and 011 | |

Facility Potential Annual Emissions (tons/year)

| EU ID | Engine ID | Description | $NO_x$ | CO | VOC | $SO_2$ | PM |
|---|---|---|---|---|---|---|---|
| 001 | 1201 | 2,000 bhp Reciprocating IC Engine | 212.5 | 27.0 | 8.5 | 1.8 | 0.6 |
| 002 | 1202 | 2,000 bhp Reciprocating IC Engine | 212.5 | 27.0 | 8.5 | 1.8 | 0.6 |
| 003 | 1203 | 2,000 bhp Reciprocating IC Engine | 212.5 | 27.0 | 8.5 | 1.8 | 0.6 |
| 004 | 1204 | 2,000 bhp Reciprocating IC Engine | 104.3 | 15.5 | 1.9 | 2.0 | 0.7 |
| 005 | 1205 | 2,000 bhp Reciprocating IC Engine | 104.3 | 15.5 | 1.9 | 2.0 | 0.7 |
| 006 | 1206 | 4,100 bhp Reciprocating IC Engine | 77.2 | 96.6 | 38.6 | 3.5 | 0.6 |
| 008 | 1207 | 15,000 bhp Turbine Engine | 49.3 | 60.1 | 1.7 | 15.0 | 3.6 |
| 010 | 1208 | 15,700 bhp Turbine Engine | 61.8 | 30.8 | 6.6 | 16.2 | 3.9 |

| EU ID | Engine ID | Description | $NO_x$ | CO | VOC | $SO_2$ | PM |
|---|---|---|---|---|---|---|---|
| 011 | 1209 | 20,500 bhp Turbine Engine | 37.3 | 37.9 | 2.2 | 19.9 | 4.6 |
| 012 | GEN04 & GEN05 | Two 454 bhp Emergency Generators | 1.8 | 1.9 | 0.2 | 0.0 | 0.0 |
| 009 | GEN03 | 637 bhp Emergency Generator | 0.7 | 0.6 | 0.2 | 0.0 | 0.0 |
| **Annual Potential Emission Total (TPY)** | | | 1074.2 | 339.9 | 82.7* | 64.0 | 15.9 |

*Includes 3.9 TPY VOC from other sources such as storage tanks, equipment leaks, etc.

Applicable Rules & Regulations: EU001 through EU003 (FGTC Engines 1201 – 1203) are spark-ignition, reciprocating internal combustion engines (RICE) subject only to General Visible Emissions Standards by Rule 62-296.320(4), F.A.C. These engines are subject to 40 CFR 63 subpart ZZZZ. However, pursuant to 40 CFR 63.6590(b)(3)(ii), these engines have no applicable requirements under subpart ZZZZ.

EU004 and EU005 (FGTC Engines 1204 and 1205) are spark-ignition, RICE subject to NESHAP CFR 63 subpart ZZZZ. EU006 (FGTC Engine 1206) is a spark-ignition, RICE subject to Best Available Control Technology (BACT) NOx emissions limitation established in accordance with Rule 62-212.400(PSD), F.A.C. EU008 and EU010 (FGTC Engines 1207 and 1208) are internal combustion turbines subject to 40 CFR 60 subpart GG. EU011 (FGTC Engine 1209) is an internal combustion turbine subject to the provisions of NSPS subpart KKKK of 40 CFR 60. The emergency generator engines (FGTC GEN04 and GEN05) in EU012 are spark-ignition, RICE 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.

Compliance Monitoring: 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 engines (GEN04 and GEN05) will comply with the manufacturer's certification.

Compliance History: A review of records shows the facility to be in compliance for the last five years.

Fee Summary: None. The facility is subject to annual emissions fee as a Title V source.

HA/c