



RECEIVED

MAY 21 2012

DIVISION OF AIR
RESOURCE MANAGEMENT

APPLICATION FOR TITLE V RENEWAL

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

Permit Application

Prepared For: City of Lake Worth Utilities
117 College Street
Lake Worth, FL 33460

Submitted By: Golder Associates Inc.
6026 NW 1st Place
Gainesville, FL 32607 USA

Distribution: 4 copies – FDEP
2 copies – City of Lake Worth Utilities
1 copy – Golder Associates Inc.

May 2012

113-87730

**A world of
capabilities
delivered locally**



**APPLICATION FOR AIR PERMIT
LONG FORM**



Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

RECEIVED

MAY 21 2012

DIVISION OF AIR RESOURCE MANAGEMENT

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- To establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial, revised, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: City of Lake Worth Utilities	
2. Site Name: Tom G. Smith Power Plant and Lake Worth Water Treatment Plant	
3. Facility Identification Number: 0990045	
4. Facility Location... Street Address or Other Locator: 117 College Street City: Lake Worth County: Palm Beach Zip Code: 33460	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Application Contact

1. Application Contact Name: Michael Ridge, Environmental Specialist	
2. Application Contact Mailing Address... Organization/Firm: City of Lake Worth Utilities Street Address: 1900 2nd Avenue North City: Lake Worth State: FL Zip Code: 33461	
3. Application Contact Telephone Numbers... Telephone: (561) 533-7379 ext. Fax: (561) 586-1702	
4. Application Contact E-mail Address: mridge@lakeworth.org	

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 5-21-2012	3. PSD Number (if applicable):
2. Project Number(s): 0990045-008-AV	4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

This application for air permit is being submitted to obtain: (Check one)

Air Construction Permit

- Air construction permit.
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

- Initial Title V air operation permit.
- Title V air operation permit revision.
- Title V air operation permit renewal.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

- Air construction permit and Title V permit revision, incorporating the proposed project.
- Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

- I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

This application is for renewal of Title V Permit No. 0990045-005-AV for the Tom G. Smith Power Plant, which expires on December 31, 2012.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
001-005	Five 2 MW Diesel Engine Generators (MU-1 through MU-5)	AF2B	N/A
006	Gas Turbine No. 1 (GT-1)	AF2B	N/A
009	Fossil Fuel Steam Generating Unit 3 (S-3)	AF2B	N/A
011	Combined Cycle Unit (GT-2/S-5)	AF2B	N/A

Application Processing Fee

Check one: Attached - Amount: \$ _____ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

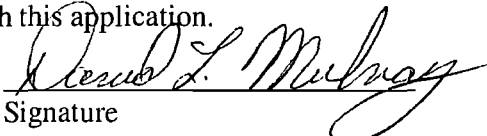
Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Owner/Authorized Representative Telephone Numbers... Telephone: () ext. Fax: ()
4. Owner/Authorized Representative E-mail Address:
5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.</i> _____ Signature _____ Date

APPLICATION INFORMATION


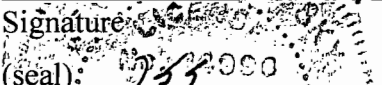
Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name: David L. Mulvey, Power Plant Manager
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input checked="" type="checkbox"/> The designated representative at an Acid Rain source or CAIR source.
3. Application Responsible Official Mailing Address... Organization/Firm: City of Lake Worth Utilities Street Address: 1900 2nd Avenue North City: Lake Worth State: FL Zip Code: 33461
4. Application Responsible Official Telephone Numbers... Telephone: (561) 533-7351 ext. Fax: (561) 586-1702
5. Application Responsible Official E-mail Address: dmulvey@lakeworth.org
6. Application Responsible Official Certification: I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.  Signature <u>5-15-2012</u> Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Kennard F. Kosky Registration Number: 14996
2. Professional Engineer Mailing Address... Organization/Firm: Golder Associates Inc.** Street Address: 6026 NW 1st Place City: Gainesville State: FL Zip Code: 32607
3. Professional Engineer Telephone Numbers... Telephone: (352) 336-5600 ext. Fax: (352) 336-6603
4. Professional Engineer E-mail Address: kkosky@golder.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input checked="" type="checkbox"/> , if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input type="checkbox"/> , if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/> , if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/> , if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i>  Signature: _____ Date: <u>5/17/12</u> (seal): 

* Attach any exception to certification statement.

** Board of Professional Engineers Certificate of Authorization #00001670.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 592.8 North (km) 2943.7		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 26/36/45 Longitude (DD/MM/SS) 80/04/04	
3. Governmental Facility Code: 4	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4911
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: Michael Ridge, Environmental Specialist
2. Facility Contact Mailing Address... Organization/Firm: City of Lake Worth Utilities Street Address: 1900 2nd Avenue North City: Lake Worth State: FL Zip Code: 33461
3. Facility Contact Telephone Numbers: Telephone: (561) 533-7379 ext. Fax: (561) 586-1702
4. Facility Contact E-mail Address: mridge@lakeworth.org

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: () ext. Fax: ()
4. Facility Primary Responsible Official E-mail Address:

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a “major source” and a “synthetic minor source.”

1. <input type="checkbox"/> Small Business Stationary Source	<input type="checkbox"/> Unknown
2. <input type="checkbox"/> Synthetic Non-Title V Source	
3. <input checked="" type="checkbox"/> Title V Source	
4. <input checked="" type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. <input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. <input type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)	
7. <input type="checkbox"/> Synthetic Minor Source of HAPs	
8. <input type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. <input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. <input type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment: Diesel engine generators (EU001 to 005) are subject to 40 CFR 63 Subpart ZZZZ-National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.	

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
SO ₂	A	N
NO _x	A	N
CO	A	N
VOC	B	N
PM	A	N
PM ₁₀	A	N

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility-Wide Cap [Y or N]? (all units)	3. Emissions Unit ID's Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>LW-FI-C1</u> <input type="checkbox"/> Previously Submitted, Date: _____
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>See EU Sections</u> <input type="checkbox"/> Previously Submitted, Date: _____
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>LW-FI-C3</u> <input type="checkbox"/> Previously Submitted, Date: _____

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (existing permitted facility)
2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL): <input type="checkbox"/> Attached, Document ID: _____
3. Rule Applicability Analysis: <input type="checkbox"/> Attached, Document ID: _____
4. List of Exempt Emissions Units: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units:
 Attached, Document ID: _____ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities: (Required for initial/renewal applications only)
 Attached, Document ID: LW-FI-CV1 Not Applicable (revision application)
2. Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought)
 Attached, Document ID: LW-FI-CV2
 Not Applicable (revision application with no change in applicable requirements)
3. Compliance Report and Plan: (Required for all initial/revision/renewal applications)
 Attached, Document ID: LW-FI-CV3
Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.
4. List of Equipment/Activities Regulated under Title VI: (If applicable, required for initial/renewal applications only)
 Attached, Document ID: _____
 Equipment/Activities Onsite but Not Required to be Individually Listed
 Not Applicable
5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only)
 Attached, Document ID: _____ Not Applicable
6. Requested Changes to Current Title V Air Operation Permit:
 Attached, Document ID: LW-FI-CV6 Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Facilities Subject to Acid Rain, CAIR, or Hg Budget Program

1. Acid Rain Program Forms

Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):

Attached, Document ID: _____ Previously Submitted, Date: Jun 01, 1997

Not Applicable (not an Acid Rain source)

Phase II NO_x Averaging Plan (DEP Form No. 62-210.900(1)(a)1.):

Attached, Document ID: _____ Previously Submitted, Date: _____

Not Applicable

New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):

Attached, Document ID: _____ Previously Submitted, Date: _____

Not Applicable

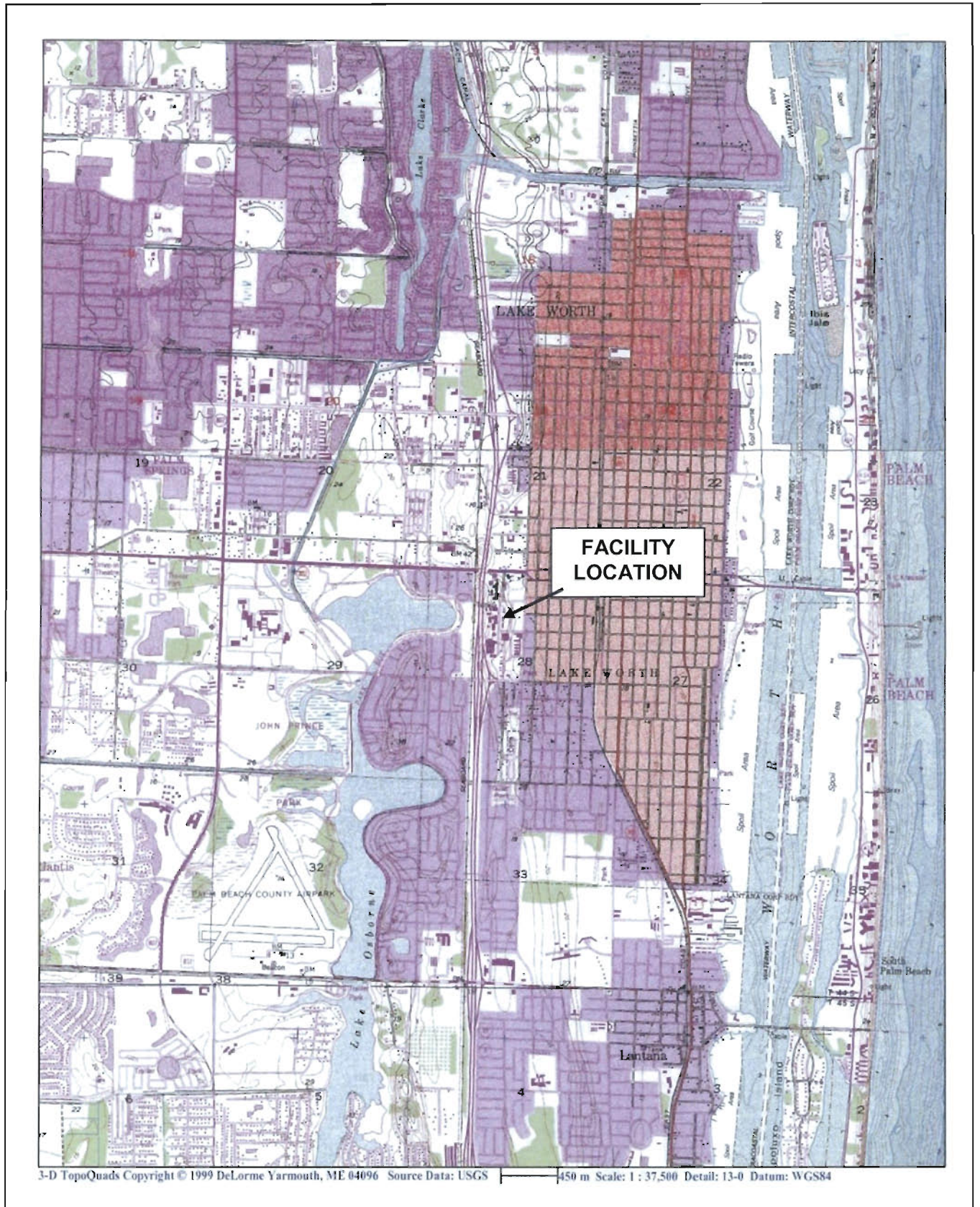
2. CAIR Part (DEP Form No. 62-210.900(1)(b)):

Attached, Document ID: _____ Previously Submitted, Date: April 28, 2008

Not Applicable (not a CAIR source)

Additional Requirements Comment

ATTACHMENT LW-FI-C1
FACILITY PLOT PLAN

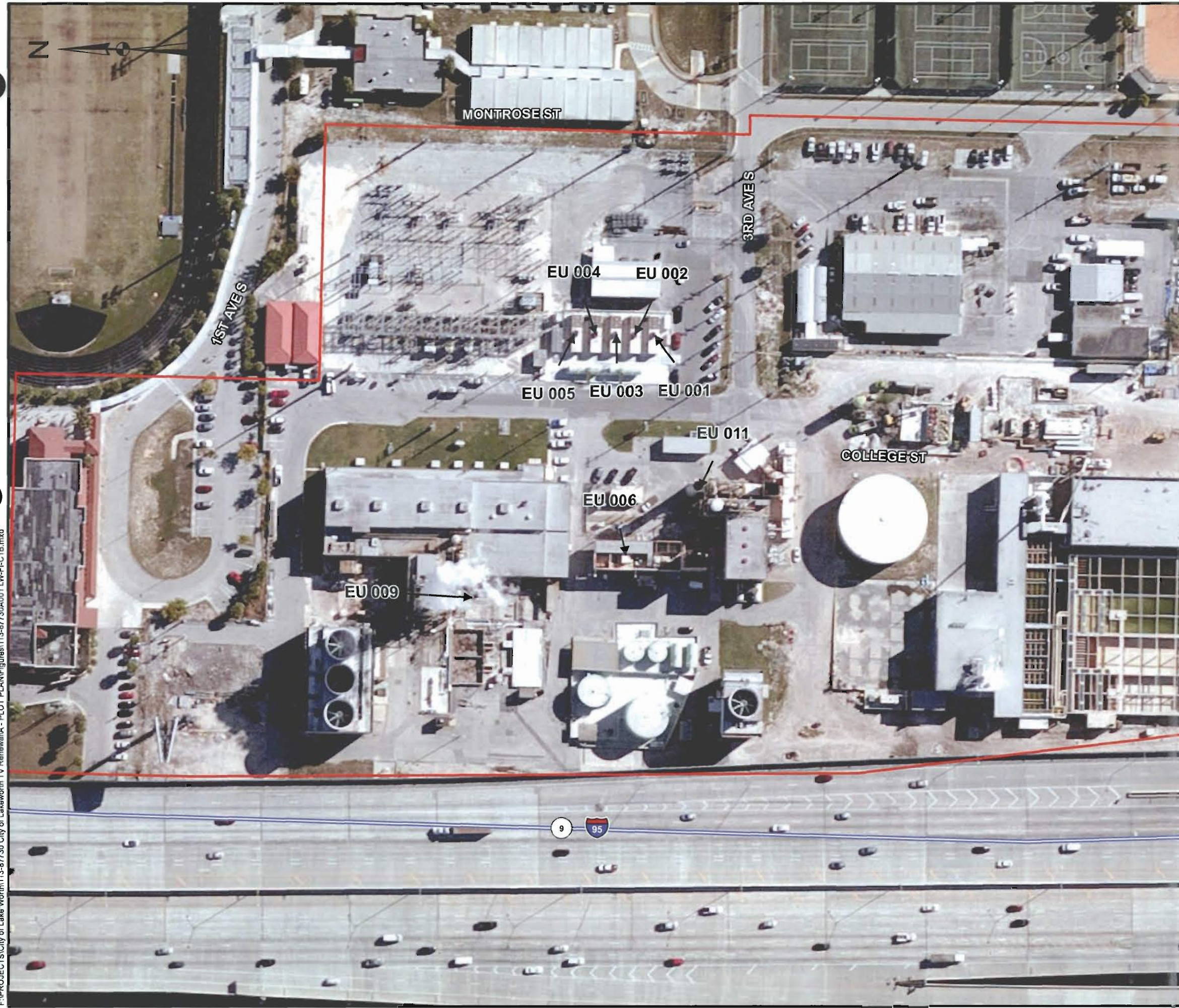


Attachment LW-FI-C1a
Area Map
Lake Worth Utilities, City of Lake Worth, Florida
Source: Golder, 2002.

Y:\Projects\2011\113-87730 CLWU\Final\Atts\FILW-FI-C1a.docx



F:\PROJECTS\City of Lake Worth\113-87730 City of Lakeworth TV Renewal\A - PLOT PLAN\Figures\113-87730A001 LW-FI-C1B.mxd

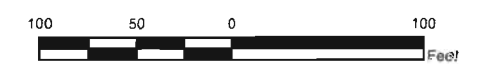


LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- INTERSTATE

REFERENCES

1. APPROXIMATE PROPERTY BOUNDARY: PALM BEACH COUNTY FLORIDA PROPERTY APPRAISER, 2012
2. AERIAL: ARC GIS ONLINE - BING MAPS AERIAL: MICROSOFT CORPORATION AND ITS DATA SUPPLIERS, 2010



REV.	DATE	DESC	REVISION DESCRIPTION	G&C	CHK	R/W

PROJECT
 CITY OF LAKE WORTH
 PALM BEACH COUNTY, FLORIDA

TITLE
FACILITY PLOT PLAN

	PROJECT No. 113-87730		FILE No. 113-87730A001	
	DESIGN	JDG	05/18/2012	SCALE: AS SHOWN
	GIS	JDG	05/18/2012	REV. 0
	CHECK	SKM	05/18/2012	ATTACHMENT LW-FI-C1B
	REVIEW	SKM	05/18/2012	

ATTACHMENT LW-FI-C3

**PRECAUTIONS TO PREVENT EMISSIONS OF
UNCONFINED PARTICULATE MATTER**

ATTACHMENT LW-FI-C3
PRECAUTIONS TO PREVENT EMISSIONS OF
UNCONFINED PARTICULATE MATTER

Operational measures are undertaken at the facility to minimize unconfined particulate matter emissions resulting from the operation of the facility, in accordance with Rule 62-296.320(4)(c)2, F.A.C:

- 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.

ATTACHMENT LW-FI-CV1
LIST OF INSIGNIFICANT ACTIVITIES

ATTACHMENT LW-FI-CV1

LIST OF INSIGNIFICANT ACTIVITIES

The following emission units and/or activities at the CLWU are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.:

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.
7. Diesel tank (6,000 gallons)
8. Mechanical draft cooling towers (2)

ATTACHMENT LW-FI-CV2

IDENTIFICATION OF APPLICABLE REQUIREMENTS

ATTACHMENT LW-FI-CV2
IDENTIFICATION OF APPLICABLE REQUIREMENTS
TITLE V CORE LIST

Effective: 03/01/02

(Updated based on current version of FDEP Air Rules)

[Note: The Title V Core List is meant to simplify the completion of the "List of Applicable Regulations" for DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List.]

Federal: **(description)**

40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

40 CFR 82: Protection of Stratospheric Ozone.

40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).

40 CFR 82, Subpart F: Recycling and Emissions Reduction.

40 CFR 98, Subpart A: Mandatory Reporting of Greenhouse Gases.

40 CFR 98, Subpart C: General Stationary Combustion Sources.

State: **(description)**

CHAPTER 62-4, F.A.C.: PERMITS, effective 03-16-08

62-4.030, F.A.C.: General Prohibition.

62-4.040, F.A.C.: Exemptions.

62-4.050, F.A.C.: Procedure to Obtain Permits; Application.

62-4.060, F.A.C.: Consultation.

62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.

62-4.080, F.A.C.: Modification of Permit Conditions.

62-4.090, F.A.C.: Renewals.

62-4.100, F.A.C.: Suspension and Revocation.

62-4.110, F.A.C.: Financial Responsibility.

62-4.120, F.A.C.: Transfer of Permits.

62-4.130, F.A.C.: Transferability of Definitions.

62-4.150, F.A.C.: Review.

62-4.160, F.A.C.: Permit Conditions.

62-4.210, F.A.C.: Construction Permits.

62-4.220, F.A.C.: Operation Permit for New Sources.

CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS, effective 03-28-12

62-210.300, F.A.C.: Permits Required.

62-210.300(1), F.A.C.: Air Construction Permits.

62-210.300(2), F.A.C.: Air Operation Permits.

62-210.300(3), F.A.C.: Exemptions.

62-210.300(5), F.A.C.: Notification of Startup.

62-210.300(6), F.A.C.: Emissions Unit Reclassification.

62-210.300(7), F.A.C.: Transfer of Air Permits.

62-210.350, F.A.C.: Public Notice and Comment.

62-210.350(1), F.A.C.: Public Notice of Proposed Agency Action.

62-210.350(2), F.A.C.: Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment-Area Preconstruction Review.

62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources.

62-210.360, F.A.C.: Administrative Permit Corrections.

62-210.370, F.A.C.: Emissions Computation and Reporting.

62-210.400, F.A.C.: Emission Estimates.

62-210.650, F.A.C.: Circumvention.

62-210.700, F.A.C.: Excess Emissions.

62-210.900, F.A.C.: Forms and Instructions.

62-210.900(1), F.A.C.: Application for Air Permit – Title V Source, Form and Instructions.

62-210.900(5), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions.

62-210.900(7), F.A.C.: Application for Transfer of Air Permit – Title V and Non-Title V Source.

CHAPTER 62-212, F.A.C.: STATIONARY SOURCES - PRECONSTRUCTION REVIEW, effective 03-28-12

CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 02-16-12

62-213.205, F.A.C.: Annual Emissions Fee.

62-213.400, F.A.C.: Permits and Permit Revisions Required.

62-213.410, F.A.C.: Changes Without Permit Revision.

62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.

62-213.415, F.A.C.: Trading of Emissions Within a Source.

62-213.420, F.A.C.: Permit Applications.

62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.

62-213.440, F.A.C.: Permit Content.

62-213.450, F.A.C.: Permit Review by EPA and Affected States

62-213.460, F.A.C.: Permit Shield.

62-213.900, F.A.C.: Forms and Instructions.

62-213.900(1), F.A.C.: Major Air Pollution Source Annual Emissions Fee Form.

62-213.900(7), F.A.C.: Statement of Compliance Form.

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 02-16-12

62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter.

62-296.320(2), F.A.C.: Objectionable Odor Prohibited.

CHAPTER 62-297, F.A.C.: STATIONARY SOURCES - EMISSIONS MONITORING, effective 02-16-12

62-297.310, F.A.C.: General Test Requirements.

62-297.310(4), F.A.C.: Applicable Test Procedures.

62-297.310(7), F.A.C.: Frequency of Compliance Tests.

62-297.310(6), F.A.C.: Repaired Stack Sampling Facilities.

62-297.310(5), F.A.C.: Determination of Process Variables.

62-297.510(8), F.A.C.: Test Report.

62-297.620, F.A.C.: Exceptions and Approval of Alternate Procedures and Requirements.

Miscellaneous:

CHAPTER 28-106, F.A.C.: Decisions Determining Substantial Interests

CHAPTER 62-110, F.A.C.: Exception to the Uniform Rules of Procedure, effective 07-01-98

CHAPTER 62-256, F.A.C.: Open Burning and Frost Protection Fires, effective 10-06-08

CHAPTER 62-257, F.A.C.: Asbestos Notification and Fee, effective 10-12-08

CHAPTER 62-281, F.A.C.: Motor Vehicle Air Conditioning Refrigerant Recovery and Recycling,
effective 09-10-96

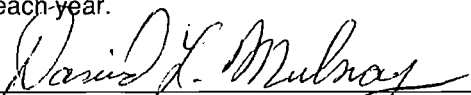
ATTACHMENT LW-FI-CV3
COMPLIANCE REPORT AND PLAN

**ATTACHMENT LW-FI-CV3
COMPLIANCE REPORT**

City of Lake Worth Utilities certifies that the Tom G. Smith Power Plant and Lake Worth Water Treatment Plant located in Lake Worth, Palm Beach County, Florida, as of the date of this application, is in compliance with each applicable requirement addressed in this Title V air operation permit renewal application.

I, the undersigned, am the responsible official as designed in Chapter 62-213, F.A.C., of the Title V source for which this report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate, and complete.

Compliance statements for this facility will be submitted on an annual basis to FDEP, on or before March 1 of each year.



Signature, Responsible Official



Date

ATTACHMENT LW-FI-CV6

REQUESTED CHANGES TO CURRENT TITLE V AIR OPERATION PERMIT

ATTACHMENT LW-FI-CV6

REQUESTED CHANGES TO CURRENT TITLE V AIR OPERATION PERMIT

40 CFR 63 Subpart ZZZZ Applicability

On behalf of City of Lake Worth Utilities (CLWU), Golder Associates Inc. (Golder) has prepared an inventory of stationary Reciprocating Internal Combustion Engines (RICE) at the Tom G. Smith Power Plant and Lake Worth Water Treatment Plant. The purpose of the inventory was to analyze applicability of Title 40, Part 63 of the Code of Federal Regulations (40 CFR 63), Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for stationary RICE to these engines. Following are the stationary RICE at the facility:

- Five 2,000-kilowatt (kW) diesel engine generators [emission unit IDs (EUs) 001 to 005] (General Motors Electro Motive Division Model 567D4).
- Emergency backup diesel generator engine for water plant lime facility (Caterpillar Model 3508)
- Emergency backup diesel generator engine for the reverse osmosis plant (Cummins Model 2000DQKAB)

The five diesel engine generators (EU 001 to 005) are currently regulated emission units. The emergency backup diesel generator for the lime facility is an existing unit listed in the List of Insignificant Units, Appendix I-1. The emergency backup diesel generator for the reverse osmosis plant was added in 2012 along with an 8,000-gallon diesel tank. The attached Tables 1, 2, and 3 present the detailed information on the engines including manufacturer, serial number, and horsepower ratings. These tables also present the applicability of emissions, monitoring, reporting and recordkeeping requirements associated with Subpart ZZZZ.

The emergency backup diesel startup diesel generator engines are used for emergency purposes only. In accordance with the requirements of emergency stationary RICE contained in 40 CFR 63.6640(f), these engines at the water plant and at the reverse osmosis plant will not operate for more than 100 hr/yr for maintenance and readiness testing, of which 50 hr/yr can be for non-emergency use.

CLWU requests that the Subpart ZZZZ applicability requirements for these engines be included in the renewed Title V permit.

Appendix I-1: List of Insignificant Activities

The current Appendix I-1 lists the emergency backup diesel generator engine for the lime plant as the "diesel-fired generator". Since this diesel engine is subject to 40 CFR 63 Subpart ZZZZ, CLWU requests that the unit be removed from the renewed Appendix I-1.

The potential volatile organic compound (VOC) emissions from the new 8,000-gallon diesel tank are expected to be less than 1 ton per year (TPY). Since there are no applicable requirements for the storage tank and the potential emissions of the only regulated air pollutant emitted from the tank are less than 5 TPY, CLWU requests that per Rule 62 210.300(3)(b), the tank be granted an insignificant emission unit status and added to Appendix I-1.

**TABLE 1
APPLICABLE REQUIREMENTS OF 40 CFR 63 SUBPART ZZZZ
EU001 - EU005, TOM G. SMITH POWER PLANT**

	Permit Requirements	Citation
Engine Description	Five 2000 kW Diesel Engine Generators	
CI or SI	CI	
Located in an Area Source or Major Source of HAPS	Area Source	
Use (Emergency, Non-Emergency, Black-Start, Limited-Use)	Non-Emergency, Non-Black Start	
Engine Serial Number	65-J1-1024 (EU001), 65-J1-1069 (EU002), 65-J1-1044 (EU003), 65-J1-1058 (EU004), 65-J1-1109 (EU005)	
Engine Manufacturer	General Electric (GE) Electro Motive Division	
Engine Model	16-567-D4	
Engine Power (bhp)	2000 kW (2,682 hp)	
Compliance Date	May 3, 2013	Rule § 63.6595(a)
Emissions Limitations	CO emissions limited to 23 ppmvd @ 15% O2 or, Reduce CO emissions by 70% or more	Rule § 63.6600(d), Table 2d (3a, 3b)
Operating Limitations	Comply with operating limitations approved by the Administrator	Rule § 63.6600(d), Table 2b
Fuel Requirements	Use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel	Rule § 63.6604
Performance Tests	Initial test within 180 days after the compliance date Subsequent test every 8,760 hrs or 3 years, whichever comes first	Rule § 63.6612 & 63.6615
Monitoring, installation, collection, operation, and maintenance requirements	Minimize idle & startup time to <30 min	Rule § 63.6625
Initial Compliance	Initial compliance is demonstrated if average of 3 1-hour tests ≤ standard	Rule § 63.6630
Continuous Compliance	Subsequent performance test every 8,760 hours or 3 years, whichever comes first	Rule § 63.6640
Notification Requirements	Submit Notice of Intent to conduct performance test at least 60 days prior Notification of compliance status within 30 day after the completion of initial compliance demonstration	Rule § 63.6645
Reporting Requirements	Semi-annual compliance reports postmarked by July 31 or January 31	Rule § 63.6650
Recordkeeping Requirements	Copies of each notification and report to comply with the subpart Records of occurrence and duration of each malfunction of operation Records of performance tests Records of maintenance conducted Records of operating hours	Rule § 63.6655

**TABLE 2
APPLICABLE REQUIREMENTS OF 40 CFR 63 SUBPART ZZZZ
Emergency Engine for Lime Facility**

	Permit Requirements	Citation
Engine Description	Emergency Engine for Water Plant lime facility	
CI or SI	CI	
Located in an Area Source or Major Source of HAPS	Area Source	
Use (Emergency, Non-Emergency, Black-Start, Limited-Use)	Emergency backup	
Engine Serial Number	1F203093	
Engine Manufacturer	Caterpillar	
Engine Model	3508	
Engine Power (bhp)	1,341	
Compliance Date	May 3, 2013	Rule § 63.6595(a)
Emissions Limitations	None	
Operating Limitations	Change oil and filter every 500 hrs of operation or annually, whichever first Inspect air cleaner every 1,000 hrs of operation or annually, whichever first Inspect and replace (if necessary) hoses and belts every 500 hrs of operation or annually, whichever first Minimize idle & startup time to <30 min	Rule § 63.6600(d), Table 2d (4a, 4b , 4c)
Fuel Requirements	None	Rule § 63.6604
Performance Tests	None	Rule § 63.6610
Monitoring, installation, collection, operation, and maintenance requirements	Operate and maintain according to manufacturer's instructions or develop and follow GCP	Rule § 63.6625(e)
Initial Compliance	None	Rule § 63.6630
Continuous Compliance	Non-emergency use including maintenance checks and readiness testing limited to 100 hr/yr. Non-emergency use limited to 50 hr/yr.	Rule § 63.6640(f)
Notification Requirements	None	Rule § 63.6645
Reporting Requirements	None	Rule § 63.6650
Recordkeeping Requirements	Copies of each notification and report to comply with the subpart Records of occurrence and duration of each malfunction of operation Records of maintenance conducted Records of operating hours	Rule § 63.6655

**TABLE 3
APPLICABLE REQUIREMENTS OF 40 CFR 63 SUBPART ZZZZ
Emergency Engine for Reverse Osmosis Plant**

	Permit Requirements	Citation
Engine Description	Emergency Engine for Reverse Osmosis Plant	
CI or SI	CI	
Located in an Area Source or Major Source of HAPS	Area Source	
Use (Emergency, Non-Emergency, Black-Start, Limited-Use)	Emergency backup	
Engine Serial Number	75779-1041	
Engine Manufacturer	Cummins	
Engine Model	Model 2000DQKAB	
Engine Power (bhp)	2,682	
Compliance Date	May 3, 2013	Rule § 63.6595(a)
Emissions Limitations	None	
Operating Limitations	Change oil and filter every 500 hrs of operation or annually, whichever first Inspect air cleaner every 1,000 hrs of operation or annually, whichever first Inspect and replace (if necessary) hoses and belts every 500 hrs of operation or annually, whichever first Minimize idle & startup time to <30 min	Rule § 63.6600(d), Table 2d (4a, 4b , 4c)
Fuel Requirements	None	Rule § 63.6604
Performance Tests	None	Rule § 63.6610
Monitoring, installation, collection, operation, and maintenance requirements	Operate and maintain according to manufacturer's instructions or develop and follow GCP	Rule § 63.6625(e)
Initial Compliance	None	Rule § 63.6630
Continuous Compliance	Non-emergency use including maintenance checks and readiness testing limited to 100 hr/yr. Non-emergency use limited to 50 hr/yr.	Rule § 63.6640(f)
Notification Requirements	None	Rule § 63.6645
Reporting Requirements	None	Rule § 63.6650
Recordkeeping Requirements	Copies of each notification and report to comply with the subpart Records of occurrence and duration of each malfunction of operation Records of maintenance conducted Records of operating hours	Rule § 63.6655

EMISSIONS UNIT INFORMATION

Section [1]

Diesel Generator Units 1-5

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [1]

Diesel Generator Units 1-5

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Diesel Generator Units 1 through 5, each 2,000 kW

3. Emissions Unit Identification Number: **001, 002, 003, 004, and 005**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date: 1965	7. Emissions Unit Major Group SIC Code: 49
--	--------------------------------	---	--

8. Federal Program Applicability: (Check all that apply)
- Acid Rain Unit
- CAIR Unit

9. Package Unit:
Manufacturer: **GM EMD** Model Number: **567D4**

10. Generator Nameplate Rating: **2 MW**

11. Emissions Unit Comment:
This unit consists of five 2000 kW Diesel Engine Generators burning only diesel fuel.

EMISSIONS UNIT INFORMATION

Section [1]

Diesel Generator Units 1-5

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

EMISSIONS UNIT INFORMATION

Section [1]

Diesel Generator Units 1-5

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:		
2. Maximum Production Rate:		
3. Maximum Heat Input Rate:	105 million Btu/hr Total	
4. Maximum Incineration Rate:	pounds/hr	
	tons/day	
5. Requested Maximum Operating Schedule:	24 hours/day	7 days/week
	52 weeks/year	8,760 hours/year
6. Operating Capacity/Schedule Comment:	Each diesel generator has a rated heat input of 21 MMBtu/hr.	

EMISSIONS UNIT INFORMATION

Section [1]

Diesel Generator Units 1-5

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: MU-1, MU-2, MU-3, MU-4, MU-5		2. Emission Point Type Code: 3	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: MU-1 Diesel Generating Unit 1 MU-2 Diesel Generating Unit 2 MU-3 Diesel Generating Unit 3 MU-4 Diesel Generating Unit 4 MU-5 Diesel Generating Unit 5			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A			
5. Discharge Type Code: V	6. Stack Height: 16.5 feet	7. Exit Diameter: 1.83 feet	
8. Exit Temperature: 667 °F	9. Actual Volumetric Flow Rate: 19,208 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 592.8 North (km): 2943.7		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: The operating parameters for all five diesel units are identical and based on Title V permit application dated June, 2007.			

EMISSIONS UNIT INFORMATION

Section [1]

Diesel Generator Units 1-5

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Internal Combustion Engines; Electric Generation; Distillate Oil (Diesel)		
2. Source Classification Code (SCC): 2-01-001-02		3. SCC Units: Thousand gallons burned
4. Maximum Hourly Rate: 0.755	5. Maximum Annual Rate: 6,613.8	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.039	8. Maximum % Ash:	9. Million Btu per SCC Unit: 139
10. Segment Comment: Maximum Hourly Rate: (21 MMBtu/hr x 5 Engines) / 139 MMBtu/10³ gal = 0.755 x 10³ gal/hr Maximum Annual Rate: 0.755 x 10³ gal/hr x 8,760 hr/yr = 6,613.8 x 10³ gal/yr.		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

EMISSIONS UNIT INFORMATION

Section [1]

Diesel Generator Units 1-5

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO2			NS
NOx			EL
CO			NS
VOC			NS
PM			NS
PM10			NS

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Diesel Generator Units 1-5

Page [1] of [1]
Nitrogen Oxides - NOx

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NOx		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 498.75 lb/hour 2,184.5 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 4.75 lb/MMBtu Reference: NOx RACT Rule and Permit No. 099045-005-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Hourly: 4.75 lb/MMBtu x 21 MMBtu/hr x 5 Engines = 498.75 lb/hr Annual: 498.75 lb/hr x 8760 hr/yr x ton/2,000 lb = 2,184.5 TPY.			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [1]
 Diesel Generator Units 1-5

POLLUTANT DETAIL INFORMATION

Page [1] of [1]
 Nitrogen Oxides - NOx

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
 ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 4.75 lb/MMBtu	4. Equivalent Allowable Emissions: 499 lb/hour 2,185 tons/year
5. Method of Compliance: EPA Method 7E conducted annually	
6. Allowable Emissions Comment (Description of Operating Method): Rule 62-296.570, F.A.C. Applicable when burning liquid fuels for 400 or more hours per year.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [1]

Diesel Generator Units 1-5

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation _ of _

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: Annual testing using EPA Method 9	
5. Visible Emissions Comment: Rule 62-296.320(4)(b)1 and 4, F.A.C. General visible emission standard. VE testing not required for fuel oil firing < 400 hr/yr.	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [1]

Diesel Generator Units 1-5

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [1]

Diesel Generator Units 1-5

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>LW-EU1-11</u> <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>LW-EU1-12</u> <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [1]

Diesel Generator Units 1-5

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

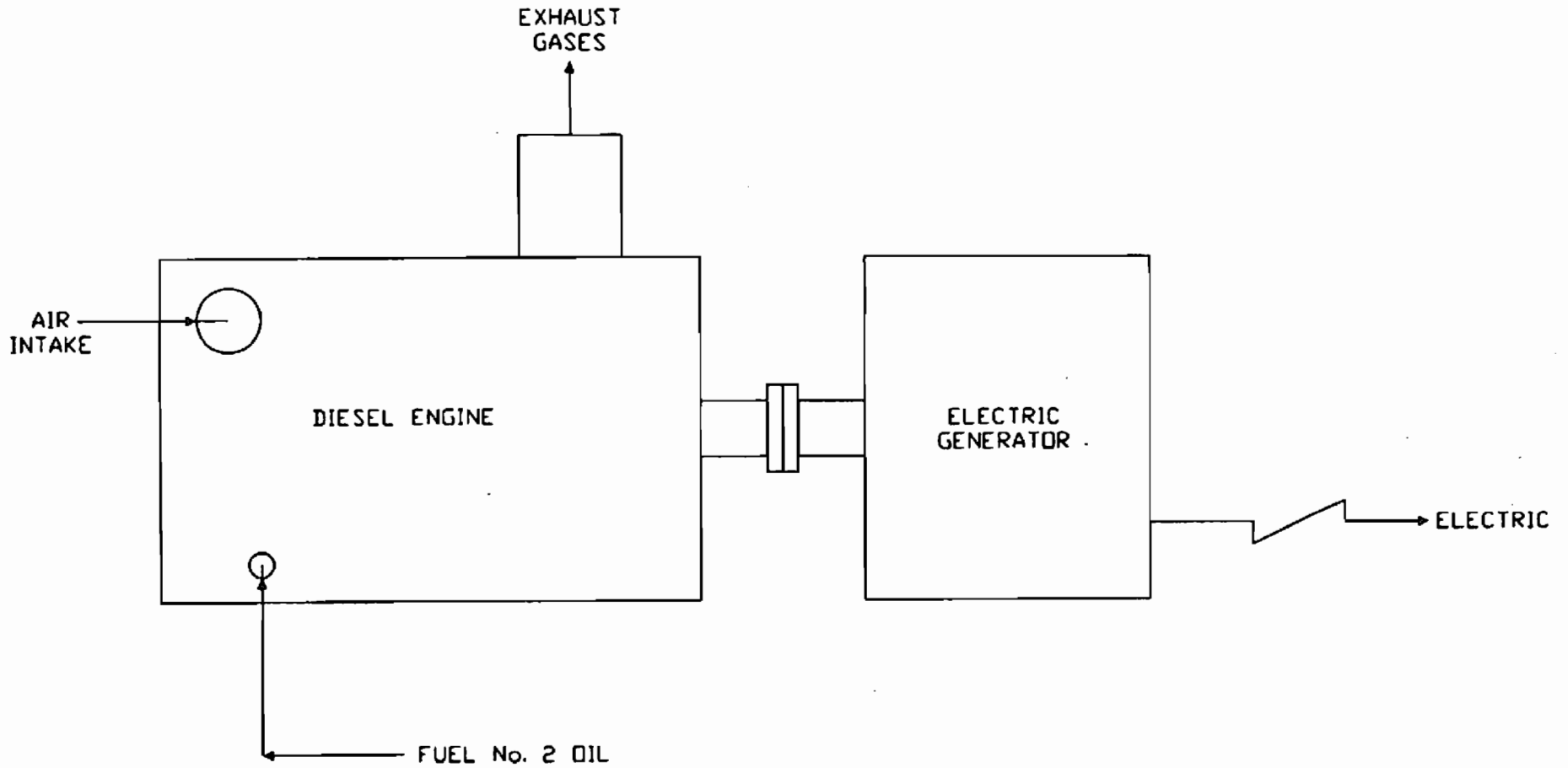
1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: <input checked="" type="checkbox"/> Attached, Document ID: <u>LW-EU1-IV1</u>
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements Comment

ATTACHMENT LW-EU1-I1
PROCESS FLOW DIAGRAM



Tom G. Smith Power Plant Title V Emissions - MU-1 through MU-5 Diesel Units 1 through 5

ATTACHMENT LW-EU1-I2
FUEL ANALYSIS OR SPECIFICATION

CITY OF LAKE WORTH
 ATTN: ACCOUNTS PAYABLE, 7 NORTH DIXIE HIGHWAY
 33460 LAKE WORTH FL
 United States



Reference P.O. # 162077
 Report no. 13056/2717 .01.L/12
 Report date 12/Apr/2012
 Object Submitted Quarterly Samples - Analysis
 Product No.5 RFO, No.2 DFO
 Locallon Lake Worth, Florida, City Power Plant

SAYBOLT L.P.
 2610 S. Federal Hwy
 Ft Lauderdale, FL 33316
 Phone: (954)524-8772
 Fax: (954)524-2377
 E-mail: Saybolt.FtLauderdale@scorlab.com
 Handled by: Margarita Colerusso

LABORATORY ANALYSIS

Saybolt Fort Lauderdale, FL have attended the loading of the a.m. vessel.
 The inspection was carried out according to the following reports:

Contents	Number of pages
Laboratory Analysis	One
Quality Certificates	Two
Terms, Conditions & Limitations (Page 1 Of 2)	One
Terms, Conditions & Limitations (Page 2 Of 2)	One
Remarks:	

This report consists of 5 pages.
 A copy of this report and all field documents and related correspondence will be retained for a period of 10 years, unless local law requires otherwise.

Handled by: Mr. A. Mejia

Issuer warrants that it has exercised due diligence and care with respect to the information and professional judgements embodied in this report. This report reflects only the findings at the time and place of the inspection and testing.

Issuer expressly disclaims any further indemnity of any kind. This report is not a guarantee or policy of insurance with respect to the goods or the contractual performance of any party. Any person relying upon this report should be aware that issuer's activities are carried out under their general terms and conditions.

All Saybolt measurement devices and methods used for quantity and quality determination meet the pertinent requirements of 40 CFR 98.3 et. seq. (Greenhouse Gas Mandatory Reporting Rule)

All manual gauges, temp. and samples in accordance with API MPMS Chapt. 3.1A 7, & 1 and 8.2.

Vol.corr. for temp. based on ASTM D1250 or terminal/customer supplied tables, for which Saybolt can assume no responsibility.

Printed: 12/Apr/2012

SAIL_CNT0_V1.8.100_0cc1311

CITY OF LAKE WORTH
 ATTN: ACCOUNTS PAYABLE, 7 NORTH DIXIE HIGHWAY
 33460 LAKE WORTH FL
 United States



FAST TO THE POINT.
 SAYBOLT LP
 2610 S. Federal Hwy
 Ft Lauderdale, Florida
 33316
 Phone: (954)524-8772
 Fax: (954)524-2377
 E-mail: Saybolt.flauderdale@corelab.com
 Handled by: Armando Mejia

Reference PO No. 16027
 Report no. 13056/2717 .01.L/12
 Report date 12/Apr/2012
 Object Submitted Quarterly Samples - Analysis
 Product No.2 DFO
 Location Lake Worth, Florida, City Power Plant
 B/L Date

CERTIFICATE OF ANALYSIS

Sample submitted as No.2 DFO
 Received Submitted by City of Lake Worth
 Marked **Mu DAY TANK**
 Date of sampling 09/Apr/2012
 Testing completed 12/Apr/2012 Time
 Sealed n/a
 Lab number 627

Test	Analyte	Unit	Method	Specification	Result	
					Prefix	Figure
API gravity at 60 °F	API gravity	°API	ASTM D 4052	Report		35.8
Gravity Specific	Gravity		ASTM D 4052	Report		0.8460
Sulfur content	Sulfur	wt%	ASTM D 4294	Report		0.0138
Ash	Ash	wt%	ASTM D 482	Report		0.001
Heat of Combustion	Heat of Combustion	BTU/lb	ASTM D 4868	Report		19615
Heat of Combustion	Heat of Combustion	BTU/gal	ASTM D 4868	Report		138404
Heat of Combustion	Heat of Combustion	BTU/BBL	ASTM D 4868	Report		5812968

Precision parameters apply in the evaluation of the test results specified above. Please also refer to ASTM D3244 (except for analysis of RFG), IP367 and appendix E of IP standard methods for analysis and testing with respect to the utilization of test data to determine conformance with specifications.

This report is issued in accordance with the General Terms and Conditions of Saybolt Fort Lauderdale, FL and the recipient is deemed to have full knowledge thereof.

Remarks

Armando Mejia
 Armando Mejia

CITY OF LAKE WORTH
 ATTN: ACCOUNTS PAYABLE, 7 NORTH DIXIE HIGHWAY
 33460 LAKE WORTH FL



FAST TO THE POINT.
 SAYBOLT LP
 2810 S. Federal Hwy
 Ft Lauderdale, Florida
 33316
 Phone: (954)524-8772
 Fax: (954)524-2377
 E-mail: Saybolt.flauderdale@corelab.com
 Handled by: Armando Mejia

Reference PO No. 16027
 Report no. 13056/2717 .01.L/12
 Report date 12/Apr/2012
 Object Submitted Quarterly Samples - Analysis
 Product No.5 RFO
 Location Lake Worth, Florida, City Power Plant
 B/L Date

CERTIFICATE OF ANALYSIS

Sample submitted as No.5 RFO
 Received Submitted by City of Lake Worth
 Marked **S3 HEAT SET**
 Date of sampling 09/Apr/2012
 Testing completed 12/Apr/2012 Time
 Sealed n/a
 Lab number 628

Test	Analyte	Unit	Method	Specification	Result	
					Prefix	Figure
API gravity at 60 °F	API gravity	°API	ASTM D 4052	Report		17.2
Gravity Specific	Gravity		ASTM D 4052	Report		0.9514
Sulfur content	Sulfur	wt%	ASTM D 4294	Report		1.53
Ash	Ash	wt%	ASTM D 482	Report		0.03
Heat of Combustion	Heat of Combustion	BTU/lb	ASTM D 4868	Report		18669
Heat of Combustion	Heat of Combustion	BTU/gal	ASTM D 4868	Report		148135
Heat of Combustion	Heat of Combustion	BTU/BBL	ASTM D 4868	Report		6221670

Precision parameters apply in the evaluation of the test results specified above. Please also refer to ASTM D3244 (except for analysis of RFG), IP367 and appendix E of IP standard methods for analysis and testing with respect to the utilization of test data to determine conformance with specifications.

This report is issued in accordance with the General Terms and Conditions of Saybolt Fort Lauderdale, FL and the recipient is deemed to have full knowledge thereof.

Armando Mejia
 Armando Mejia

CITY OF LAKE WORTH
ATTN: ACCOUNTS PAYABLE, 7 NORTH DIXIE HIGHWAY
33460 LAKE WORTH FL
United States



Reference P.O. # 162077
Report no. 13056/2717 .01.L/12
Report date 12/Apr/2012
Object Submitted Quarterly Samples - Analysis
Product No.5 RFO, No.2 DFO
Location Lake Worth, Florida, City Power Plant
BL Date

Terms, Conditions & Limitations (Page 1 Of 2)

1. **ACCEPTANCE.** SAYBOLT WESTERN HEMISPHERE, (hereinafter referred to as "Saybolt") offers and will accept orders for services only under Saybolt's General Terms, Conditions and Limitations (the "Terms"). Saybolt performs its services for only one customer unless Saybolt is expressly notified in writing prior to performing the services that such services are for the benefit and account of more than one party and each such party has received a copy of these Terms (each such party, collectively and individually, being hereinafter referred to as "Customer"), but Saybolt may rely completely on the instructions received from the first nominating Customer without consultation with any other Customer and may use its own discretion in resolving conflicts, discrepancies and/or ambiguities in or among Customer communications with Saybolt. These Terms replace and supercede any terms and conditions previously used by Saybolt and/or Customer to the extent of overlap, duplication and/or conflict therebetween. There may be other documents between Customer and Saybolt dealing with commercial issues such as pricing and invoicing, for example, but in the absence of such other documents, Saybolt's standard commercial terms are payment in full without setoff or discount within fifteen (15) days of the date of Saybolt's invoice, with interest on any amounts due but unpaid to Saybolt accruing until payment thereof at the lesser of (i) the highest lawful rate of interest permitted by applicable law or (ii) one percent (1%) per month. If unpaid amounts are collected through a collection agent, legal proceedings or by an attorney, Customer shall pay all related administrative charges, costs, attorneys' fees, and agents' fees associated with such collection procedures or efforts.
2. **CUSTOMER RESPONSIBILITY.** Customer shall at all times be responsible for the complete care, custody, and control of its premises where the services are or will be performed (the "Site") and shall provide a safe environment for Saybolt's employees and representatives to perform Saybolt services.
3. **NO GUARANTEES.** Saybolt expressly advises that it is neither an insurer nor guarantor of the quality or quantity of any inspected or analyzed product and disclaims any liability in such capacity.
4. **HOLD HARMLESS.** Customer releases and shall save, indemnify, defend and hold Saybolt, its employees, officers, directors, agents affiliates, subsidiaries franchisees, intermediaries, and each parent of Saybolt (Saybolt and each of said employees, officers, directors, agents, affiliates, subsidiaries, and each parent of Saybolt being herein called an "Indemnified Person") harmless from and against any and all liabilities, losses or damages, claims, demands, causes of action, suits and associated expenses (including, but not limited to all court costs, expert witness fees, investigative expenses and attorneys' fees (the "Litigation Expenses"), and awards arising in favor of Customer or any third party as a result of, and/or in any way occurring, incident to, arising out of, or in connection with the performance of services by Saybolt pursuant to this Agreement and/or the transportation, handling, or disposal of Customer's property (including samples): (i) injury, disease, or death to persons, (ii) damage to, loss of, or loss of use of property (including pollution damage to any surface or water, or damage to any storage tank, vessel or other Site), and/or (iii) financial loss of every kind or character, and (iv) delay or failure to perform the services due to causes beyond Saybolt's control.
5. **EXTENT OF INDEMNITY.** The indemnities in these Terms shall not apply to any of the foregoing losses, costs, damages, or injuries caused solely by the gross negligence or willful misconduct of Saybolt or its employees. Further, this indemnity shall specifically apply to losses, claims, damages, liabilities, awards, demands, Litigation Expenses, suits or causes of action of every kind and character arising out of or in connection with the negligence of or breach of contract by any Indemnified Person, whether actual or alleged, in the performance of services under this Agreement. The foregoing indemnities will be in addition to any liability that the Customer might otherwise have in Saybolt and the other Indemnified Persons. To the extent necessary under applicable law, Customer agrees that its indemnity obligation will be sufficiently supported by available liability insurance coverage to be furnished by Customer.
6. **NO CONSEQUENTIAL DAMAGES.** In no event shall Saybolt be liable to Customer for indirect, punitive, special, incidental, or consequential damages (including, without limitation, loss of profit or business interruption). Litigation Expenses or other fees (including without limitation, attorneys' fees, court costs, and/or pre- or post-judgment interest), or any other expenses or costs incurred by Customer or any other party in any litigation against or involving Saybolt or any Indemnified Person in connection with this Agreement or any service provided under this Agreement even if Customer is the prevailing party.

All Saybolt measurement devices and methods used for quantity and quality determination meet the pertinent requirements of 40 CFR 98.3 et. seq. (Greenhouse Gas Mandatory Reporting Rule)

Printed: 12/Apr/2012

SAIL_TCW1_V1.2.000_May0906

CITY OF LAKE WORTH
ATTN: ACCOUNTS PAYABLE, 7 NORTH DIXIE HIGHWAY
33460 LAKE WORTH FL
United States



Reference P.O. # 162077
Report no. 13056/2717 .01.L/12
Report date 12/Apr/2012
Object Submitted Quarterly Samples - Analysis
Product No.6 RFO, No.2 DFO
Location Lake Worth, Florida, City Power Plant
B/L Date

Terms, Conditions & Limitations (Page 2 Of 2)

7. **LIMITATION OF LIABILITY.** All claims must be made in writing within 45 days after delivery of the Saybolt report regarding the work/services or such claim shall be deemed as irrevocably waived. Saybolt's liability under this Agreement or in connection with any service hereunder will not exceed the amount equal to ten times the charges payable for the services which are the subject matter of the alleged liability or the amount of USD 20,000, whichever is less. This remedy shall be the sole and exclusive remedy against Saybolt arising out of its work. Customer acknowledges that from time to time circumstances may arise under which Saybolt may need to engage the services of third parties or purchase goods made by third parties in connection with Saybolt's services; under no circumstances shall Saybolt be held liable for any such services or goods and accepts no responsibility for analysis result produced in laboratories operated by third parties, regardless of whether Saybolt witnessed such analysis.

8. **NO THIRD-PARTY BENEFICIARIES; NO RIGHT OF RELIANCE.** Saybolt shall have no responsibility or liability for Customer's or any third party's use of or reliance on the data, information, or reports furnished by Saybolt. Customer is securing services hereunder for his own account, and not as an agent or broker, or in any other representative capacity, for any other person or entity. It is agreed and acknowledged that there are no third party beneficiaries to this Agreement, and that no third party may rely on such data, information, or reports, except with the express prior written consent of Saybolt. Customer represents, warrants, and agrees that said data, information, and reports are not requested, nor shall be used or relied upon, in connection with or as part of, the securing, amendment, renewal, or extension of any loan from any financial institution or other lender, or the certification to or contracting with, directly or indirectly, any governmental agency or department. The original written report carrying the signature of the authorized representative of Saybolt serves as the only and exclusive proof of the content of any information provided by Saybolt to Customer, regardless of whether such information is also supplied by other means (such as electronically).

9. **REPORTING.** Any report, certificate or statement submitted to Customer other than in written form bearing the signature of the authorized representative of Saybolt shall be deemed to have been issued at the request of and for the risk of Customer, and Saybolt shall not be responsible and/or liable for any deviation between information in such report, certificate or statement and the information in the original written report signed by such representative.

10. **LEGAL CONSTRUCTION, INTERPRETATION AND VENUE.** This Agreement shall be governed by and interpreted in accordance with the laws of the State of Texas.

11. **AMENDMENT.** No amendment of or deviation from, and no waiver of, the terms set forth herein shall bind Saybolt unless in writing and signed by a duly authorized officer or managing director of Saybolt.

12. **LANGUAGE.** These conditions are originally drawn up in the English language and the ruling language is English.

13. **REGISTRATION.** Above mentioned conditions were lodged at Harris County, Texas, U.S.A. on April 2004.

All Saybolt measurement devices and methods used for quantity and quality determination meet the pertinent requirements of 40 CFR 98.3 et. seq. (Greenhouse Gas Mandatory Reporting Rule)

Printed: 12/Apr/2012

SAIL_TCW2_V1.2.000_May0906

ATTACHMENT LW-EU1-IV1
IDENTIFICATION OF APPLICABLE REQUIREMENTS

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 Renewal
FINAL Permit No. 0990045-005-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: 850/921-9533

Compliance Authority:

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

Telephone: 561/840-4500
Fax: 561/355-2442

Table of Contents

Section	Page Number
Placard Page	1
I. Facility Information	2
A. Facility Description.	
B. Summary of Emissions Unit ID No(s). and Brief Description(s).	
C. Relevant Documents.	
II. Facility-wide Conditions	4
III. Emissions Unit(s) and Conditions	
A. Emissions Units 001 through 005, Diesel Engine Generators 1 - 5.....	7
B. Reserved.....	8
C. Emissions Unit 009, Fossil Fuel Steam Generating Unit, S-3	9
D. Emissions Unit 006, Gas Turbine # 1, GT-1	
Emissions Unit 011, Combined Cycle Unit, GT-2/S-5	12
E. Common Conditions, Emissions Units 001 through 011	15
IV. Acid Rain Part	
A. Acid Rain, Phase II	22



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

Permittee:
City of Lake Worth Utilities
1900 2nd Avenue North
Lake Worth, FL 33461

FINAL Permit No. 0990045-005-AV
Facility ID No. 0990045
SIC Nos.: 49, 4931
Project: Title V Air Operation Permit Renewal

The purpose of this permit is to renew the Title V Air Operation Permit for the operation of the Tom G. Smith Power Plant and the Lake Worth Water Treatment Plant. This facility is located at 117 College Street, Lake Worth, Florida 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 CP-1, Compliance Plan

Acid Rain Part Application

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

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

Appendix TV-6, Title V Conditions (version dated 6/23/06)

Appendix SS-1, Stack Sampling Facilities (version dated 10/07/96)

Table 297.310-1, Calibration Schedule (version dated 10/07/96)

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, 2008

Renewal Application Due Date: July 4, 2012

Expiration Date: December 31, 2012

Joseph Kahn, Director
Division of Air Resource Management

JK/tlv/aal/dlr

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

Facility ID No. 0990045

Page 2 of 23

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; one Fossil Fuel Steam Generating Unit (S-3); one simple cycle Gas Turbine # 1, (GT-1); and one Combined Cycle Gas Turbine Unit, (GT-2/S-5). Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

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

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, 2007, this facility is *not* a major source of hazardous air pollutants (HAP).

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.
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
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:

Application (hard copy) for a Title V Air Operation Permit Renewal received on July 5, 2007.

DRAFT/PROPOSED Title V Air Operation Permit Renewal clerked on October 17, 2007.

Public Notice published on October 22, 2007.

Notification to U.S. EPA Region 4 of Publication of Public Notice dated November 3, 2007.

Section II. Facility-Wide Conditions.**The following conditions apply facility-wide:**

1. Appendix TV-6, Title V Conditions, is a part of this permit.
{Permitting note: Appendix TV-6, 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. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to:

RMP Reporting Center
Post Office Box 1515
Lanham-Seabrook, MD 20703-1515
Telephone: 301/429-5018
 - and,
 - b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.
[40 CFR 68]
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. **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.

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

Facility ID No. 0990045

Page 5 of 23

- 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.]

8. **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]

9. 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.]

10. **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-6, Title V Conditions).}

11. **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
Post Office Box 29
West Palm Beach, Florida 33401
Phone: 561/840-4500

Department of Environmental Protection
Southeast District Office, Air Section
Post Office Box 15425
West Palm Beach, Florida 33416
Phone: 561/681-6600

12. 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

13. 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 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.]

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:
- The number of hours each emissions unit operates every year; and
 - 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.7**, **E.8**, **E.9**, **E.10**, **E.11** and **E.18**, contained in **Subsection E. Common Conditions**.

City of Lake Worth Utilities

FINAL Permit No. 0990045-005-AV

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

Facility ID No. 0990045

Page 8 of 23

Subsection B. Reserved. Formerly Addressed Emissions Unit 007 (S-1). Retired August 18, 2005.

Subsection C. This section addresses the following emissions unit.

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
-----	--

{Permitting note(s): This emissions unit is 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. The permittee reported it operates the following continuous monitors for Unit S-3: NOx, CO₂, and visible emissions. Emissions Unit 010 also known as S-4 was retired from service on August 18, 2005.}

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
		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. 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.]
- 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. NOx RACT. Emissions of nitrogen oxides (NOx) 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 fuel sulfur limitation of specific condition C.8 of this permit:
- Sample the as-fired fuel oil each day fuel oil is fired.
 - 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-

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

Facility ID No. 0990045

Page 11 of 23

95 (or latest editions) to analyze a representative sample of the composite 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 a CEMS for emissions unit 009. See specific condition 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. NOx CEMS Required - Unit 3 (S-3, Emissions Unit 009).** For emissions unit 009, compliance with the NOx 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 NOx 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.16.** 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.**

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., NO_x 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
		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.]

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.** NOx RACT. Emissions of nitrogen oxides (NOx) 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:
- Sample the as-fired fuel oil each day fuel oil is fired.
 - 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 composite as-fired fuel oil. Each composite sample shall also be analyzed for heating value.
 - 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.** NOx Testing. Compliance with the NOx 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 - NOx 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 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**.

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

Facility ID No. 0990045

Page 15 of 23

Subsection E. Common Conditions.

E.U. ID No.	Brief Description
001 to 005	Five 2000 kW diesel engine generators
009	Fossil Fuel Steam Generating Unit 3 (S-3)
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 emission unit 009)** 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.

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

Facility ID No. 0990045

Page 16 of 23

- (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.

1. 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.
2. 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. (This condition is applicable only to emissions unit 009)**
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. (This condition is applicable only to emissions units 006, 009, and 011.)**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 006 and 011.) Visible Emissions - Turbines**. The test method for visible emissions for emissions units 006 (GT-1) and 011 (GT-2/S-5) 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 unit 009) Visible Emissions - Boilers.** The test method for visible emissions for emissions unit 009 (S-3) 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 unit 009) 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.]

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

Facility ID No. 0990045

Page 20 of 23

- 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 unit 009) 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.

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

Facility ID No. 0990045

Page 21 of 23

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.
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.]

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

Facility ID No. 0990045

Page 22 of 23

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.

E.U. ID No.	Brief Description
009	Fossil Fuel Steam Generator S-3

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 09/25/07.

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

2. Sulfur dioxide (SO₂) allowance allocations for each Acid Rain unit are as follows:

E.U. ID No.	EPA ID	Year	2008	2009	2010	2011	2012
009	S-3	Table 2, 40CFR73	9*	9*	11*	11*	11*

* 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.]

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

Facility ID No. 0990045

Page 23 of 23

Subsection B. This subsection addresses the Retired Unit Exemptions under Acid Rain, Phase II.

The emissions unit listed below is regulated as *permanently retired units* under Phase II of the Federal Acid Rain Program.

E.U. ID No.	Description
010	Fossil Fuel Fired Steam Generator S-4 (Permanently Retired)

- The "Retired Unit Exemption" form submitted for this facility constitutes a supplement to the Acid Rain Part application pursuant to 40 CFR 72.8 and is a part of this permit. The owners and operators of these acid rain units shall comply with the standard requirements and special provisions set forth in DEP Form No. 62-210.900(1)(a)3., dated April 16, 2001, and signed by the designated representative on June 29, 2007. This units are subject to the following: 40 CFR 72.1, which requires the unit to have an Acid Rain Part as part of its Title V permit; 40 CFR 72.2, which provides associated definitions; 40 CFR 72.3, which provides measurements, abbreviations, and acronyms; 40 CFR 72.4, which provides the federal authority of the Administrator; 40 CFR 72.5, which provides the authority of the states; 40 CFR 72.6, which makes the boiler a Phase II unit; 40 CFR 72.10, which gives the public access to information about this unit; and 40 CFR 72.13, which incorporates certain ASTM methods into 40 CFR Part 72. [Chapter 62-213, F.A.C. and Rule 62-214.340, F.A.C.]

- Sulfur dioxide (SO₂) allowance allocations for the permanently retired Acid Rain units are as follows:

E.U. ID No.	EPA ID	Year	2008	2009	2010	2011	2012
010	S-4	Table 2, 40CFR73	80*	80*	80*	80*	80*

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

- 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.

- No permit revision shall be required for increases 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 62-213.440(3), F.A.C.

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

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

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

- The designated representative of these acid rain units applied for an exemption from the requirements of the Federal Acid Rain Program by submitting a completed and signed "Retired Unit Exemption" form (DEP Form No. 62-210.900(1)(a)3., F.A.C., attached) to the Department. The date of permanent retirement was January 1, 2002. [Rule 62-214.340(2), F.A.C.; and, 40 CFR 72.8.]

- 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 CP-1, Compliance Plan

Background

This facility had a potential noncompliance issue identified at the time of its Title V air Operation permit renewal application (see below). This issue was reported by the Palm Beach County Health Departments' compliance personnel.

The potential noncompliance issue relates to the lack of permanent stack sampling platforms on some of this power generation facility's emissions units. Pursuant to Rule 62-297.310(6)(a), F.A.C., permanent stack sampling platforms are required at this facility to conduct annual compliance testing. In this case, annual testing for NOx emissions is required.

During the latest facility compliance inspection, inspection personnel noticed that permanent stack sampling facilities were not present on some of the emission units. There are no permanent stack sampling platforms on the following emissions units: the Combined Cycle Combustion Turbine (E.U. ID No. 11), the Diesel Generators (E.U. ID No. 001 to 005), and the Simple Cycle Combustion Turbine (E.U. ID No. U006). The Diesel Generators, which are peaking units, have historically rarely needed to have annual NOx emissions tests conducted because they have been operated less than 400 hours per year. Likewise the Simple Cycle Gas Combustion Turbine (E.U. ID No. 006) has predominately operated at 400 hours or less per year thus not requiring NOx emissions testing. The Combined Cycle Combustion Turbine (E.U. ID No. 011) has usually operated more than 400 hours per year and thus has required annual NOx emissions testing.

The diesel generators (E.U. ID No. 001 to E.U. ID No. 005) have been in operation since January of 1990. Both of the cited combustion turbines (E.U. ID No. 006 and E.U. ID No. 011) have been in operation since the 1970s. These turbine units were initially constructed and permitted in the 1970s and are not subject to NSPS. **At the time of construction and permitting, permanent stack sampling facilities were not required by rule.** Due to subsequent RACT rules for NOx emissions, a limit of 0.5 lb/MMBtu was imposed on these units (E.U. ID No. 006 and E.U. ID No. 011) with annual testing required when annual operations exceed 400 hours.

In the past, when 400 annual operational hours have been surpassed for any of the emissions units not having permanent stack sampling platforms, a temporary sampling platform (cherry picker) has been used. During the many years of operation of these emission units not having permanent stack sampling facilities this potential non-compliance issue has never been raised before.

Compliance Plan [Rule 62-213.440(2), F.A.C]

The permittee shall use one of the two options below to remedy this situation:

1. Option-1: Install permanent stack sampling facilities (platforms) on the Diesel Generators (E.U. ID No. 001 to E.U. ID No. 005), the Simple Cycle Combustion Turbine (E.U. ID No. 006), and the Combined Cycle Combustion Turbine (E.U. ID No. 011) prior to September 2008 when the next annual NOx emissions tests, if required, are scheduled to be conducted; or
2. Option-2: Obtain an Alternative Sampling Procedure (ASP) from the Department allowing the current annual NOx emissions testing procedures to be continued. To obtain an ASP, sufficient justification must be supplied to the Department to show why the applicable rule requirement should be waved.

On or before February 29, 2008 the permittee shall submit the request for the ASP to the Department. Submit the request to the attention of Mr. Errin Pichard, P.E., Emissions Monitoring Section, Bureau of Air Monitoring and Mobile Sources, 2600 Blair Stone Road, Tallahassee Florida 32399-2400. A copy of the request shall be submitted to the Bureau of Air

City of Lake Worth Utilities

DRAFT Permit No. 0990045-005-AV

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

Facility ID No. 0990045

Regulation at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 and to the compliance authority.

The ASP request and all associated submittals must be certified by the responsible official [Rule 62-213.420(4), F.A.C]

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.

Brief Description of Emissions Units and/or Activities
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.
7. Diesel-fired generator
8. Diesel tank (6,000 gallons)
9. Mechanical draft cooling towers (2)

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	
	All of the above plus shutdown of the SO2 CEMS on EU 009, Fossil Fuel Steam Generating Unit (S-3)	0990045-004-AV	01/01/03	12/31/07	09/19/05

ID Number Changes (for tracking purposes):

From: Facility ID No.: 50PMB500045

To: Facility ID No.: 0990045.

* Units S-1, S-2 and S-4 are not in service. Operation of these units 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'.

E.U. ID No.	Brief Description of Emissions Units and/or Activity
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 ¹			
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
NO_x	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.

City of Lake Worth Utilities

FINAL Permit No. 0990045-005-AV

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

Facility ID No. 0990045

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 → UNIT RETIRED FROM SERVICE PERMENENTLY ON AUGUST 18, 2005

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

Facility ID No. 0990045

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 → UNIT RETIRED FROM SERVICE PERMENENTLY ON AUGUST 18, 2005							
			Allowable Emissions			Equivalent Emissions ¹			
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)	142 (EU 009)	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)	426 (EU 009)	Rule 62-210.700(3), F.A.C.	C.7

City of Lake Worth Utilities

FINAL Permit No. 0990045-005-AV

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

Facility ID No. 0990045

Table 1-1, Continued, Emissions Units 009

Pollutant	Fuel(s)	Hours per Year	Allowable Emissions			Equivalent Emissions ¹		Regulatory Citations	See Permit Condition(s)
			Standard(s)	lbs./hour	TPY	lbs./hour	TPY		
SO₂	Oil, Natural Gas	8760	2.25% S by weight, fuel oil			832 (EU 009) (oil)	1072 (EU 009) (oil)	Rule 62-213.440, F.A.C. & PPSC No. PA 74-05	C.8
NO_x	Oil, Natural Gas	8760	0.5 lb/mmBtu			163 (EU 009)	712 (EU 009)	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 ¹		Regulatory Citations	See Permit Condition(s)
			Standard(s)	lbs./hour	TPY	lbs./hour	TPY		
VE	Oil ^a , Natural Gas ^b	8760	20% Opacity					Rule 62-296.320(4)(b), F.A.C.	Section II, Condition 3
SO ₂ (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 _x (EU 006)	Oil ^a , Natural Gas ^b	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 _x (EU 011)	Oil ^a , Natural Gas ^b	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 ¹			
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:

¹ 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 ¹	Minimum Compliance Test Duration	CMS ²	See Permit Condition(s)
NO_x	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: UNIT RETIRED FROM SERVICE PERMENENTLY ON AUGUST 18, 2005

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 → UNIT RETIRED FROM SERVICE PERMENENTLY ON AUGUST 18, 2005					
Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date ¹	Minimum Compliance Test Duration	CMS ²	See Permit Condition(s)
SO ₂	Oil, Natural Gas	Fuel sampling & analysis	Sampling daily, analysis of monthly composite			No	C.8, C.11 & C.12
NO _x (EU 009)	Oil, Natural Gas	CEMS	Continuous			Yes	C.13 & C.16
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 ¹	Minimum Compliance Test Duration	CMS ²	See Permit Condition(s)
SO₂ (Emissions Unit 011 only)	Oil, Natural Gas	Fuel sampling & analysis	Sampling daily, analysis of monthly composite			No	D.4, D.6 & D.7
NO_x	Oil, Natural Gas	EPA Test Method 7E	Annual		3 hours	No	D.8 & D.9
VE	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 ¹	Minimum Compliance Test Duration ¹	CMS ²	See Permit Condition(s)
Capacity		Record keeping					F.2 & F.3

Notes for all tables:

¹ Frequency base date established for planning purposes only; see Rule 62-297.310, F.A.C.² CMS = continuous monitoring system

EMISSIONS UNIT INFORMATION

Section [2]

Gas Turbine No. 1 (GT-1)

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [2]

Gas Turbine No. 1 (GT-1)

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Gas Turbine No. 1 (GT-1)

3. Emissions Unit Identification Number: **006**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date: 1976	7. Emissions Unit Major Group SIC Code: 49
--	--------------------------------	---	--

8. Federal Program Applicability: (Check all that apply)

- Acid Rain Unit
- CAIR Unit

9. Package Unit:

Manufacturer: **Westinghouse**

Model Number:

10. Generator Nameplate Rating: **30 MW**

11. Emissions Unit Comment:

EU006 is a nominal 30 MW gas turbine firing only No. 2 fuel oil.

EMISSIONS UNIT INFORMATION

Section [2]

Gas Turbine No. 1 (GT-1)

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:
2. Control Device or Method Code:

EMISSIONS UNIT INFORMATION

Section [2]

Gas Turbine No. 1 (GT-1)

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:		
2. Maximum Production Rate:		
3. Maximum Heat Input Rate:	435 million Btu/hr	
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	24 hours/day 52 weeks/year	7 days/week 8,760 hours/year
6. Operating Capacity/Schedule Comment:		

EMISSIONS UNIT INFORMATION

Section [2]

Gas Turbine No. 1 (GT-1)

C. EMISSION POINT (STACK/VENT) INFORMATION**(Optional for unregulated emissions units.)****Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram: GT-1 Gas Turbine No. 1		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: 46 feet	7. Exit Diameter: 16 feet	
8. Exit Temperature: 837°F	9. Actual Volumetric Flow Rate: 983,593 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 592.8 North (km): 2943.7		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Stack parameters based on Title V permit application dated June, 2007.			

EMISSIONS UNIT INFORMATION

Section [2]

Gas Turbine No. 1 (GT-1)

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Internal Combustion Engines; Electric Generation; Distillate Oil; Turbine		
2. Source Classification Code (SCC): 2-01-001-01		3. SCC Units: 1,000 gallons
4. Maximum Hourly Rate: 3.13	5. Maximum Annual Rate: 27,419	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 139
10. Segment Comment: Based on heat input rate of 435 MMBtu/hr and 8,760 hr/yr of operation. Maximum Hourly rate = 435 MMBtu/hr/ 139 MMBtu/10³ gal = 3.13 x 10³ gal/hr Maximum Annual rate = 3.13 x 10³ gal/hr x 8,760 hr/yr =27,419 x 10³ gal/yr.		

Segment Description and Rate: Segment ____ of ____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

EMISSIONS UNIT INFORMATION

Section [2]

Gas Turbine No. 1 (GT-1)

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO2			NS
NOx			EL
CO			NS
VOC			NS
PM			NS
PM10			NS

EMISSIONS UNIT INFORMATION

Section [2]
Gas Turbine No. 1 (GT-1)

POLLUTANT DETAIL INFORMATION

Page [1] of [1]
Nitrogen Oxides - NOx

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NOx		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 391.5 lb/hour 1,715 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.9 lb/MMBtu Reference: NOx RACT Rule and Permit No 0990045-005-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Hourly: 0.9 lb/MMBtu x 435 MMBtu/hr = 391.5 lb/hr Annual: 391.5 lb/hr x 8,760 hr/yr x ton/2,000 lb = 1,714.8 TPY			
11. Potential, Fugitive, and Actual Emissions Comment: Potential emissions based on maximum heat input rate and 8,760 hr/yr.			

EMISSIONS UNIT INFORMATION

Section [2]
Gas Turbine No. 1 (GT-1)

POLLUTANT DETAIL INFORMATION

Page [1] of [1]
Nitrogen Oxides - NOx

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.9 lb/MMBtu	4. Equivalent Allowable Emissions: 391.5 lb/hour 1,715 tons/year
5. Method of Compliance: EPA Method 7E conducted annually	
6. Allowable Emissions Comment (Description of Operating Method): Rule 62-296.570, F.A.C. Required when burning No.2 fuel oil for 400 or more hours per year.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [2]

Gas Turbine No. 1 (GT-1)

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9 conducted annually	
5. Visible Emissions Comment: Rule 62-296.320(4)(b)1&4, F.A.C. General visible emission standard. VE test not required when burning fuel oil for less than 400 hrs/yr.	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [2]

Gas Turbine No. 1 (GT-1)

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [2]

Gas Turbine No. 1 (GT-1)

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>LW-EU2-11</u> <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>LW-EU1-12</u> <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [2]

Gas Turbine No. 1 (GT-1)

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

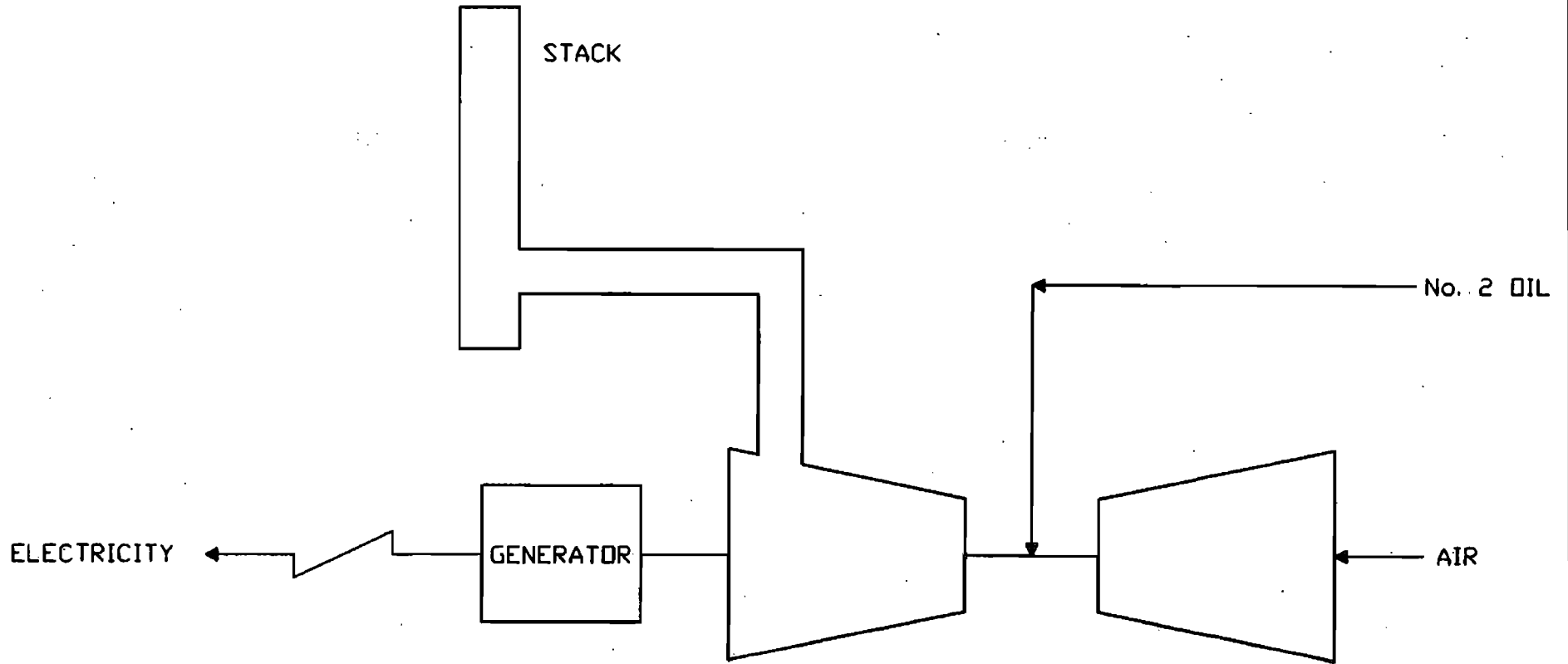
1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: <input checked="" type="checkbox"/> Attached, Document ID: <u>LW-EU1-IV1</u>
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements Comment

ATTACHMENT LW-EU2-11
PROCESS FLOW DIAGRAM



Tom G. Smith Power Plant Title V Emissions - GT-1

EMISSIONS UNIT INFORMATION

Section [3]

Fossil Fuel Steam Generating Unit 3

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [3]

Fossil Fuel Steam Generating Unit 3

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Fossil Fuel Steam Generating Unit 3 (S-3)

3. Emissions Unit Identification Number: **009**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date: 1966	7. Emissions Unit Major Group SIC Code: 49
--	--------------------------------	---	--

8. Federal Program Applicability: (Check all that apply)

- Acid Rain Unit
 CAIR Unit

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **26.5 MW**

11. Emissions Unit Comment:
Emission unit is a fossil fuel steam generating unit capable of burning any combination of natural gas and No. 6 Fuel oil during startup as well as normal operations.

EMISSIONS UNIT INFORMATION

Section [3]

Fossil Fuel Steam Generating Unit 3

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

EMISSIONS UNIT INFORMATION

Section [3]

Fossil Fuel Steam Generating Unit 3

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate:	325.1 million Btu/hr
4. Maximum Incineration Rate:	pounds/hr tons/day
5. Requested Maximum Operating Schedule:	24 hours/day 7 days/week 52 weeks/year 8,760 hours/year
6. Operating Capacity/Schedule Comment:	Maximum heat input rate permitted for both natural gas and No.6 fuel oil.

EMISSIONS UNIT INFORMATION

Section [3]

Fossil Fuel Steam Generating Unit 3

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: Fossil Fuel Steam Generating Unit #3 (S-3)		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A			
5. Discharge Type Code: V	6. Stack Height: 113 feet	7. Exit Diameter: 7 feet	
8. Exit Temperature: Gas: 293°F Oil: 298°F	9. Actual Volumetric Flow Rate: Gas: 118,719 acfm Oil: 121,338 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 592.8 North (km): 2943.7		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:			

EMISSIONS UNIT INFORMATION

Section [3]

Fossil Fuel Steam Generating Unit 3

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): External Combustion Boilers; Electric Generation; Natural-Gas Boilers >100 MMBtu/hr		
2. Source Classification Code (SCC): 1-01-006-01		3. SCC Units: Million Cubic Feet burned
4. Maximum Hourly Rate: 0.317	5. Maximum Annual Rate: 2,777	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1,027
10. Segment Comment: Based on heat input rate of 325.1 MMBtu/hr and 8,760 hr/yr of operation. Maximum Hourly rate = 325.1 MMBtu/hr / 1,027 MMBtu/MMcf = 0.317 MMcf/hr Maximum Annual rate = 0.317 MMcf/hr x 8,760 hr/yr = 2,776.9 MMcf/yr		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): External Combustion Boilers; Electric Generation; Residual Oil No. 6 - Normal Firing		
2. Source Classification Code (SCC): 1-01-004-01		3. SCC Units: 1,000 gallons burned
4. Maximum Hourly Rate: 2.22	5. Maximum Annual Rate: 19,447.2	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 2.25	8. Maximum % Ash:	9. Million Btu per SCC Unit: 146.6
10. Segment Comment: Based on heat input rate of 325.1 MMBtu/hr and 8,760 hr/yr of operation. Maximum Hourly rate = 325.1 MMBtu/hr / 146.6 MMBtu/10³ gal = 2.22 x 10³ gal/hr Maximum Annual rate = 2.22 x 10³ gal/hr x 8,760 hr/yr = 19,447.2 x 10³ gal/yr No.6 fuel oil sulfur content limited to 2.25% by weight.		

EMISSIONS UNIT INFORMATION

Section [3]

Fossil Fuel Steam Generating Unit 3

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO2			EL
NOx			EL
CO			NS
VOC			NS
PM			EL
PM10			NS

EMISSIONS UNIT INFORMATION

Section [3]
Fossil Fuel Steam Generating Unit 3

POLLUTANT DETAIL INFORMATION

Page [1] of [3]
Sulfur Dioxide – SO2

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: SO2		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 831.3 lb/hour 3,641.1 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 2.25% Sulfur oil Reference: Permit No. 0990045-005-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Hourly: 325.1 MMBtu/hr /146.6 MMBtu/10³ gal x 8.33 lb/gal x (2.25/100) x (64/32) = 831.3 lb/hr Annual: 831.3 lb/hr x 8,760 hr/yr x ton/2,000 lb = 3,641.1 TPY.			
11. Potential, Fugitive, and Actual Emissions Comment: Potential emissions based on No.6 fuel oil firing.			

EMISSIONS UNIT INFORMATION

Section [3]
Fossil Fuel Steam Generating Unit 3

POLLUTANT DETAIL INFORMATION

Page [1] of [3]
Sulfur Dioxide – SO₂

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 2.25% Sulfur	4. Equivalent Allowable Emissions: 831.3 lb/hour 3,641.1 tons/year
5. Method of Compliance: Fuel Sampling and Analysis. Sampling of as-fired fuel oil each day fuel oil is fired.	
6. Allowable Emissions Comment (Description of Operating Method): SO₂ emissions obtained from 40 CFR 75, Appendix D procedures may be used in lieu of stoichiometrically calculating emissions.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [3]
Fossil Fuel Steam Generating Unit 3

POLLUTANT DETAIL INFORMATION

Page [2] of [3]
Nitrogen Oxides – NOx

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NOx		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 163 lb/hour 712 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.5 lb/MMBtu Reference: NOx RACT Rule and Permit No 0990045-005-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Potential Hourly: 0.5 lb/MMBtu x 325.1 MMBtu/hr = 162.5 lb/hr Potential Annual: 162.5 lb/hr x 8,760hr/yr x ton/2,000 lb =711.8 TPY			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [3]

Fossil Fuel Steam Generating Unit 3

POLLUTANT DETAIL INFORMATION

Page [2] of [3]

Nitrogen Oxides – NOx

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS****Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.****Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.5 lb/MMBtu	4. Equivalent Allowable Emissions: 163 lb/hour 712 tons/year
5. Method of Compliance: CEMS 30-day rolling average	
6. Allowable Emissions Comment (Description of Operating Method): Rule 62-296.570, F.A.C.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [3]
Fossil Fuel Steam Generating Unit 3

POLLUTANT DETAIL INFORMATION

Page [3] of [3]
Total Particulate Matter – PM

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: PM		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 97.5 lb/hour 178 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.3 lb/MMBtu (Soot blowing) Reference: Permit No. 0990045-005-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: PM emissions limited to: Normal operation – 0.1 lb/MMBtu Soot blowing and load change – 0.3 lb/MMBtu Potential Hourly: 0.3 lb/MMBtu x 325.1 MMBtu/hr = 97.5 lb/hr Potential Annual: (0.3 lb/MMBtu x 325.1 MMBtu/hr x 3hr/24hr) + (0.1 lb/MMBtu x 325.1 MMBtu/hr x 21 hr/24 hr) x 8,760 hr/yr x ton/2,000 lb = 178 TPY			
11. Potential, Fugitive, and Actual Emissions Comment: Potential annual emissions based on soot blowing and load change operation for 3 hours in any 24-hour period.			

EMISSIONS UNIT INFORMATION

Section [3]
Fossil Fuel Steam Generating Unit 3

POLLUTANT DETAIL INFORMATION

Page [3] of [3]
Total Particulate Matter – PM

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.1 lb/MMBtu	4. Equivalent Allowable Emissions: 32.5 lb/hour 142.4 tons/year
5. Method of Compliance: Annual testing using EPA Methods 17, 5, 5B or 5F only if liquid fuels firing exceeds 400 hr/yr.	
6. Allowable Emissions Comment (Description of Operating Method): Rule 62-296.405(1)(b), F.A.C. Equivalent Hourly Emissions = 0.1 lb/MMBtu x 325.1 MMBtu/hr = 32.51 lb/hr. Equivalent Annual emissions = 32.51 lb/hr x 8,760 hr/yr x ton/2,000 lb = 142.4 TPY.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.3 lb/MMBtu	4. Equivalent Allowable Emissions: 97.5 lb/hour 53.4 tons/year
5. Method of Compliance: Annual testing using EPA Methods 17, 5, 5B or 5F only if liquid fuel-firing exceeds 400 hr/yr.	
6. Allowable Emissions Comment (Description of Operating Method): Rule 62-210.700(3), F.A.C. Allowable emissions for soot blowing and load changing operations. Equivalent Hourly Emissions = 0.3 lb/MMBtu x 325.1 MMBtu/hr = 97.53 lb/hr. Equivalent Annual emissions = 97.53 lb/hr x 3hrs/day x 365 days/yr x ton/2000 lb = 53.4 TPY.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [3]

Fossil Fuel Steam Generating Unit 3

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: VE	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: 40 % Maximum Period of Excess Opacity Allowed: 2 min/hour	
4. Method of Compliance: EPA Method 9 conducted annually.	
5. Visible Emissions Comment: Rule 62-296.405(1)(a). VE testing required only if liquid fuel-firing exceed 400 hr/yr.	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: VE	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 60 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: Four 6-min periods per 3 hours min/hour	
4. Method of Compliance: EPA Method 9 conducted annually.	
5. Visible Emissions Comment: Rule 62-210.700(3) VE testing required only if liquid fuel-firing exceed 400 hr/yr.	

EMISSIONS UNIT INFORMATION

Section [3]

Fossil Fuel Steam Generating Unit 3

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 3

1. Parameter Code: EM	2. Pollutant(s): NOx
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: TECO/Spectrum Systems Model Number: 42D Serial Number: 42D-48739-281	
5. Installation Date: 12 Dec 1994	6. Performance Specification Test Date: 20 Dec 1994
7. Continuous Monitor Comment: 40 CFR 75 and Rule 62-214, F.A.C. Based on 30-day rolling average, excluding periods of startup, shutdown, or malfunction as provided by Rule 62-210.700, F.A.C.	

Continuous Monitoring System: Continuous Monitor 2 of 3

1. Parameter Code: O2	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: TECO/Spectrum Systems Model Number: 42D Serial Number: 42D-48739-281	
5. Installation Date: 12 Dec 1994	6. Performance Specification Test Date: 20 Dec 1994
7. Continuous Monitor Comment: 40 CFR 75 and Rule 62-214, F.A.C.	

EMISSIONS UNIT INFORMATION

Section [3]

Fossil Fuel Steam Generating Unit 3

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Continuous Monitoring System: Continuous Monitor **3** of **3**

1. Parameter Code: VE	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: United Sciences/Spectrum Systems Model Number: 500C Serial Number: 0394853	
5. Installation Date: 12 Dec 1994	6. Performance Specification Test Date: 20 Dec 1994
7. Continuous Monitor Comment: Rule 62-214, F.A.C.	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [3]

Fossil Fuel Steam Generating Unit 3

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>LW-EU3-11</u> <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>LW-EU1-12</u> <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input checked="" type="checkbox"/> Attached, Document ID: <u>LW-EU3-16</u> Test Date(s)/Pollutant(s) Tested: <u>NOx RATA</u> _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [3]

Fossil Fuel Steam Generating Unit 3

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

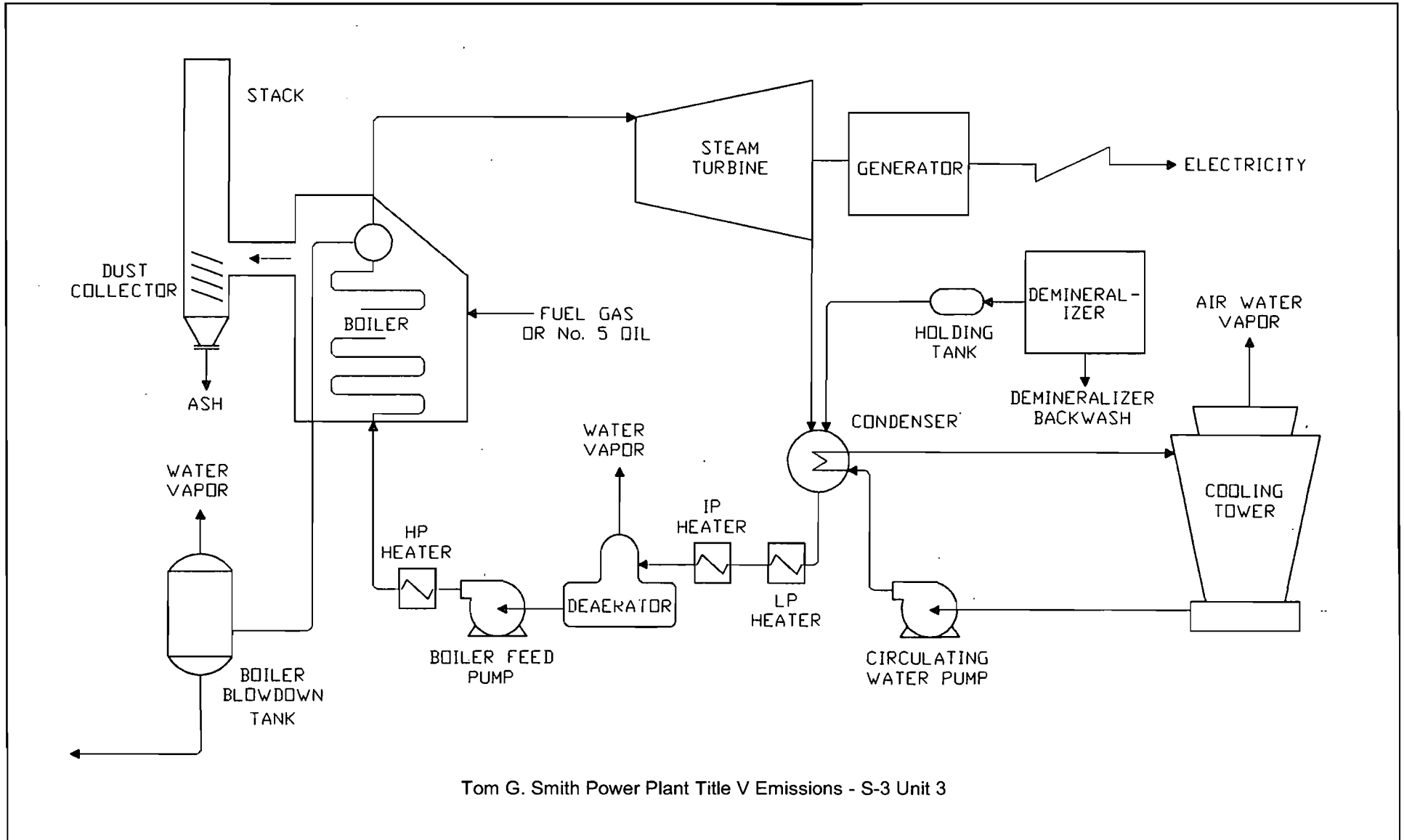
Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: <input checked="" type="checkbox"/> Attached, Document ID: <u>LW-EU1-IV1</u>
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements Comment

--

ATTACHMENT LW-EU3-I1
PROCESS FLOW DIAGRAM



Tom G. Smith Power Plant Title V Emissions - S-3 Unit 3

Attachment LW-EU3-11
Process Flow Diagram
Lake Worth Utilities - City of Lake Worth, Florida

Source: Golder, 2012.

Y:\Projects\2011\113-87730 CLWU\Final\Atts\EU3\LW-EU3-11.docx



ATTACHMENT LW-EU3-I6

COMPLIANCE DEMONSTRATION

(Full test report was previously submitted to FDEP)

Data Accuracy Assessment Report

Fossil-Fuel Steam Generating Unit S-3 (EU009)

**Annual Quality Assurance
Relative Accuracy Test Audit**

**Performance Specification 2
Utilizing EPA Reference Methods 3A, 7E, and 19**

City Of Lake Worth - Tom G. Smith Power Plant
Lake Worth, Florida

Date Conducted: November 17, 2011
Job Number: 111123

Prepared by:

Air Compliance

Testing, Inc.

PO Box 41156
Cleveland OH 44141-0156
Phone: (800) EPA-AIR1 (372-2471)

Report Date: December 15, 2011

**Superior Quality
Emission Testing.**

**Valid Results
Guaranteed.**

Air Compliance

Testing, Inc.

P.O. Box 41156 Cleveland, Ohio 44141
1-800-EPA-AIR1 www.aircomp.com
testing@aircomp.com

December 15, 2011

Mike Ridge
Env/Perf Spec
City Of Lake Worth - Tom G. Smith Power Plant
Utilities Administration, 1900 2nd Ave. North
Lake Worth, Florida 33461

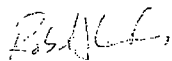
Dear Mike:

The following report provides the results of the compliance emission testing conducted on November 17, 2011. These results are a product of the application of the U.S. EPA Stationary Source Sampling Methods listed in 40 CFR Part 60, Appendix A, that were in effect at the time of this test in accordance with 40 CFR Part 75, Appendices A and B.

Please mail one copy of this report along with any other supportive process operating data collected during this test to your local EPA representative. You should also attach a cover letter (on company letterhead) stating the purpose and the outcome of this test. Additionally, you may address, preferably in a timetable format, any obligations or implications that might be necessary to achieve environmental compliance because of the result of this test.

Please do not hesitate to call if you have any questions or concerns about these test results. On behalf of Air Compliance Testing, I would also like to personally thank you for the opportunity to work with you on this testing project and would enjoy the opportunity to work with you again on any additional future testing projects.

Sincerely,



Robert J. Lisy, Jr.
Technical Manager

EMISSIONS UNIT INFORMATION

Section [4]

Combined Cycle Unit (GT-2/S-5)

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [4]

Combined Cycle Unit (GT-2/S-5)

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
Combined Cycle Unit (GT-2/S-5)

3. Emissions Unit Identification Number: **011**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date: 1978	7. Emissions Unit Major Group SIC Code: 49
--	--------------------------------	---	--

8. Federal Program Applicability: (Check all that apply)

Acid Rain Unit

CAIR Unit

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **29.5 MW**

11. Emissions Unit Comment:
Emission unit is a combined cycle unit consisting of a gas turbine and a heat recovery steam generator capable of burning any combination of natural gas and/or No. 2 fuel oil.

EMISSIONS UNIT INFORMATION

Section [4]

Combined Cycle Unit (GT-2/S-5)

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

EMISSIONS UNIT INFORMATION

Section [4]

Combined Cycle Unit (GT-2/S-5)

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:		
2. Maximum Production Rate:		
3. Maximum Heat Input Rate:	317.6 million Btu/hr	
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	24 hours/day 52 weeks/year	7 days/week 8,760 hours/year
6. Operating Capacity/Schedule Comment:	Maximum heat input rate is based on both Natural Gas and fuel oil firing.	

EMISSIONS UNIT INFORMATION

Section [4]

Combined Cycle Unit (GT-2/S-5)

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: CC1 Combined Cycle		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: 75 feet	7. Exit Diameter: 10 feet	
8. Exit Temperature: Oil: 404°F Gas: 406°F	9. Actual Volumetric Flow Rate: Oil: 412,466 acfm Gas: 429,223 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet.	
13. Emission Point UTM Coordinates... Zone: 17 East (km): 592.8 North (km): 2943.7		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: By-pass stack parameters: Stack Height = 49 feet Exit Dimensions = 12 feet 7 inches x 10 feet 6.5 inches Maximum Exit Temperature = 1,020 °F Maximum Actual Volumetric Flow Rate = 733,562 (gas) acfm Discharge Type = Vertical Stack and operating parameters based on Title V permit application dated July 2007.			

EMISSIONS UNIT INFORMATION

Section [4]

Combined Cycle Unit (GT-2/S-5)

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): Internal Combustion Engines; Electric Generation; Distillate Oil; Turbines		
2. Source Classification Code (SCC): 2-01-001-01		3. SCC Units: 1,000 gallons
4. Maximum Hourly Rate: 2.28	5. Maximum Annual Rate: 19,973	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.35	8. Maximum % Ash:	9. Million Btu per SCC Unit: 139
10. Segment Comment: Based on heat input rate of 317.6 MMBtu/hr and 8,760 hr/yr of operation. Maximum Hourly rate = 317.6 MMBtu/hr / 139 MMBtu/10³ gal = 2.28 x 10³ gal/hr Maximum Annual rate = 2.28 x 10³ gal/hr x 8,760 hr/yr = 19,973 x 10³ gal/yr		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): Internal Combustion Engines; Electric Generation; Natural Gas; Turbine		
2. Source Classification Code (SCC): 2-01-002-01		3. SCC Units: Million cubic feet burned
4. Maximum Hourly Rate: 0.31	5. Maximum Annual Rate: 2,715.6	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1,027
10. Segment Comment: Based on heat input rate of 317.6 MMBtu/hr and 8,760 hr/yr of operation. Maximum Hourly rate = 317.6 MMBtu/hr / 1,027 MMBtu/MMcf = 0.31 MMcf/hr Maximum Annual rate = 0.31 MMcf/hr x 8,760 hr/yr = 2,715.6 MMcf/yr.		

EMISSIONS UNIT INFORMATION

Section [4]

Combined Cycle Unit (GT-2/S-5)

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO2			EL
NOx			EL
CO			NS
VOC			NS
PM			NS
PM10			NS

EMISSIONS UNIT INFORMATION

Section [4]
 Combined Cycle Unit (GT-2/S-5)

POLLUTANT DETAIL INFORMATION

Page [1] of [2]
 Sulfur Dioxide - SO₂

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: SO₂		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 113.3 lb/hour 496.3 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.35% Sulfur oil Reference: Permit No. 0990045-005-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Hourly: 7.1 lb/gal x 2,280 gal/hr x 0.35% S x 2 lb SO₂/ 1 lb S = 113.3 lb/hr Annual: 113.3 lb/hr x 8,760 hr/yr x ton/2,000 lb = 496.3 TPY.			
11. Potential, Fugitive, and Actual Emissions Comment: Potential emissions based on No. 2 fuel oil firing. No. 2 fuel oil sulfur content limited to 0.35% by weight.			

EMISSIONS UNIT INFORMATION

Section [4]
 Combined Cycle Unit (GT-2/S-5)

POLLUTANT DETAIL INFORMATION

Page [1] of [2]
 Sulfur Dioxide - SO2

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
 ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.35% Sulfur oil	4. Equivalent Allowable Emissions: 113.3 lb/hour 496.3 tons/year
5. Method of Compliance: Fuel Sampling and Analysis	
6. Allowable Emissions Comment (Description of Operating Method): Fuel oil sulfur content limited to 0.35% by weight.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [4]
 Combined Cycle Unit (GT-2/S-5)

POLLUTANT DETAIL INFORMATION

Page [2] of [2]
 Nitrogen Oxides - NOx

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**
 (Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NOx		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 285.8 lb/hour 1,252 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.9 lb/MMBtu oil firing Reference: NOx RACT Rule and Permit No. 0990045-005-AV		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Hourly: 0.9 lb/MMBtu x 317.6 MMBtu/hr = 285.8 lb/hr Annual: 285.8 lb/hr x 8,760 hr/yr x ton/2,000 lb = 1,251.8 TPY			
11. Potential, Fugitive, and Actual Emissions Comment: Potential emissions based on No. 2 fuel oil firing.			

EMISSIONS UNIT INFORMATION

Section [4]
 Combined Cycle Unit (GT-2/S-5)

POLLUTANT DETAIL INFORMATION

Page [2] of [2]
 Nitrogen Oxides - NOx

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
 ALLOWABLE EMISSIONS**

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.9 lb/MMBtu	4. Equivalent Allowable Emissions: 285.8 lb/hour 1,252 tons/year
5. Method of Compliance: EPA Method 7E conducted annually.	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions for fuel oil firing. Rule 62-296.570, F.A.C. Required when burning liquid fuels for 400 or more hours per year.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.5 lb/MMBtu	4. Equivalent Allowable Emissions: 158.8 lb/hour 695.6 tons/year
5. Method of Compliance: None	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions for natural gas firing. Rule 62-296.570, F.A.C. Compliance testing not required for firing only natural gas.	

Allowable Emissions Allowable Emissions ____ of ____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

EMISSIONS UNIT INFORMATION

Section [4]

Combined Cycle Unit (GT-2/S-5)

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9 conducted annually	
5. Visible Emissions Comment: Rule 62-296.320(4)(b), F.A.C. General visible emission standard. VE test not required when firing only natural gas or oil for less than 400 hrs/yr.	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [4]

Combined Cycle Unit (GT-2/S-5)

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [4]

Combined Cycle Unit (GT-2/S-5)

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>LW-EU4-11</u> <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>LW-EU1-12</u> <input type="checkbox"/> Previously Submitted, Date _____
3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____
4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input checked="" type="checkbox"/> Attached, Document ID: <u>LW-EU4-16</u> Test Date(s)/Pollutant(s) Tested: <u>11/16/2011 – NOx, VE</u> <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [4]

Combined Cycle Unit (GT-2/S-5)

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

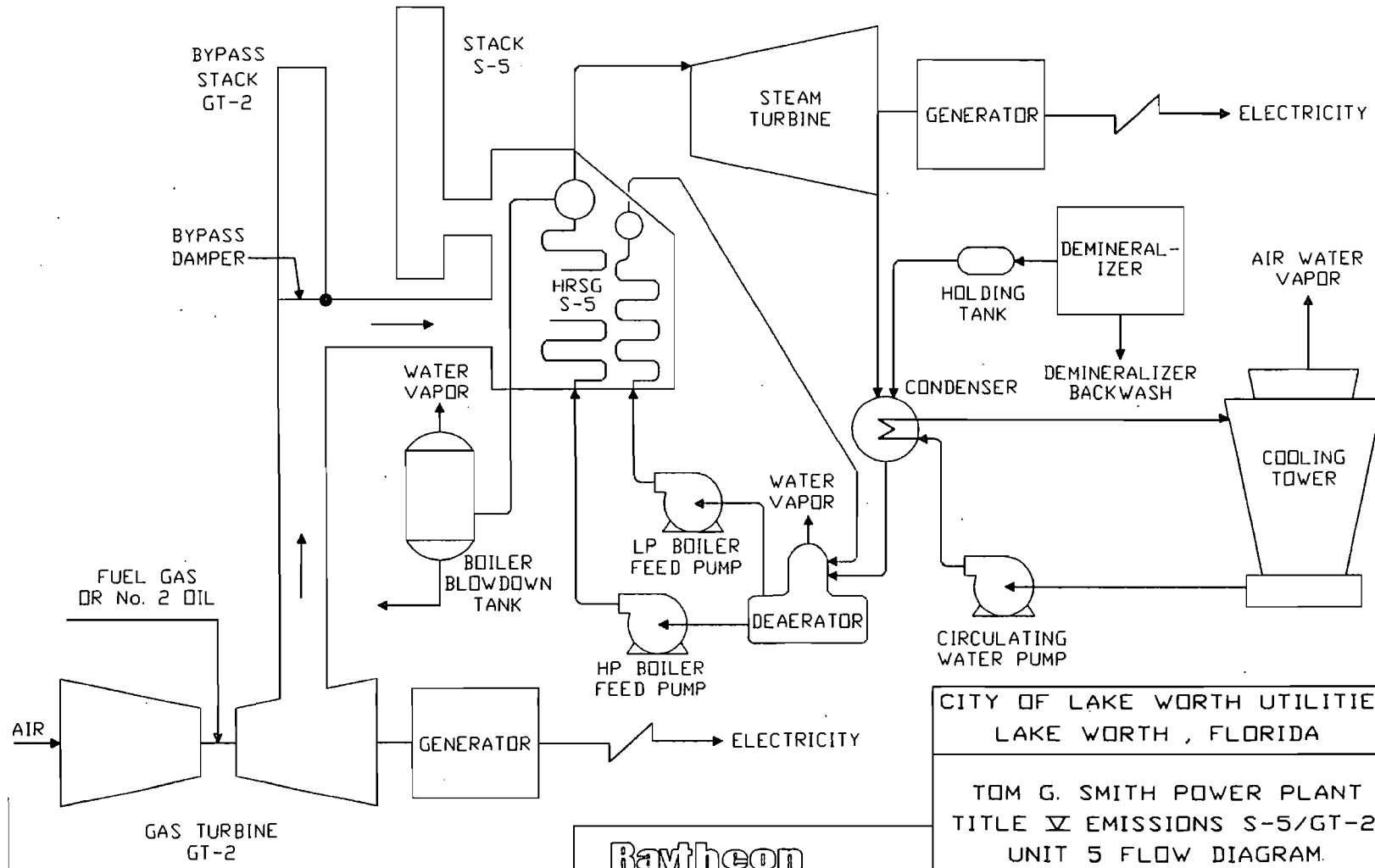
1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: <input checked="" type="checkbox"/> Attached, Document ID: <u>LW-EU1-IV1</u>
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements Comment

ATTACHMENT LW-EU4-I1
PROCESS FLOW DIAGRAM



CITY OF LAKE WORTH UTILITIES
LAKE WORTH, FLORIDA

TOM G. SMITH POWER PLANT
TITLE V EMISSIONS S-5/GT-2
UNIT 5 FLOW DIAGRAM.

FIGURE No. 5

Raytheon
Engineers & Constructors

Attachment LW-EU4-11
Process Flow Diagram
Lake Worth Utilities - City of Lake Worth, Florida

Source: Golder, 2012.

Y:\Projects\2011\113-87730 CLWU\Final\Atts\EU4\LW-EU4-11.docx



ATTACHMENT LW-EU4-I6
COMPLIANCE DEMONSTRATION

Compliance Stack Emission Test Report

Determination of Nitrogen Oxides and Visible Emissions

Combined Cycle Unit GT-2/S-5 (EU011)

EPA Methods 3A, 7E, 9, and 19

City of Lake Worth - Tom G. Smith Power Plant

Lake Worth, Florida

Date Conducted: November 16, 2011

Job Number: 111123

Prepared by:

Air Compliance

Testing, Inc.

PO Box 41156

Cleveland OH 44141-0156

Phone: (800) EPA-AIR1 (372-2471)

Report Date: December 14, 2011

**Superior Quality
Emission Testing.**

**Valid Results
Guaranteed.**



P.O. Box 41156 Cleveland, Ohio 44141
1-800-EPA-AIR1 www.aircomp.com
testing@aircomp.com

December 14, 2011

Mike Ridge
Env/Perf Spec
City of Lake Worth - Tom G. Smith Power Plant
Utilities Administration, 1900 2nd Ave. North
Lake Worth, Florida 33461

Dear Mike:

The following report provides the results of the compliance emission testing conducted on November 16, 2011. These results are a product of the application of the U.S. EPA Stationary Source Sampling Methods listed in 40 CFR Part 60 Appendix A that were in effect at the time of this test. To the best of my knowledge, this report has been checked for completeness, and the results presented are accurate, error-free, legible, and representative of the actual emissions measured during testing.

Please mail one copy of this report along with any other supportive process operating data collected during this test to your local EPA representative. You should also attach a cover letter (on company letterhead) stating the purpose and the outcome of this test. Additionally, you may address, preferably in a timetable format, any obligations or implications that might be necessary to achieve environmental compliance because of the result of this test.

Please do not hesitate to call if you have any questions or concerns about these test results. On behalf of Air Compliance Testing, I would also like to personally thank you for the opportunity to work with you on this testing project and would enjoy the opportunity to work with you again on any additional future testing projects.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Lisy, Jr.", is written over the printed name.

Robert J. Lisy, Jr.
Technical Manager