STATEMENT OF BASIS

City of Lake Worth Utilities
Tom G. Smith Power Plant and Lake Worth Water Treatment Plant
Facility ID No. 0990045
Palm Beach County
Draft/Proposed Permit No. 0990045-008-AV

APPLICANT

The applicant for this project is the City of Lake Worth Utilities. The applicant's authorized representative and mailing address are: Mr. David L. Mulvay, Power Plant Manager, City of Lake Worth Utilities, Utilities Administration, 1900 2nd Avenue North, Lake Worth, Florida 33461.

PROJECT DESCRIPTION

The purpose of this permitting action is to renew the Title V air operation permit for this facility.

FACILITY DESCRIPTION

The applicant operates the existing Tom G. Smith Power Plant and the Lake Worth Water Treatment Plant, which are located in Palm Beach County at 117 College Street, Lake Worth, Florida.

The facility is an existing power plant consisting of an electric power generating plant and an adjacent potable water treatment facility. The facility has a total nominal generating capacity of 96 megawatts (MW). The facility is classified as a Title V major source, a Title IV acid rain source, a major stationary source subject to the Prevention of Significant Deterioration (PSD) of Air Quality, and a minor source of hazardous air pollutants.

The following emissions units are part of this facility:

EU No.	Brief Description
Regulated Emissions Units	
001 to 005	Five 2,000 kilowatts (2 MW) diesel engine-driven emergency generators that comprise a single MP 36 Power Pack. Each emergency diesel engine is a model 567D4 manufactured by General Motors Electro Motive Division.
006	Gas Turbine # 1 (GT-1) nominally rated at 30 MW, 435 million Btu per hour (MMBtu/hr), capable of burning number 2 fuel oil, with emissions exhausted through a 46 foot stack.
009	Fossil Fuel Steam Generating Unit 3 (S-3) nominally rated at 26.5 MW, 325.1 MMBtu/hr, capable of burning any combination of natural gas and number 6 fuel oil, with emissions exhausted through a 113 ft. stack.
011	Combined Cycle Unit (GT-2/S-5) nominally rated at 29.5 MW, consisting of a gas turbine (GT-2) nominally rated at 20 MW and a heat recovery steam generator (S-5) nominally rated at 10 MW. GT-2 has a maximum heat input of 317.6 MMBtu/hr, capable of burning any combination of natural gas and number 2 fuel oil, with emissions exhausted through a 75 ft. stack.
014	1,502 HP diesel engine-driven emergency generator, a Caterpillar Model 3508BDITA; serial number is 1F203093. It was installed in 2006. This engine serves the Water Plant Lime facility. Air pollutant emissions from this engine are uncontrolled.
015	2,922 HP diesel engine-driven emergency generator, a Cummins engine model No. QSK60-G6-NR2. It was installed in 2010 and commissioned to operate in 2011. Air pollutant emissions from this engine are uncontrolled.
016	800 HP Black Start Engine, a Cummins VTA1710P800 diesel engine. It was constructed in 1973. Air pollutant emissions from this engine are uncontrolled.
017	500 HP Black Start Engine, a Detroit 7123-7000 diesel engine. It was constructed in 1978. Air pollutant emissions from this engine are uncontrolled.
Unregulated Emissions Units and Activities	
012	Two Fuel oil Storage Tanks (tanks 10 & 11, both 20,134 gallons capacity, and tank 12, 140,785 gallons capacity).
013	Five Fuel oil Storage Tanks (tanks 3, 4, 5, 6, and 8), lube oil tanks, fittings and pumps.

These units are primarily used for peaking purposes during the summer months.

Retired Units: Two small fossil fuel steam generators designated as S-1 and S-4, (Emissions Units 007 and 010) were permanently retired in 2005.

This facility also includes miscellaneous unregulated/insignificant emissions units and/or activities (see Appendix I – List of Insignificant Emissions Units and/or Activities and Appendix U- List of Unregulated Emissions Units and/or Activities.)

As a result of an inspection by the Palm Beach County Health Department, Air Quality Control Section, a compliance plan was included (Appendix CP-1) in Permit 0990045-005-AV. This plan required the applicant to install permanent stack sampling facilities or to apply for and obtain an alternative sampling plan (ASP) from the Department. The applicant decided to apply for and obtained an ASP in 2008 with an expiration date of April 7, 2018, to continue to use a mobile lift for conducting compliance for the combined cycle turbine GT-2/S-5, diesel generators M-Units 001, 002, 003, 004 and 005, and the simple cycle combustion turbine GT-1. The current permit renewal does not include the Appendix CP-1, but does include the ASP.

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Initial Title V Air Operation Permit issued December 31, 1997.
Application for a Title V Air Operation Permit Renewal received May 21, 2012.
Additional Information Request (e-mail) dated June 22, 2012.
Additional Information Response received June 28, and July 25, 2012.
Draft/proposed Title V air operation permit renewal issued September 28, 2012.
Public Notice published and proposed permit review commenced October 4, 2012.

PRIMARY REGULATORY REQUIREMENTS

Standard Industrial Classification (SIC) Code: 4911 – Electrical Generation

Title III: The facility is not identified as a major source of hazardous air pollutants (HAP).

Title IV: The facility operates units subject to the acid rain provisions of the Clean Air Act.

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 source of air pollution in accordance with Rule 62-212.400, F.A.C.

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

CAIR: The facility is subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

Siting: Emissions Unit 011 was originally certified pursuant to the power plant siting provisions of Chapter 62-17, F.A.C.

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

GHG: The facility is identified as a major source of green house gas (GHG) pollutants.

PROJECT REVIEW

The purpose of this project is to renew the Title V air operation permit for the Tom G. Smith Power Plant. Changes that were made as part of this renewal include: reformatting the permit to match the current permitting style; replacement of Appendix TV-6 with the following new Appendices: Appendix TV, Title V General Conditions, Appendix TR, Facility-wide Testing Requirements and Appendix RR, Facility-wide Reporting Requirements; elimination of the previously "reserved" Subsection B for the retired Unit 7; elimination of the common conditions section; and, streamlining of the emissions unit sub-sections by moving common conditions to the new appendices. The existing facility includes five, 2,000 kilowatts (2 MW), diesel engine driven generators that comprise a single MP 36 Power Pack. Each diesel generator is a model 567D4 manufactured by GM Electro Motive Division. Usage of these generators for producing electrical peaking power has progressively declined since 2001. In order to avoid the upcoming requirement to install costly controls on these engines pursuant to 40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE), the applicant has requested to reclassify these units to emergency engines. As emergency engines, electrical power is no longer allowed to be supplied to the grid. For future operation, these units may only be used to provide on-site power during emergency situations. Being reclassified to emergency use and limiting operation of all emergency engines at the site to less than the categorically exempt level of 64,000 gallons per year of diesel fuel pursuant to Rule 62-210.300(3)(a)35.d., F.A.C., exempts these units from being subject to the NO_X RACT emissions limit and testing requirements contained in Rule 62-296.570, F.A.C.

CONCLUSION

This project renews Title V air operation permit No. **0990045-005-AV**, which was effective on January 1, 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, 62-213 and 214, F.A.C.