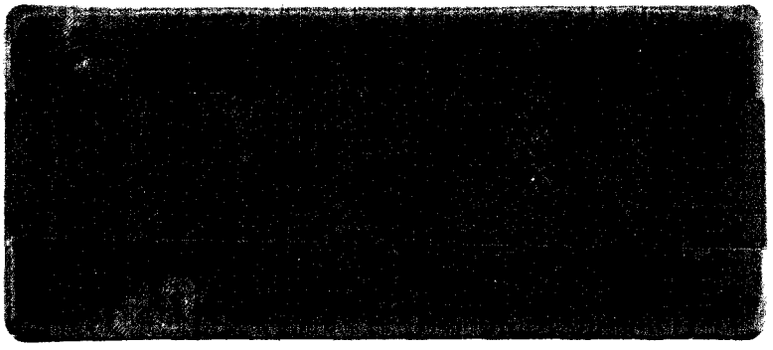

Golder Associates

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603

Golder Associates

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MAY 19 2003

BUREAU OF AIR REGULATION

May 16, 2003

0339569

Mr. A.A. Linero, Administrator
New Source Review Section
Division of Air Resources Management
Florida Department of Environmental Protection
Mail Station #5505
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Attention: Mr. Jeffery F. Koerner, P.E.

RE: DEP FILE NO. 099-0568-001-AC/PSD-FL-266
LAKE WORTH GENERATION, L.L.C., COMBINED CYCLE PROJECT
PERMIT AMENDMENT

Dear Jeff:

As previously discussed, the construction of the Project was suspended on September 30, 2002, due to the uncontrollable and unforeseen circumstances brought on by the ENRON and NEPCO bankruptcies and the developments in the energy sector. LWG is seeking an alternative for the Project, which would not change the emission limiting standards established for the original design of the project and would decrease potential emissions. The Project is being changed from a combined cycle project to a simple cycle project with a decrease in the hours of operation. As provided in the semi-annual progress reports, the components for simple cycle operation are close to construction completion.

It is anticipated that construction would resume in September 2003 and require about 9 months to a year for completion and testing. An expiration date of March 31, 2005, is being requested to accommodate all final compliance testing and preparation and submittal of the Title V permit application.

Your expeditious review and processing of this amendment will be appreciated. Please call if you have questions.

Sincerely,

GOLDER ASSOCIATES INC.

Kennard F. Kosky, P.E.
Principal

KFK/nav

cc: Mr. Derald Wildharber, Lake Worth Generation, L.L.C.
Mr. Brian Chatlosh, Lake Worth Generation, L.L.C.
Mr. Isadore Goldman, FDEP, Southeast District
Mr. James Stormer, Palm Beach County Health Department
Mr. Richard Zwolak, Golder Associates Inc., Tampa
G. Little, EPA

P:\Projects\2003\0339569 Lake Worth\4\4.1\L051603.doc

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MAY 19 2003
BUREAU OF AIR REGULATION

AMENDMENT FOR
LAKE WORTH GENERATION, L.L.C.
PERMIT No. 0990568-001-AC (PSD-FL-266)

Prepared for:

Lake Worth Generation, L.L.C.
70 Walnut Street
Wellesley Hills, MA 02481

Prepared by:

Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500

May 2003
0339569

DISTRIBUTION:
4 Copies – FDEP
2 Copies – Lake Worth Generation, L.L.C.
2 Copies – Golder Associates Inc.

Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: **Lake Worth Generation, L.L.C.**	
2. Site Name: **Lake Worth Generation**	
3. Facility Identification Number: [ ] Unknown	
4. Facility Location: Street Address or Other Locator: **117 College Street** City: **Lake Worth** County: **Palm Beach** Zip Code: **33461**	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: **Brian Chatlosh, Manager**
2. Application Contact Mailing Address: Organization/Firm: **Lake Worth Generation, L.L.C.** Street Address: **70 Walnut Street** City: **Wellesley Hills** State: **MA** Zip Code: **02481**
3. Application Contact Telephone Numbers: Telephone: **(781) 239-8137** Fax: **(781) 239-8223**

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	5/19/2003
2. Permit Number:	0990568-003-AC
3. PSD Number (if applicable):	PSD-FL-266C
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Initial Title V air operation permit for an existing facility which is classified as a Title V source.

[ ] Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number:_____

[ ] Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number:_____

Operation permit number to be revised:_____

[ ] Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected:_____

[ ] Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised:_____

Reason for revision:_____

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Air construction permit to construct or modify one or more emissions units.

[X] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

[ ] Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:
   Brian Chatlosh, Manager

2. Owner/Authorized Representative or Responsible Official Mailing Address:
   Organization/Firm: **Lake Worth Generation, L.L.C.**
   Street Address: **70 Walnut Street**
   City: **Wellesley Hills** State: **MA** Zip Code: **02481**

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
   Telephone: **(781) 239-~~8055~~** 8137 Fax: **(781) 239-~~8072~~** 8223

4. Owner/Authorized Representative or Responsible Official Statement:

   I, the undersigned, am the owner or authorized representative(check here [ ], if so) or the responsible official (check here [ ], if so) of the Title V source addressed in this application, whichever is applicable. 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. 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 any permitted emissions unit.*

   B. P. Chatlosh 5/12/'03

   Signature Date

* Attach letter of authorization if not currently on file.

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: **6241 NW 23 Street**
   City: **Gainesville** State: **FL** Zip Code: **32653**

3. Professional Engineer Telephone Numbers:
   Telephone: **(352) 336-5600** Fax: **(352) 336-6603**

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

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(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

(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.

If the purpose of this application is to obtain a Title V source air operation permit (check here [ ], 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 schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [X], 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.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], 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.

Signature 5/16/03

Date

(seal)

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
01	GE 7FA Combustion Turbine	ACM1	NA

Application Processing Fee

Check one: [X] Attached - Amount: $250 [ ] Not Applicable

Fee pursuant to Rule 62-4.050(4)(r)5 F.A.C.

Construction/Modification Information

1. Description of Proposed Project or Alterations: **Refer to Part II.**
2. Projected or Actual Date of Commencement of Construction:
3. Projected Date of Completion of Construction: **March 31, 2005**

Application Comment

Refer to Part II.

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): **80/4/4**			
3. Governmental Facility Code: **0**	4. Facility Status Code: **C**	5. Facility Major Group SIC Code: **49**	6. Facility SIC(s): **4911**
7. Facility Comment (limit to 500 characters): **Refer to Part II.**			

Facility Contact

1. Name and Title of Facility Contact: **Derald Wildharber**
2. Facility Contact Mailing Address: Organization/Firm: **Lake Worth Generation, L.L.C.** Street Address: **P.O. Box 532** City: **Lake Worth** State: **FL** Zip Code: **33460**
3. Facility Contact Telephone Numbers: Telephone: **(561) 586-7213** Fax: **(561) 586-3956**

Facility Regulatory Classifications

Check all that apply:

1. [ ] Small Business Stationary Source?	[ ] Unknown
2. [X] Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	
3. [ ] Synthetic Minor Source of Pollutants Other than HAPs?	
4. [ ] Major Source of Hazardous Air Pollutants (HAPs)?	
5. [ ] Synthetic Minor Source of HAPs?	
6. [X] One or More Emissions Units Subject to NSPS?	
7. [ ] One or More Emission Units Subject to NESHAP?	
8. [ ] Title V Source by EPA Designation?	
9. Facility Regulatory Classifications Comment (limit to 200 characters): **NSPS – 40 CFR Part 60 Subpart GG applies to turbine.**	

List of Applicable Regulations

Refer to Permit No. 0990568-001-AC; PSD-FL-266	

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap lb/hour	tons/year	4. Basis for Emissions Cap	5. Pollutant Comment

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: [X] Attached, Document ID: **Part II** [ ] Not Applicable [ ] Waiver Requested
3. Process Flow Diagram(s): [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
5. Fugitive Emissions Identification: [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
6. Supplemental Information for Construction Permit Application: [X] Attached, Document ID: **Part II** [ ] Not Applicable
7. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities:
   [ ] Attached, Document ID:_____ [X] Not Applicable

9. List of Equipment/Activities Regulated under Title VI:
   [ ] Attached, Document ID:_____
   [ ] Equipment/Activities On site but Not Required to be Individually Listed
   [X] Not Applicable

10. Alternative Methods of Operation:
    [ ] Attached, Document ID:_____ [X] Not Applicable

11. Alternative Modes of Operation (Emissions Trading):
    [ ] Attached, Document ID:_____ [X] Not Applicable

12. Identification of Additional Applicable Requirements:
    [ ] Attached, Document ID:_____ [X] Not Applicable

13. Risk Management Plan Verification:
    [ ] Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID:_____) or previously submitted to DEP (Date and DEP Office:_____)
    [ ] Plan to be submitted to CEPPO (Date required:_____)
    [X] Not Applicable

14. Compliance Report and Plan:
    [ ] Attached, Document ID:_____ [X] Not Applicable

15. Compliance Certification (Hard-copy Required):
    [ ] Attached, Document ID:_____ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

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

[X] 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. Regulated or Unregulated Emissions Unit? (Check one)

[X] 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.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

GE 7FA Combustion Turbine

4. Emissions Unit Identification Number: [ ] No ID
ID: **001** [ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
C		**49**	[X]

9. Emissions Unit Comment: (Limit to 500 Characters)
The emission unit is a GE 7FA Combustion Turbine. The unit will fire primarily natural gas with distillate oil as backup and will be operated in simple cycle mode. Refer to Part II for discussion.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

   25 – Dry Low NO_x Combustion – Natural Gas
   28 – Water Injection – Distillate Oil

2. Control Device or Method Code(s): **25, 28**

Emissions Unit Details

1. Package Unit:
   Manufacturer: **General Electric** Model Number: **7FA**
2. Generator Nameplate Rating: **186** MW
3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		**1,965**	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr		tons/day
3. Maximum Process or Throughput Rate:			
4. Maximum Production Rate:			
5. Requested Maximum Operating Schedule:			
	hours/day		days/week
	weeks/year	**4,500**	hours/year

6. Operating Capacity/Schedule Comment (limit to 200 characters):

Maximum heat input and rating at turbine inlet temperature of 45°F oil firing. Nautral Gas is 176 MW and 1,817 MMBtu/hr. Heat input as High Heating Value (HHV).

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Refer to Permit No. 0990568-001-AC PSD-FL-266	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **See Part II**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **Unit exhaust through a single stack.**		
5. Discharge Type Code: **V**	6. Stack Height: **100** feet	7. Exit Diameter: **22** feet
8. Exit Temperature: **1,108** °F	9. Actual Volumetric Flow Rate: **2,681,033** acfm	10. Water Vapor: **9.47** %
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): **2,943.7**		
14. Emission Point Comment (limit to 200 characters): **Stack conditions for natural gas firing at a turbine inlet temperature of 45°F.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Natural Gas**		
2. Source Classification Code (SCC): **2-01-002-01**	3. SCC Units: **Million Cubic Feet**	
4. Maximum Hourly Rate: **1.774**	5. Maximum Annual Rate: **7,983**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,024**
10. Segment Comment (limit to 200 characters): **Maximum and annual based on 45°F turbine inlet. Annual based on 4,500 hr/yr. Million BTU per SCC as HHV.**		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Distillate (No. 2) Fuel Oil**		
2. Source Classification Code (SCC): **2-01-001-01**	3. SCC Units: **1000 Gallons**	
4. Maximum Hourly Rate: **14.42**	5. Maximum Annual Rate: **9,369.75**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **136**
10. Segment Comment (limit to 200 characters): **Annual based on 650 hr/yr. Million BTU per SCC as HHV of 19,200 BTU/lb and 7.1 lb/gallon.**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM/PM_{10}			WP
SO_2			WP
NO_x	025	028	EL
CO			EL
VOC			EL

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM/PM_{10}**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **17** lb/hour **22.9** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference: **GE, 1998; Golder, 2003**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Refer to Table 1.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Annual tons per year based on 3,850 hr/yr of gas firing and 650 hr/yr distillate oil firing.**	

Allowable Emissions Allowable Emissions __1__ of __2__

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **≤ 10% Opacity**	4. Equivalent Allowable Emissions: **9** lb/hour **20.3** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Natural Gas Firing for 4,500 hr/yr. Permit No. 0990568-001-AC; PSD-FL-266.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted:	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **= 10% Opacity**	4. Equivalent Allowable Emissions: **17** lb/hour **5.5** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 9**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Distillate Oil Firing for 650 hr/yr. Permit No. 0990568-001-AC; PSD-FL-266.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **101.5** lb/hour **42.6** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference: **GE, 1998; Golder, 2003**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Refer to Table 1.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Annual tons per year based on 3,850 hr/yr of gas firing and 650 hr/yr distillate oil firing.**	

Allowable Emissions Allowable Emissions __1__ of __2__

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **1 grain S/100 scf**	4. Equivalent Allowable Emissions: **5** lb/hour **11.3** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel Monitoring**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Natural Gas Firing for 4,500 hr/yr. Permit No. 0990568-001-AC; PSD-FL-266.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted:	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions __2__ of __2__

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.05% S**	4. Equivalent Allowable Emissions: **101.5** lb/hour **33** tons/year
5. Method of Compliance (limit to 60 characters): **Fuel Monitoring**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Distillate Oil Firing for 650 hr/yr. Permit No. 0990568-001-AC; PSD-FL-266.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **NO_x**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **362.4** lb/hour **245.2** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference: **GE, 1998; Golder, 2003**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Refer to Table 1.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Annual tons per year based on 3,850 hr/yr of gas firing and 650 hr/yr distillate oil firing.**	

Allowable Emissions Allowable Emissions __1__ of __2__

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **9 ppmvd at 15% O_2**	4. Equivalent Allowable Emissions: **66.2** lb/hour **149** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 7E and CEM**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Natural Gas Firing for 4,500 hr/yr. Permit No. 0990568-001-AC; PSD-FL-266.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted:	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **42 ppm at 15% O_2**	4. Equivalent Allowable Emissions: **362.4** lb/hour **117.8** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 7E and CEM**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Distillate Oil Firing for 650 hr/yr. Permit No. 0990568-001-AC; PSD-FL-266.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **73.4** lb/hour **86.2** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference: **GE, 1998; Golder, 2003**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Refer to Table 1.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Annual tons per year based on 3,850 hr/yr of gas firing and 650 hr/yr distillate oil firing.**	

Allowable Emissions Allowable Emissions __1__ of __2__

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **9 ppmvd at 15% O_2**	4. Equivalent Allowable Emissions: **32.4** lb/hour **72.9** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 10 and CEM**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Natural Gas Firing for 4,500 hr/yr. Permit No. 0990568-001-AC; PSD-FL-266.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted:	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions __2__ of __2__

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **20 ppmvd at 15% O_2**	4. Equivalent Allowable Emissions: **73.4** lb/hour **23.9** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 10 and CEM**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Distillate Oil Firing for 650 hr/yr. Permit No. 0990568-001-AC; PSD-FL-266.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **8.3** lb/hour **8.9** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference: **GE, 1998; Golder, 2003**	7. Emissions Method Code: **2**
8. Calculation of Emissions (limit to 600 characters): **Refer to Table 1.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Annual tons per year based on 3,850 hr/yr of gas firing and 650 hr/yr distillate oil firing.**	

Allowable Emissions Allowable Emissions __1__ of __2__

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **1.4 ppmvw**	4. Equivalent Allowable Emissions: **3.2** lb/hour **7.2** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Natural Gas Firing 4,500 hr/yr. Permit No. 0990568-001-AC; PSD-FL-266.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted:	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions __2__ of __2__

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **3.5 ppmvw**	4. Equivalent Allowable Emissions: **8.3** lb/hour **2.7** tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Distillate Oil Firing for 650 hr/yr. Permit No. 0990568-001-AC; PSD-FL-266.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: [ ] Rule [X] Other
3. Requested Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: **100** % Maximum Period of Excess Opacity Allowed: **60** min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **Permit No. 0990568-001-AC; PSD-FL-266. FDEP Rule 62-210.700(1). Allowed 2 hr per 24 hr for startup, shutdown, and malfunction.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 1 of 2

1. Parameter Code: **EM**	2. Pollutant(s): **NO_x**
3. CMS Requirement:	[ ] Rule [X] Other
4. Monitor Information: Manufacturer: **To Be Determined** Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **Diluent monitor will be CO_2 or O_2. Permit No. 0990568-001-AC; PSD-FL-266.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 2 of 2

1. Parameter Code: **EM**	2. Pollutant(s): **CO**
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: **To Be Determined** Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **Permit No. 0990568-001-AC; PSD-FL-226.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: **Information for Items 1, 2, 3, 4, 5, and 9 submitted with original application.**

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [X] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [X] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[X] Not Applicable

PART II

PART II
Amendment for
Lake Worth Generation, L.L.C.
Permit No. 0990568-001-AC (PSD-FL-266)

Introduction and Background

Lake Worth Generation, L.L.C. (LWG) was issued an air construction and PSD permit for a 186 MW combined cycle project [Permit No. 0990568-001-AC (PSAD-FL-266)]. The LWG project is located within property owned by the City of Lake Worth, Palm Beach County, Florida. The project consisted of General Electric Frame 7FA combustion turbine with heat recovery steam generator (HRSG). Steam from the HRSG was to be delivered to existing steam electric generators S-3 and S-4 at the City of Lake Worth, Tom G. Smith Power Plant. The LWG project would supply steam to S-3 which the City of Lake Worth would retain ownership. LWG would own a new steam electric generator designated Unit S-4.

The air construction and PSD authorized the LWG project for both simple cycle and combined cycle operation. The primary fuel was natural gas, which was authorized for unrestricted use for 8,760 hours per year. The back-up fuel (i.e., No.2 distillate) was restricted by a heat input quantity that was equivalent to operating 650 hours per year at maximum firing capacity. Alternative methods of operation, which included duct firing and/or power augmentation, was authorized by the permit for up to 2,000 hours per year.

The LWG project has commenced construction and December 31, 2003 was the expiration date of the construction permit. The construction of the Project was suspended on September 30, 2002, due to the uncontrollable and unforeseen circumstances brought on by the ENRON and NEPCO bankruptcies and the developments in the energy sector. NEPCO, a subsidiary of Enron, was selected as the EPC for the Lake Worth Generation Project. The ENRON bankruptcy prevented LWG from finalizing the project financing. NEPCO continued as EPC under a transition agreement but was terminated when NEPCO filed for bankruptcy. LWG continued to search for financing but due to market conditions was unable to finalize financing for the Project as originally contemplated.

At the time construction was suspended, the following construction activities were completed:

- **Combustion Turbine** - The combustion turbine was delivered in February 2002. The combustion and associated equipment (e.g., electric generation) were installed on foundations. The air inlet filter system has been installed and the lube oil system was filled

and commissioned. The turbine/generator set is rotated on a regular basis and the lube oil pumps are operated. The gas turbine electrical building has been completed. The HVAC is operated continuously to preserve batteries and equipment.

- **Gas Pipeline** – Construction of the gas pipeline was completed in March 2002. The pipeline has been tested and filled with natural gas. The pipeline interconnection was completed, commissioned and placed in service on September 27, 2002.
- **Associated Facilities** – Foundations for the combustion turbine and HRSG was completed. Retaining walls are complete, rough grading is complete, most foundations are complete, underground pipelines are 90-percent complete, underground electrical conduit and vaults are complete, grounding grid is 80-percent complete, and sound attenuation wall is almost complete.
- **Electrical Interconnection** - Design engineering was completed and all engineered equipment was bid and PO's issued. Switchyard construction work is 20-percent complete. Hypoluxo interconnection with FPL was completed. Fiber optic cable has been delivered. The electrical interconnection transfer was completed, tested and placed in service at the FPL Hypoluxo station in September 2002.
- **Project Entrance and Roads** – Construction of the north/south road and the project entrance road was completed.
- **Public Works Maintenance Building** - Activities related to the relocation of the City of Lake Worth's Public Works Department were completed. This included plugging and abandoning four wells, drilling of one new well, construction of the new building, Certificate of Occupancy issued, relocation of city staff and equipment, and demolition of old Water Department Building.
- **Demolition and Utilities Relocation** - Activities related to the demolition and utilities relocation were completed. This included demolition of the Donkey Boiler Building, demolition of the oil tanks, power installed in the new Building Maintenance Department Building and Paint Shop Building, underground pipeline completed, and relocation of power lines.
- **Streets and Sanitation Department Relocation** - Construction is complete and the city personnel and equipment occupy the facility.

As presented above, the construction activities for simple cycle operation have nearly been complete. Construction of electrical systems (i.e., project switch yard), simple cycle stack, fuel oil tank, final hookups and connections, system check, startup and testing would be required for simple cycle

operation. An evaporative equipment cooling system may be installed instead of the fin-fan cooling system typically installed on simple cycle units. The units have an electric fuel gas heater to control dewpoint of the natural gas. The simple cycle stack dimensions will remain the same.

LWG is seeking a change to the air construction and PSD permit that authorizes an extension of the expiration date of the permit and amends the description of the project from a combined cycle project to a simple cycle project.

Permit Expiration Date

LWG anticipates that construction will be resumed in September 2003. The project will require about 9 months to one year to complete construction activities and perform compliance testing. In order to complete construction and accommodate submittal of the Title V air operations permit application, an expiration date of March 31, 2005, is requested.

Operation and Emissions

As a simple cycle project, LWG is seeking a reduction in hours of operation from 8,760 hours/year to 4,500 hours per year. This requested amount is consistent with other simple cycle projects for which the Department has issued permits. The primary fuel will remain natural gas with No. 2 distillate fuel oil as the backup fuel. The current authorization of a heat input quantity, equivalent to operating 650 hours per year at maximum firing capacity, would be retained. Alternative methods of operation that included duct firing and/or power augmentation, would no longer be applicable. The emission limiting standards for natural gas and fuel oil firing would not change from the original permit.

Table 1 presents the emission changes from a combined cycle project to a simple cycle project. As shown in the table the emissions rates do not change for standard operation and backup fuel firing. With the simple cycle project, alternative methods of operation are no longer applicable. The reduction of total hours for natural gas firing and eliminating of the alternative methods of operation result in the reduction of potential emissions for the project. The combined cycle project underwent PSD review for PM/PM_{10}, SO_2, NO_2 and CO. The BACT review for NO_x and CO determined that selective catalytic reduction (SCR) and oxidation catalyst were eliminated as a control alternative due to energy, environmental and energy impacts. This determination included consideration primarily for combined cycle operation where emission reductions using alternative controls are more cost effective and technically feasible than when these controls are applied to simple cycle operation.

The evaporative equipment cooler, sometimes referred to as a wet surface air cooler, will have a small amount of particulate matter (i.e., drift). The PM emissions have been conservatively estimated to be less than 1 ton/year and well below the thresholds established for generic exemption in Rule 62-210.300(b) F.A.C. The calculation is as follows: 1,700 gallons/minute x 0.00001 gallon drift/gallon of circulating water x 8.34 lb/gallon x 5,000 ppm TDS (PM)/10 x 60 minutes/hour = 0.0425 lb/hr; 0.0425 lb/hr x 4,500 hours/year x ton/2,000 lb = 0.1 tons/year.

The original application contemplated using two existing oil storage tanks. These tanks have been demolished and a new 995,000-gallon distillate oil storage tank will be constructed. The maximum potential VOC emissions are 0.64 ton/year and less than the Department's criteria for a generic exception (see Attachment A). This tank will be subject to the recordkeeping requirements of the NSPS in 40 CFR Part 60, Subpart Kb.

A preliminary general arrangement for the simple cycle configuration is presented in Attachment B.

Regulatory Applicability

The project as originally contemplated was a major new facility required to under go pre-construction review (i.e., PSD) under the Department Rules in 62-212.400(2)(d)2.b., F.A.C. The project had potential emissions greater than 100 tons/year and was one of the major facility categories listed in Table 212.400-1 (i.e., fossil fuel fired steam electric plant with a heat input of more than 250 MMBtu/hr). The project will now have emissions of less than 250 tons/year and no longer be classified as a fossil fuel fired steam electric plant. Therefore, pursuant to Rule 62-212.400(2)(d)2.a., F.A.C., preconstruction PSD review is no longer applicable to the project and the LWG Project is a new minor facility.

LWG, through a memorandum of understanding, anticipates the sale of the project to the Florida Municipal Power Agency (FMPA). FMPA is a nonprofit agency formed by 29 municipal electric utilities for the purpose of providing competitive power supplies to its members. Lake Worth is one of the 29 members of FMPA. Upon financial closing with LWG, FPMA will own and control the project. With FMPA as owner, the amended project will be a separate minor facility under the Department's rules. Pursuant to the definition of facility in Rule 62-210.200 and the requirements in Rule 62-212.400, there are three requirements for the project to considered part of the same facility as the existing City of Lake Worth generating facility. The requirements are: 1) located on one or more contiguous or adjacent properties, 2) under the common control of the same person (or persons under

common control, and 3) under the same major group Standard Industrial Classification (SIC) code. While the project is contiguous or adjacent to the City of Lake Worth facility and the project will have the same major group SIC code, ownership of the project by FMPA will not constitute common control. While Lake Worth is a member of FMPA, its position on the FMPA Board of Directors and their generation needs do not constitute common control. Lake Worth is one of 29 voting members on the FMPA Board of Directors, which is the ultimate authority for FMPA decisions. The current Lake Worth share of votes on the FMPA Board is 12 votes of a total 298 votes, or just over 4 percent of the total votes. In addition, FMPA will dispatch the unit to meet the needs of all fifteen members of the FMPA All-Requirements Project and not just the City of Lake Worth. The peak demand of the City was 88 MW in 2002, while the expected summer peak demand of the FMPA All-Requirements Project is 1,471 MW, including the City of Lake Worth. EPA guidance and previous Department determinations have indicated that by control or ownership is established by 50 percent or greater voting interest or ownership.

Air Impacts

Air impact analyses were conducted for the Lake Worth Generation project as originally contemplated. Maximum air quality impacts were determined for both simple cycle and combined cycle modes. The modeling was conducted using procedures approved by the Department, which included the effect of aerodynamic downwash. The tallest structure considered in the modeling was the HRSG, which was 70 feet high. The HRSG will no longer be part of the amended permit. Although PSD review, including air quality impact analyses, is no longer applicable, Tables 6-7 and 6-12 summarizing the original analyses are provided in Attachment C. These tables show that the impacts for simple cycle operation are below the significant impact levels for all pollutants. Moreover, the elimination of the HRSG will likely reduce the effect of aerodynamic downwash.

Requested Permit Changes

Other than an extension of the construction permit expiration date that is discussed above, the only change in the federally enforceable requirements in the existing permit requested by Lake Worth Generation in this amendment request is a reduction in hours of operation. By the elimination of the steam cycle, certain conditions are not applicable. Listed below is a summary of the changes:

Permit Cover Page:

- Change Permit expiration Date to March 31, 2005

Section I. Facility Information:

- Emission Unit No. 002 will no longer be constructed under this permit.

Section II. Facility-Wide Specific Conditions:

- Condition 10 BACT Determination is no longer applicable.

Section III. Emission Unit Specific Conditions:

- Emission Unit 002 will no longer be constructed under this permit.
- Condition 1 is no longer applicable.
- Condition 2(c) is no longer applicable.
- Condition 3(a)(1) reference to power augmentation is no longer applicable.
- Condition 3(b) is no longer applicable.
- Condition 5(a) is no longer applicable.
- Condition 7 reference to hours of operation is changed to 4500 hours per year. Reference to alternate methods of operation is no longer applicable.
- Condition 8 is no longer applicable.
- Condition 13 is no longer applicable.
- Condition 14 is no longer applicable.
- Condition 16 reference to combined cycle (CC) is no longer applicable.
- Condition 17 reference to combined cycle (CC) is no longer applicable.
- Condition 18 is no longer applicable.
- Condition 19 is no longer applicable.
- Condition 20 is no longer applicable.
- Condition 21 is no longer applicable.
- Conditions 23 (a), (b) and (c) are no longer applicable.
- Condition 24 reference to heat recovery steam generator is no longer applicable.
- Condition 27 reference to Subpart Db is no longer applicable.
- Condition 31 (b) is no longer applicable.
- Condition 32 reference to BACT is no longer applicable.
- Conditions 35 and 36 references to power augmentation and duct firing are no longer applicable.

Permit Appendices:

- Appendix B is no longer applicable.
- Appendix E is no longer applicable.

Table 1. Project Operation and Emissions for Combined Cycle and Proposed Simple Cycle Configuration, Lake Worth Generation, L.L.C.

	Units	Original Project				Amended Project				Difference
		Standard Operation[a]	Backup Fuel Firing[b]	Alternate Methods[c]	Total[d]	Standard Operation[a]	Backup Fuel Firing[b]	Alternate Methods[e]	Total[f]	
Operation										
Duration[g]	Hours	8,760	650	2,000		4,500	650	0		
Mode[h]		SC or CC	SC or CC	CC		SC	SC	NA		
Emissions										
PM/PM_{10}	lb/hr	9.0	17.0	9.4		9.0	17.0	0.0		
	TPY	39.4	5.5	9.4	42.4	20.3	5.5	0.0	22.9	-19.6
SO_2	lb/hr	5.0	101.5	5.4		5.0	101.5	0.0		
	TPY	21.9	33.0	5.4	53.7	11.3	33.0	0.0	42.6	-11.1
NO_x	lb/hr	66.2	362.4	88.0		66.2	362.4	0.0		
	TPY	290.0	117.8	88.0	408.0	149.0	117.8	0.0	245.2	-162.8
CO	lb/hr	32.4	73.4	72.0		32.4	73.4	0.0		
	TPY	141.9	23.9	72.0	194.8	72.9	23.9	0.0	86.2	-108.6
VOC	lb/hr	3.2	8.3	3.8		3.2	8.3	0.0		
	TPY	14.0	2.7	3.8	16.3	7.2	2.7	0.0	8.9	-7.4

[a] PM/PM_{10} and SO_2 emissions based on Air Construction Permit Application; NO_x, CO and VOCs from Specific Condition in Section III. 16. of PSD-FL-266.

[b] PM/PM_{10} and SO_2 emissions based on Air Construction Permit Application; NO_x, CO and VOCs from Specific Condition in Section III. 17. of PSD-FL-266.

[c] PM/PM_{10} and SO_2 emissions based on Air Construction Permit Application; NO_x, CO and VOCs from Specific Condition in Section III. 18. of PSD-FL-266.

[d] Total hours consist of 6,110 hours of standard operation on gas, 650 hours on oil and 2,000 hours of alternate methods.

[e] Simple cycle operation does not include Alternate Methods of Operation (i.e., duct firing or power augmentation).

[f] Total hours consist of 3,850 hours of standard operation on gas and 650 hours on oil.

[g] Authorized duration of operation. Backup fuel firing was limited by an equivalent fuel input. Alternative methods of operation included duct firing and power augmentation.

[h] Mode of operation authroized: SC = simple cycle and CC = combined cycle.

ATTACHMENT A

TANK 4.0 EMISSION CALCULATIONS

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Lakeworth
City:	
State:	Florida
Company:	
Type of Tank:	Vertical Fixed Roof Tank
Description:	Diesel Storage Tank

Tank Dimensions

Shell Height (ft):	50.00
Diameter (ft):	60.00
Liquid Height (ft):	47.00
Avg. Liquid Height (ft):	47.00
Volume (gallons):	994,084.81
Turnovers:	9.45
Net Throughput (gal/yr):	9,390,000.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	Gray/Light
Shell Condition:	Good
Roof Color/Shade:	Gray/Light
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft):	50.00
Radius (ft) (Dome Roof):	60.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig):	0.03

Meteorological Data used in Emissions Calculations: West Palm Beach, Florida (Avg Atmospheric Pressure = 14.75 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Distillate fuel oil no. 2	All	82.39	73.77	91.01	76.96	0.0132	0.0101	0.0170	130.0000			188.00	Option 5: A=12.101, B=8907

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Annual Emission Calculations	
Standing Losses (lb):	899.1321
Vapor Space Volume (cu ft):	144,617.9817
Vapor Density (lb/cu ft):	0.0003
Vapor Space Expansion Factor:	0.0600
Vented Vapor Saturation Factor:	0.9656
Tank Vapor Space Volume	
Vapor Space Volume (cu ft):	144,617.9817
Tank Diameter (ft):	60.0000
Vapor Space Outage (ft):	51.1481
Tank Shell Height (ft):	50.0000
Average Liquid Height (ft):	47.0000
Roof Outage (ft):	48.1481
Roof Outage (Dome Roof)	
Roof Outage (ft):	48.1481
Dome Radius (ft):	60.0000
Shell Radius (ft):	30.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0003
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0132
Daily Avg. Liquid Surface Temp. (deg. R):	542.0595
Daily Average Ambient Temp. (deg. F):	74.7167
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	536.6267
Tank Paint Solar Absorptance (Shell):	0.5400
Tank Paint Solar Absorptance (Roof):	0.5400
Daily Total Solar Insulation Factor (Btu/sqft day):	1,504.5472
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0600
Daily Vapor Temperature Range (deg. R):	34.4728
Daily Vapor Pressure Range (psia):	0.0069
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0132
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0101
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0170
Daily Avg. Liquid Surface Temp. (deg R):	542.0595
Daily Min. Liquid Surface Temp. (deg R):	533.4413
Daily Max. Liquid Surface Temp. (deg R):	550.6777
Daily Ambient Temp. Range (deg. R):	16.2833
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9656
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0132
Vapor Space Outage (ft):	51.1481
Working Losses (lb):	382.4083

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)- (Continued)

Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0132
Annual Net Throughput (gal/yr.):	9,390,000.000 0
Annual Turnovers:	9.4459
Turnover Factor:	1.0000
Maximum Liquid Volume (gal):	994,084.8070
Maximum Liquid Height (ft):	47.0000
Tank Diameter (ft):	60.0000
Working Loss Product Factor:	1.0000

Total Losses (lb):	1,281.5404

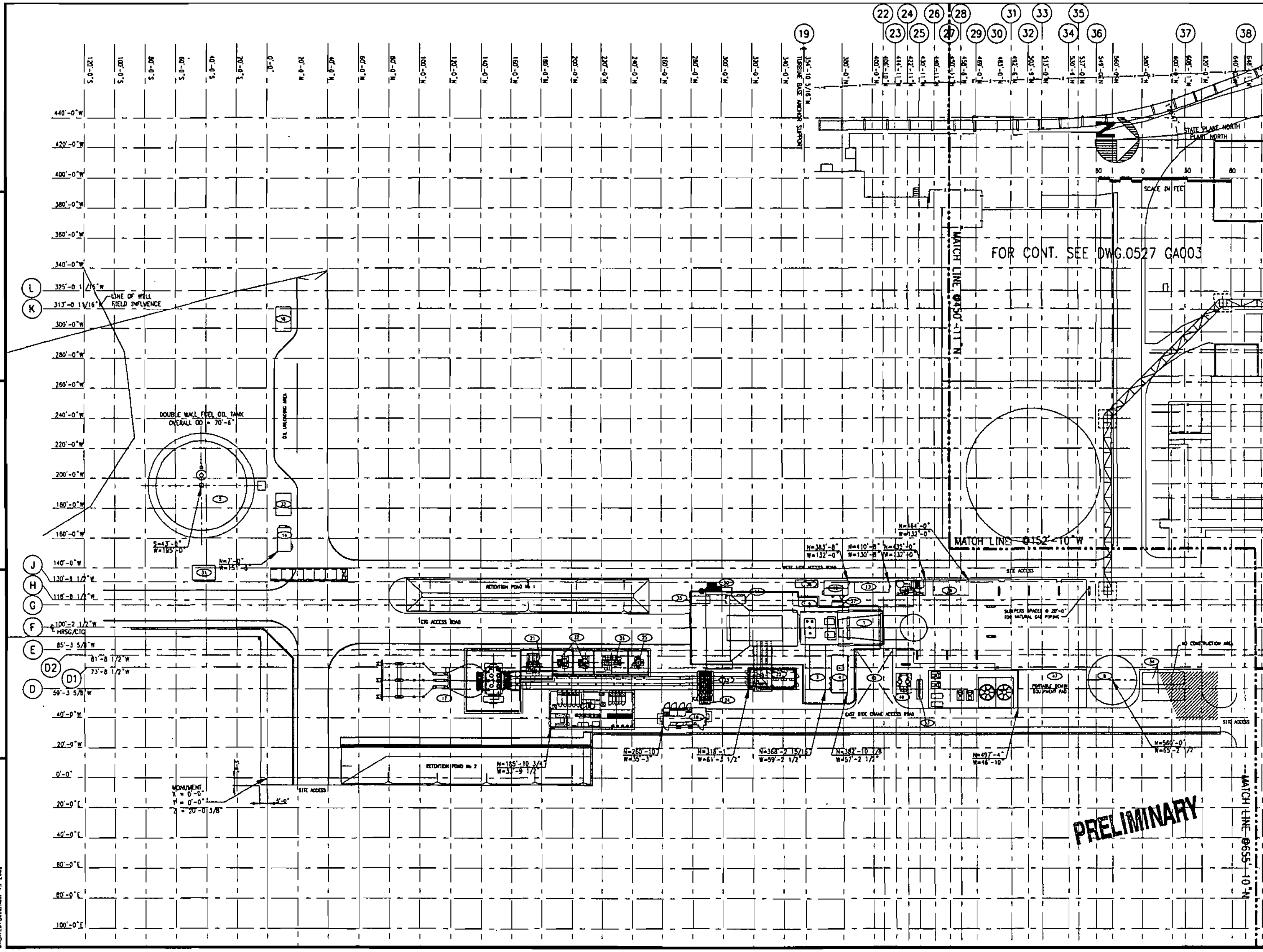
TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Annual Emissions Report

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	382.41	899.13	1,281.54

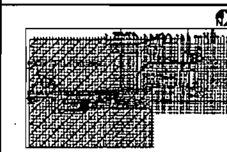
ATTACHMENT B

PRELIMINARY LAYOUT DRAWINGS



GENERAL NOTES:

1. SITE LOCATION BASED ON THE FOLLOWING: TOPOGRAPHIC SURVEY, AVIROM & ASSOCIATES, INC. SURVEYING & MAPPING. October 18, 2001 JOB NO. 6966
2. FOR OVERALL SITE G.A. SEE DWG. 0527-GA001



KEY PLAN

ITEM	DESCRIPTION	EQUIPMENT
1	COMBUSTION TURBINE PACKAGE	120M100
2	CTG ACCESSORY MODULE	120M120
3	***NOT USED***	
4	LIQUID FUEL ATOMIZING AIR MODULE	120M125
5	FUEL OIL STORAGE (999,950 GAL'S)	101M101
6	***NOT USED***	
7	DEMIN WATER PUMPS	011Q201
8	DEMIN STORAGE TANK	011M218
9	CTG SUMP	112M224
10	***NOT USED***	
11	CO2 SKID	120M680
12	WATER INJECTION SKID	120M135
13	WATER WASH SKID	120M110
14	FUEL FORWARDING SKID	101M115
15	***NOT USED***	
16	FUEL TRANSFER/UNLOADING BLDG	101M110
17	MAIN POWER TRANSFORMER	016E150
18	ELECTRICAL EQUIPMENT BLDG	
19	LEC-LOAD ELECTRICAL COMPARTMENT BLDG	
20	PEECC-ELECTRICAL/ELECTRONIC CONTROL CENTER	
21	AUX TRANSFORMER No.1 (UAT-UNC1)	
22	STATION SERVICE TRANSFORMER	016E315
23	POWER CIRCUIT BREAKER	
24	DC LINK REACTOR	
25	EXCITATION TRANSFORMER	
26	ISOLATION TRANSFORMER	
27	***NOT USED***	
28	***NOT USED***	
29	***NOT USED***	
30	***NOT USED***	
31	SUMP / FUEL TANK AREA	112M220
32	OIL/WATER SEPARATOR / FUEL TANK AREA No.1	112M300
33	***NOT USED***	
34	HYDROGEN TANK & GAS BOTTLE STORAGE	
35	OIL/WATER SEPARATOR NO.2	112M301
36	WATER WASH DRAIN TANK	112M420
37	FALSE START DRAIN TANK	120M174
38	AIR COMPRESSOR RECEIVER SKID DRYER	0150100
39	CEMS BUILDING	
40	MAINTENANCE ACCESS	
41	CARBON FILTER UNIT No.1	011M301
42	CARBON FILTER UNIT No.2	011M302
43	ANTISCALANT FEEDER	011M340
44	CARTRIDGE FILTERS	011M315
45	REVERSE OSMOSIS SYSTEMS	011M308
46	CLEAN-IN PLACE SYSTEM	011M330
47	WATER TREATMENT BLDG/OO	
48	***NOT USED***	
49	FUEL GAS FILTERS	101M121
50	CO_2 BOTTLE STORAGE	
51	***NOT USED***	
52	COOLING WATER FIN FAN COOLERS	
53	GAS HEATER	

REVISION	DATE	BY	CHECKED	PROJ. ENG.	APPROVED	V.P. ENG.	PROJ. MGR.
B1 — ADDED ELEVATED PIPE RACK PER GA003alt DRAWING	/ /	LGM					
B — GENERAL UPDATE	/ /	LGM					
A — REVISED FROM PROJECT DRAWING, ADDED COOLER & CEMS BLDG, MOVED AIR SKID, DELETED EQUIP COVER, UPDATED EQUIPMENT SCHEDULE, ISSUED FOR PROPOSAL.	01/27/03	LGM	AMC		AMC		

INSTR | ELECT | MECH | STRUCT | PIPING | PROCESS | REVIEW/ISSUE BY

SNC LAVALIN Constructors Inc.

DRAWN BY: R. PLUCINSKI | ENGINEERED BY: R. SKIBINSKI

SCALE: 1" = 30'-0"

LAKE WORTH GENERATION LLC

7FA SIMPLE CYCLE PROJECT
LAKE WORTH, FLORIDA

GENERAL ARRANGEMENT
CTG PLANT AREA - SIMPLE CYCLE

DWG. NO. 0527 GA002alt | SHT. 01 | REV B1

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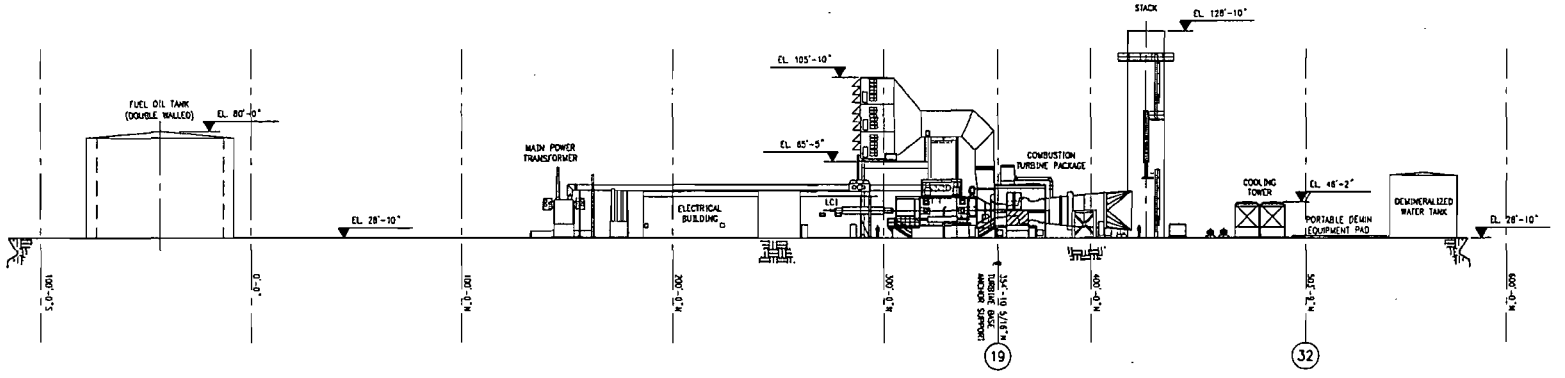
USER: LowP
TODAYS DATE: MAY 13 2003 TIME: 14:42
DATE OF LAST UPDATE: May 13 2003 2:33pm
CREATED: December 19 2002



SECTIONAL ELEVATION

LOOKING WEST

GENERAL NOTES:

1. FOR OVERALL SITE GENERAL ARRANGEMENT DRAWING, SEE DWG. 0527-GA001
2. FOR CTG PLANT AREA, SEE DWG. 0527-GA001
3. FOR GAS METERING AREA, SEE DWG 0527-GA003.

LEGEND:

REFERENCE DWGS:

REFERENCE SPECS:

UPDATED WATER TREATMENT AREA, FUEL OIL TANK.

5/16/03 — ISSUED FOR PROPOSAL

REVISION	DATE	BY	CHECKED	PROJ. ENG.	APPROVED	V.P. ENG.	PROJ. MGR.

SNC·LAVALIN Constructors Inc.

DRAWN BY: LON PALMER | ENGINEERED BY:

SCALE: 1"=30'-0"

LAKE WORTH GENERATION LLC

7FA SIMPLE CYCLE PROJECT
LAKE WORTH, FLORIDA
GENERAL ARRANGEMENT
SITE SECTION ELEVATION

DWG. NO. 0527 GA010 | SHT. 01 | REV. 1

CLIENT | MECH | STRUCT | PIPING | PROCESS | REVIEW / ISSUE BY

PATH: H:\Proposals\2003prop\V0052700 ALS-Lakeworth\Dwg\V052700410-501.dwg
TODAYS DATE: MAY 15 2003 TIME: 13:28 - Plotted By: RobP
DATE OF LAST UPDATE: May 15 2003 2:50pm
01

ATTACHMENT C

TABLES 6-7 AND 6-12

Table 6-7 Summary of the Maximum Pollutant Concentrations Predicted for the Project in Simple-Cycle and Combined-Cycle Operations Compared to EPA Significant Impact Levels – Refined Analysis

Pollutant	Averaging Time	Maximum Predicted Concentrations ($\mu g/m^3$)		EPA Significant Impact Levels ($\mu g/m^3$)
		Simple-Cycle Operation	Combined-Cycle Operation	
Natural Gas				
SO_2	Annual	0.0009	0.01	1
	24-Hour	0.02	0.2	5
	3-Hour	0.14	0.7	25
NO_x	Annual	0.01	0.1	1
PM_{10}	Annual	0.003	0.03	1
	24-Hour	0.06	0.7	5
CO	8-Hour	0.5	3	500
	1-Hour	3	9	2,000
Fuel Oil				
SO_2	Annual	0.02	0.15	1
	24-Hour	0.3	5	5
	3-Hour	2.6	15	25
NO_x	Annual	0.06	0.49	1
PM_{10}	Annual	0.005	0.04	1
	24-Hour	0.1	1.1	5
CO	8-Hour	1.1	7.0	500
	1-Hour	7.1	21	2,000

Note: Concentrations are based on highest predicted concentrations using 5 years of meteorological for 1987 to 1991 of surface and upper air data from the National Weather Service station at the Palm Beach International Airport.

Table 6-12 Summary of the Maximum Pollutant Concentrations Predicted for the Project in Simple-Cycle and Combined-Cycle Operations Compared to PSD Class I Significant Impact Levels

Pollutant	Averaging Time	Maximum Predicted Concentrations ($\mu g/m^3$)		PSD Class I Significantt Impact Levels ($\mu g/m^3$)	
		Simple-Cycle Operation	Combined-Cycle Operation	NPS Recommended	EPA Proposed
Natural Gas					
SO_2	Annual	0.00001	0.00001	0.03	0.1
	24-Hour	0.0004	0.0004	0.07	0.2
	3-Hour	0.002	0.003	0.48	1.0
NO_x	Annual	0.0001	0.0001	0.03	0.1
PM_{10}	Annual	0.00002	0.00002	0.08	0.2
	24-Hour	0.001	0.001	0.27	0.3
Fuel Oil					
SO_2	Annual	0.003	0.0043	0.03	0.1
	24-Hour	0.07	0.12	0.07	0.2
	3-Hour	0.32	0.57	0.48	1.0
NO_x	Annual	0.01	0.015	0.03	0.1
PM_{10}	Annual	0.001	0.0008	0.08	0.2
	24-Hour	0.02	0.03	0.27	0.3

Note: Concentrations are based on highest predicted concentrations using 5 years of meteorological for 1987 to 1991 of surface and upper air data from the National Weather Service station at the Palm Beach International Airport.