



Jeb Bush  
Governor

# Department of Environmental Protection

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

Colleen M. Castille  
Secretary

July 25, 2005

Mr. George Adair  
Assistant City Manager/Utilities Director  
City of Lake Worth  
1900 2<sup>nd</sup> Avenue North  
Lake Worth, FL 33461

Re: Title V Air Operation Permit Revision  
PROPOSED Permit Project No.: 0990045-004-AV  
Revision to Title V Air Operation Permit No.: 0990045-003-AV  
Tom G. Smith Power Plant

Dear Mr. Adair:

One copy of the "PROPOSED PERMIT REVISION DETERMINATION" for the Tom G. Smith Power Plant, located at 117 South College Street, Lake Worth, Palm Beach County, is enclosed. This letter is only a courtesy to inform you that the DRAFT permit revision has become a PROPOSED permit revision.

An electronic version of this determination has been posted on the Division of Air Resource Management's world wide web site for the United States Environmental Protection Agency (U.S. EPA) Region 4 office's review. The web site address is:

<http://www.dep.state.fl.us/air/eproducts/airpermit/AirSearch.asp>

Pursuant to Section 403.0872(6), Florida Statutes, if no objection to the PROPOSED permit revision is made by the U.S.EPA within 45 days, the PROPOSED permit revision will become a FINAL permit revision no later than 55 days after the date on which the PROPOSED permit revision was mailed (posted) to U.S.EPA. If U.S.EPA has an objection to the PROPOSED permit revision, the FINAL permit revision will not be issued until the permitting authority receives written notice that the objection is resolved or withdrawn. If you have any questions, please contact Cindy Mulkey at 850/921-8968.

Sincerely,

Trina L. Vielhauer, Chief  
Bureau of Air Regulation

Enclosures  
Copy furnished to:

Scott Osbourn, Golder  
Jim Stormer, PBCHD  
U.S.EPA, Region 4 (INTERNET E-mail Memorandum)

"More Protection, Less Process"

Printed on recycled paper.

**Friday, Barbara**

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**To:** 'sosbourn@golder.com'; JimStorner@doh.state.fl.us  
**Cc:** Mulkey, Cindy  
**Subject:** PROPOSED Title V Permit Revision No.: 0990045-004-AV - City of Lake Worth - Tom G. Smith Power Plant  
**Attachments:** 0990045-004-AV-P.zip

Attached for your records is a zip file for the subject PROPOSED Title V Permit Revision.

If I may be of further assistance, please feel free to contact me.

Barbara J. Friday  
Planner II  
Bureau of Air Regulation  
(850)921-9524  
[Barbara.Friday@dep.state.fl.us](mailto:Barbara.Friday@dep.state.fl.us)

7/26/2005

PROPOSED Permit Revision Determination  
City of Lake Worth  
**Tom G. Smith Power Plant**  
Title V Permit Revision No. **0990045-004-AV**

**I. Public Notice.**

An "INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION" to the City of Lake Worth for the Tom G. Smith Power Plant, located at 117 College Street, Lake Worth, Palm Beach County, was clerked on June 10, 2005. The "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION" was published in the Palm Beach Post on June 22, 2005. The DRAFT Title V Air Operation Permit Revision was available for public inspection at the Palm Beach County Health Department office in West Palm Beach, and the permitting authority's office in Tallahassee. Proof of publication of the "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION" was received on June 27, 2005.

**II. Public Comments.**

*No comments* were received from the applicant, the public at large, or the U.S.EPA concerning the DRAFT Title V Operation Permit Revision.

**III. Conclusion.**

The permitting authority hereby issues PROPOSED Permit Revision No. **0990045-004-AV**, with no changes.

## 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

Title V Air Operation Permit Revision  
PROPOSED Permit Project No.: 0990045-004-AV

This Title V Air Operation Permit Revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213, and 62-214. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

The purpose of this permit revision is to reflect the shutdown of the SO<sub>2</sub> CEMS on EU 009, Fossil Fuel Steam Generating Unit (S-3). The facility currently demonstrates compliance of SO<sub>2</sub> with the liquid fuel sulfur limit by fuel sampling and analysis. The SO<sub>2</sub> CEMS served to demonstrate compliance with Acid Rain requirements. The facility has now chosen to demonstrate compliance with the Acid Rain requirements by complying with 40 CFR Part 75, Appendix D, Optional SO<sub>2</sub> Emissions Data Protocol for Gas-Fired and Oil-Fired Units. Therefore, the CEMS SO<sub>2</sub> and CEMS flow meter will be removed from service. All references to the Unit S-3 SO<sub>2</sub> CEMS shall be removed from the Title V permit.

The following **Permitting Note of Section III. C.** is changed as follows:

FROM:

**Subsection C. This section addresses the following emissions units.**

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
010	Fossil Fuel Steam Generating Unit 4, (S-4), nominally rated at 33 MW, 419.1 mmBtu/hr, capable of burning any combination of natural gas and number 6 fuel oil, with emissions exhausted through a 115 ft. stack

{Permitting note(s): The emissions units are regulated under Acid Rain, Phase II, Rule 62-296.405, F.A.C., Fossil Fuel Steam Generators with More than 250 million Btu per Hour Heat Input, and Rule 62-296.570, F.A.C., NO<sub>x</sub> RACT, Power Plant Siting Certification No. PA 74-05, and the modified conditions of PA 74-05 ordered September 28, 1987. Fossil fuel fired steam generator Unit 3 (S-3) began commercial operation in 1966; and, fossil fuel fired steam generator Unit 4 (S-4) began commercial operation in 1970. The permittee reported it operates the following continuous monitors for Unit S-3: SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub>, flow, visible emissions, and temperature.}

Compliance Assurance Monitoring (CAM) *does not apply* to these emissions units.

TO:

**Subsection C. This section addresses the following emissions units.**

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
010	Fossil Fuel Steam Generating Unit 4, (S-4), nominally rated at 33 MW, 419.1 mmBtu/hr, capable of burning any combination of natural gas and number 6 fuel oil, with emissions exhausted through a 115 ft. stack

{Permitting note(s): The emissions units are regulated under Acid Rain, Phase II, Rule 62-296.405, F.A.C., Fossil Fuel Steam Generators with More than 250 million Btu per Hour Heat Input, and Rule 62-296.570, F.A.C., NOx RACT, Power Plant Siting Certification No. PA 74-05, and the modified conditions of PA 74-05 ordered September 28, 1987. Fossil fuel fired steam generator Unit 3 (S-3) began commercial operation in 1966; and, fossil fuel fired steam generator Unit 4 (S-4) began commercial operation in 1970. The permittee reported it operates the following continuous monitors for Unit S-3: SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub>, flow, visible emissions, and temperature.}

Compliance Assurance Monitoring (CAM) *does not apply* to these emissions units.

**Table 2-1 Summary of Compliance Requirements** is changed as follows:

FROM:

**Table 2-1, Continued**

Emissions Unit		Brief Description					
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					
010		Fossil Fuel Steam Generating Unit 4, (S-4), nominally rated at 33 MW, 419.1 mmBtu/hr, capable of burning any combination of natural gas and number 6 fuel oil					
Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date <sup>1</sup>	Minimum Compliance Test Duration	CMS <sup>2</sup>	See Permit Condition(s)
SO <sub>2</sub>	Oil, Natural Gas	Fuel sampling & analysis	Sampling daily, analysis of monthly composite			No <sup>a</sup>	C.8, C.11 & C.12
NO <sub>x</sub> (EU 009)	Oil, Natural Gas	CEMS	Continuous			Yes	C.13 & C.16
NO <sub>x</sub> (EU 010)	Oil, Natural Gas	EPA Test Method 7E (If CEMS installed see next row)	Annual		3 hours	No	C.13 & C.15
NO <sub>x</sub> (EU 010)	Oil, Natural Gas	CEMS (If installed)	Continuous			Yes, if installed for Acid Rain	C.13 & C.15
PM	Oil, Natural Gas	EPA Test Methods 17,5,5B or 5F	Annual		3 hours	No	C.10 & C.14
VE	Oil, Natural Gas	DEP Method 9	Annual		1 hour	Yes	C.14 & E.10

Note for EU 009 & 010:

a A continuous monitor for SO<sub>2</sub> is operated by the City for emissions unit 009. Compliance with the fuel sulfur limitation is not via the continuous monitor.

TO:

**Table 2-1, Continued**

Emissions Unit		Brief Description					
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					
010		Fossil Fuel Steam Generating Unit 4, (S-4), nominally rated at 33 MW, 419.1 mmBtu/hr, capable of burning any combination of natural gas and number 6 fuel oil					
Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date <sup>1</sup>	Minimum Compliance Test Duration	CMS <sup>2</sup>	See Permit Condition(s)
SO <sub>2</sub>	Oil, Natural Gas	Fuel sampling & analysis	Sampling daily, analysis of monthly composite			No <sup>a</sup>	C.8, C.11 & C.12
NO <sub>x</sub> (EU 009)	Oil, Natural Gas	CEMS	Continuous			Yes	C.13 & C.16
NO <sub>x</sub> (EU 010)	Oil, Natural Gas	EPA Test Method 7E (If CEMS installed see next row)	Annual		3 hours	No	C.13 & C.15
NO <sub>x</sub> (EU 010)	Oil, Natural Gas	CEMS (If installed)	Continuous			Yes, if installed for Acid Rain	C.13 & C.15
PM	Oil, Natural Gas	EPA Test Methods 17,5,5B or 5F	Annual		3 hours	No	C.10 & C.14
VE	Oil, Natural Gas	DEP Method 9	Annual		1 hour	Yes	C.14 & E.10

Note for EU 009 & 010:

a - A continuous monitor for SO<sub>2</sub> is operated by the City for emissions unit 009. Compliance with the fuel sulfur limitation is not via the continuous monitor.

CAM does not apply.

Based on the Title V Air Operation Permit application received April 14, 2005 this facility is not a major source of hazardous air pollutants (HAPs).



City of Lake Worth Utilities  
**Tom G. Smith Power Plant and Lake Worth Water Treatment Plant**

Facility ID No. 0990045  
Palm Beach County

Title V Air Operation Permit Revision  
Proposed Permit No. 0990045-004-AV

Permitting Authority:

State of Florida  
Department of Environmental Protection  
Division of Air Resource Management  
Bureau of Air Regulation  
Permitting South Section

Mail Station #5505  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Telephone: 850/488-0114  
Fax: 850/922-6979

Compliance Authority:

Palm Beach County Health Department  
PO Box 29  
West Palm Beach, Florida 33401

Telephone: 561/355-3070  
Fax: 561/355-2442

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Permittee:  
**City of Lake Worth Utilities**  
1900 2<sup>nd</sup> Avenue North  
Lake Worth, FL 33461

**Proposed Permit No. 0990045-004-AV**  
Facility ID No. **0990045**  
SIC Nos.: 49, 4931  
Project: Title V Air Operation Permit Revision

The purpose of this permit is to revise Title V Air Operation Permit No. 0990045-003-AV, issued on January 1, 2003, for the operation of the Tom G. Smith Power Plant and Lake Worth Water Treatment Plant. This facility is located at 117 College Street, Lake Worth, FL 33461; UTM Coordinates: Zone 17, 592.8 km East and 2943.7 km North; Latitude: 26° 36' 45" North and Longitude: 80° 04' 04" West.

This Title V air operation permit revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213, and 62-214. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

**Referenced attachments made a part of this permit:**

Appendix U-1, List of Unregulated Emissions Units and/or Activities  
Appendix I-1, List of Insignificant Emissions Units and/or Activities  
Appendix TV-4, Title V Conditions (version dated 2/12/02)  
Appendix SS-1, Stack Sampling Facilities (version dated 10/07/96)  
Table 297.310-1, Calibration Schedule (version dated 10/07/96)  
Phase II Acid Rain Part Renewal Application received 08/23/02  
Alternate Sampling Procedure: ASP Number 97-B-01  
Scrivener's Order dated July 9, 1997 correcting ASP 97-B-01

**Renewal Effective Date:** January 1, 2003  
**Revision Effective Date:**  
**Renewal Application Due Date:** July 5, 2007  
**Expiration Date:** December 31, 2007

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Michael G. Cooke, Director  
Division of Air Resource Management

TLV/cem

**Section I. Facility Information.**

**Subsection A. Facility Description.**

This facility is an electric power generating plant and an adjacent potable water treatment facility and consists of:

Five 2000 kW diesel engine generators; Fossil Fuel Steam Generating Units 1 (S-1), 3 (S-3) and 4 (S-4); Gas Turbine # 1, (GT-1); and a Combined Cycle Unit, (GT-2/S-5).

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

No activities at the water treatment plant were required to be included in this permit as emissions units.

Based on the Title V permit renewal application received July 5, 2002, this facility is *not* a major source of hazardous air pollutants (HAPs).

**Subsection B. Summary of Emissions Unit ID No(s). and Brief Description(s).**

E.U. ID No.	Brief Description
001 to 005	Five 2000 kW diesel engine generators, an MP 36 Power Pack; each diesel generator is a model 567D4 manufactured by GM Electro Motive Division.
007	Fossil Fuel Steam Generating Unit 1 (S-1), nominally rated at 7.5 MW, 111 mmBtu/hr, capable of burning any combination of natural gas and number 6 fuel oil, with emissions exhausted through a 60 ft. 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
010	Fossil Fuel Steam Generating Unit 4, (S-4), nominally rated at 33 MW, 419.1 mmBtu/hr, capable of burning any combination of natural gas and number 6 fuel oil, with emissions exhausted through a 115 ft. stack
006	Gas Turbine # 1, (GT-1), nominally rated at 30 MW, 435 mmBtu/hr, capable of burning number 2 fuel oil, with emissions exhausted through a 46 ft. stack
011	Combined Cycle Unit, (GT-2/S-5), nominally rated at 29.5 MW, consists of a gas turbine (GT-2) nominally rated at 20 MW and a heat recovery steam generator (S5) 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

*Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.*

**Subsection C. Relevant Documents.**

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

These documents are provided to the permittee for information purposes only:

Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers

Appendix H-1, Permit History/ID Number Changes

Table 1-1, Summary of Air Pollutant Standards and Terms

Table 2-1, Summary of Compliance Requirements

Statement of Basis

These documents are on file with the permitting authority:

Final Title V Permit Renewal Effective January 1, 2003

Title V Permit Revision Application received April 18, 2005.

These documents are on file with USEPA:

The Responsible Official has certified that the Risk Management Plan was submitted to the RMP Reporting Center.

**Section II. Facility-wide Conditions.**

**The following conditions apply facility-wide:**

1. Appendix TV-4, Title V Conditions, is a part of this permit.  
{Permitting note: Appendix TV-4, Title V Conditions, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided a copy when requested or otherwise appropriate.}
2. **Not Federally Enforceable. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited.** The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.  
[Rule 62-296.320(2), F.A.C.]
3. **General Particulate Emission Limiting Standards. General Visible Emissions Standard.** Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.  
[Rule 62-296.320(4)(b)1. & 4, F.A.C.]
4. **Prevention of Accidental Releases (Section 112(r) of CAA).**
  - a. As required by Section 112(r)(7)(B)(iii) of the CAA and 40 CFR 68, the owner or operator shall submit an updated Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center.
  - b. As required under Section 252.941(1)(c), F.S., the owner or operator shall report to the appropriate representative of the Department of Community Affairs (DCA), as established by department rule, within one working day of discovery of an accidental release of a regulated substance from the stationary source, if the owner or operator is required to report the release to the United States Environmental Protection Agency under Section 112(r)(6) of the CAA.
  - c. The owner or operator shall submit the required annual registration fee to the DCA on or before April 1, in accordance with Part IV, Chapter 252, F.S., and Rule 9G-21, F.A.C.

Any required written reports, notifications, certifications, and data required to be sent to the DCA, should be sent to:

Department of Community Affairs  
Division of Emergency Management  
2555 Shumard Oak Boulevard  
Tallahassee, FL 32399-2100  
Telephone: 850/413-9921, Fax: 850/488-1739

Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

RMP Reporting Center  
Post Office Box 1515  
Lanham-Seabrook, Maryland 20703-1515  
Telephone: 301/429-5018

Any required reports to be sent to the National Response Center, should be sent to:

National Response Center  
EPA Office of Solid Waste and Emergency Response  
USEPA (5305 W)  
401 M Street, SW  
Washington, D.C. 20460  
Telephone: 1/800/424-8802

Send the required annual registration fee using approved forms made payable to:

Cashier  
Department of Community Affairs  
State Emergency Response Commission  
2555 Shumard Oak Boulevard  
Tallahassee, FL 32399-2149

[Part IV, Chapter 252, F.S.; and, Rule 9G-21, F.A.C.]

5. Unregulated Emissions Units and/or Activities. Appendix U-1, List of Unregulated Emissions Units and/or Activities, is a part of this permit.

[Rule 62-213.440(1), F.A.C.]

6. Insignificant Emissions Units and/or Activities. Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit.

[Rules 62-213.440(1), 62-213.430(6), and 62-4.040(1)(b), F.A.C.]

7. [Reserved.]

8. **Not Federally Enforceable.** General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. The owner or operator shall:

- a. Tightly cover or close all VOC or OS containers when they are not in use.
- b. Tightly cover all open tanks which contain VOC or OS when they are not in use.
- c. Maintain all pipes, valves, fittings, etc., which handle VOC or OS in good operating condition.
- d. As soon as practicable, confine and clean up VOC or OS spills and make sure wastes are placed in closed containers for reuse, recycling or proper disposal.

[Rule 62-296.320(1)(a), F.A.C.]

9. **Not Federally Enforceable.** Unconfined Particulate Matter. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity without taking reasonable precautions to prevent such emissions. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:

- a. When performing sandblasting on fixed plant equipment, the facility shall construct temporary enclosures when practical and necessary, in order to prevent unconfined particulate emissions.
- b. Maintenance of paved areas.
- c. Regular care of vegetation.
- d. Limiting access to plant property by unnecessary vehicles.
- e. Bagged chemical products shall be stored in buildings until they are used.
- f. Spills of powdered chemical products are cleaned up as soon as practicable.

- g. Sweeping paved roads with a wet vacuum truck.
  - h. Watering, if necessary, the lime backwash residue holding area.
- [Rule 62-296.320(4)(c)2., F.A.C.; and Title V Permit Renewal Application received July 5, 2002]

10. When appropriate, any recording, monitoring or reporting requirements that are time-specific shall be in accordance with the effective date of this permit, which defines day one.  
[Rule 62-213.440, F.A.C.]

11. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3)(a)2., F.A.C., shall be submitted to the Department and EPA within 60 (sixty) days after the end of the calendar year using DEP Form No. 62-213.900(7), F.A.C.  
[Rules 62-213.440(3) and 62-213.900, F.A.C.]

{Permitting Note: This condition implements the requirements of Rules 62-213.440(3)(a)2. & 3., F.A.C. (see Condition 51. of Appendix TV-4, Title V Conditions).}

12. Submittals. All reports, tests, notifications or other submittals required by this permit shall be submitted to the Palm Beach County Health Department's Air Section, and copies of those submittals shall be sent to the Department of Environmental Protection, Southeast District Office, Air Section. Addresses and telephone numbers are:

Palm Beach County Health Department  
Air Section  
P.O. Box 29  
West Palm Beach, FL 33402-0029  
Phone: 561/355-3070

Department of Environmental Protection  
Southeast District Office, Air Section  
P.O. Box 15425  
West Palm Beach, FL 33416  
Phone: 561/681-6600

13. Any reports, data, notifications, certifications and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency  
Region 4  
Air, Pesticides & Toxics Management Division  
Air and EPCRA Enforcement Branch  
61 Forsyth Street  
Atlanta, Georgia 30303-8960  
Telephone: 404/562-9155  
Fax: 404/562-9163

14. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on information and belief



**Tom G. Smith Power Plant and Lake Worth Water Treatment Plant**

Facility ID No. 0990045

formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information.

[Rule 62-213.420(4), F.A.C.]

**Tom G. Smith Power Plant and Lake Worth Water Treatment Plant**

Facility ID No. 0990045

**Section III. Emissions Unit(s) and Conditions.****Subsection A. This section addresses the following emissions units.**

E.U. ID No.	Brief Description
001 to 005	Five 2000 kW diesel engine generators, an MP 36 Power Pack; each diesel generator is a model 567D4 manufactured by GM Electro Motive Division.

{Permitting note(s): These emissions units are regulated under Rule 62-296.570, F.A.C., NOx RACT.}

Compliance Assurance Monitoring (CAM) *does not apply* to these emissions units.

**The following specific conditions apply to the emissions unit(s) listed above:**

**Essential Potential to Emit (PTE) Parameters**

**A.1. Methods of Operation - (i.e., Fuels).** These emissions units shall burn only diesel fuel.  
[Rule 62-213.410, F.A.C.]

**Emission Limitations and Standards**

{Permitting note: Unless otherwise specified, the averaging time for Specific Condition **A.2.** is based on the specified averaging time of the applicable test method.}

**A.2. NOx RACT.** Emissions of nitrogen oxides (NOx) from these emissions units shall not exceed 4.75 pounds per million Btu.  
[Rule 62-296.570, F.A.C.]

**Test Methods and Procedures**

**A.3. NOx Testing.** Compliance with the NOx emission limitation shall be demonstrated by annual emission testing in accordance with EPA Test Method 7E or other EPA- or DEP-approved test method.  
[Rule 62-296.570, F.A.C.]

**Monitoring of Operations**

**A.4. Annual Tests Required - NOx.** Except as provided in specific conditions **E.6** through **E.8** of this permit, emission testing for nitrogen oxide emissions shall be performed annually, no later than the end of each federal fiscal year (September 30), except for units that are not operating because of scheduled maintenance outages and emergency repairs, which will be tested within thirty days of returning to service. Annual compliance testing while firing oil is not required for units that operated on oil for less than 400 hours in the previous federal fiscal year (ending September 30th).  
[Rules 62-4.070(3) and 62-213.440, F.A.C.]

**Record Keeping and Reporting Requirements**

**A.5.** The owner or operator shall make and keep records of:

- a. The number of hours each emissions unit operates every year; and
- b. The total fuel consumption of all five units combined each year.

Such records shall be prepared no later than thirty days after the end of each fiscal year.

[Rule 62-4.070(3), F.A.C.]

**Common Conditions**

**A.6.** This emissions unit is also subject to conditions **E.1** through **E.19**, except for **E.3**, **E.10**, **E.11** and **E.18**, contained in **Subsection E. Common Conditions**.

**Tom G. Smith Power Plant and Lake Worth Water Treatment Plant**

Facility ID No. 0990045

**Subsection B. This section addresses the following emissions unit.**

E.U. ID No.	Brief Description
007	Fossil Fuel Steam Generating Unit 1 (S-1), nominally rated at 7.5 MW, 111 mmBtu/hr, capable of burning any combination of natural gas and number 6 fuel oil, with emissions exhausted through a 60 ft. stack

{Permitting note(s): The emissions unit is regulated under Rule 62-296.406, F.A.C., Fossil Fuel Steam Generators with Less than 250 million Btu per Hour Heat Input, and Rule 62-296.570, F.A.C., NOx RACT. Fossil fuel fired steam generator Unit 1 (S-1) began commercial operation in 1961.}

Compliance Assurance Monitoring (CAM) *does not apply* to this emissions unit.

**The following specific conditions apply to the emissions unit(s) listed above:**

**Essential Potential to Emit (PTE) Parameters**

**B.1. Permitted Capacity.** The maximum operation heat input rate is as follows:

Unit No.	mmBtu/hr Heat Input	Fuel Type
007	111	Natural Gas
	111	No. 6 Fuel Oil

[Rules 62-4.160(2), 62-210.200(PTE) and 62-296.406, F.A.C.]

{Permitting note: The heat input limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of the process variables for emission tests. Such heat input determination may be based on measurements of fuel consumption by various methods including but not limited to fuel flow metering or tank drop measurements, using the heat value of the fuel determined by the fuel vendor or the owner or operator, to calculate average hourly heat input during the test.}

**B.2. Emissions Unit Operating Rate Limitation After Testing.** See specific condition E.14.

[Rule 62-297.310(2), F.A.C.]

**B.3. Methods of Operation. Fuels.**

- a. Startup: The only fuel(s) allowed to be burned are any combination of natural gas and/or number 6 fuel oil.
- b. Normal: The only fuel(s) allowed to be burned are any combination of natural gas and/or number 6 fuel oil.

[Rule 62-213.410, F.A.C.]

**Emission Limitations and Standards**

{Permitting note: Unless otherwise specified, the averaging time for Specific Conditions B.4. through B.8. are based on the specified averaging time of the applicable test method.}

**B.4. Visible Emissions.** Visible emissions shall not exceed 20 percent opacity, except for one two-minute period per hour during which opacity shall not exceed 40 percent.  
[Rule 62-296.406(1), F.A.C.]

**B.5. Visible emissions - Soot Blowing and Load Change.** Visible emissions shall not exceed 60 percent opacity during the 3-hours in any 24 hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more.  
[Rule 62-210.700(3), F.A.C.]

**B.6. Particulate Matter.** Particulate matter emissions shall be controlled by the firing of natural gas and/or low sulfur content liquid fuel. See specific condition B.7.  
[Rules 62-4.070(3) and 62-296.406(2), F.A.C.]

**B.7. Sulfur Dioxide - Sulfur Content.** The No. 6 fuel oil sulfur content shall not exceed 2.25 percent, by weight. See specific condition B.10.  
[Rules 62-4.070(3) and 62-296.406(3), F.A.C.; BACT for this unit assumed to equal the sulfur limit established by PPSC No. PA 74-05 for units S-3 and S-4]

**B.8. NO<sub>x</sub> RACT.** Emissions of nitrogen oxides (NO<sub>x</sub>) from these emissions units shall not exceed 0.50 pounds per million Btu while firing natural gas or number 6 fuel oil.  
[Rule 62-296.570, F.A.C.]

**Test Methods and Procedures**

**B.9. Sulfur Dioxide - Sulfur Content.** The permittee shall demonstrate compliance with the liquid fuel sulfur limit by fuel sampling and analysis. See specific conditions B.7. and B.10.  
[Rules 62-213.440 and 62-296.406(3), F.A.C.]

**B.10. Fuel Sampling & Analysis - Sulfur.** For this emissions unit, the following fuel sampling and analysis protocol shall be used to demonstrate compliance with the fuel sulfur limitation of specific condition B.7 of this permit:

- a. Sample the as-fired fuel oil each day fuel oil is fired.
- b. Composite the daily samples and each month determine and record the as-fired fuel sulfur content, percent by weight, for liquid fuels using either ASTM D2622-94, ASTM D4294-90(95), ASTM D1552-95, ASTM D1266-91, or both ASTM D4057-88 and ASTM D129-95 (or latest editions) to analyze a representative sample of the composited as-fired fuel oil.

[Rules 62-4.070(3) and 62-213.440, F.A.C.]

**B.11. NO<sub>x</sub> Testing.** Compliance with the NO<sub>x</sub> emission limitation shall be demonstrated by annual emission testing in accordance with EPA Test Method 7E or other EPA- or DEP-approved test methods.  
[Rule 62-296.570, F.A.C.]

**Monitoring of Operations**

**B.12. Annual Tests Required - NOx and VE.** Except as provided in specific conditions E.6 through E.8 of this permit, emission testing for nitrogen oxide emissions and visible emissions shall be performed annually, no later than the end of each federal fiscal year (September 30), except for units that are not operating because of scheduled maintenance outages and emergency repairs, which will be tested within thirty days of returning to service. Annual compliance testing while firing oil is not required for units that operated on oil for less than 400 hours in the previous federal fiscal year (ending September 30th). [Rules 62-4.070(3) and 62-213.440, F.A.C.]

**Common Conditions**

**B.13.** This emissions unit is also subject to conditions E.1 through E.19, except for E.2, E.9 and E.18, contained in **Subsection E. Common Conditions.**

**Subsection C. This section addresses the following emissions units.**

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
010	Fossil Fuel Steam Generating Unit 4, (S-4), nominally rated at 33 MW, 419.1 mmBtu/hr, capable of burning any combination of natural gas and number 6 fuel oil, with emissions exhausted through a 115 ft. stack

{Permitting note(s): The emissions units are regulated under Acid Rain, Phase II, Rule 62-296.405, F.A.C., Fossil Fuel Steam Generators with More than 250 million Btu per Hour Heat Input, and Rule 62-296.570, F.A.C., NOx RACT, Power Plant Siting Certification No. PA 74-05, and the modified conditions of PA 74-05 ordered September 28, 1987. Fossil fuel fired steam generator Unit 3 (S-3) began commercial operation in 1966; and, fossil fuel fired steam generator Unit 4 (S-4) began commercial operation in 1970. The permittee reported it operates the following continuous monitors for Unit S-3: NOx, CO<sub>2</sub>, flow, visible emissions, and temperature.}

Compliance Assurance Monitoring (CAM) *does not apply* to these emissions units.

**The following specific conditions apply to the emissions units listed above:**

**Essential Potential to Emit (PTE) Parameters**

**C.1. Permitted Capacity.** The maximum operation heat input rates are as follows:

Unit No.	mmBtu/hr Heat Input	Fuel Type
009	325.1	Natural Gas
	325.1	No. 6 Fuel Oil
010	419.1	Natural Gas
	419.1	No. 6 Fuel Oil

[Rules 62-4.160(2), 62-210.200(PTE) and 62-296.405, F.A.C.]

{Permitting note: The heat input limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of the process variables for emission tests. Such heat input determination may be based on measurements of fuel consumption by various methods including but not limited to fuel flow metering or tank drop measurements, using the heat value of the fuel determined by the fuel vendor or the owner or operator, to calculate average hourly heat input during the test.}

**C.2. Emissions Unit Operating Rate Limitation After Testing.** See specific condition **E.14.**

[Rule 62-297.310(2), F.A.C.]

**C.3. Methods of Operation. Fuels.**

- a. Startup: The only fuel(s) allowed to be burned are any combination of natural gas and/or number 6 fuel oil.
- b. Normal: The only fuel(s) allowed to be burned are any combination of natural gas and/or number 6 fuel oil.

[Rule 62-213.410, F.A.C.]

**Emission Limitations and Standards**

{Permitting note: Unless otherwise specified, the averaging time for Specific Conditions C.4. through C.9. are based on the specified averaging time of the applicable test method.}

**C.4. Visible Emissions.** Visible emissions shall not exceed 20 percent opacity, except for one two-minute period per hour during which opacity shall not exceed 40 percent. Emissions units governed by this visible emissions limit shall compliance test for particulate matter emissions annually and as otherwise required by Chapter 62-297, F.A.C.

[Rule 62-296.405(1)(a), F.A.C.]

**C.5. Visible Emissions - Soot Blowing and Load Change.** **(The following paragraph is applicable only to emissions unit 010 (Unit S-4) and only until installation of an operational continuous opacity monitor at Unit S-4.)** Visible emissions shall not exceed 60 percent opacity during the 3-hours in any 24 hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more.

**(The following paragraph is applicable to emissions unit 009 (Unit S-3) and will become applicable to emissions unit 010 (Unit S-4) only upon installation of an operational continuous opacity monitor at Unit S-4.)** Visible emissions above 60 percent opacity shall be allowed for not more than 4, six (6)-minute periods, during the 3-hour period of excess emissions allowed by this condition. [Rule 62-210.700(3), F.A.C., Note: Unit S-3 has an operational continuous opacity monitor. Unit S-4 may install an operational continuous opacity monitor in the future, and at that time be allowed visible emissions greater than 60% opacity pursuant to Rule 62-210.700(3), F.A.C., and specific condition C.5 of this permit.]

**C.6. Particulate Matter.** Particulate matter emissions shall not exceed 0.1 pound per million Btu heat input, as measured by applicable compliance methods.

[Rule 62-296.405(1)(b), F.A.C.]

**C.7. Particulate Matter - Soot Blowing and Load Change.** Particulate matter emissions shall not exceed an average of 0.3 pound per million Btu heat input during the 3-hours in any 24-hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

[Rule 62-210.700(3), F.A.C.]

**C.8. Sulfur Dioxide - Sulfur Content.** The No. 6 fuel oil sulfur content shall not exceed 2.25 percent, by weight. See specific condition C.11.

[Rules 62-4.070(3) and 62-213.440, F.A.C., and Power Plant Siting Certification No. PA 74-05]

**C.9. NO<sub>x</sub> RACT.** Emissions of nitrogen oxides (NO<sub>x</sub>) from these emissions units shall not exceed 0.50 pounds per million Btu while firing natural gas or number 6 fuel oil or combination thereof.

[Rule 62-296.570, F.A.C.]



### **Test Methods and Procedures**

**C.10. Particulate Matter.** The test methods for particulate emissions shall be EPA Methods 17, 5, 5B, or 5F, incorporated by reference in Chapter 62-297, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet. EPA Method 5 may be used with filter temperature no more than 320 degrees Fahrenheit. For EPA Method 17, stack temperature shall be less than 375 degrees Fahrenheit. The owner or operator may use EPA Method 5 to demonstrate compliance. EPA Method 3 or 3A with Orsat analysis shall be used when the oxygen based F-factor, computed according to EPA Method 19, is used in lieu of heat input. Acetone wash shall be used with EPA Method 5 or 17.  
[Rules 62-213.440, 62-296.405(1)(e)2., and 62-297.401, F.A.C.]

**C.11. Sulfur Dioxide - Sulfur Content.** The permittee shall demonstrate compliance with the liquid fuel sulfur limit by fuel sampling and analysis. See specific conditions **C.8.** and **C.12.**  
[Rules 62-213.440 and 62-296.406(3), F.A.C.]

**C.12. Fuel Sampling & Analysis - Sulfur.** For each emissions unit, the following fuel sampling and analysis protocol shall be used to demonstrate compliance with the the fuel sulfur limitation of specific condition **C.8** of this permit:

- a. Sample the as-fired fuel oil each day fuel oil is fired.
- b. Composite the daily samples and each month determine and record the as-fired fuel sulfur content, percent by weight, for liquid fuels using either ASTM D2622-94, ASTM D4294-90(95), ASTM D1552-95, ASTM D1266-91, or both ASTM D4057-88 and ASTM D129-95 (or latest editions) to analyze a representative sample of the composited as-fired fuel oil. Each composite sample shall also be analyzed for heating value.
- c. Record monthly the amount of each fuel fired, and maintain records of the monthly analyses of the heating value of each fuel, and the percent sulfur content by weight of each fuel, to enable calculations of sulfur dioxide emissions.

[Rules 62-4.070(3) and 62-213.440, F.A.C., and PPSC PA 74-05]

**C.13. NOx Testing.** Compliance with the NOx emission limitation shall be demonstrated by annual emission testing in accordance with EPA Test Method 7E, for emissions unit 010. If a continuous emission monitoring system (CEMS) for NOx is installed at emissions unit 010, compliance shall then be demonstrated by the CEMS. Compliance with the NOx emission limitation shall be demonstrated by a CEMS for emissions unit 009. See specific conditions **C.15** and **C.16.**  
[Rule 62-296.570, F.A.C.]

### **Monitoring of Operations**

**C.14. Annual Tests Required - PM and VE.** Except as provided in specific conditions **E.6** through **E.8** of this permit, emission testing for particulate matter emissions and visible emissions shall be performed annually, no later than the end of each federal fiscal year (September 30), except for units that are not operating because of scheduled maintenance outages and emergency repairs, which will be tested within thirty days of returning to service.

[Rules 62-4.070(3) and 62-213.440, F.A.C.]

**C.15. Annual NOx Tests Required - Unit 4 (S-4, Emissions Unit 010).** For emissions unit 010, emission testing for NOx shall be performed annually, no later than the end of each federal fiscal year (September 30), except for units that are not operating because of scheduled maintenance outages and emergency

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repairs, which will be tested within thirty days of returning to service. Annual compliance testing while firing oil is not required for units that operated on oil for less than 400 hours in the previous federal fiscal year (ending September 30th).

Should the owner or operator install a continuous emission monitoring system (CEMS) for NO<sub>x</sub> emissions at emission unit 010, compliance with the NO<sub>x</sub> limitation shall be demonstrated with the CEMS. Compliance shall be based on a 30-day rolling average. The CEMS shall be properly maintained and operated and shall meet the performance specifications of 40 CFR 60, Appendix B, or 40 CFR 75. The CEMS data shall be maintained on site for inspection by the Department.

[Rules 62-4.070(3), 62-213.410, F.A.C. and 62-296.570(4)(a)3. & 4.]

**C.16. NO<sub>x</sub> CEMS Required - Unit 3 (S-3, Emissions Unit 009).** For emissions unit 009, compliance with the NO<sub>x</sub> limitation shall be demonstrated with a continuous emission monitoring system (CEMS). Compliance shall be based on a 30-day rolling average, excluding periods of startup, shutdown or malfunction as provided by Rule 62-210.700, F.A.C., if the CEMS is properly maintained and operated and meets the performance specifications of 40 CFR 60, Appendix B, or 40 CFR 75. The CEMS data shall be maintained on site for inspection by the Department and need not be submitted to the Department unless specifically requested.

If the CEMS is *not properly maintained and operated, as described in the above paragraph*, compliance with the NO<sub>x</sub> limitation shall be demonstrated by annual emission testing in accordance with EPA Test Method 7E.

[Rules 62-4.070(3), 62-213.440, F.A.C. and 62-296.570(4)(a)4., and request of applicant]

**Common Conditions**

**C.17.** This emissions unit is also subject to conditions E.1 through E.19, except for E.2 and E.9, contained in **Subsection E. Common Conditions**.

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**Subsection D. This section addresses the following emissions units.**

006	Gas Turbine # 1, (GT-1), manufactured by Westinghouse, nominally rated at 30 MW, 435 mmBtu/hr, capable of burning number 2 fuel oil, with emissions exhausted through a 46 ft. stack
011	Combined Cycle Unit, (GT-2/S-5), nominally rated at 29.5 MW, consists of a gas turbine (GT-2) nominally rated at 20 MW and a heat recovery steam generator (S5) 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

{Permitting notes: These emissions units are regulated under Rule 62-210.300, F.A.C., Permits Required and Rule 62-296.570, F.A.C., NOx RACT. Emissions unit 011 is also regulated under Power Plant Siting Certification No. PA 74-05, and the modified conditions of PA 74-05 ordered September 28, 1987. Based on information submitted by the applicant in the Title V application, these emissions units are *not subject* to 40 CFR 60, Subpart GG, Standards of Performance for New Stationary Gas Turbines. Each combustion turbine has its own stack. Emissions unit 006 (Unit GT-1) began commercial operation in 1976; and, emissions unit 011 (Unit GT-2/S-5) began commercial operation in 1978.}

Compliance Assurance Monitoring (CAM) *does not apply* to these emissions units.

**The following specific conditions apply to the emissions units listed above:**

**Essential Potential to Emit (PTE) Parameters**

**D.1. Permitted Capacity.** The maximum operation heat input rates are as follows:

Unit No.	mmBtu/hr Heat Input	Fuel Type
006	435	No. 2 Fuel Oil
011	317.6	Natural Gas
	317.6	No. 2 Fuel Oil

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

{Permitting note: The heat input limitations have been placed in each permit to identify the capacity of each unit for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability. Regular record keeping is not required for heat input. Instead the owner or operator is expected to determine heat input whenever emission testing is required, to demonstrate at what percentage of the rated capacity that the unit was tested. Rule 62-297.310(5), F.A.C., included in the permit, requires measurement of the process variables for emission tests. Such heat input determination may be based on measurements of fuel consumption by various methods including but not limited to fuel flow metering or tank drop measurements, using the heat value of the fuel determined by the fuel vendor or the owner or operator, to calculate average hourly heat input during the test.}

**D.2. Emissions Unit Operating Rate Limitation After Testing.** See specific condition E.14.

[Rule 62-297.310(2), F.A.C.]

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**D.3. Methods of Operation - Fuels.**

- a. Emissions unit 006: Only number 2 fuel oil shall be fired in the combustion turbine.
- b. Emissions unit 011: Only any combination of natural gas and/or number 2 fuel oil shall be fired in the combustion turbine.

[Rule 62-213.410, F.A.C.]

**Emission Limitations and Standards**

{Permitting note: Unless otherwise specified, the averaging times for Specific Conditions **D.4.** and **D.5.** are based on the specified averaging time of the applicable test method.}

**D.4. Sulfur Dioxide - Sulfur Content - Emissions Unit 011.** For emissions unit 011 (Unit GT-2/S-5), the No. 2 fuel oil sulfur content shall not exceed 0.35 percent, by weight. See specific condition **D.6.**  
[Rules 62-4.070(3) and 62-213.440, F.A.C., and Power Plant Siting Certification No. PA 74-05]

**D.5. NO<sub>x</sub> RACT.** Emissions of nitrogen oxides (NO<sub>x</sub>) from these emissions units shall not exceed 0.50 pounds per million Btu while firing natural gas and 0.90 pounds per million Btu while firing number 2 fuel oil.

[Rule 62-296.570, F.A.C.]

**Test Methods and Procedures**

**D.6. Sulfur Dioxide - Sulfur Content - Emissions Unit 011.** The permittee shall demonstrate compliance with the liquid fuel sulfur limit by fuel sampling and analysis. See specific conditions **D.4.** and **D.7.**  
[Rules 62-213.440 and 62-296.406(3), F.A.C.]

**D.7. Fuel Sampling & Analysis - Sulfur - Emissions Unit 011.** For each emissions unit, the following fuel sampling and analysis protocol shall be used to demonstrate compliance with the fuel sulfur limitation of specific condition **D.4** of this permit:

- a. Sample the as-fired fuel oil each day fuel oil is fired.
- b. Composite the daily samples and each month determine and record the as-fired fuel sulfur content, percent by weight, for liquid fuels using either ASTM D2622-94, ASTM D4294-90(95), ASTM D1552-95, ASTM D1266-91, or both ASTM D4057-88 and ASTM D129-95 (or latest editions) to analyze a representative sample of the composited as-fired fuel oil. Each composite sample shall also be analyzed for heating value.
- c. Record monthly the amount of each fuel fired, and maintain records of the monthly analyses of the heating value of each fuel, and the percent sulfur content by weight of each fuel, to enable calculations of sulfur dioxide emissions.

[Rules 62-4.070(3) and 62-213.440, F.A.C., and PPSC PA 74-05]

**D.8. NO<sub>x</sub> Testing.** Compliance with the NO<sub>x</sub> emission limitation shall be demonstrated by annual emission testing in accordance with EPA Test Method 7E.

[Rule 62-296.570, F.A.C.]

**Monitoring of Operations**

**D.9. Annual Tests Required - NO<sub>x</sub> and VE.** Except as provided in specific conditions **E.6** through **E.8** of this permit, emission testing for nitrogen oxide emissions for Unit 006 and 011 and visible emissions for Unit 011 shall be performed annually, no later than the end of each federal fiscal year (September 30), except for units that are not operating because of scheduled maintenance outages and emergency

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repairs, which will be tested within thirty days of returning to service. Annual compliance testing while firing oil is not required for units that operated on oil for less than 400 hours in the previous federal fiscal year (ending September 30th).

[Rules 62-4.070(3) and 62-213.440, F.A.C.]

**D.10.** These emissions units are also subject to conditions **E.1** through **E.19**, except for **E.3**, **E.10**, **E.11** and **E.18**, contained in Subsection **E. Common Conditions**.

**Subsection E. Common Conditions.**

<b>E.U. ID No.</b>	<b>Brief Description</b>
001 to 005	Five 2000 kW diesel engine generators
007	Fossil Fuel Steam Generating Unit 1 (S-1)
009	Fossil Fuel Steam Generating Unit 3 (S-3)
010	Fossil Fuel Steam Generating Unit 4, (S-4)
006	Gas Turbine # 1, (GT-1)
011	Combined Cycle Unit, (GT-2/S-5)

The following conditions apply to the emissions unit(s) listed above:

**Essential Potential to Emit (PTE) Parameters**

**E.1. Hours of Operation.** The emissions units may operate continuously, i.e., 8,760 hours/year. [Rule 62-210.200(PTE), F.A.C.]

**Emission Limitations and Standards**

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

**Excess Emissions**

**E.2. (This condition is applicable only to emissions units 001 - 005, 006 and 011.)** Excess emissions resulting from startup, shutdown or malfunction shall be permitted provided (1) that best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1), F.A.C.]

**E.3. (This condition is applicable only to emissions units 007, 009 and 010.)** Excess emissions resulting from startup or shutdown shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized.

Excess emissions resulting from malfunction shall be permitted provided (1) that best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700(1) & (2), F.A.C.]

**E.4.** Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

**Monitoring of Operations****E.5. Determination of Process Variables.**

(a) **Required Equipment.** The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) **Accuracy of Equipment.** Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

(c) Heat input rate shall be determined by average fuel use during testing (to be determined by fuel flow meters or fuel tank measurements) and the latest fuel analysis available from the vendor or operator (for Btu content of the fuel used).

[Rules 62-297.310(5) and 62-213.440, F.A.C.]

**E.6. Frequency of Compliance Tests.** The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) **General Compliance Testing.**

2. For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid and/or solid fuel for more than 400 hours other than during startup.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

a. Did not operate; or

b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours.

4. During each federal fiscal year (October 1 -- September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

a. Visible emissions, if there is an applicable standard;

b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and

5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.

8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.

9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.]

**E.7. When PM Tests Not Required**. Annual and permit renewal compliance testing for particulate matter emissions is not required for these emissions units while burning:

- a. only gaseous fuel(s); or
- b. gaseous fuel(s) in combination with any amount of liquid fuel(s) for less than 400 hours per year; or
- c. only liquid fuel(s) for less than 400 hours per year.

[Rules 62-297.310(7)(a)3. & 5., F.A.C.; and, ASP Number 97-B-01.]

**E.8. When VE Tests Not Required**. By this permit, annual emissions compliance testing for visible emissions is not required for these emissions units while burning:

- a. only gaseous fuel(s); or
- b. gaseous fuel(s) in combination with any amount of liquid fuel(s) for less than 400 hours per year; or
- c. only liquid fuel(s) for less than 400 hours per year.

[Rule 62-4.070(3), F.A.C.]

### **Test Methods and Procedures**

{Permitting Note: The attached Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

**E.9. (This condition is applicable only to emissions units 001 - 005, 006 and 011.) Visible Emissions - Turbines, Diesel Engine Generators**. The test method for visible emissions for emissions units 006 (GT-1), 011 (GT-2/S-5), and 001 through 005 (diesel engine generators) shall be EPA Method 9, adopted and incorporated by reference in Rule 62-204.800, F.A.C., and referenced in Chapter 62-297, F.A.C. [Rules 62-204.800, 62-296.320(4)(b)4.a. and 62-297.401, F.A.C., and modified conditions of PA 74-05 ordered September 28, 1987]



**E.10. (This condition is applicable only to emissions units 007, 009 and 010.) Visible Emissions - Boilers.** The test method for visible emissions for emissions units 007 (S-1), 009 (S-3) and 010 (S-4) shall be DEP Method 9, incorporated in Chapter 62-297, F.A.C. A transmissometer may be used and calibrated according to Rule 62-297.520, F.A.C. See specific condition E.11.  
[Rule 62-296.405(1)(e)1., F.A.C.]

**E.11. (This condition is applicable only to emissions units 007, 009 and 010.) DEP Method 9.** The provisions of EPA Method 9 (40 CFR 60, Appendix A) are adopted by reference with the following exceptions:

1. EPA Method 9, Section 2.4, Recording Observations. Opacity observations shall be made and recorded by a certified observer at sequential fifteen second intervals during the required period of observation.
2. EPA Method 9, Section 2.5, Data Reduction. For a set of observations to be acceptable, the observer shall have made and recorded, or verified the recording of, at least 90 percent of the possible individual observations during the required observation period. For single-valued opacity standards (e.g., 20 percent opacity), the test result shall be the highest valid six-minute average for the set of observations taken. For multiple-valued opacity standards (e.g., 20 percent opacity, except that an opacity of 40 percent is permissible for not more than two minutes per hour) opacity shall be computed as follows:
  - a. For the basic part of the standard (i.e., 20 percent opacity) the opacity shall be determined as specified above for a single-valued opacity standard.
  - b. For the short-term average part of the standard, opacity shall be the highest valid short-term average (i.e., two-minute, three-minute average) for the set of observations taken.

In order to be valid, any required average (i.e., a six-minute or two-minute average) shall be based on all of the valid observations in the sequential subset of observations selected, and the selected subset shall contain at least 90 percent of the observations possible for the required averaging time. Each required average shall be calculated by summing the opacity value of each of the valid observations in the appropriate subset, dividing this sum by the number of valid observations in the subset, and rounding the result to the nearest whole number. The number of missing observations in the subset shall be indicated in parenthesis after the subset average value.

[Rule 62-297.401, F.A.C.]

**E.12. Required Number of Test Runs.** For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.

[Rule 62-297.310(1), F.A.C.]

**E.13. Calculation of Emission Rate.** The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the separate test runs unless otherwise specified in a particular test method or applicable rule.

[Rule 62-297.310(3), F.A.C.]

**E.14. Operating Rate During Testing.** Testing of emissions shall be conducted with each emissions unit operating at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

[Rules 62-297.310(2) & (2)(b), F.A.C.]

**E.15. Applicable Test Procedures.**

(a) Required Sampling Time.

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.

2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

(b) Minimum Sample Volume. Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.

(c) Required Flow Rate Range. For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

(d) Calibration of Sampling Equipment. Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1.

(e) Allowed Modification to EPA Method 5. When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

[Rule 62-297.310(4), F.A.C.]

**E.16. Required Stack Sampling Facilities.** When a mass emissions stack test is required, the permittee shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit. Temporary stack sampling facilities under Rule 62-297.310(6)(b), F.A.C. may be used in lieu of permanent facilities.

[Rule 62-297.310(6), F.A.C.]

### **Recordkeeping and Reporting Requirements**

**E.17. Malfunctions - Notification.** In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Palm Beach County Health Department's Air Section in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Palm Beach County Health Department's Air Section.

[Rule 62-210.700(6), F.A.C.]

**E.18. (This condition is applicable only to emissions units 009 and 010.) Excess Emissions - Report.** Submit to the Palm Beach County Health Department's Air Section a written report of emissions in excess of emission limiting standards as set forth in Rule 62-296.405(1), F.A.C., for each calendar quarter. The nature and cause of the excess emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations. All recorded data shall be maintained on file by the Source for a period of five years.

[Rules 62-213.440 and 62-296.405(1)(g), F.A.C.]

### **E.19. Test Reports.**

(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Palm Beach County Health Department's Air Section on the results of each such test.

(b) The required test report shall be filed with the Palm Beach County Health Department's Air Section as soon as practical but no later than 45 days after the last sampling run of each test is completed.

(c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Palm Beach County Health Department's Air Section to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.

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11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rules 62-213.440 and 62-297.310(8), F.A.C.]

**Section IV. This section is the Acid Rain Part.**

**Operated by:** City of Lake Worth Utilities

**ORIS code:** 0673

**Subsection A. This subsection addresses Acid Rain, Phase II.**

The emissions unit(s) listed below are regulated under Acid Rain, Phase II.

<b>E.U. ID No.</b>	<b>Brief Description</b>
009	Fossil Fuel Steam Generator, Unit 3, (S-3)
010	Fossil Fuel Steam Generator, Unit 4, (S-4)

1. The Phase II permit application(s) submitted for this facility, as approved by the Department, is a part of this permit. The owners and operators of these Phase II acid rain unit(s) must comply with the standard requirements and special provisions set forth in the application(s) listed:

a. DEP Form No. 62-210.900(1)(a), signed by the Designated Representative on 08/21/02.

[Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

2. Sulfur dioxide (SO<sub>2</sub>) allowance allocations for each Acid Rain unit are as follows:

<b>E.U. ID No.</b>	<b>EPA ID</b>	<b>Year</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
009	S-3	SO <sub>2</sub> allowances, under Table 2 of 40 CFR Part 73	89*	89*	89*	89*	89*
010	S-4	SO <sub>2</sub> allowances, under Table 2 of 40 CFR Part 73	0*	0*	0*	0*	0*

\*The number of allowances held by an Acid Rain source in a unit account may differ from the number allocated by the USEPA under Table 2 of 40 CFR 73.

3. Emission Allowances. Emissions from sources subject to the Federal Acid Rain Program (Title IV) shall not exceed any allowances that the source lawfully holds under the Federal Acid Rain Program. Allowances shall not be used to demonstrate compliance with a non-Title IV applicable requirement of the Act.

1. No permit revision shall be required for increase in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400(3), F.A.C.

2. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain Program.

3. Allowances shall be accounted for under the Federal Acid Rain Program.

[Rule 62-213.440(1)(c), F.A.C.]

4. Where an applicable requirement of the Act is more stringent than applicable regulations promulgated under Title IV of the Act, both provisions shall be incorporated into the permit and shall be enforceable by the Administrator.

[40 CFR 70.6(a)(1)(ii); and, Rule 62-210.200, F.A.C., Definitions – Applicable Requirements.]

### Appendix I-1, List of Insignificant Emissions Units and/or Activities

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, or that meet the criteria specified in Rule 62-210.300(3)(b)1., F.A.C., Generic Emissions Unit Exemption, are exempt from the permitting requirements of Chapters 62-210, 62-212 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rules 62-210.300(3)(a) and (b)1., F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

<b>Brief Description of Emissions Units and/or Activities</b>
1. Dust collector hopper discharge valve for Unit S-3.
2. Liquid propane gas emergency generator.
3. Portable electrical generators that can be moved by hand from one location to another.
4. Air compressors and pneumatically operated equipment, including hand tools.
5. Storage tanks, vessels, and containers that hold or store liquid substances that will not have the potential to emit VOC or HAPs greater than the de minimis quantities.
6. Janitorial services and consumer use of janitorial products.

## Appendix H-1, Permit History/ID Number Changes

## Permit History (for tracking purposes):

E.U. ID No.	Description	Permit No.	Issue Date	Expiration Date	Revised Date(s)
001	Diesel Generator #1 Peaking Unit	AO 50-172357	01/18/90	07/17/94	
002	Diesel Generator #2 Peaking Unit	AO 50-172357	01/18/90	07/17/94	
003	Diesel Generator #3 Peaking Unit	AO 50-172357	01/18/90	07/17/94	
004	Diesel Generator #4 Peaking Unit	AO 50-172357	01/18/90	07/17/94	
005	Diesel Generator #5 Peaking Unit	AO 50-172357	01/18/90	07/17/94	
006	Combustion Gas Turbine #1 (GT-1)	AO 50-219177 AC 50-2168A AC 50-2168	11/06/92 09/10/76 09/28/73	10/30/97 09/01/77 03/01/75	
007	Fossil Fuel Steam Generator Unit #1 (S-1)	AO 50-169444	01/31/96	09/15/96	
008	Fossil Fuel Steam Generator Unit #2 (S-2)*				
009	Fossil Fuel Steam Generator Unit #3 (S-3)	AO 50-169444 PA - 74-05	01/31/96 05/18/76	09/15/96	09/28/87 03/27/96
010	Fossil Fuel Steam Generator Unit #4 (S-4)	AO 50-169444 PA - 74-05	01/31/96 05/18/76	09/15/96	09/28/87 03/27/96
011	Combined Cycle Gas Turbine (GT-2/S-5)	PA - 74-05	05/18/76		09/28/87 03/27/96
001 - 005, 006, 007, 009, 010	Diesel engine generators #1 - 5 GT-1 S-1 S-3 S-4	0990045-001-AO (amendment of AO 50-169444, AO 50-172357, AO 50-219177, for NOx RACT)	01/31/96		
	All of the above.	0990045-002-AV	01/01/98	12/31/02	
	All of the above.	0990045-003-AV	01/01/03	12/31/07	

## ID Number Changes (for tracking purposes):

From: Facility ID No.: 50PMB500045

To: Facility ID No.: 0990045

\* Unit S-2 is not in service. Operation of this unit is not permitted by this permit.



**Appendix U-1, List of Unregulated Emissions Units and/or Activities**

Unregulated Emissions Units and/or Activities. An emissions unit which emits no “emissions-limited pollutant” and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards.

The below listed emissions units and/or activities are neither ‘regulated emissions units’ nor ‘insignificant emissions units’.

<b>E.U. ID No.</b>	<b>Brief Description of Emissions Units and/or Activity</b>
012	Fuel oil storage tanks (tanks 10 & 11, both 20,134 gallons capacity, and tank 12, 140,785 gallons capacity) subject to NSPS, Subpart Kb.*
013	Fuel oil storage tanks (tanks 3, 4, 5, 6, and 8), lube oil tanks, fittings and pumps.

\*The owner or operator shall keep readily accessible records showing the dimension of each storage vessel (tank) and an analysis showing the capacity of each storage vessel (tank), and shall retain the records as long as each tank remains at the facility.

**Table 1-1, Summary of Air Pollutant Emission Standards**

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

Emissions Unit		Brief Description							
001 - 005		Five 2000 kW diesel engine generators							
			Allowable Emissions			Equivalent Emissions			
Pollutant	Fuel(s)	Hours per Year	Standard(s)	lbs./hour	TPY	lbs./hour	TPY	Regulatory Citations	See Permit Condition(s)
VE	Diesel Fuel	8760	20% opacity					Rule 62-296.320(4)(b), F.A.C.	Section II, Condition 3
NOx	Diesel Fuel	8760	4.75 lb/mmBtu			99.8	436.91	Rules 62-296.570., F.A.C.	A.2

Note for EU 001 - 005: Equivalent emissions are listed for each diesel generator.

Table 1-1, Continued

Emissions Unit		Brief Description							
007		Fossil Fuel Steam Generating Unit 1 (S-1), nominally rated at 7.5 MW, 111 mmBtu/hr, capable of burning any combination of natural gas and number 6 fuel oil							
Pollutant	Fuel(s)	Hours per Year	Allowable Emissions			Equivalent Emissions		Regulatory Citations	See Permit Condition(s)
			Standard(s)	lbs./hour	TPY	lbs./hour	TPY		
VE Steady State	Oil, Natural Gas	8760	20% opacity, except for 40% for 2 min. each hour					Rule 62-296.406(1), F.A.C.	B.4
VE Soot Blowing or Load Change	Oil, Natural Gas	8760	60% opacity					Rule 62-210.700(3), F.A.C.	B.5
SO <sub>2</sub> (& PM)	Oil, Natural Gas	8760	2.25% S by weight, fuel oil			267* (oil)	1,170* (oil)	Rules 62-4.070(3) & 296.406(3), F.A.C.	B.7
NO <sub>x</sub>	Oil, Natural Gas	8760	0.5 lb/mmBtu			56	243	Rules 62-296.570, F.A.C.	B.8

\* Equivalent emissions are for SO<sub>2</sub> emissions firing fuel oil.

Table 1-1, Continued

Emissions Unit		Brief Description							
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							
010		Fossil Fuel Steam Generating Unit 4, (S-4), nominally rated at 33 MW, 419.1 mmBtu/hr, capable of burning any combination of natural gas and number 6 fuel oil							
		Allowable Emissions				Equivalent Emissions			
Pollutant	Fuel(s)	Hours per Year	Standard(s)	lbs./hour	TPY	lbs./hour	TPY	Regulatory Citations	See Permit Condition(s)
VE Steady State	Oil, Natural Gas	8760	20% opacity, except for 40% for 2 min. each hour					Rule 62-296.405(1)(a), F.A.C.	C.4
VE Soot Blowing or Load Change	Oil, Natural Gas	8760	60 % opacity (>60% opacity for not more than 4, six-minute periods per hour during 3 hours allowed for sootblowing/load change)					Rule 62-210.700(3), F.A.C.	C.5
PM Steady State	Oil, Natural Gas	8760	0.1 lb/mmBtu			33 (EU 009) 42 (EU 010)	142 (EU 009) 184 (EU 010)	Rule 62-296.405(1)(b), F.A.C.	C.6
PM Soot Blowing or Load Change	Oil, Natural Gas	8760	0.3 lb/mmBtu			99 (EU 009) 126 (EU 010)	426 (EU 009) 552 (EU 010)	Rule 62-210.700(3), F.A.C.	C.7

Table 1-1, Continued, Emissions Units 009 & 010

Pollutant	Fuel(s)	Hours per Year	Allowable Emissions			Equivalent Emissions		Regulatory Citations	See Permit Condition(s)
			Standard(s)	lbs./hour	TPY	lbs./hour	TPY		
SO <sub>2</sub>	Oil, Natural Gas	8760	2.25% S by weight, fuel oil			832 (EU 009) (oil) 1072 (EU 010) (oil)	1072 (EU 009) (oil) 4695 (EU 010) (oil)	Rule 62-213.440, F.A.C. & PPSC No. PA 74-05	C.8
NO <sub>x</sub>	Oil, Natural Gas	8760	0.5 lb/mmBtu			163 (EU 009) 210 (EU 010)	712 (EU 009) 918 (EU 010)	Rules 62- 296.570, F.A.C.	C.9

Table 1-1, Continued

Emissions Unit		Brief Description							
006		Gas Turbine # 1, (GT-1), nominally rated at 30 MW, 435 mmBtu/hr, capable of burning number 2 fuel oil							
011		Combined Cycle Unit, (GT-2/S-5), nominally rated at 29.5 MW, consists of a gas turbine (GT-2) nominally rated at 20 MW and a heat recovery steam generator (S5) 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							
Pollutant	Fuel(s)	Hours per Year	Allowable Emissions			Equivalent Emissions <sup>1</sup>		Regulatory Citations	See Permit Condition(s)
			Standard(s)	lbs./hour	TPY	lbs./hour	TPY		
VE	Oil <sup>a</sup> , Natural Gas <sup>b</sup>	8760	20% Opacity					Rule 62-296.320(4)(b), F.A.C.	Section II, Condition 3
SO <sub>2</sub> (EU 011 only)	Oil, Natural Gas	8760	0.35% S by weight, fuel oil			109 (oil)	478 (oil)	Rule 62-213.440, F.A.C. & PPSC No. PA 74-05	D.4
NO <sub>x</sub> (EU 006)	Oil <sup>a</sup> , Natural Gas <sup>b</sup>	8760	0.90 lb/mmBtu (fuel oil) 0.50 lb/mmBtu (natural gas)			392 218	1715 953	Rules 62-570, F.A.C.	D.5
NO <sub>x</sub> (EU 011)	Oil <sup>a</sup> , Natural Gas <sup>b</sup>	8760	0.90 lb/mmBtu (fuel oil) 0.50 lb/mmBtu (natural gas)			286 159	1252 696	Rules 62-570, F.A.C.	D.5

a Number 2 fuel oil may be fired in emissions unit 006 or 011.

b Natural gas may be fired in emissions unit 011.

Table 1-1, Continued

Emissions Unit		Brief Description							
012		Fuel oil storage tanks (tanks 10 & 11, both 20,134 gallons capacity, and tank 12, 140,785 gallons capacity) subject to NSPS, Subpart Kb							
			Allowable Emissions			Equivalent Emissions <sup>1</sup>			
Pollutant	Fuel(s)	Hours per Year	Standard(s)	lbs./hour	TPY	lbs./hour	TPY	Regulatory Citations	See Permit Condition(s)
None		8760	No emission limits - record keeping only						F.2, F.3

Notes for all tables:

<sup>1</sup> The "Equivalent Emissions" listed are for informational purposes only.

**Table 2-1, Summary of Compliance Requirements**

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

Emissions Unit	Brief Description
001 to 005	Five 2000 kW diesel engine generators

Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date <sup>1</sup>	Minimum Compliance Test Duration	CMS <sup>2</sup>	See Permit Condition(s)
NOx	Diesel Fuel	EPA Test Method 7E	Annual		3 hours	No	A.3 & A.4
VE	Diesel Fuel	EPA Method 9	Annual		30 min.	No	A.4 & E.9

Emissions Unit	Brief Description
007	Fossil Fuel Steam Generating Unit 1 (S-1), nominally rated at 7.5 MW, 111 mmBtu/hr, capable of burning any combination of natural gas and number 6 fuel oil

Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date <sup>1</sup>	Minimum Compliance Test Duration	CMS <sup>2</sup>	See Permit Condition(s)
SO <sub>2</sub>	Oil, Natural Gas	Fuel sampling & analysis	Sampling daily, analysis of monthly composite			No	B.7, B.9 & B.10
NOx	Oil, Natural Gas	EPA Test Method 7E	Annual		3 hours	No	B.11 & B.12
VE	Oil, Natural Gas	DEP Method 9	Annual		1 hour	No	B.12 & E.10



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Table 2-1; Continued

Emissions Unit		Brief Description					
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					
010		Fossil Fuel Steam Generating Unit 4, (S-4), nominally rated at 33 MW, 419.1 mmBtu/hr, capable of burning any combination of natural gas and number 6 fuel oil					
Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date <sup>1</sup>	Minimum Compliance Test Duration	CMS <sup>2</sup>	See Permit Condition(s)
SO <sub>2</sub>	Oil, Natural Gas	Fuel sampling & analysis	Sampling daily, analysis of monthly composite			No	C.8, C.11 & C.12
NO <sub>x</sub> (EU 009)	Oil, Natural Gas	CEMS	Continuous			Yes	C.13 & C.16
NO <sub>x</sub> (EU 010)	Oil, Natural Gas	EPA Test Method 7E (If CEMS installed see next row)	Annual		3 hours	No	C.13 & C.15
NO <sub>x</sub> (EU 010)	Oil, Natural Gas	CEMS (If installed)	Continuous			Yes, if installed for Acid Rain	C.13 & C.15
PM	Oil, Natural Gas	EPA Test Methods 17,5,5B or 5F	Annual		3 hours	No	C.10 & C.14
VE	Oil, Natural Gas	DEP Method 9	Annual		1 hour	Yes	C.14 & E.10

Table 2-1, Continued

Emissions Unit	Brief Description
006	Gas Turbine # 1, (GT-1), nominally rated at 30 MW, 435 mmBtu/hr, capable of burning number 2 fuel oil
011	Combined Cycle Unit, (GT-2/S-5), nominally rated at 29.5 MW, consists of a gas turbine (GT-2) nominally rated at 20 MW and a heat recovery steam generator (S5) 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

Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date <sup>1</sup>	Minimum Compliance Test Duration	CMS <sup>2</sup>	See Permit Condition(s)
<b>SO<sub>2</sub></b> <b>(Emissions Unit 011 only)</b>	Oil, Natural Gas	Fuel sampling & analysis	Sampling daily, analysis of monthly composite			No	D.4, D.6 & D.7
<b>NO<sub>x</sub></b>	Oil, Natural Gas	EPA Test Method 7E	Annual		3 hours	No	D.8 & D.9
<b>VE</b>	Oil, Natural Gas	EPA Method 9	Annual		1 hour	No	D.9 & E.9

**Tom G. Smith Power Plant and Lake Worth Water Treatment Plant**

Facility ID No. 0990045

**Table 2-1, Continued**

Emissions Unit	Brief Description
012	Fuel oil storage tanks (tanks 10 & 11, both 20,134 gallons capacity, and tank 12, 140,785 gallons capacity) subject to NSPS, Subpart Kb

Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date <sup>1</sup>	Minimum Compliance Test Duration	CMS <sup>2</sup>	See Permit Condition(s)
<b>Capacity</b>		Record keeping					F.2 & F.3

Notes for all tables:

<sup>1</sup> Frequency base date established for planning purposes only; see Rule 62-297.310, F.A.C.

<sup>2</sup> CMS = continuous monitoring system

**Appendix H-1: Permit History****Permit History (for tracking purposes):**

E.U. ID No.	Description	Permit No.	Issue Date	Expiration Date	Revised Date(s)
001	Diesel Generator #1 Peaking Unit	AO 50-172357	01/18/90	07/17/94	
002	Diesel Generator #2 Peaking Unit	AO 50-172357	01/18/90	07/17/94	
003	Diesel Generator #3 Peaking Unit	AO 50-172357	01/18/90	07/17/94	
004	Diesel Generator #4 Peaking Unit	AO 50-172357	01/18/90	07/17/94	
005	Diesel Generator #5 Peaking Unit	AO 50-172357	01/18/90	07/17/94	
006	Combustion Gas Turbine #1 (GT-1)	AO 50-219177 AC 50-2168A AC 50-2168	11/06/92 09/10/76 09/28/73	10/30/97 09/01/77 03/01/75	
007	Fossil Fuel Steam Generator Unit #1 (S-1)	AO 50-169444	01/31/96	09/15/96	
008	Fossil Fuel Steam Generator Unit #2 (S-2)*				
009	Fossil Fuel Steam Generator Unit #3 (S-3)	AO 50-169444 PA - 74-05	01/31/96 05/18/76	09/15/96	09/28/87 03/27/96
010	Fossil Fuel Steam Generator Unit #4 (S-4)	AO 50-169444 PA - 74-05	01/31/96 05/18/76	09/15/96	09/28/87 03/27/96
011	Combined Cycle Gas Turbine (GT-2/S-5)	PA - 74-05	05/18/76		09/28/87 03/27/96
001 - 005, 006, 007, 009, 010	Diesel engine generators #1 - 5  GT-1 S-1 S-3 S-4	0990045-001-AO (amendment of AO 50-169444, AO 50-172357, AO 50-219177, for NOx, RACT)	01/31/96		
	All of the above.	0990045-002-AV	01/01/98	12/31/02	
	All of the above.	0990045-003-AV	1/1/03	12/31/07	

**ID Number Changes (for tracking purposes):**

From: Facility ID No.: 50PMB500045

To: Facility ID No.: 0990045