STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF FINAL PERMIT

In the Matter of an Application for Permit by:

Lake Worth Generation, LLC 245 Winter Street, Suite 300 Waltham, MA 02451 Authorized Representative: Brian Chatlosh, Manager Lake Worth Generation, LLC Air Permit No. 0990568-003-AC 186 MW Simple Cycle Gas Turbine Palm Beach County, Florida

Enclosed is Final Air Permit No. 0990568-003-AC, which authorizes the construction of a 186 MW simple cycle gas turbine project. The new equipment will be installed within the boundaries of the City of Lake Worth's existing Tom G. Smith Power Plant at 117 College Street in Lake Worth, Florida. As noted in the attached Final Determination, only minor changes and clarifications were made. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty (30) days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

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Trina Vielhauer, Chief Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this <u>Notice of Final Permit</u> (including the Final permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on to the persons listed:

Mr. Brian Chatlosh, LWG*

Mr. Ken Kosky, Golder Associates

Mr. Jim Stormer, PBCHD

Mr. Tom Tittle, SED

Mr. Gregg Worley, EPA Region 4

Mr. John Bunyak, NPS

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Florida Department of Environmental Protection

TO:

Michael G. Cooke, Division of Air Resources Management

THRU:

Trina Vielhauer, Bureau of Air Regulation

Al Linero, New Source Review Section

FROM:

Jeff Koerner, New Source Review Section

DATE:

December 19, 2003

SUBJECT:

Air Permit No. 0990568-003-AC

Lake Worth Generation, LLC

186 MW Simple Cycle Gas Turbine Project

The Final Permit for this project is attached for your approval and signature, which authorizes Lake Worth Generation, LLC to construct a 186 MW simple cycle gas turbine. The project is located within the boundaries of the existing Tom G. Smith Power Plant, which is owned and operated by the City of Lake Worth. The permit restricts the unit to simple cycle operation only and a maximum of 4500 hours per year. Based on the permit conditions, the project is not subject to PSD preconstruction review because potential emissions are below the PSD major facility threshold.

The project was originally permitted in 1999 as a combined cycle unit and substantial construction commenced, including placement of the gas turbine. However, the construction company was an affiliate of Enron Corporation and eventually filed for bankruptcy. In turn, Lake Worth Generation, LLC also filed for bankruptcy. Ultimately, the project may be sold. Recent information suggests that the project may not continue at all, but that the existing equipment will be sold piecemeal including the gas turbine.

The Department distributed an "Intent to Issue Permit" package on July 22, 2003. The applicant published the "Public Notice of Intent to Issue" in The Palm Beach Post on November 24, 2003. The Department received the proof of publication on December 17, 2003. No petitions for administrative hearings or extensions of time to petition for an administrative hearing were filed.

Day #90 is March 3, 2004. I recommend your approval of the attached Final Permit for this project.

Attachments

FINAL DETERMINATION

PERMITTEE

Lake Worth Generation, LLC 245 Winter Street, Suite 300 Waltham, MA 02451

PERMITTING AUTHORITY

Florida Department of Environmental Protection Division of Air Resources Management Bureau of Air Regulation New Source Review Section 2600 Blair Stone Road, MS #5505 Tallahassee, Florida, 32399-2400

PROJECT

Air Permit No. 0990568-003-AC Lake Worth Generation, LLC

This permit authorizes the construction of a 186 MW simple cycle gas turbine with electrical generator set and associated equipment in accordance with the application and conditions of this permit. The new electrical generating power plant will be located within the boundaries of the existing Tom G. Smith Power Plant (owned and operated by the City of Lake Worth) at 117 College Street in Lake Worth, Florida 33461. The project was originally configured as a combined cycle gas turbine (Permit No. PSD-FL-266) and was classified as a new PSD major facility in accordance with Rule 62-212.400, F.A.C. This new permit authorizes simple cycle only operation. In accordance with the conditions of this permit, the new facility is considered a minor source of air pollution and is not subject to PSD preconstruction review.

NOTICE AND PUBLICATION

The Department distributed an "Intent to Issue Permit" package on July 22, 2003. The applicant published the "Public Notice of Intent to Issue" in The Palm Beach Post on November 24, 2003. The Department received the proof of publication on December 17, 2003. No petitions for administrative hearings or extensions of time to petition for an administrative hearing were filed.

COMMENTS

No comments on the Draft Permit were received from the public, the Department's Southeast District Office, the Palm Beach County Health Department, EPA Region 4, the National Park Service, or the applicant.

CONCLUSION

Only minor revisions were made to correct typographical errors. The final action of the Department is to issue the permit with the changes described above.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF FINAL PERMIT

In the Matter of an Application for Permit by:

Lake Worth Generation, LLC 245 Winter Street, Suite 300 Waltham, MA 02451

Authorized Representative: Brian Chatlosh, Manager

Lake Worth Generation, LLC Air Permit No. 0990568-003-AC 186 MW Simple Cycle Gas Turbine Palm Beach County, Florida

Enclosed is Final Air Permit No. 0990568-003-AC, which authorizes the construction of a 186 MW simple cycle gas turbine project. The new equipment will be installed within the boundaries of the City of Lake Worth's existing Tom G. Smith Power Plant at 117 College Street in Lake Worth, Florida. As noted in the attached Final Determination, only minor changes and clarifications were made. This permit is issued pursuant to Chapter 403, Florida Statutes.

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Executed in Tallahassee, Florida.

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Trina Vielhauer, Chief Bureau of Air Regulation

CERTIFICATE OF SERVICE

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Mr. John Bunyak, NPS

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.



Department of Environmental Protection

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

David B. Struhs Secretary

PERMITTEE

Lake Worth Generation, LLC 245 Winter Street, Suite 300 Waltham, MA 02451

Authorized Representative: Brian Chatlosh, Manager

Permit No. 0990568-003-AC Expires: March 31, 2005

186 MW Simple Cycle Gas Turbine

SIC No. 4911

Palm Beach County, Florida

PROJECT AND LOCATION

This permit authorizes Lake Worth Generation, LLC to construct a 186 MW simple cycle gas turbine with electrical generator set and associated equipment in accordance with the application and conditions of this permit. The new electrical generating power plant will be located within the boundaries of the existing Tom G. Smith Power Plant (owned and operated by the City of Lake Worth) at 117 College Street in Lake Worth, Florida 33461.

{Permitting Note: This project was originally configured as a combined cycle gas turbine (Permit No. PSD-FL-266) and was classified as a new PSD major facility in accordance with Rule 62-212.400, F.A.C. This new permit authorizes simple cycle only operation. In accordance with the conditions of this permit, the new facility is considered a minor source of air pollution and is not subject to PSD preconstruction review.}

STATEMENT OF BASIS

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.), and Subpart GG in Part 60 of Title of the Code of Federal Regulations. The above named permittee is authorized to construct the emissions units in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department). This permit supersedes previous air construction Permit No. PSD-FL-266.

APPENDICES

The attached appendices are a part of this permit:

Appendix A. Citation Format

Appendix B. Construction Permit General Conditions

Appendix GG. NSPS Provisions

Michael G. Cooke, Director

Division of Air Resources Management

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"More Protection, Less Process"

Printed on recycled paper.

FACILITY DESCRIPTION

This permit authorizes Lake Worth Generation (LWG) to construct a new simple cycle gas turbine. The permittee will lease property from the City of Lake Worth that is within the boundaries of its existing Tom G. Smith Power Plant. City employees will operate and maintain the new unit under the control of LWG. This new facility consists of the following emissions unit.

EU No.	Emissions Unit Description
001	186 MW simple cycle gas turbine

{Permitting Note: The project was originally proposed as a combined cycle unit, but is modified by this permit to authorize simple cycle <u>only</u> operation.}

REGULATORY CLASSIFICATIONS

Title III: The new facility will not be a major source of hazardous air pollutants (HAPs).

Title IV: The new facility operates units subject to applicable Acid Rain provisions of the Clean Air Act.

<u>Title V</u>: The new facility is a Title V major facility pursuant to Chapter 62-213, F.A.C.

PSD: The new facility is not a PSD major facility pursuant to Rule 62-212.400, F.A.C.

NSPS: The gas turbine is subject to New Source Performance Standards of Subpart GG in 40 CFR 60.

Siting: The project is not subject to Chapter 62-17, F.A.C. for Power Plant Site Certification.

RELEVANT DOCUMENTS

The documents listed below are not part of this permit, but specifically relate to this permitting action.

- Project No. 0990568-001-AC: Air Permit No. PSD-FL-266 issued on 11/14/99 and all related documents for a combined cycle gas turbine.
- *Project No. 0990568-002-AC*: Permit modification (PSD-FL-266A) issued on 08/30/00 to revise VOC standards for combined cycle operation and all related documents.
- No Project Number: Permitting action (PSD-FL-266B) issued on 04/03/01 to extend permit expiration date (and authority to construct) and all related documents.
- Project No. 0990568-003-AC: Application to modify current air permit (PSD-FL-266) for a simple cycle only gas turbine received on May 19, 2003 and all related correspondence.

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

Unless otherwise specified by this permit, the following conditions apply to all activities this facility.

ADMINISTRATIVE REQUIREMENTS

- 1. <u>Permitting Authority:</u> All documents related to applications for permits to construct; operate or modify an emissions unit should be submitted to the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.
- Compliance Authorities: All documents related to reports, tests, minor modifications and notifications shall be submitted to the Air Pollution Control Section of the Palm Beach County Health Department at P.O. Box 29 (901 Evernia Street), West Palm Beach, Florida 33402-0029. Copies of these items shall also be submitted to the Department's Air Resources Section of the Southeast District Office at P.O. Box 15425 (400 North Congress Avenue), West Palm Beach, Florida, 33416-5425.
- 3. <u>Previous Permits</u>: This air construction permit supersedes previous Permit No. PSD-FL-266.
- 4. <u>Permit Applications</u>: The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C.
- 5. <u>Citation Format</u>: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code. *Appendix A* lists abbreviations and methods for citing regulations used throughout this permit.
- 6. <u>General Conditions</u>: The owner and operator is subject to, and shall operate under, the attached General Conditions listed in *Appendix B* of this permit. General Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
- 7. Applicable Regulations: Unless otherwise indicated in this permit, the construction and operation of the subject emission units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, and 62-297; and the applicable requirements in Title 40 of the Code of Federal Regulations. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations. [Rule 62-210.300, F.A.C.]
- 8. <u>Modifications</u>: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
- 9. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
- 10. Source Obligation: This project is subject to Rule 62-212.400(2)(g), F.A.C., which states, "If a previously permitted facility or modification becomes a facility or modification which would be subject to the preconstruction review requirements of this rule if it were a proposed new facility or modification solely by virtue of a relaxation in any federally enforceable limitation on the capacity of the facility or modification to emit a pollutant (such as a restriction on hours of operation), which limitation was established after August 7,1980, then at the time of such relaxation the preconstruction review requirements of this rule shall apply to the facility or modification as though construction had not yet commenced on it." This includes, but is not limited to, increases in

- maximum heat input rates, hours of operation, pollutant emission rates, or a request for combined cycle operation. [Rule 62-212.400(2)(g), F.A.C.]
- 11. Expiration and Extension: For good cause, the permittee may request that this PSD permit be extended. Such a request shall be submitted at least sixty (60) days before the expiration of this permit. [Rules 62-4.070(3) and 62-4.080, F.A.C.]
- 12. Transfer of Permit: Within thirty (30) days after the sale or legal transfer of a permitted facility, an "Application for Transfer of Air Permit" (DEP Form 62-210.900(7)) shall be submitted to the Permitting Authority. This form must be completed with the notarized signatures of both the permittee and the proposed new permittee. The permittee is encouraged to apply for a permit transfer prior to the sale or legal transfer of a permitted facility. However, the transfer shall not be effective prior to the sale or legal transfer. Until this transfer is approved by the Department, the permittee and any other person constructing, operating, or maintaining the permitted facility shall be liable for compliance with the terms of the permit. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations occurring prior to the sale or legal transfer of the facility. {Permitting Note: In reviewing a request for a transfer of the air permit, the Department will reconsider the issues of "common control" and "single facility" due to the proximity of this new facility within the boundaries the existing Tom G. Smith Power Plant, which is owned operated by the City of Lake Worth.} [Rule 62-4.120, F.A.C.]
- 13. Application for Title IV Permit: At least 24 months before the date on which the new unit begins serving an electrical generator greater than 25 MW, the permittee shall submit an application for a Title IV Acid Rain Permit to the EPA Region 4 office with copy to the Department's Bureau of Air Regulation in Tallahassee. [40 CFR 72]
- 14. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may require by law. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

EMISSION STANDARDS

- 15. <u>Unconfined Emissions of Particulate Matter</u>: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]
- 16. Odor: No person shall cause, suffer, allow or permit the discharge of air pollutants that cause or contribute to an objectionable odor. An objectionable odor is defined as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(203), F.A.C.]

OPERATIONAL REQUIREMENTS

- 17. <u>Plant Operation Problems</u>: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall notify the Compliance Authorities within one (1) working day. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. [Rule 62-4.130, F.A.C.]
- 18. <u>Circumvention</u>: No person shall circumvent any air pollution control device or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

- 19. Operating Rate During Testing. Unless otherwise specified in this permit, testing of emissions shall be conducted with the emissions unit operating at permitted capacity (90 to 100 percent of the maximum operation rate allowed by the permit). If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity. In this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the 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. [Rule 62-297.310(2), F.A.C.]
- 20. 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 two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]
- 21. <u>Calculation of Emission Rate</u>: The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
- 22. Test Procedures shall meet all applicable requirements of Rule 62-297.310(4), F.A.C.
- 23. Determination of Process Variables: 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. Equipment or instruments used to directly, or indirectly, determine process variables 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. Examples of such devices include belt scales, weight hoppers, flow meters, and tank scales. [Rule 62-297.310(5), F.A.C.]

- 24. Required Stack Sampling Facilities: All emissions units requiring stack testing shall be designed to accommodate testing and sampling facilities. Sampling facilities shall conform to the requirements of Rule 62-297.310(6), F.A.C. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.
- 25. <u>Test Notification</u>: The owner or operator shall notify the Compliance Authorities at least 30 days prior to the scheduled initial NSPS tests and at least 15 days prior to all other scheduled compliance tests. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and conducting the test. [Rule 62-297.310(7)(a)9., F.A.C. and 40 CFR 60.8]
- 26. 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 shall require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

- 27. Records Retention: All measurements, records, and other data required by this permit shall be recorded in a permanent form and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These records shall be made available to the Department's representatives upon request. [Rule 62-213.440, F.A.C.]
- 28. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical, but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department 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 applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]
- 29. Excess Emissions Reporting: If excess emissions occur, the owner or operator shall notify the Compliance Authorities within one (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. Within thirty (30) days following each calendar quarter, the owner or operator shall submit a report summarizing any incident of the excess emissions or stating that no excess emissions occurred during the given calendar quarter. The summary of each incident shall include the amount, the duration, the cause, and the action taken to minimize and correct the excess emissions. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with § 60.7, Subpart A. Periods of startup, shutdown, and malfunction shall be monitored, recorded, and reported as excess emissions when monitored emission levels exceed any permitted standards. [Rules 62-4.070(3), 62-4.130 and 62-210.700(6), F.A.C.]
- 30. <u>Annual Operating Report (AOR)</u>: The Annual Operating Report form shall be completed each year and submitted to the Compliance Authorities by March 1st of the following year. [Rule 62-210.370(3), F.A.C.]

EU 001. Simple Cycle Gas Turbine

The specific conditions of this section address the following emissions unit.

EU No.	Emissions unit Description					
001	Simple Cycle Gas Turbine: This emissions unit consists of a General Electric Mode PG7241(FA) gas turbine with electrical generator set. The gas turbine design incorporates dry low-NOx (DLN) combustion technology to reduce NOx emissions when firing natural gas. A water (or steam) injection system is included to reduce NOx emissions when firing distillate oil as a restricted alternate fuel. The General Electric Speedtronic™ Gas Turbine Contro System will monitor and control the gas turbine combustion process and operating parameters An absorption or evaporative cooling system may be installed to reduce the turbine inlet air temperature for a corresponding increase in power generation. Continuous monitors will record carbon monoxide emissions, nitrogen oxide emissions, and the water-to-fuel ratio during oil firing.					
	The exhaust stack is 22 feet in diameter and 98 feet tall. When firing natural gas, the gas turbine generates approximately 176 MW of electrical power. Exhaust gases exit the stack at a temperature of 1110° F and a volumetric flow rate of 2,681,000 actual cubic feet per minute. When firing low sulfur distillate oil, the gas turbine generates approximately 186 MW of electrical power. Exhaust gases exit the stack at a temperature of 1080° F and a volumetric flow rate of 2,763,000 actual cubic feet per minute. The exhaust gas parameters are approximate considering base load operation and a turbine inlet air temperature of 45° F.					

FEDERAL REGULATIONS

1. NSPS General Provisions: The gas turbine shall comply with all applicable provisions of Subpart GG in 40 CFR 60, the Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C. Appendix GG of this permit identifies the applicable NSPS requirements. The Subpart GG requirement to correct NOx test data to ISO conditions applies; however, such correction shall not be used for determining compliance with the state standards. [40 CFR 60, Subparts A and GG]

PERFORMANCE RESTRICTIONS

- 2. Allowable Fuels: The gas turbine shall fire pipeline natural gas containing no more than 1 grain of sulfur per 100 scf of natural gas. As a restricted alternate fuel, the gas turbine may fire No. 2 distillate oil (or a superior grade) containing no more than 0.05% sulfur by weight. Compliance with the fuel sulfur specifications shall be demonstrated by the record keeping requirements of this permit and the approved Alternate Monitoring Plan. [Application; Rule 62-210.200(PTE), F.A.C.]
- 3. <u>Permitted Capacities</u>: The gas turbine shall operate only in simple cycle mode. Based on the higher heating value of each fuel, a turbine inlet air temperature of 45° F, a relative humidity of 70%, and 100% base load, the permitted capacity shall be defined as the following maximum heat input rates.
 - (a) Gas Firing: The maximum heat input rate is 1817 MMBtu/hour.
 - (b) Oil Firing: The maximum heat input rate is 1965 MMBtu/hour.

The maximum heat input rates will vary depending upon turbine inlet conditions and the gas turbine characteristics. Manufacturer's performance curves, corrected for site conditions or equations for correction to other turbine inlet conditions, shall be provided to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. The performance curves shall include DLN operation for gas firing and water (or steam) injection for oil firing. The

EU 001. Simple Cycle Gas Turbine

permittee shall install, operate, calibrate, and maintain fuel metering systems to monitor the flow of natural gas and distillate oil. [Design; Rule 62-210.200(PTE), F.A.C.]

- Hours of Operation: The gas turbine shall operate no more than 4500 hours during any consecutive 12 months. [Applicant Request; Rules 62-210.200(PTE) and 62-212.400(2)(g), F.A.C.]
- 5. <u>Fuel Consumption Limit</u>: No more than 9,369,750 gallons of distillate oil shall be fired during any consecutive 12 months. *{Permitting Note: The oil firing limit is equivalent to approximately 650 hours of oil firing per year at the maximum firing rate.}* [Applicant Request, Rules 62-210.200(PTE) and 62-212.400(2)(g), F.A.C.]
- 6. Operating Procedures: All operators and supervisors shall be properly trained to operate and maintain the gas turbine and pollution control devices in accordance with the guidelines and procedures established by each manufacturer. The training shall include good operating practices as well as methods of minimizing excess emissions. [Applicant Request; Rule 62-4.070(3), F.A.C.]

EMISSIONS CONTROLS

- 7. <u>DLN Tuning</u>: Prior to the required initial emissions performance testing, the gas turbine, dry low-NOx (DLN) combustors, and SpeedtronicTM control system shall be tuned in accordance with the manufacturer's recommendations to optimize the reduction of CO, NOx, and VOC emissions. Thereafter, these systems shall be maintained and tuned as necessary to ensure efficient combustion. The SpeedtronicTM control system shall be designed and operated to monitor and control the gas turbine combustion process and operating parameters including, but not limited to: fuel distribution and staging, turbine speed, load conditions, combustion temperatures, water injection, and fully automated startup, shutdown, and cool-down. [Design; Rule 62-4.070(3), F.A.C.]
- 8. Water Injection: The permittee shall install, calibrate, operate, and maintain an automated water (or steam) injection system to control NOx emissions when firing distillate oil. This system shall be maintained and adjusted in accordance with the manufacturer's recommendations to minimize NOx emissions. [Design; Rules 62-4.070(3) and 62-4.070(3), F.A.C.]
- 9. <u>Turbine Inlet Air Cooling System</u>: The permittee may install an absorption or evaporative cooling system to reduce the turbine inlet air temperature. [Applicant Request]

EMISSIONS STANDARDS

10. <u>Simple Cycle Operation, Natural Gas</u>: This permit authorizes simple cycle operation of the gas turbine when firing natural gas. Emissions shall not exceed following standards. [Applicant Request; Design; Rule 62-4.070(3), F.A.C.]

Pollutant	Controls f	Emission Standard			
CO ^a	DLN	9.0 ppmvd corrected to 15% O2 based on a 24-hour CEMS average			
		9.0 ppmvd corrected to 15% O2 and 32.4 lb/hour based on a 3-run test average			
NOx ^b	DLN	9.0 ppmvd corrected to 15% O2 based on a 24-hour CEMS average			
		9.0 ppmvd corrected to 15% O2 and 66.2 lb/hour based on a 3-run test average			
PM/PM10°	CF/CD	Visible emissions shall not exceed 10% opacity			
SAM/SO2 d	CF	1 grain per 100 SCF of gas (fuel specification)			
VOC e	DLN	1.4 ppmvw and 3.2 lb/hour (as methane) based on a 3-run test average			

 Compliance with the rolling 24-hour CEMS standard shall be demonstrated with data collected from the certified continuous CO emissions monitoring system (CEMS) required by this permit. The CEMS shall

EU 001. Simple Cycle Gas Turbine

- calculate and record emissions for each 1-hour block of operation and determine a 24-hour average for each day of operation. Compliance with the 3-run test averages shall be determined by stack testing using EPA Method 10.
- b. Compliance with the rolling 24-hour CEMS standard shall be demonstrated with data collected from the certified continuous NOx emissions monitoring system (CEMS) required by this permit. The CEMS shall calculate and record emissions for each 1-hour block of operation and determine a 24-hour average for each day of operation. Compliance with the 3-run test averages shall be determined by stack testing using EPA Method 7E (or 20).
- Compliance with the visible emissions standard shall be determined by conducting EPA Method 9. {Permitting Note: Estimated PM emissions are less than 0.005 lb/MMBtu when firing natural gas.}
- d. Compliance with the SAM/SO2 standard shall be demonstrated by firing only pipeline natural gas and the record keeping and reporting requirements of this permit.
- e. Compliance with the VOC standards shall be determined by stack testing using EPA Method 25A. EPA Method 18 may be performed concurrently to deduct emissions of methane and ethane from the total measured VOC.
- f. DLN means dry low-NOx controls. CF means clean fuels. CD means combustion design.
- 11. <u>Simple Cycle Operation</u>, <u>Distillate Oil</u>: This permit authorizes simple cycle operation of the gas turbine when firing a restricted amount of distillate oil. Emissions shall not exceed the following standards. [Applicant Request; Design; Rule 62-4.070(3), F.A.C.]

Pollutant	Controls f	Emission Standard
CO a	CD	20.0 ppmvd corrected to 15% O2 based on a 24-hour average
		73.4 pounds per hour based on a 3-run test average
NOx ^b	WI	42.0 ppmvd corrected to 15% O2 based on a 24-hour average
		362.4 pounds per hour based on a 3-run test average
PM/PM10°	CF/CD	Visible emissions shall not exceed 10% opacity (< 0.01 grains/dscf)
SAM/SO2 d	CF/CD	Distillate oil containing no more than 0.05% sulfur by weight (fuel specification).
VOC °	CD	3.5 ppmvw (as methane) based on a 3-run test average
		8.3 pounds per hour (as methane) based on a 3-run test average

- a. Compliance with the rolling 24-hour CEMS standard shall be demonstrated with data collected from the certified continuous CO emissions monitoring system (CEMS) required by this permit. The CEMS shall calculate and record emissions for each I-hour block of operation and determine a 24-hour average for each day of operation. Compliance with the 3-run test averages shall be determined by stack testing using EPA Method 10.
- b. Compliance with the rolling 24-hour CEMS standard shall be demonstrated with data collected from the certified continuous NOx emissions monitoring system (CEMS) required by this permit. The CEMS shall calculate and record emissions for each 1-hour block of operation and determine a 24-hour average for each day of operation. Compliance with the 3-run test averages shall be determined by stack testing using EPA Method 7E (or 20).
- c. Compliance with the visible emissions standard shall be determined by EPA Method 9. {Permitting Note: Estimated PM emissions are less than 0.009 lb/MMBtu when firing distillate oil.}
- d. Compliance with the SAM/SO2 standard shall be demonstrated by low sulfur distillate oil containing no more than 0.05% sulfur by weight and the record keeping and reporting requirements of this permit.
- e. Compliance with the VOC standards shall be determined by stack testing using EPA Method 25A. EPA Method 18 may be performed concurrently to deduct emissions of methane and ethane from the total

EU 001. Simple Cycle Gas Turbine

measured VOC.

- f. CF means clean fuels. CD means combustion design. WI means water injection.
- 12. <u>Annual NOx Emission Cap</u>: NOx emissions from the simple cycle gas turbine shall not exceed 245.0 tons during any consecutive 12 months. [Rules 62-4.070(3) and 62-212.400(2)(g), F.A.C.]

EXCESS EMISSIONS

- 13. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction, shall be prohibited. These emissions shall be included in the calculation of the CEMS emission rates for compliance determinations. [Rule 62-210.700, F.A.C.]
- 14. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown, or malfunction of the gas turbine shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall not exceed two hours in any 24-hour period. Excluding startup and shutdown, operation below 50% base load is prohibited. If excess emissions occur due to malfunction, the owner or operator shall notify the Compliance Authorities within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. [Vendor Performance Curves; Rule 62-210.700, F.A.C.]

COMPLIANCE MONITORING AND RECORD KEEPING REQUIREMENTS

- 15. <u>Sampling Facilities</u>: The permittee shall design the gas turbine stack to accommodate adequate testing and sampling locations for demonstrating compliance with the applicable emission standards. [Rules 62-4.070(3) and 62-204.800, F.A.C., 40 CFR 60.40a(b)]
- 16. Gas Turbine Testing Capacity: Testing of emissions shall be conducted with the gas turbine operating at permitted capacity. Permitted capacity is defined as 90-100% of the maximum heat input rate allowed by the permit, corrected for the turbine inlet air temperature during the test (with 100% represented by a curve depicting heat input vs. turbine inlet temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. However, subsequent operation is limited by adjusting the entire heat input vs. turbine temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for the turbine inlet air temperature) and 105% of the value reached during the test until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. Procedures for these tests shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapters 62-204 and 62-297, F.A.C. [Rule 62-297.310(2), F.A.C.]
- 17. <u>Performance Test Methods</u>: Compliance tests shall be performed in accordance with the following reference methods as described in 40 CFR 60, Appendix A (1997 version), and adopted by reference in Rule 62-204.800, F.A.C.
 - (a) EPA Method 7E, "Determination of Nitrogen Oxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)".
 - (b) EPA Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources".
 - (c) EPA Method 10, "Determination of Carbon Monoxide Emissions from Stationary Sources". All CO tests shall be conducted concurrently with NOx tests.

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EU 001. Simple Cycle Gas Turbine

- (d) EPA Method 20, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines."
- (e) EPA Methods 18, 25 and/or 25A, "Determination of Volatile Organic Concentrations."
- No other test methods may be used for compliance testing without prior written approval from the Department. [Rules 62-297.200 and 62-204.800, F.A.C.; 40 CFR 60, Appendix A]
- 18. <u>Initial Tests Required</u>: Initial compliance with the allowable emission standards specified in this permit shall be determined within 60 days after achieving the maximum production rate, but not later than 180 days after initial operation of the emissions units. Initial tests for emissions from the gas turbine shall be conducted for carbon monoxide, nitrogen oxides, volatile organic compounds, and visible emissions separately for each fuel type. Initial performance test data shall also be converted into the units of the corresponding NSPS Subpart GG emissions standards to demonstrate compliance See Appendix GG. [Rule 62-297.310(7)(a)1, F.A.C.]
- 19. <u>Annual Performance Tests</u>: Annual compliance tests shall be conducted to determine the emissions of carbon monoxide, nitrogen oxides and visible emissions from the gas turbine. Tests required on an annual basis shall be conducted at least once during each federal fiscal year (October 1st to September 30th). When conducted at permitted capacity, the annual NOx continuous monitor RATA required pursuant to 40 CFR 75 may be substituted for the annual compliance stack test. Similarly, the CO continuous monitor RATA pursuant to 40 CFR 60, Appendix B may be substituted for the annual compliance stack test. [Rule 62-297.310(7)(a)4, F.A.C.]
- 20. <u>Tests Prior to Permit Renewal</u>: During the federal fiscal year (October 1st to September 30th) prior to renewing the air operation permit, compliance tests shall be conducted to determine the emissions of volatile organic compounds from the gas turbine. [Rule 62-297.310(7)(a)3, F.A.C.]
- 21. Special Compliance Tests: The Department may require additional performance tests after any substantial modifications and appropriate shake down period including the replacement of dry low-NOx combustors. Shake down periods shall not exceed 100 days after re-starting the gas turbine. [Rule 62-297.310(7)(b), F.A.C.]
- 22. <u>Continuous Monitors</u>: To demonstrate continuous compliance with the emissions limits for CO and NOx, the owner or operator shall install, calibrate, operate, and maintain a continuous emission monitoring systems (CEMS) to measure and record the CO, NOx and oxygen concentrations in the gas turbine exhaust. Alternatively, a monitor for carbon dioxide may be used in place of the oxygen monitor, but the system shall be capable of correcting the emissions to 15% oxygen.

Compliance with the 24-hour rolling averages shall be demonstrated by continuous emissions monitoring data. The 24-hour rolling average shall be determined by calculating the arithmetic average of all hourly emission rates during the averaging period. Each 1-hour average shall be expressed in units of ppmvd corrected to 15% oxygen and calculated using four valid data points approximately 15 minutes apart. (The minimum requirement is two valid data points at least 15 minutes apart.) If any oil is fired during the hour, emissions shall be attributed towards compliance with the standards for oil firing.

Continuous emission monitoring data required by this permit shall be collected and recorded during all periods of operation including startup, shutdown, and malfunction, except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. Although recorded, emissions during periods of startup, shutdown and malfunction are subject to the excess emission conditions specified in this permit.

EU 001. Simple Cycle Gas Turbine

The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of: Rule 62-297.520, F.A.C., including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications 2, 3 and 4; 40 CFR 60.7(a)(5); 40 CFR 60.13; 40 CFR 60, Appendix F; and 40 CFR Part 75, whichever is more stringent. A monitoring plan shall be provided to the DEP Emissions Monitoring Section Administrator and EPA for review no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62. The plan shall consist of data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location.

When the CEMS reports CO or NOx emissions in excess of the standards allowed by this permit, the permittee shall notify the Compliance Authorities within one (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. [Rules 62-204.800, 62-210.700, 62-4.070(3), 62-4.130, 62-4.160(8), F.A.C and 40 CFR 60.7].

- 23. <u>Fuel Records</u>: The permittee shall comply with the fuel sulfur specifications in accordance with the following requirements.
 - (a) Natural Gas: The permittee shall maintain records of the sulfur content of the natural gas being supplied for each month of operation. Methods for determining the sulfur content of the natural gas shall be ASTM methods D4084-82, D3246-81 or equivalent methods. These methods shall be used to determine the sulfur content of the natural gas fired in accordance with any EPA-approved custom fuel monitoring schedule (see Alternate Monitoring Plan) or natural gas supplier data or the natural gas sulfur content referenced in 40 CFR 75 Appendix D. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency pursuant to 40 CFR 60.335(e). However, the permittee is responsible for ensuring that the procedures in 40 CFR60.335 or 40 CFR75 are used to determine the fuel sulfur content for compliance with the SO2 standard in 40 CFR 60.333.
 - (b) Low Sulfur Distillate Oil: For all bulk shipments of low sulfur distillate oil received at this facility, the permittee shall obtain from the fuel vendor an analysis identifying the sulfur content. Methods for determining the sulfur content of the distillate oil shall be ASTM D129-91, D2622-94, or D4294-90 or equivalent methods. Records shall specify the test method used and shall comply with the requirements of 40 CFR 60.335(d).

[Rules 62-4.070(3) and 62-4.160(15), F.A.C.]

- 24. <u>Alternate Monitoring Plan</u>: Subject to EPA approval, the following alternate monitoring may be used to demonstrate compliance.
 - (a) The NOx CEMS data may be used in lieu of the monitoring system for water-to-fuel ratio and the reporting of excess emissions in accordance with 40 CFR 60.334(c)(1). The calibration of the water-to-fuel ratio-monitoring device required in 40 CFR 60.335(c)(2) will be replaced by the 40 CFR 75 certification tests of the NOx CEMS.
 - (b) The NOx CEMS data shall be used in lieu of the requirement for reporting excess emissions in accordance with 40 CFR 60.334(c)(1).
 - (c) When requested by the Department, the CEMS emission rates for NOx on this unit shall be corrected to ISO conditions to demonstrate compliance with the NOx standard established in 40 CFR 60.332.

EU 001. Simple Cycle Gas Turbine

- (d) A custom fuel monitoring schedule pursuant to Appendix D of 40 CFR 75 for natural gas may be used in lieu of the daily sampling requirements of 40 CFR 60.334(b)(2) provided the following conditions are met.
 - (1) The permittee shall apply for an Acid Rain permit within the deadlines specified in § 72.30.
 - (2) The permittee shall submit a monitoring plan, certified by signature of the Authorized Representative, that commits to using a primary fuel of pipeline supplied natural gas containing no more than 1 grain of sulfur per 100 scf of gas pursuant to § 75.11(d)(2);
 - (3) Each unit shall be monitored for SO₂ emissions using methods consistent with the requirements of 40 CFR 75 and certified by the U.S. EPA.

This custom fuel-monitoring schedule will only be valid when pipeline natural gas is used as a primary fuel. If the primary fuel for these units is changed to a higher sulfur fuel, SO2 emissions must be accounted for as required pursuant to 40 CFR 75.11(d).

[40 CFR 60, Subpart GG, Applicant Request]

- 25. <u>Daily Operations Log</u>: Before the end of the following calendar day, the owner or operator shall record the following information in a log for the previous day of operation: total hours of operation; gallons of distillate oil fired; heat input (MMBtu) from distillate oil firing; and the average water injection rate (lb/hour) during oil firing. Information may be recorded and stored as an electronic file, but must be available for inspection and/or printing at the request of the Compliance Authorities. [Rule 62-4.160(15), F.A.C.]
- 26. Monthly Operations Summary: By the fifth calendar day of each month, the owner or operator shall record the following information in a log for the previous month of operation: total hours of operation; million cubic feet of natural gas fired; gallons of distillate oil fired; the heat input rate (MMBtu) from distillate oil firing, and tons of NOx emitted. The owner or operator shall also calculate and record the rolling totals for the previous 12 months of operation. Information may be recorded and stored as an electronic file, but must be available for inspection and/or printing at the request of the Compliance Authorities. [Rule 62-4.160(15), F.A.C.]

SECTION IV.

List of Appendices

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SECTION IV.

Appendix A. Citation Format

ABBREVIATIONS AND ACRONYMS

۰F

- Degrees Fahrenheit

DEP ...

State of Florida, Department of Environmental Protection

DARM

- Division of Air Resource Management

EPA

- United States Environmental Protection Agency

F.A.C.

- Florida Administrative Code

F.S.

Florida Statute

SOA

- Specific Operating Agreement

DLN

- Dry Low-NOX Combustion Technology

RULE CITATIONS

The following examples illustrate the methods used in this permit to abbreviate and cite the references of rules, regulations, permit numbers, and identification numbers.

Florida Administrative Code (F.A.C.) Rules:

Example:

[Rule 62-213.205, F.A.C.]

Where:

62

- refers to Title 62 of the Florida Administrative Code (F.A.C.)

62-213

- refers to Chapter 62-213, F.A.C.

62-213.205 - refers to Rule 62-213.205, F.A.C.

Facility Identification (ID) Number:

Example:

Facility ID No. 0990001

Where:

000

093

- 3 digit number indicates that the facility is located in Palm Beach County

0221

- 4 digit number assigned by state database identifies specific facility

New Permit Numbers:

Example:

Permit No. 0992222-001-AC or 0992222-001-AV

Where:

AC

- identifies permit as an Air Construction Permit

ΑV

- identifies permit as a Title V Major Source Air Operation Permit

099

- 3 digit number indicates that the facility is located in Palm Beach County

2222

- 4 digit number identifies a specific facility

001

- 3 digit sequential number identifies a specific permit project

Old Permit Numbers:

Example:

Permit No. AC50-123456 or AO50-123456

Where:

AC AO

identifies permit as an Air Construction Permitidentifies permit as an Air Operation Permit

123456

- 6 digit sequential number identifies a specific permit project

Appendix B. Construction Permit General Conditions

- 1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- 2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- 3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
- 4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- 5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- 6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- 7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
 - (a) Have access to and copy and records that must be kept under the conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

- 8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - (a) A description of and cause of non-compliance; and
 - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections

SECTION IV.

Appendix B. Construction Permit General Conditions

- 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extend it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- 10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- 11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- 12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
- 13. This permit also constitutes:
 - (a) Determination of Best Available Control Technology (NA);
 - (b) Determination of Prevention of Significant Deterioration (NA); and
 - (c) Compliance with New Source Performance Standards (X).
- 14. The permittee shall comply with the following:
 - (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 - 1) The date, exact place, and time of sampling or measurements;
 - 2) The person responsible for performing the sampling or measurements;
 - 3) The dates analyses were performed;
 - 4) The person responsible for performing the analyses;
 - 5) The analytical techniques or methods used; and
 - 6) The results of such analyses.
- 15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SECTION IV.

Appendix GG. NSPS Provisions

Federal New Source Performance Standards, 40 CFR 60

40 CFR 60, Subpart A - NSPS General Provisions

Applicable portions of 40 CFR 60, Subpart A, General Provisions include:

- 40 CFR 60.7, Notification and Record Keeping
- 40 CFR 60.8, Performance Tests
- 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
- 40 CFR 60.12, Circumvention
- 40 CFR 60.13, Monitoring Requirements
- 40 CFR 60.19, General Notification and Reporting Requirements

{Permitting Note: For copies of these requirements, please contact the Department's New Source Review Section.}

40 CFR 60, Subpart GG - Stationary Gas Turbines

This emissions unit is subject to 40 CFGR 60, Subpart GG for stationary gas turbines adopted by reference in Rule 62-204.800(7)(b), F.A.C. The following conditions follow the original NSPS rule language and numbering scheme. Regulations that are not applicable were omitted for clarity. Because this emissions units is subject to an NSPS, it is also subject to the following federal provisions: 40 CFR 60, Subpart A, General Provisions for sources subject to an NSPS, adopted by reference in Rule 62-204.800(7)(d), F.A.C.; 40 CFR 60, Appendix A - Test Methods, Appendix B - Performance Specifications, Appendix C - Determination of Emission Rate Change, Appendix D - Required Emissions Inventory Information, Appendix F - Quality Assurance Procedures, adopted by reference in Rule 62-204.800(7)(e).

§ 60.330 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to all stationary gas turbines with a heat input at peak load equal to or greater than 10 million BTU per hour, based on the lower heating value of the fuel fired.

§ 60.331 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

- (a) Stationary gas turbine means any simple cycle gas turbine, regenerative cycle gas turbine or any gas turbine portion of a combined cycle steam/electric generating system that is not self propelled. It may, however, be mounted on a vehicle for portability.
- (b) Simple cycle gas turbine means any stationary gas turbine which does not recover heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine, or which does not recover heat from the gas turbine exhaust gases to heat water or generate steam.
- (d) Combined cycle gas turbine means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to heat water or generate steam.
- (f) *Ice fog* means an atmospheric suspension of highly reflective ice crystals.
- (g) ISO standard day conditions means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.
- (h) Efficiency means the gas turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output based on the lower heating value of the fuel.
- (i) Peak load means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.
- (j) Base load means the load level at which a gas turbine is normally operated.
- (p) Gas turbine model means a group of gas turbines having the same nominal air flow, combustor inlet pressure, combustor inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.

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Appendix GG. NSPS Provisions

(q) Electric utility stationary gas turbine means any stationary gas turbine constructed for the purpose of supplying more than one-third of its potential electric output capacity to any utility power distribution system for sale.

§ 60.332 Standard for nitrogen oxides.

- (a) On and after the date of the performance test required by § 60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (b) of this section shall comply with one of the following, except as provided in paragraphs (e) of this section.
 - (1) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

STD =
$$(0.0075) \frac{(14.4)}{Y} + F$$

Where:

STD = allowable NOx emissions (percent by volume at 15 percent oxygen and on a dry basis).

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F = NOx emission allowance for fuel-bound nitrogen as defined in the following table:

(3) F shall be defined according to the nitrogen content of the fuel as follows:

Fuel-Bound Nitrogen	"F"
(Percent By Weight)	(NOx Percent By Volume)
N < 0.015	0
0.015 < N < 0.1	0.04(N)
0.1 < N < 0.25	0.004 + 0.0067(N - 0.1)
N > 0.25	0.005

Where, N = the nitrogen content of the fuel (percent by weight).

- (b) Electric utility stationary gas turbines with a heat input at peak load greater than 100 million Btu per hour based on the lower heating value of the fuel fired shall comply with the provisions of paragraph (a)(1) of this section.
- (f) Stationary gas turbines using water or steam injection for control of NOx emissions are exempt from paragraph (a) when ice fog is deemed a traffic hazard by the owner or operator of the gas turbine.

§ 60.333 Standard for sulfur dioxide.

On and after the date on which the performance test required to be conducted by § 60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with one or the other of the following conditions:

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8 percent by weight.

§ 60.334 Monitoring of operations.

- (a) The owner or operator of any stationary gas turbine subject to the provisions of this subpart and using water injection to control NOx emissions shall install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within +/- 5.0 percent and shall be approved by the Administrator.
- (b) The owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

Appendix GG. NSPS Provisions

- (1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
- (2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with paragraph (b) of this section.
- (c) For the purpose of reports required under § 60.7(c), periods of excess emissions that shall be reported are defined as follows:
 - (1) Nitrogen oxides. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with § 60.332 by the performance test required in § 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in § 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under § 60.335(a).
 - (2) Sulfur dioxide. Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent.
 - (3) Ice fog. Each period during which an exemption provided in § 60.332(g) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

§ 60.335 Test methods and procedures.

- (a) To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.
- (b) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided for in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.
- (c) The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in § 60.332 and 60.333(a) as follows:
 - (1) The nitrogen oxides emission rate (NOx) shall be computed for each run using the following equation:

$$NOx = (NOx_0) (Pr/Po)^{0.5} (e^{19 (Ho - 0.00633)}) (288°K/Ta)^{1.53}$$

Where

NOx = emission rate of NOx at 15 percent oxygen and ISO standard ambient conditions, volume percent.

 $NOx_0 =$ observed NOx concentration, ppm by volume.

Pr = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.

Po = observed combustor inlet absolute pressure at test, mm Hg.

HO = observed humidity of ambient air, g H2O/g air.

SECTION IV.

Appendix GG. NSPS Provisions

- E = transcendental constant, 2.718.
- Ta = ambient temperature, °K.
- (2) The monitoring device of § 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with § 60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.
- (3) Method 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NOx emissions shall be determined at each of the load conditions specified in paragraph (c)(2) of this section.
- (d) The owner or operator shall determine compliance with the sulfur content standard in § 60.333(b) as follows: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels (incorporated by reference--see Sec. 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.
- (e) To meet the requirements of § 60.334(b), the owner or operator shall use the methods specified in paragraphs (a) and (d) of this section to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

SECTION IV.

Appendix GG. NSPS Provisions

Figure 1. Summary Report for Excess NSPS Emissions and Monitoring System Performance

Pollutant (Circle One): SO ₂ NOx TRS H ₂ S CO	Opacity
Reporting period dates: From	to
Company:	
Emission Limitation:	
Address:	·
Monitor Manufacturer and Model No.:	
Date of Latest CMS Certification or Audit:	
Process Unit(s) Description:	
Total source operating time in reporting period ¹ :	
Emission Data Summary	CMS Performance Summary 1
1. Duration of excess emissions in reporting period due to: a. Startup/shutdown b. Control equipment problems c. Process problems d. Other known causes e. Unknown causes 3. [Total duration of excess emissions] x (100) / [Total source operating time] 1 For opacity, record all times in minutes. For gases, record all 2 For the reporting period: If the total duration of excess emiss or the total CMS downtime is 5 percent or greater of the total excess emission report described in 40 CFR 60.7(c) shall. On a separate page, describe any changes since last quarter in 6	sions is 1 percent or greater of the total operating time otal operating time, both the summary report form and be submitted.
I certify that the information contained in this report is true, ac Name:	curate, and complete.
Signature:	<u> </u>
Title:	
Date:	
{Note: This format is referenced in § 60.7, Subpart A, Generology compliance and excess emissions with regard to the federal NS	

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BEST AVAILABLE COPY

THE PALM BEACH POST

Published Daily and Sunday West Palm Beach, Palm Beach County, Florida

PROOF OF PUBLICATION

STATE OF FLORIDA COUNTY OF PALM BEACH

Before the undersigned authority personally appeared Tracey Diglio, who on oath says that she is Telephone Sales Supervisor of The Palm Beach Post, a daily and Sunday newspaper published at West Palm Beach in Palm Beach County, Florida; that the attached copy of advertising, being Notice in the matter DEP Permit # 0990568-003-AC was published in said newspaper in the issues of November 24, 2003. Affiant further says that the said The Post is a newspaper published at West Palm Beach, in said Palm Beach County, Florida, and that the said newspaper has heretofore been continuously published in said Palm Beach County, Florida, daily and Sunday and has been entered as second class mail matter at the post office in West Palm Beach, in said Palm Beach County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that she/her has neither paid nor promised any person, firm or corporation any discount rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and subscribed before this 11th day of December, A.D. 2003

Personally known XX or Produced Identification

Type of Identification Produced_



PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT STATE OF FLORIDA DEPARTMENT OF

DEPARTIMENI OF
ENVIRONMENTAL
PROTECTION
Draft Air Permit No.
0990568-003-AC
Lake Worth Generation, LLC
Change to Simple Cycle Only
Operation
The Department of Environmental Protection (Department) gives notice of its
intent to issue air construction Permit No. 0990568003-AC to Lake Worth Generation, LLC, which authorizes simple cycle only
operation for the gas turbine project under construction. The gas turbine is
being installed at the new
Lake Worth Generation
Plant located in Palm Beach
County at 117 College
Street in Lake Worth,
Florida. The applicant's
authorized representative is
Mr. Brian Chatlosh, Manager of Lake Worth Generation. LLC The applicant's
mailing address is 245 Winter Street, Suite 300,
Waltham, MA 02451.
In 1999, the Department
issued Permit No. PSD-FL266, which authorized Lake
Worth Generation, LLC to
construct a new combined
cycle gas turbine consisting
of a 186 MW gas turbine
with electrical generator set
and a heat recovery steam
generator with duct firing.
The original project was
subject to preconstruction
review for the Prevention of
Significant Deterioration
(PSD) pursuant to Rule
62-212,400, F.A.C. Initially.

62-212.400, F.A.C. Initially, the project was designed to provide steam for sale to the adjacent Tom G. Smith Power Plant operated by the City of Lake Worth. However, the heat recovery steam generator will not be installed and the applicant now requests a revised permit allowing simple cycle only operation limited to a maximum of 4500 hours per year. The change to simple cycle

only operation will result in reductions of potential annual emissions compared to the original project. In addition, the new plant will no longer belong to the List of 28 PSD Facility Categories because steam gener-ated electrical power will not be produced. Therefore, the PSD major facility the PSU major facility threshold for the project is 250 tons per year. In accordance with Rule 62-212. 400, F.A.C., the revised simple cycle project is not subject to PSD preconstruction results have used to PSD preconstruction for the project project to PSD preconstruction for the project page 100 pt. 100 pt subject to PSD preconstruc-tion review because permit conditions limit all potential emissions below this PSD major facility threshold. No additional air quality model-ing was necessary because impacts from simple cycle operation were satisfactorily reviewed for the initial air construction permit project. The previous permit stan-The previous permit standards were retained, which represented determinations of the Best Available Control Technology (BACT) for emissions of CO. NOx, PM, SAM, and SO2 from large frame gas turbines. The draft permit removes all references to combined cycle operation. Any future request to add combined cycle operation will require a permit modification and PSD applicability review.

applicability review.
The Department will issue the
Final Permit with the
attached conditions unless a response received in accordance with the follow-ing procedures results in a different decision or signifidifferent decision or signifi-cant change of terms or conditions. The Depart-ment will accept written comments concerning the proposed permit issuance action for a period of four-teen (14) days trom the date of publication of this Public. Notice of Intent to Issue Air Construction Permit. Writ-ten comments should be provided to the Departten comments should be provided to the Depart-ment's Bureau of Air Regu-lation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 323992400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant charge in the proposed agency action, the Department shall revise the proposed agency action, the Department shall revise the proposed agency action, the Department will issue the permit with the attached conditions unless a timely betition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding. A person whose substantial interests are affected by the proposed of permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent, Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (14) days of receipt of this notice of within fourteen (14) days of receipt of the poptication of the public notice or within fourteen (14) days of receipt of that notice in the process of the other section 120.60(3), F.S. however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Section 120.569 and 120.57, F.S. or to intervene in this proceeding and participate as a party vent of the publication of the petition the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Section 120.569 and 1

205, F.A.C.
A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number. If known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination. petitioner's substantial, interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant.reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require

petitioner contends require reversal or modification of

the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner vishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is a valiable for public inspection during normal business hours, 8:00 a.m. though Friday, except legal holidays, at:

Department of Environmental Protection Bureau of Air Regulation (111 S. Magnolla Drive, Suite 4)

2600 Blair Stone Road,

MS #5505 Tallahassee, 32399-2400 see Florida, Telephone: 850/488-0114

retephone: 850/488-0114
Department of
Environmental Protection
Southeast District
Air Resources Section
400 North Congress Avenue
West Palm Beach, Florida
33401
Telephone: 554/664 6000 33401
Telephone: 561/681-6600
Palm Beach County
Health Department
Air Pollution Control Section
(901 Evernia Street)
P.O. Box 29
West Palm Beach, FL
33402-0029
Telephone: 561/355-3136
PUB: The Palm Beach Post
November 24, 2003



Department of Environmental Protection

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

David B. Struhs Secretary

October 23, 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Brian Chatlosh, Manager Lake Worth Generation, LLC 245 Winter Street, Suite 300 Waltham, MA 02451

Re:

Draft Air Permit No. 0990568-003-AC (Previous Permit No. PSD-FL-266)

Lake Worth Generation, LLC, Change to Simple Cycle Only Operation

Second Request for Public Notice

Dear Mr. Chatlosh:

On July 21, 2003, the Department mailed the Intent to Issue Permit for the new Lake Worth Generation Plant, which is located in Palm Beach County at 117 College Street in Lake Worth, Florida. This letter notified you of the following requirement.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permit (Public Notice). The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in Section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) and (11), F.A.C.

The Department has not received proof of publication of the required Public Notice. If you have published the Public Notice, please submit the uniform affidavit of proof as soon as possible. If you have not yet published the Public Notice, please do so and submit the uniform affidavit of proof as soon as possible. A copy of the Public Notice is attached. The Department intends to deny your request for an air construction permit if the required proof of publication of the Public Notice is not received by November 28, 2003. If you have any questions regarding this matter, please contact Jeff Koerner at 850/921-9536.

Sincerely,

Trina Vielhauer, Chief Bureau of Air Regulation

Trund Vulhaun

Enclosures

"More Protection, Less Process"

Printed on recycled paper.

CERTIFICATE OF SERVICE

Mr. Brian Chatlosh, LWG*

Mr. Ken Kosky, Golder Associates

Mr. Jim Stormer, PBCHD

Mr. Tom Tittle, SED

Mr. Gregg Worley, EPA Region 4

Mr. John Bunyak, NPS

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Draft Air Permit No. 0990568-003-AC

Lake Worth Generation, LLC Change to Simple Cycle Only Operation

The Department of Environmental Protection (Department) gives notice of its intent to issue air construction Permit No. 0990568-003-AC to Lake Worth Generation, LLC, which authorizes simple cycle only operation for the gas turbine project under construction. The gas turbine is being installed at the new Lake Worth Generation Plant located in Palm Beach County at 117 College Street in Lake Worth, Florida. The applicant's authorized representative is Mr. Brian Chatlosh, Manager of Lake Worth Generation, LLC The applicant's mailing address is 245 Winter Street, Suite 300, Waltham, MA 02451.

In 1999, the Department issued Permit No. PSD-FL-266, which authorized Lake Worth Generation, LLC to construct a new combined cycle gas turbine consisting of a 186 MW gas turbine with electrical generator set and a heat recovery steam generator with duct firing. The original project was subject to preconstruction review for the Prevention of Significant Deterioration (PSD) pursuant to Rule 62-212.400, F.A.C. Initially, the project was designed to provide steam for sale to the adjacent Tom G. Smith Power Plant operated by the City of Lake Worth. However, the heat recovery steam generator will not be installed and the applicant now requests a revised permit allowing simple cycle only operation limited to a maximum of 4500 hours per year.

The change to simple cycle only operation will result in reductions of potential annual emissions compared to the original project. In addition, the new plant will no longer belong to the List of 28 PSD Facility Categories because steam generated electrical power will not be produced. Therefore, the PSD major facility threshold for the project is 250 tons per year. In accordance with Rule 62-212.400, F.A.C., the revised simple cycle project is not subject to PSD preconstruction review because permit conditions limit all potential emissions below this PSD major facility threshold. No additional air quality modeling was necessary because impacts from simple cycle operation were satisfactorily reviewed for the initial air construction permit project. The previous permit standards were retained, which represented determinations of the Best Available Control Technology (BACT) for emissions of CO, NOx, PM, SAM, and SO2 from large frame gas turbines. The draft permit removes all references to combined cycle operation. Any future request to add combined cycle operation will require a permit modification and PSD applicability review.

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information:
(a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection Bureau of Air Regulation (111 S. Magnolia Drive, Suite 4) 2600 Blair Stone Road, MS #5505 Tallahassee, Florida, 32399-2400 Telephone: 850/488-0114 Department of Environmental Protection Southeast District Air Resources Section 400 North Congress Avenue West Palm Beach, Florida 33401 Telephone: 561/681-6600 Palm Beach County Health Department Air Pollution Control Section (901 Evernia Street) P.O. Box 29 West Palm Beach, FL 33402-0029 Telephone: 561/355-3136

The complete project file includes the application, Technical Evaluation and Preliminary Determination, Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Department's reviewing engineer for this project for additional information at the address and phone numbers listed above.

Memorandum

Florida Department of Environmental Protection

TO:

Trina Vielhauer, Chief

Bureau of Air Regulation

THROUGH:

Al Linero, Manager

New Source Review Section

FROM:

Jeff Koerner, New Source Review Section

DATE:

July 11, 2003

SUBJECT:

Permit No. 0990568-003-AC

(Previous Permit No. PSD-FL-266) Lake Worth Generation, LLC 186 MW Simple Cycle Gas Turbine

Attached for your review are the following items:

Intent to Issue Permit and Public Notice Package;

- Technical Evaluation and Preliminary Determination;
- · Draft Permit; and
- P.E. Certification.

In 1999, the Department issued a PSD permit to Lake Worth Generation, LLC to construct a 186 MW combined cycle gas turbine. The property for the project is leased from the City of Lake Worth, which owns and operates the existing Tom G. Smith Power Plant. City of Lake Worth employees were contracted to operate and maintain the new gas turbine under the control of Lake Worth Generation, LLC. The City of Lake Worth would purchase steam generated by the combined cycle unit's heat recovery steam generator (HRSG) to repower existing steam turbines at the Tom G. Smith Power Plant. This would allow older, oil-fired boilers to remain idle. The Department determined that the project would be a new facility because the combined cycle unit would be under the control of Lake Worth Generation, LLC.

Due to bankruptcy issues, Lake Worth Generation, LLC now proposes to install only the simple cycle portion of the original project. The gas turbine is on site and partially constructed. The HRSG will not be installed. During simple cycle operation, the unit will produce only direct electrical power delivered to the main power grid. The simple cycle gas turbine remains under control of Lake Worth Generation, LLC. However, it should be noted that this project is likely to be sold in the near future and it may be necessary to revisit the issues of "common control" and "single facility" depending on the eventual purchaser and corresponding business relationship with the City of Lake Worth.

Operation only as a simple cycle unit limited to 4500 hours per year results in reductions of potential annual emissions compared to the original project. The new plant no longer belongs to the List of 28 PSD Facility Categories because steam generated electrical power will not be produced. Therefore, the PSD major facility threshold for the project is 250 tons per year. The simple cycle only project is not subject to PSD preconstruction review because permit conditions limit all potential emissions below this PSD major facility threshold. No additional air quality modeling was necessary because the project is not subject to PSD; however, impacts from simple cycle operation were satisfactorily reviewed during the initial air construction permit project.

The draft permit authorizes the construction of the gas turbine for up to 4500 hours per year of simple cycle operation. The draft permit retains the previous emissions standards, which were based on the determinations of the Best Available Control Technology (BACT) for emissions of CO, NOx, PM, SAM, and SO2 from large frame gas turbines. The draft permit removes all references to combined cycle operation. Any future request to add combined cycle operation will require a permit modification and PSD applicability review. Day #74 is September 8, 2003. I recommend your approval of the attached Draft Permit for this project.

P.E. CERTIFICATION STATEMENT

PERMITTEE

Lake Worth Generation, LLC 245 Winter Street, Suite 300 Waltham, MA 02451

Draft Air Permit No. 0990568-003-AC Lake Worth Generation Plant Change to Simple Cycle Only Operation Palm Beach County, Florida

PROJECT DESCRIPTION

In 1999, the Department issued Permit No. PSD-FL-266 authorizing Lake Worth Generation, LLC to construct a new combined cycle gas turbine consisting of a 186 MW gas turbine with electrical generator set and a heat recovery steam generator with duct firing. Initially, the project was designed to provide steam for sale to the adjacent Tom G. Smith Power Plant operated by the City of Lake Worth. However, the heat recovery steam generator will not be installed and the project is now being revised for only simple cycle only operation limited to a maximum of 4500 hours per year.

The General Electric Model PG7241(FA) gas turbine design incorporates dry low-NOx (DLN) combustion technology to reduce thermal NOx formation when firing natural gas. A water (or steam) injection system is included to decrease flame temperatures and reduce NOx emissions when firing ultra low-sulfur distillate oil as a restricted alternate fuel. CO and VOC emissions are minimized by the efficient combustion design and high temperatures. Particulate matter emissions are also reduced by efficient, high-temperature combustion of natural gas and distillate oil, which contain little ash or other contaminants. Emissions of sulfuric acid mist (SAM) and sulfur dioxide (SO2) are minimized by the firing of natural gas as the primary and restricted firing of ultra low sulfur distillate oil, which are fuels that contain only small amounts of fuel sulfur. The Speedtronic TM gas turbine control system will monitor and control the gas turbine combustion process and operating parameters. Continuous monitors will record CO and NOx emissions as well as the water-to-fuel ratio during oil firing.

The change to simple cycle only operation results in reductions of potential annual emissions from the original project. In addition, the new plant will no longer belong to the List of 28 PSD Facility Categories because steam generated electrical power will not be produced. Therefore, the PSD major facility threshold for the project is 250 tons per year. In accordance with Rule 62-212.400, F.A.C., the revised simple cycle project is not subject to PSD preconstruction review because permit conditions limit all potential emissions below this PSD major facility threshold. No additional air quality modeling was necessary because the project is not subject to PSD; however, impacts from simple cycle operation were satisfactorily reviewed during the initial air construction permit project. The previous permit standards were retained, which represented determinations of the Best Available Control Technology (BACT) for emissions of CO, NOx, PM, SAM, and SO2 from large frame gas turbines. The draft, permit removes all references to combined cycle operation. Any future request to add combined cycle operation will require a permit modification and PSD applicability review.

I HEREBY CERTIFY that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62½04 at through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including, but not limited to, the electrical, mechanical, structural, hydrological, geological, and meteorological features).

Jeffery F. Koerner, P.E.

Registration Number: 49441



Department of Environmental Protection

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

David B. Struhs Secretary

July 21, 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Brian Chatlosh, Manager Lake Worth Generation, LLC 245 Winter Street, Suite 300 Waltham, MA 02451

De.

Draft Air Permit No. 0990568-003-AC (Previous Permit No. PSD-FL-266) Lake Worth Generation, LLC Change to Simple Cycle Only Operation

Dear Mr. Chatlosh:

Enclosed is one copy of the draft permit to modify the existing project for simple cycle only operation. The new equipment is being installed at the new Lake Worth Generation Plant, which is located in Palm Beach County at 117 College Street in Lake Worth, Florida. The Department's "Technical Evaluation and Preliminary Determination", "Intent to Issue Permit", and the "Public Notice of Intent to Issue Permit" are also included.

The "Public Notice of Intent to Issue Permit" must be published one time only, as soon as possible, in the legal advertisement section of a newspaper of general circulation in the area affected, pursuant to the requirements Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to A. A. Linero, Administrator of the New Source Review Section, at the above letterhead address. If you have any other questions, please contact Jeff Koerner at 850/921-9536.

Sincerely,

Trina Vielhauer, Chief Bureau of Air Regulation

Lua L Vielhauer

Enclosures

INTENT TO ISSUE AIR PERMIT

In the Matter of an Application for Air Permit by:

Lake Worth Generation, LLC . 245 Winter Street, Suite 300 Waltham, MA 02451

Authorized Representative:
Mr. Brian Chatlosh, Manager

Draft Air Permit No. 0990568-003-AC (Previous Permit No. PSD-FL-266) Lake Worth Generation, LLC Change to Simple Cycle Only Operation Palm Beach County, Florida

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit (copy of Draft Permit attached) for the proposed project as detailed in the application and the enclosed Technical Evaluation and Preliminary Determination, for the reasons stated below. On May 19, 2003, Lake Worth Generation, LLC submitted an application to the Department requesting a modification of existing Permit No. PSD-FL-266 to recognize simple cycle operation only for the previously permitted combined cycle gas turbine project. The project is being constructed at the new Lake Worth Generation Plant, which is located in Palm Beach County at 117 College Street in Lake Worth, Florida.

The Department has permitting jurisdiction under the provisions of Chapter 403, F.S., and Chapters 62-4, 62-210, and 62-212, F.A.C. The above actions are not exempt from permitting procedures. The Department has determined that an air construction permit is required to perform the proposed work. The Department intends to issue this air construction permit based on the belief that the applicant has provided reasonable assurances to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permit. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in Section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) and (11), F.A.C.

The Department will issue the final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) days from the date of publication of Public Notice. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (14) days of publication of the Public Notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S. however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at

Lake Worth Generation, LLC Change to Simple Cycle Only Operation Page 2 of 3 Draft Air Permit No. 0990568-003-AC (Previous Permit No. PSD-FL-266) Intent to Issue Air Permit

the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information:
(a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542, F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Mediation is not available in this proceeding. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2), F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Executed in Tallahassee, Florida.

Vice L'Vielhaur

Trina Vielhauer, Chief Bureau of Air Regulation

Draft Air Permit No. 0990568-003-AC (Previous Permit No. PSD-FL-266) Intent to Issue Air Permit

CERTIFICATE OF SERVICE

Mr. Brian Chatlosh, LWG*

Mr. Ken Kosky, Golder Associates

Mr. Jim Stormer, PBCHD

Mr. Tom Tittle, SED

Mr. Gregg Worley, EPA Region 4

Mr. John Bunyak, NPS

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

TECHNICAL EVALUATION .& PRELIMINARY DETERMINATION

PROJECT

Lake Worth Generation LLC ARMS Facility ID No. 0990568

Air Permit No. 0990568-003-AC (Previous Permit No. PSD-FL-266)

Project: Change to Simple Cycle Only Operation

COUNTY

Palm Beach County

APPLICANT

Lake Worth Generation, LLC 245 Winter Street, Suite 300 Waltham, MA 02451

Authorized Representative: Brian Chatlosh, Manager

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
New Source Review Section
2600 Blair Stone Road, MS #5505
Tallahassee, FL 32399-2400



July 10, 2003

1. GENERAL PROJECT INFORMATION

Application Processing Schedule

03/12/03	Meeting in Lake Worth between the Department and representatives of Lake Worth Generation, LLC to
	review construction to date and discuss change to only simple cycle operation.

05/19/03 Received application for permit modification.

06/06/03 Requested additional information (email).

06/16/03 Mailed reminder of request for additional information.

06/27/03 Received additional information; application complete.

Facility Description and Location

After modification of the permit, Lake Worth Generation, LLC will be authorized to construct a 186 MW simple cycle gas turbine with electrical generator set and associated equipment. The new electrical generating power plant will be located within the boundaries of the existing Tom G. Smith Power Plant (owned and operated by the City of Lake Worth) at 117 College Street in Lake Worth, Florida 33461.

Regulatory Categories

<u>Title III</u>: The new facility is not a major source of hazardous air pollutants (HAP).

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

Title V: The new facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

PSD: The simple cycle gas turbine is a minor facility in accordance with Rule 62-212.400, F.A.C.

NSPS: The gas turbine is subject to the New Source Performance Standards of Subpart GG in 40 CFR 60.

Project Description

In 1999, the Department issued a PSD permit to Lake Worth Generation, LLC to construct a 186 MW combined cycle gas turbine. The property for the project is leased from the City of Lake Worth, which owns and operates the existing Tom G. Smith Power Plant. City of Lake Worth employees were contracted to operate and maintain the new gas turbine under the control of Lake Worth Generation, LLC. The City of Lake Worth would purchase steam generated by the combined cycle unit's heat recovery steam generator (HRSG) to re-power existing steam turbines at the Tom G. Smith Power Plant. This would allow older, oil-fired boilers to remain idle. The Department determined that the project would be a new facility because the combined cycle unit would be under the control of Lake Worth Generation, LLC.

Due to bankruptcy issues, Lake Worth Generation, LLC now proposes to install only the simple cycle portion of the original project restricted to 4500 hours per year of operation. The gas turbine is on site and partially constructed, but HRSG will not be installed. During simple cycle operation, the unit will produce only direct electrical power delivered to the main power grid. The simple cycle gas turbine remains under control of Lake Worth Generation, LLC. However, it should be noted that this project is likely to be sold in the near future and it may be necessary to revisit the issues of "common control" and "single facility" depending on the eventual purchaser and corresponding business relationship with the City of Lake Worth.

2. APPLICABLE REGULATIONS

State Regulations

This project is subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The Florida Statutes authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the Florida Administrative Code (F.A.C.). This project is subject to the applicable rules and regulations defined in the following Chapters of the Florida Administrative Code.

~1	-		. •
Chapter	Desc	27177	finn.

62-4 Permitting Requirements

62-204 Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

- 62-210 Required Permits, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms
 62-212 Preconstruction Review, PSD Requirements, and BACT Determinations
- 62-213 Operation Permits for Major Sources of Air Pollution
- 62-296 Emission Limiting Standards
- 62-297 Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures

Federal Regulations

This project is subject to the applicable federal provisions regarding air quality as established by the EPA in the following sections of the Code of Federal Regulations (CFR) adopted by reference in Rule 62-204.800, F.A.C.

Title 40 Description

Part 60 New Source Performance Standards (NSPS)

Subpart A, General Provisions for NSPS Sources

Subpart GG, NSPS for Gas Turbines

Applicable Appendices

PSD Applicability and Preconstruction Review

The Department regulates major air pollution sources in accordance with Florida's Prevention of Significant Deterioration (PSD) program, as approved by the EPA in Florida's State Implementation Plan and defined in Rule 62-212.400, F.A.C. A PSD review is required only in areas currently in attainment with the National Ambient Air Quality Standard (AAQS) or areas designated as "unclassifiable" for a given pollutant. A facility is considered "major" with respect to PSD if it emits or has the potential to emit:

- ≥ 250 tons per year of any regulated pollutant, or
- ≥ 100 tons per year of any regulated pollutant and belonging to one of 28 PSD Major Facility Categories, or
- \geq 5 tons per year of lead.

For new PSD-major facilities and modifications at existing PSD-major facilities, each regulated pollutant is reviewed for PSD applicability based on emissions thresholds known as the Significant Emission Rates listed in Table 62-212.400-2, F.A.C. Net emissions increases exceeding these rates are considered "significant" and the applicant must employ the Best Available Control Technology (BACT) to minimize emissions of each such pollutant and evaluate the air quality impacts. Although a facility may be "major" with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants.

The original combined cycle project was classified as a new PSD-major source of air pollution in accordance with Rule 62-212.400, F.A.C. The following table summarizes PSD applicability for the original project based on the initial PSD permit.

Table 2A. Summary of Potential Emissions from Original Combined Cycle Project.

	Emissions Rate In Tons Per Year (TPY)				
Pollutant	Potential Emissions	Major Source Threshold	Major Source?	Significant Emissions Rate	Subject To PSD?
СО	195		100/250* Yes (NOx)	100	Yes
NOx	408			40	Yes
PM / PM10	42	100/250*		25/15	Yes
SAM	9	100/250*		7	Yes
SO ₂	54			40	Yes
VOC	16			40	No

^{*} The threshold is 100 TPY for electric utility steam generating units and 250 TPY for any facility.

As shown, PSD preconstruction review applied to emissions carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM10), sulfuric acid mist (SAM), and sulfur dioxide (SO2). Emissions of volatile organic compounds (VOC) were below the PSD significant emission rates. The following table summarizes the PSD applicability for the revised simple cycle project restricted to 4500 hours of operation per year.

Table 2B.	Summary o	f Potential	Emissions	from	Original	Combined (Cvcle Proi	ect.

	Emissions Rate In Tons Per Year (TPY)					
Pollutant	Potential Emissions	Major Source Threshold	Major Source?	Significant Emissions Rate	Subject To PSD?	
СО	86		250* N	100	No	
NOx	245			40	No	
PM / PM10	23	250*		25 / 15	No	
SAM	< 7	250*	No	7	No	
SO ₂	43			40	No	
VOC	9			40	No	

^{*} The threshold is 250 TPY because the simple cycle gas turbine does not produce any steam generated electrical power.

As shown, the new simple cycle only facility will be considered a minor source of air pollution and is not subject to PSD preconstruction review. Operation as a simple cycle only unit limited to 4500 hours per year will result in reductions of potential annual emissions compared to the original project. The new plant no longer belongs to the List of 28 PSD Facility Categories because steam generated electrical power will not be produced. Therefore, the PSD major facility threshold for the project is 250 tons per year. The simple cycle only project is not subject to PSD preconstruction review because permit conditions limit all potential emissions below this PSD major facility threshold. No additional air quality modeling was necessary because impacts from simple cycle operation were satisfactorily reviewed for the initial air construction permit project.

It is noted that Lake Worth Generation LLC is in bankruptcy and plans to sell the project. Due to the location of this new facility within the boundaries of the existing City of Lake Worth's Tom G. Smith Power Plant, there are concerns over the issues of "common control" and "single facility". These issues should be readdressed when considering any future transfer of this permit.

3. CONTROL TECHNOLOGY REVIEW

The General Electric Model PG7241(FA) gas turbine design incorporates dry low-NOx (DLN) combustion technology to reduce thermal NOx formation when firing natural gas. A water (or steam) injection system is included to decrease flame temperatures and reduce NOx emissions when firing ultra low-sulfur distillate oil as a restricted alternate fuel. CO and VOC emissions are minimized by the efficient combustion design and high temperatures. Particulate matter emissions are also reduced by efficient, high-temperature combustion of natural gas and distillate oil, which contain little ash or other contaminants. Emissions of sulfuric acid mist (SAM) and sulfur dioxide (SO2) are minimized by the firing of natural gas as the primary and restricted firing of ultra low sulfur distillate oil, which are fuels that contain only small amounts of fuel sulfur. The Speedtronic gas turbine control system will monitor and control the gas turbine combustion process and operating parameters. CO and NOx CEMS will record emissions during gas and oil firing. Although no longer subject to PSD preconstruction review, the gas turbines remains subject to the New Source Performance Standards for gas turbines in Subpart GG of 40 CFR 60.

4. DRAFT PERMIT: CHANGES TO THE ORIGINAL PERMIT

The draft permit includes the following changes:

- Addition of new specific condition clarifying that the new permit supersedes previous Permit No. PSD-FL-266.
- Authorization for up to 4500 hours per year of simple cycle operation;
- Removal all references to combined cycle operation and BACT;

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

- Retention of the previous emissions standards, which were based on the determinations of the Best Available Control Technology (BACT) for emissions of CO, NOx, PM, SAM, and SO2 from large frame gas turbines;
- All CO and NOx standards were revised to 24-hour averaging periods;
- Addition of a new specific condition limiting total NOx emissions to no more than 245.0 tons during any consecutive
 12 months to prevent triggering the PSD major facility threshold;
- Addition of a new specific condition recognizing that a relaxation of permit restrictions (including maximum heat input
 rates, hours of operation, pollutant emission standards, or a request for combined cycle operation) would trigger the
 source obligation provisions of Rule 62-212.400(2)(g), F.A.C.; and
- Addition of a new specific condition providing the requirements for a transfer of permit.

The emissions standards continue to reflect the range of Best Available Control Technology (BACT) for emissions of CO, NOx, PM, SAM, and SO2 from large frame gas turbines. Although the original project did not trigger PSD review for volatile organic compounds (VOC), the emission standard for VOC is also within the range of recent BACT determinations. The change to simple cycle only operation reduces potential annual emissions and does not trigger additional PSD review. No additional air quality modeling was necessary because impacts from simple cycle operation were reviewed during the initial air construction permit project.

5. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Jeff Koerner is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

{Filename: 0990568-003-AC-TEPD}

DRAFT

PERMITTEE

Lake Worth Generation, LLC 245 Winter Street, Suite 300 Waltham, MA 02451 Authorized Representative: Brian Chatlosh, Manager

Permit No. 0990568-003-AC Expires: March 31, 2005 186 MW Simple Cycle Gas Turbine

SIC No. 4911

PROJECT AND LOCATION

This permit authorizes Lake Worth Generation, LLC to construct a 186 MW simple cycle gas turbine with electrical generator set and associated equipment in accordance with the application and conditions of this permit. The new electrical generating power plant will be located within the boundaries of the existing Tom G. Smith Power Plant (owned and operated by the City of Lake Worth) at 117 College Street in Lake Worth, Florida 33461.

{Permitting Note: This project was originally configured as a combined cycle gas turbine (Permit No. PSD-FL-266) and was classified as a new PSD major facility in accordance with Rule 62-212.400, F.A.C. This new permit authorizes simple cycle only operation. In accordance with the conditions of this permit, the new facility is considered a minor source of air pollution and is not subject to PSD preconstruction review.}

STATEMENT OF BASIS

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.), and Subpart GG in Part 60 of Title of the Code of Federal Regulations. The above named permittee is authorized to construct the emissions units in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department). This permit supersedes previous air construction Permit No. PSD-FL-266.

APPENDICES

The attached appendices are a part of this permit:

Appendix A. Citation Format

Appendix B. Construction Permit General Conditions

Appendix GG. NSPS Provisions

(DRAFT)

Joseph Kahn, Acting Director Division of Air Resources Management

FACILITY DESCRIPTION

This permit authorizes Lake Worth Generation (LWG) to construct a new simple cycle gas turbine. The permittee will lease property from the City of Lake Worth that is within the boundaries of its existing Tom G. Smith Power Plant. City employees will operate and maintain the new unit under the control of LWG. This new facility consists of the following emissions unit.

EU No.	Emissions Unit Description	
001	186 MW simple cycle gas turbine	

{Permitting Note: The project was originally proposed as a combined cycle unit, but is modified by this permit to authorize simple cycle <u>only</u> operation.}

REGULATORY CLASSIFICATIONS

<u>Title III</u>: The new facility will not be a major source of hazardous air pollutants (HAPs).

Title IV: The new facility operates units subject to applicable Acid Rain provisions of the Clean Air Act.

Title V: The new facility is a Title V major facility pursuant to Chapter 62-213, F.A.C.

PSD: The new facility is not a PSD major facility pursuant to Rule 62-212.400, F.A.C.

NSPS: The gas turbine is subject to New Source Performance Standards of Subpart GG in 40 CFR 60.

Siting: The project is not subject to Chapter 62-17, F.A.C. for Power Plant Site Certification.

RELEVANT DOCUMENTS

The documents listed below are not part of this permit, but specifically relate to this permitting action.

- Project No. 0990568-001-AC: Air Permit No. PSD-FL-266 issued on 11/14/99 and all related documents for a combined cycle gas turbine.
- *Project No. 0990568-002-AC*: Permit modification (PSD-FL-266A) issued on 08/30/00 to revise VOC standards for combined cycle operation and all related documents.
- No Project Number: Permitting action (PSD-FL-266B) issued on 04/03/01 to extend permit expiration date (and authority to construct) and all related documents.
- Project No. 0990568-003-AC: Application to modify current air permit (PSD-FL-266) for a simple cycle only gas turbine received on May 19, 2003 and all related correspondence.

Unless otherwise specified by this permit, the following conditions apply to all activities this facility.

ADMINISTRATIVE REQUIREMENTS

- 1. <u>Permitting Authority:</u> All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.
- 2. Compliance Authorities: All documents related to reports, tests, minor modifications and notifications shall be submitted to the Air Pollution Control Section of the Palm Beach County Health Department at P.O. Box 29 (901 Evernia Street), West Palm Beach, Florida 33402-0029. Copies of these items shall also be submitted to the Department's Air Resources Section of the Southeast District Office at P.O. Box 15425 (400 North Congress Avenue), West Palm Beach, Florida, 33416-5425.
- 3. <u>Previous Permits</u>: This air construction permit supersedes previous Permit No. PSD-FL-266.
- 4. <u>Permit Applications</u>: The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C.
- 5. <u>Citation Format</u>: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code. *Appendix A* lists abbreviations and methods for citing regulations used throughout this permit.
- 6. General Conditions: The owner and operator is subject to, and shall operate under, the attached General Conditions listed in *Appendix B* of this permit. General Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
- 7. <u>Applicable Regulations</u>: Unless otherwise indicated in this permit, the construction and operation of the subject emission units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, and 62-297; and the applicable requirements in Title 40 of the Code of Federal Regulations. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations. [Rule 62-210.300, F.A.C.]
- 8. <u>Modifications</u>: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
- 9. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
- 10. Source Obligation: This project is subject to Rule 62-212.400(2)(g), F.A.C., which states, "If a previously permitted facility or modification becomes a facility or modification which would be subject to the preconstruction review requirements of this rule if it were a proposed new facility or modification solely by virtue of a relaxation in any federally enforceable limitation on the capacity of the facility or modification to emit a pollutant (such as a restriction on hours of operation), which limitation was established after August 7,1980, then at the time of such relaxation the preconstruction review requirements of this rule shall apply to the facility or modification as though construction had not yet commenced on it." This includes, but is not limited to, increases in

- maximum heat input rates, hours of operation, pollutant emission rates, or a request for combined cycle operation. [Rule 62-212.400(2)(g), F.A.C.]
- 11. Expiration and Extension: For good cause, the permittee may request that this PSD permit be extended. Such a request shall be submitted at least sixty (60) days before the expiration of this permit. [Rules 62-4.070(3) and 62-4.080, F.A.C.]
- 12. Transfer of Permit: Within thirty (30) days after the sale or legal transfer of a permitted facility, an "Application for Transfer of Air Permit" (DEP Form 62-210.900(7)) shall be submitted to the Permitting Authority. This form must be completed with the notarized signatures of both the permittee and the proposed new permittee. The permittee is encouraged to apply for a permit transfer prior to the sale or legal transfer of a permitted facility. However, the transfer shall not be effective prior to the sale or legal transfer. Until this transfer is approved by the Department, the permittee and any other person constructing, operating, or maintaining the permitted facility shall be liable for compliance with the terms of the permit. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations occurring prior to the sale or legal transfer of the facility. {Permitting Note: In reviewing a request for a transfer of the air permit, the Department will reconsider the issues of "common control" and "single facility" due to the proximity of this new facility within the boundaries the existing Tom G. Smith Power Plant, which is owned operated by the City of Lake Worth.} [Rule 62-4.120, F.A.C.]
- 13. Application for Title IV Permit: At least 24 months before the date on which the new unit begins serving an electrical generator greater than 25 MW, the permittee shall submit an application for a Title IV Acid Rain Permit to the EPA Region 4 office with copy to the Department's Bureau of Air Regulation in Tallahassee. [40 CFR 72]
- 14. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may require by law. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

EMISSION STANDARDS

- 15. <u>Unconfined Emissions of Particulate Matter</u>: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]
- 16. Odor: No person shall cause, suffer, allow or permit the discharge of air pollutants that cause or contribute to an objectionable odor. An objectionable odor is defined as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(203), F.A.C.]

OPERATIONAL REQUIREMENTS

- 17. <u>Plant Operation Problems</u>: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall notify the Compliance Authorities within one (1) working day. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. [Rule 62-4.130, F.A.C.]
- 18. <u>Circumvention</u>: No person shall circumvent any air pollution control device or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

- 19. Operating Rate During Testing. Unless otherwise specified in this permit, testing of emissions shall be conducted with the emissions unit operating at permitted capacity (90 to 100 percent of the maximum operation rate allowed by the permit). If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity. In this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the 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. [Rule 62-297.310(2), F.A.C.]
- 20. 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 two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]
- 21. <u>Calculation of Emission Rate</u>: The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
- 22. Test Procedures shall meet all applicable requirements of Rule 62-297.310(4), F.A.C.
- 23. Determination of Process Variables: 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. Equipment or instruments used to directly, or indirectly, determine process variables 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. Examples of such devices include belt scales, weight hoppers, flow meters, and tank scales. [Rule 62-297.310(5), F.A.C.]

- 24. Required Stack Sampling Facilities: All emissions units requiring stack testing shall be designed to accommodate testing and sampling facilities. Sampling facilities shall conform to the requirements of Rule 62-297.310(6), F.A.C. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.
- 25. <u>Test Notification</u>: The owner or operator shall notify the Compliance Authorities at least 30 days prior to the scheduled initial NSPS tests and at least 15 days prior to all other scheduled compliance tests. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and conducting the test. [Rule 62-297.310(7)(a)9., F.A.C. and 40 CFR 60.8]
- 26. 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 shall require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

- 27. Records Retention: All measurements, records, and other data required by this permit shall be recorded in a permanent form and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These records shall be made available to the Department's representatives upon request. [Rule 62-213.440, F.A.C.]
- 28. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical, but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department 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 applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]
- 29. Excess Emissions Reporting: If excess emissions occur, the owner or operator shall notify the Compliance Authorities within one (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. Within thirty (30) days following each calendar quarter, the owner or operator shall submit a report summarizing any incident of the excess emissions or stating that no excess emissions occurred during the given calendar quarter. The summary of each incident shall include the amount, the duration, the cause, and the action taken to minimize and correct the excess emissions. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with § 60.7, Subpart A. Periods of startup, shutdown, and malfunction shall be monitored, recorded, and reported as excess emissions when monitored emission levels exceed any permitted standards. [Rules 62-4.070(3), 62-4.130 and 62-210.700(6), F.A.C.]
- 30. <u>Annual Operating Report (AOR)</u>: The Annual Operating Report form shall be completed each year and submitted to the Compliance Authorities by March 1st of the following year. [Rule 62-210.370(3), F.A.C.]

EU 001. Simple Cycle Gas Turbine

The specific conditions of this section address the following emissions unit.

EU No.	Emissions unit Description
001	Simple Cycle Gas Turbine: This emissions unit consists of a General Electric Model PG7241(FA) gas turbine with electrical generator set. The gas turbine design incorporates dry low-NOx (DLN) combustion technology to reduce NOx emissions when firing natural gas. A water (or steam) injection system is included to reduce NOx emissions when firing distillate oil as a restricted alternate fuel. The General Electric Speedtronic™ Gas Turbine Control System will monitor and control the gas turbine combustion process and operating parameters. An absorption or evaporative cooling system may be installed to reduce the turbine inlet air temperature for a corresponding increase in power generation. Continuous monitors will record carbon monoxide emissions, nitrogen oxide emissions, and the water-to-fuel ratio during oil firing.
	The exhaust stack is 22 feet in diameter and 98 feet tall. When firing natural gas, the gas turbine generates approximately 176 MW of electrical power. Exhaust gases exit the stack at a temperature of 1110° F and a volumetric flow rate of 2,681,000 actual cubic feet per minute. When firing low sulfur distillate oil, the gas turbine generates approximately 186 MW of electrical power. Exhaust gases exit the stack at a temperature of 1080° F and a volumetric flow rate of 2,763,000 actual cubic feet per minute. The exhaust gas parameters are approximate considering base load operation and a turbine inlet air temperature of 45° F.

FEDERAL REGULATIONS

1. NSPS General Provisions: The gas turbine shall comply with all applicable provisions of Subpart GG in 40 CFR 60, the Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C. Appendix GG of this permit identifies the applicable NSPS requirements. The Subpart GG requirement to correct NOx test data to ISO conditions applies; however, such correction shall not be used for determining compliance with the state standards. [40 CFR 60, Subparts A and GG]

PERFORMANCE RESTRICTIONS

- 2. <u>Allowable Fuels</u>: The gas turbine shall fire pipeline natural gas containing no more than 1 grain of sulfur per 100 scf of natural gas. As a restricted alternate fuel, the gas turbine may fire No. 2 distillate oil (or a superior grade) containing no more than 0.05% sulfur by weight. Compliance with the fuel sulfur specifications shall be demonstrated by the record keeping requirements of this permit and the approved Alternate Monitoring Plan. [Application; Rule 62-210.200(PTE), F.A.C.]
- 3. <u>Permitted Capacities</u>: The gas turbine shall operate only in simple cycle mode. Based on the higher heating value of each fuel, a turbine inlet air temperature of 45° F, a relative humidity of 70%, and 100% base load, the permitted capacity shall be defined as the following maximum heat input rates.
 - (a) Gas Firing: The maximum heat input rate is 1817 MMBtu/hour.
 - (b) Oil Firing: The maximum heat input rate is 1965 MMBtu/hour.

The maximum heat input rates will vary depending upon turbine inlet conditions and the gas turbine characteristics. Manufacturer's performance curves, corrected for site conditions or equations for correction to other turbine inlet conditions, shall be provided to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. The performance curves shall include DLN operation for gas firing and water (or steam) injection for oil firing. The

EU 001. Simple Cycle Gas Turbine

- permittee shall install, operate, calibrate, and maintain fuel metering systems to monitor the flow of natural gas and distillate oil. [Design; Rule 62-210.200(PTE), F.A.C.]
- 4. Hours of Operation: The gas turbine shall operate no more than 4500 hours during any consecutive 12 months. [Applicant Request; Rules 62-210.200(PTE) and 62-212.400(2)(g), F.A.C.]
- 5. Fuel Consumption Limit: No more than 9,369,750 gallons of distillate oil shall be fired during any consecutive 12 months. {Permitting Note: The oil firing limit is equivalent to approximately 650 hours of oil firing per year at the maximum firing rate.} [Applicant Request, Rules 62-210.200(PTE) and 62-212.400(2)(g), F.A.C.]
- 6. Operating Procedures: All operators and supervisors shall be properly trained to operate and maintain the gas turbine and pollution control devices in accordance with the guidelines and procedures established by each manufacturer. The training shall include good operating practices as well as methods of minimizing excess emissions. [Applicant Request; Rule 62-4.070(3), F.A.C.]

EMISSIONS CONTROLS

- 7. <u>DLN Tuning</u>: Prior to the required initial emissions performance testing, the gas turbine, dry low-NOx (DLN) combustors, and SpeedtronicTM control system shall be tuned in accordance with the manufacturer's recommendations to optimize the reduction of CO, NOx, and VOC emissions. Thereafter, these systems shall be maintained and tuned as necessary to ensure efficient combustion. The SpeedtronicTM control system shall be designed and operated to monitor and control the gas turbine combustion process and operating parameters including, but not limited to: fuel distribution and staging, turbine speed, load conditions, combustion temperatures, water injection, and fully automated startup, shutdown, and cool-down. [Design; Rule 62-4.070(3), F.A.C.]
- 8. Water Injection: The permittee shall install, calibrate, operate, and maintain an automated water (or steam) injection system to control NOx emissions when firing distillate oil. This system shall be maintained and adjusted in accordance with the manufacturer's recommendations to minimize NOx emissions. [Design; Rules 62-4.070(3) and 62-4.070(3), F.A.C.]
- 9. <u>Turbine Inlet Air Cooling System</u>: The permittee may install an absorption or evaporative cooling system to reduce the turbine inlet air temperature. [Applicant Request]

EMISSIONS STANDARDS

10. <u>Simple Cycle Operation</u>, <u>Natural Gas</u>: This permit authorizes simple cycle operation of the gas turbine when firing natural gas. Emissions shall not exceed following standards. [Applicant Request; Design; Rule 62-4.070(3), F.A.C.]

Pollutant	Controls f	Emission Standard	
CO ^a	DLN	9.0 ppmvd corrected to 15% O2 based on a 24-hour CEMS average	
		9.0 ppmvd corrected to 15% O2 and 32.4 lb/hour based on a 3-run test average	
NOx b	DLN	9.0 ppmvd corrected to 15% O2 based on a 24-hour CEMS average	
		9.0 ppmvd corrected to 15% O2 and 66.2 lb/hour based on a 3-run test average	
PM/PM10°	CF/CD	Visible emissions shall not exceed 10% opacity	
SAM/SO2 d	CF	1 grain per 100 SCF of gas (fuel specification)	
VOC®	DLN	1.4 ppmvw and 3.2 lb/hour (as methane) based on a 3-run test average	

a. Compliance with the rolling 24-hour CEMS standard shall be demonstrated with data collected from the certified continuous CO emissions monitoring system (CEMS) required by this permit. The CEMS shall

EU 001. Simple Cycle Gas Turbine

calculate and record emissions for each 1-hour block of operation and determine a 24-hour average for each day of operation. Compliance with the 3-run test averages shall be determined by stack testing using EPA Method 10.

- b. Compliance with the rolling 24-hour CEMS standard shall be demonstrated with data collected from the certified continuous NOx emissions monitoring system (CEMS) required by this permit. The CEMS shall calculate and record emissions for each 1-hour block of operation and determine a 24-hour average for each day of operation. Compliance with the 3-run test averages shall be determined by stack testing using EPA Method 7E (or 20).
- c. Compliance with the visible emissions standard shall be determined by conducting EPA Method 9. {Permitting Note: Estimated PM emissions are less than 0.005 lb/MMBtu when firing natural gas.}
- d. Compliance with the SAM/SO2 standard shall be demonstrated by firing only pipeline natural gas and the record keeping and reporting requirements of this permit.
- e. Compliance with the VOC standards shall be determined by stack testing using EPA Method 25A. EPA Method 18 may be performed concurrently to deduct emissions of methane and ethane from the total measured VOC.
- f. DLN means dry low-NOx controls. CF means clean fuels. CD means combustion design.
- 11. <u>Simple Cycle Operation, Distillate Oil</u>: This permit authorizes simple cycle operation of the gas turbine when firing a restricted amount of distillate oil. Emissions shall not exceed the following standards. [Applicant Request; Design; Rule 62-4.070(3), F.A.C.]

Pollutant	Controls f	Emission Standard	
CO ª	CD	20.0 ppmvd corrected to 15% O2 based on a 24-hour average	
		73.4 pounds per hour based on a 3-run test average	
NOx b	WI	42.0 ppmvd corrected to 15% O2 based on a 24-hour average	
		362.4 pounds per hour based on a 3-run test average	
PM/PM10°	CF/CD	Visible emissions shall not exceed 10% opacity (< 0.01 grains/dscf)	
SAM/SO2 d	CF/CD	Distillate oil containing no more than 0.05% sulfur by weight (fuel specification).	
VOC °	CD	3.5 ppmvw (as methane) based on a 3-run test average	
		8.3 pounds per hour (as methane) based on a 3-run test average	

- a. Compliance with the rolling 24-hour CEMS standard shall be demonstrated with data collected from the certified continuous CO emissions monitoring system (CEMS) required by this permit. The CEMS shall calculate and record emissions for each 1-hour block of operation and determine a 24-hour average for each day of operation. Compliance with the 3-run test averages shall be determined by stack testing using EPA Method 10.
- b. Compliance with the rolling 24-hour CEMS standard shall be demonstrated with data collected from the certified continuous NOx emissions monitoring system (CEMS) required by this permit. The CEMS shall calculate and record emissions for each 1-hour block of operation and determine a 24-hour average for each day of operation. Compliance with the 3-run test averages shall be determined by stack testing using EPA Method 7E (or 20).
- c. Compliance with the visible emissions standard shall be determined by EPA Method 9. {Permitting Note: Estimated PM emissions are less than 0.009 lb/MMBtu when firing distillate oil.}
- d. Compliance with the SAM/SO2 standard shall be demonstrated by low sulfur distillate oil containing no more than 0.05% sulfur by weight and the record keeping and reporting requirements of this permit.
- e. Compliance with the VOC standards shall be determined by stack testing using EPA Method 25A. EPA Method 18 may be performed concurrently to deduct emissions of methane and ethane from the total

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- (d) *EPA Method 20*, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines."
- (e) EPA Methods 18, 25 and/or 25A, "Determination of Volatile Organic Concentrations."
- No other test methods may be used for compliance testing without prior written approval from the Department. [Rules 62-297.200 and 62-204.800, F.A.C.; 40 CFR 60, Appendix A]
- 18. <u>Initial Tests Required</u>: Initial compliance with the allowable emission standards specified in this permit shall be determined within 60 days after achieving the maximum production rate, but not later than 180 days after initial operation of the emissions units. Initial tests for emissions from the gas turbine shall be conducted for carbon monoxide, nitrogen oxides, volatile organic compounds, and visible emissions separately for each fuel type. Initial performance test data shall also be converted into the units of the corresponding NSPS Subpart GG emissions standards to demonstrate compliance See Appendix GG. [Rule 62-297.310(7)(a)1, F.A.C.]
- 19. <u>Annual Performance Tests</u>: Annual compliance tests shall be conducted to determine the emissions of carbon monoxide, nitrogen oxides and visible emissions from the gas turbine. Tests required on an annual basis shall be conducted at least once during each federal fiscal year (October 1st to September 30th). When conducted at permitted capacity, the annual NOx continuous monitor RATA required pursuant to 40 CFR 75 may be substituted for the annual compliance stack test. Similarly, the CO continuous monitor RATA pursuant to 40 CFR 60, Appendix B may be substituted for the annual compliance stack test. [Rule 62-297.310(7)(a)4, F.A.C.]
- 20. <u>Tests Prior to Permit Renewal</u>: During the federal fiscal year (October 1st to September 30th) prior to renewing the air operation permit, compliance tests shall be conducted to determine the emissions of volatile organic compounds from the gas turbine. [Rule 62-297.310(7)(a)3, F.A.C.]
- 21. Special Compliance Tests: The Department may require additional performance tests after any substantial modifications and appropriate shake down period including the replacement of dry low-NOx combustors. Shake down periods shall not exceed 100 days after re-starting the gas turbine. [Rule 62-297.310(7)(b), F.A.C.]
- 22. Continuous Monitors: To demonstrate continuous compliance with the emissions limits for CO and NOx, the owner or operator shall install, calibrate, operate, and maintain a continuous emission monitoring systems (CEMS) to measure and record the CO, NOx and oxygen concentrations in the gas turbine exhaust. Alternatively, a monitor for carbon dioxide may be used in place of the oxygen monitor, but the system shall be capable of correcting the emissions to 15% oxygen.
 - Compliance with the 24-hour rolling averages shall be demonstrated by continuous emissions monitoring data. The 24-hour rolling average shall be determined by calculating the arithmetic average of all hourly emission rates during the averaging period. Each 1-hour average shall be expressed in units of ppmvd corrected to 15% oxygen and calculated using four valid data points approximately 15 minutes apart. (The minimum requirement is two valid data points at least 15 minutes apart.) If any oil is fired during the hour, emissions shall be attributed towards compliance with the standards for oil firing.

Continuous emission monitoring data required by this permit shall be collected and recorded during all periods of operation including startup, shutdown, and malfunction, except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. Although recorded, emissions during periods of startup, shutdown and malfunction are subject to the excess emission conditions specified in this permit.

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The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of: Rule 62-297.520, F.A.C., including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications 2, 3 and 4; 40 CFR 60.7(a)(5); 40 CFR 60.13; 40 CFR 60, Appendix F; and 40 CFR Part 75, whichever is more stringent. A monitoring plan shall be provided to the DEP Emissions Monitoring Section Administrator and EPA for review no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62. The plan shall consist of data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location.

When the CEMS reports CO or NOx emissions in excess of the standards allowed by this permit, the permittee shall notify the Compliance Authorities within one (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. [Rules 62-204.800, 62-210.700, 62-4.070(3), 62-4.130, 62-4.160(8), F.A.C and 40 CFR 60.7].

- 23. <u>Fuel Records</u>: The permittee shall comply with the fuel sulfur specifications in accordance with the following requirements.
 - (a) Natural Gas: The permittee shall maintain records of the sulfur content of the natural gas being supplied for each month of operation. Methods for determining the sulfur content of the natural gas shall be ASTM methods D4084-82, D3246-81 or equivalent methods. These methods shall be used to determine the sulfur content of the natural gas fired in accordance with any EPA-approved custom fuel monitoring schedule (see Alternate Monitoring Plan) or natural gas supplier data or the natural gas sulfur content referenced in 40 CFR 75 Appendix D. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency pursuant to 40 CFR 60.335(e). However, the permittee is responsible for ensuring that the procedures in 40 CFR60.335 or 40 CFR75 are used to determine the fuel sulfur content for compliance with the SO2 standard in 40 CFR 60.333.
 - (b) Low Sulfur Distillate Oil: For all bulk shipments of low sulfur distillate oil received at this facility, the permittee shall obtain from the fuel vendor an analysis identifying the sulfur content. Methods for determining the sulfur content of the distillate oil shall be ASTM D129-91, D2622-94, or D4294-90 or equivalent methods. Records shall specify the test method used and shall comply with the requirements of 40 CFR 60.335(d).

[Rules 62-4.070(3) and 62-4.160(15), F.A.C.]

- 24. <u>Alternate Monitoring Plan</u>: Subject to EPA approval, the following alternate monitoring may be used to demonstrate compliance.
 - (a) The NOx CEMS data may be used in lieu of the monitoring system for water-to-fuel ratio and the reporting of excess emissions in accordance with 40 CFR 60.334(c)(1). The calibration of the water-to-fuel ratio-monitoring device required in 40 CFR 60.335(c)(2) will be replaced by the 40 CFR 75 certification tests of the NOx CEMS.
 - (b) The NOx CEMS data shall be used in lieu of the requirement for reporting excess emissions in accordance with 40 CFR 60.334(c)(1).
 - (c) When requested by the Department, the CEMS emission rates for NOx on this unit shall be corrected to ISO conditions to demonstrate compliance with the NOx standard established in 40 CFR 60.332.

EU 001. Simple Cycle Gas Turbine

- (d) A custom fuel monitoring schedule pursuant to Appendix D of 40 CFR 75 for natural gas may be used in lieu of the daily sampling requirements of 40 CFR 60.334(b)(2) provided the following conditions are met.
 - (1) The permittee shall apply for an Acid Rain permit within the deadlines specified in § 72.30.
 - (2) The permittee shall submit a monitoring plan, certified by signature of the Authorized Representative, that commits to using a primary fuel of pipeline supplied natural gas containing no more than 1 grain of sulfur per 100 scf of gas pursuant to § 75.11(d)(2);
 - (3) Each unit shall be monitored for SO₂ emissions using methods consistent with the requirements of 40 CFR 75 and certified by the U.S. EPA.

This custom fuel-monitoring schedule will only be valid when pipeline natural gas is used as a primary fuel. If the primary fuel for these units is changed to a higher sulfur fuel, SO₂ emissions must be accounted for as required pursuant to 40 CFR 75.11(d).

[40 CFR 60, Subpart GG, Applicant Request]

- 25. <u>Daily Operations Log</u>: Before the end of the following calendar day, the owner or operator shall record the following information in a log for the previous day of operation: total hours of operation; gallons of distillate oil fired; heat input (MMBtu) from distillate oil firing; and the average water injection rate (lb/hour) during oil firing. Information may be recorded and stored as an electronic file, but must be available for inspection and/or printing at the request of the Compliance Authorities. [Rule 62-4.160(15), F.A.C.]
- 26. Monthly Operations Summary: By the fifth calendar day of each month, the owner or operator shall record the following information in a log for the previous month of operation: total hours of operation; million cubic feet of natural gas fired; gallons of distillate oil fired; the heat input rate (MMBtu) from distillate oil firing, and tons of NOx emitted. The owner or operator shall also calculate and record the rolling totals for the previous 12 months of operation. Information may be recorded and stored as an electronic file, but must be available for inspection and/or printing at the request of the Compliance Authorities. [Rule 62-4.160(15), F.A.C.]

SECTION IV.

List of Appendices

Appendix A. Citation Format Appendix B. Construction Permit General Conditions Appendix GG. NSPS Provisions

SECTION IV.

Appendix A. Citation Format

ABBREVIATIONS AND ACRONYMS

° F - Degrees Fahrenheit

DEP - State of Florida, Department of Environmental Protection

DARM - Division of Air Resource Management

EPA - United States Environmental Protection Agency

F.A.C. - Florida Administrative Code

F.S. - Florida Statute

SOA - Specific Operating Agreement

DLN - Dry Low-NOX Combustion Technology

RULE CITATIONS

The following examples illustrate the methods used in this permit to abbreviate and cite the references of rules, regulations, permit numbers, and identification numbers.

Florida Administrative Code (F.A.C.) Rules:

Example: [Rule 62-213.205, F.A.C.]

Where: 62 - refers to Title 62 of the Florida Administrative Code (F.A.C.)

62-213 - refers to Chapter 62-213, F.A.C. 62-213.205 - refers to Rule 62-213.205, F.A.C.

Facility Identification (ID) Number:

Example: Facility ID No. 0990001

Where: 099 - 3 digit number indicates that the facility is located in Palm Beach County

- 4 digit number assigned by state database identifies specific facility

New Permit Numbers:

Example: Permit No. 0992222-001-AC or 0992222-001-AV

Where: AC - identifies permit as an Air Construction Permit

AV - identifies permit as a Title V Major Source Air Operation Permit

099 - 3 digit number indicates that the facility is located in Palm Beach County

2222 - 4 digit number identifies a specific facility

- 3 digit sequential number identifies a specific permit project

Old Permit Numbers:

Example: Permit No. AC50-123456 or AO50-123456

Where: AC - identifies permit as an Air Construction Permit
AO - identifies permit as an Air Operation Permit

123456 - 6 digit sequential number identifies a specific permit project

Appendix B. Construction Permit General Conditions

- 1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- 2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- 3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
- 4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- 5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- 6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- 7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
 - (a) Have access to and copy and records that must be kept under the conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

- 8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - (a) A description of and cause of non-compliance; and
 - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections

SECTION IV.

Appendix B. Construction Permit General Conditions

- 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extend it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- 10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- 11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- 12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
- 13. This permit also constitutes:
 - (a) Determination of Best Available Control Technology (NA);
 - (b) Determination of Prevention of Significant Deterioration (NA); and
 - (c) Compliance with New Source Performance Standards (X).
- 14. The permittee shall comply with the following:
 - (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 - 1) The date, exact place, and time of sampling or measurements;
 - 2) The person responsible for performing the sampling or measurements;
 - 3) The dates analyses were performed;
 - 4) The person responsible for performing the analyses;
 - 5) The analytical techniques or methods used; and
 - 6) The results of such analyses.
- 15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SECTION IV.

Appendix GG. NSPS Provisions

Federal New Source Performance Standards, 40 CFR 60

40 CFR 60, Subpart A - NSPS General Provisions

Applicable portions of 40 CFR 60, Subpart A, General Provisions include:

- 40 CFR 60.7, Notification and Record Keeping
- 40 CFR 60.8, Performance Tests
- 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
- 40 CFR 60.12, Circumvention
- 40 CFR 60.13, Monitoring Requirements
- 40 CFR 60.19, General Notification and Reporting Requirements

{Permitting Note: For copies of these requirements, please contact the Department's New Source Review Section.}

40 CFR 60, Subpart GG - Stationary Gas Turbines

This emissions unit is subject to 40 CFGR 60, Subpart GG for stationary gas turbines adopted by reference in Rule 62-204.800(7)(b), F.A.C. The following conditions follow the original NSPS rule language and numbering scheme. Regulations that are not applicable were omitted for clarity. Because this emissions units is subject to an NSPS, it is also subject to the following federal provisions: 40 CFR 60, Subpart A, General Provisions for sources subject to an NSPS, adopted by reference in Rule 62-204.800(7)(d), F.A.C.; 40 CFR 60, Appendix A - Test Methods, Appendix B - Performance Specifications, Appendix C - Determination of Emission Rate Change, Appendix D - Required Emissions Inventory Information, Appendix F - Quality Assurance Procedures, adopted by reference in Rule 62-204.800(7)(e).

§ 60.330 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to all stationary gas turbines with a heat input at peak load equal to or greater than 10 million BTU per hour, based on the lower heating value of the fuel fired.

§ 60.331 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

- (a) <u>Stationary gas turbine</u> means any simple cycle gas turbine, regenerative cycle gas turbine or any gas turbine portion of a combined cycle steam/electric generating system that is not self propelled. It may, however, be mounted on a vehicle for portability.
- (b) <u>Simple cycle gas turbine</u> means any stationary gas turbine which does not recover heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine, or which does not recover heat from the gas turbine exhaust gases to heat water or generate steam.
- (d) <u>Combined cycle gas turbine</u> means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to heat water or generate steam.
- (f) <u>Ice fog</u> means an atmospheric suspension of highly reflective ice crystals.
- (g) <u>ISO standard day conditions</u> means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.
- (h) <u>Efficiency</u> means the gas turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output based on the lower heating value of the fuel.
- Peak load means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.
- (j) <u>Base load</u> means the load level at which a gas turbine is normally operated.
- (p) <u>Gas turbine model</u> means a group of gas turbines having the same nominal air flow, combustor inlet pressure, combustor inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.

Appendix GG. NSPS Provisions

(q) <u>Electric utility stationary gas turbine</u> means any stationary gas turbine constructed for the purpose of supplying more than one-third of its potential electric output capacity to any utility power distribution system for sale.

§ 60.332 Standard for nitrogen oxides.

- (a) On and after the date of the performance test required by § 60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (b) of this section shall comply with one of the following, except as provided in paragraphs (e) of this section.
 - (1) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

STD =
$$(0.0075) \frac{(14.4)}{Y} + F$$

Where:

STD = allowable NOX emissions (percent by volume at 15 percent oxygen and on a dry basis).

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F = NO emission allowance for fuel-bound nitrogen as defined in the following table:

(3) F shall be defined according to the nitrogen content of the fuel as follows:

Fuel-Bound Nitrogen	"F"
(Percent By Weight)	(NOX Percent By Volume)
N < 0.015	0
0.015 < N < 0.1	0.04(N)
0.1 < N < 0.25	0.004 + 0.0067(N - 0.1)
N > 0.25	0.005

Where, N = the nitrogen content of the fuel (percent by weight).

- (b) Electric utility stationary gas turbines with a heat input at peak load greater than 100 million Btu per hour based on the lower heating value of the fuel fired shall comply with the provisions of paragraph (a)(1) of this section.
- (f) Stationary gas turbines using water or steam injection for control of NOX emissions are exempt from paragraph (a) when ice fog is deemed a traffic hazard by the owner or operator of the gas turbine.

§ 60.333 Standard for sulfur dioxide.

On and after the date on which the performance test required to be conducted by § 60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with one or the other of the following conditions:

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8 percent by weight.

§ 60.334 Monitoring of operations.

- (a) The owner or operator of any stationary gas turbine subject to the provisions of this subpart and using water injection to control NOX emissions shall install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within +/- 5.0 percent and shall be approved by the Administrator.
- (b) The owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

Appendix GG. NSPS Provisions

- (1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
- (2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with paragraph (b) of this section.
- (c) For the purpose of reports required under § 60.7(c), periods of excess emissions that shall be reported are defined as follows:
 - (1) Nitrogen oxides. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with § 60.332 by the performance test required in § 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in § 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under § 60.335(a).
 - (2) Sulfur dioxide. Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent.
 - (3) Ice fog. Each period during which an exemption provided in § 60.332(g) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

§ 60.335 Test methods and procedures.

- (a) To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.
- (b) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided for in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.
- (c) The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in § 60.332 and 60.333(a) as follows:
 - (1) The nitrogen oxides emission rate (NOX) shall be computed for each run using the following equation:

NOX = (NOXO)
$$(Pr/Po)^{0.5}$$
 (e ^{19 (Ho - 0.00633)}) $(288^{\circ}K/Ta)^{1.53}$

Where

NOX = emission rate of NOX at 15 percent oxygen and ISO standard ambient conditions, volume percent.

NOXO = observed NO<INF>x</INF> concentration, ppm by volume.

Pr = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.

Po = observed combustor inlet absolute pressure at test, mm Hg.

HO = observed humidity of ambient air, g H2O/g air.

SECTION IV.

Appendix GG. NSPS Provisions

- E = transcendental constant, 2.718.
- Ta = ambient temperature, °K.
- (2) The monitoring device of § 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with § 60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.
- (3) Method 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NOX emissions shall be determined at each of the load conditions specified in paragraph (c)(2) of this section.
- (d) The owner or operator shall determine compliance with the sulfur content standard in § 60.333(b) as follows: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels (incorporated by reference--see Sec. 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.
- (e) To meet the requirements of § 60.334(b), the owner or operator shall use the methods specified in paragraphs (a) and (d) of this section to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

SECTION IV.

Appendix GG. NSPS Provisions

Figure 1. Summary Report for Excess NSPS Emissions and Monitoring System Performance

Pollutant (Circle One): SO ₂ NOx TRS H ₂ S CO	Opacity
Reporting period dates: From	to
Company:	
Emission Limitation:	
Address:	
Monitor Manufacturer and Model No.:	
Date of Latest CMS Certification or Audit:	
Process Unit(s) Description:	
Total source operating time in reporting period ¹ :	
Emission Data Summary 1	CMS Performance Summary
Duration of excess emissions in reporting period due to: a. Startup/shutdown	1. CMS downtime in reporting period due to: a. Monitor equipment malfunctions
b. Control equipment problems	b. Non-Monitor equipment malfunctions
c. Process problems	c. Quality assurance calibration
d. Other known causes	d. Other known causes
e. Unknown causes	e. Unknown causes
2. Total duration of excess emissions	2. Total CMS Downtime
3. [Total duration of excess emissions] x (100) / [Total	3. [Total CMS Downtime] x (100) / [Total source
source operating time]	operating time] % ²
For opacity, record all times in minutes. For gases, record all	
² For the reporting period: If the total duration of excess emission the total CMS downtime is 5 percent or greater of the tothe excess emission report described in 40 CFR 60.7(c) shall	sions is 1 percent or greater of the total operating time stal operating time, both the summary report form and
On a separate page, describe any changes since last quarter in G	CMS, process or controls.
I certify that the information contained in this report is true, ac	curate, and complete.
Name:	•
Signature:	
Title:	, ·
Date:	
,	
	•

{Note: This format is referenced in § 60.7, Subpart A, General Provisions. It should only be used to summarize compliance and excess emissions with regard to the federal NSPS standards.}

SENDER: COMPLETE THIS SECTION COMPLETE THIS SECTION ON DELIVERY ■ Complete items 1, 2, and 3. Also complete A. Received by (Please Print Clearly) item 4 if Restricted Delivery is desired. Print your name and address on the reverse C. Signature so that we can return the card to you. ☐ Agent Attach this card to the back of the mailpiece, ☐ Addressee or on the front if space permits. D. Is delivery ad ☐ Yes 1. Article Addressed to: If YES, enter delivery address belo □ No Mr. Brian Chatlosh Manager Lake Worth Generation, LLC 245 Winter Street, Suite 300 3. Service Type Waltham, MA 02451 Certified Mail Registered ☐ Express Mail ☐ Return Receipt for Merchandise ☐ Insured Mail □ C.O.D. 4. Restricted Delivery? (Extra Fee) ☐ Yes 7001 032<u>0</u> 0001_3692 <u>5559</u> PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

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Golder Associates Inc.

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

June 17, 2003

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.

DEP FILE NO. 099-0568-001-AC/PSD-FL-266

LAKE WORTH GENERATION, L.L.C. COMBINED CYCLE PROJECT

REQUEST FOR ADDITIONAL INFORMATION



RE:

This correspondence is submitted on behalf of Lake Worth Generation, L.L.C (LWG) to address the information requested in the Department's June 16, 2003 correspondence. The information is being provided in the same format as requested.

- Please provide a copy of the lease agreement between LWG and the City of Lake Worth.
 LWG and the City of Lake Worth originally had a lease for the combined cycle project that provided steam sales to the City. That lease will be expiring as a result of restructuring the project and is nontransferable. The new owner of the project will have to enter in a separate lease arrangement with the City of Lake Worth.
- 2. Will all of the electricity generated be delivered to the grid? Who will get the revenues? The project has an interconnection to the FPL Hypoluxo substation through the City of Lake Worth's 138-kV transmission line. The Energy Services Agreement signed by LWG, the City of Lake Worth, and FPL covers the use of the transmission line and interconnection to the FPL substation. The power from the simple cycle project will be through the City of Lake Worth's transmission line to the FPL substation for transmission. All revenue from generation of the power produced by the simple cycle unit would accrue to the new owner under conditions that the new owner will dictate. The new owner would have to obtain a similar interconnection agreement as the Energy Services Agreement.
- 3. Who will determine when the gas turbine will startup?

 Decisions to operate the project as a simple cycle unit will be the responsibility of the new owner.
- 4. At this point, who actually owns the gas turbine?

 The unit, as it current exists at the site, is owned by Lake Worth Generation, L.L.C.
- 5. What is the corporate status and organizational structure of LWG? Who is the general partner? LWG is a limited liability corporation whose assets are wholly owned by AES Lake Worth Holdings LLC, which in turn is wholly owned by AES Corporation. Mr. Brian Chatlosh is the General Manager for the project.



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- 6. What is the corporate status and organizational structure of FMPA? Who are the members? FMPA is a nonprofit agency formed in 1978 for the purpose of providing competitive power supplies to its members. There are currently 29 members of FMPA that are made up of the following municipalities in Florida: Alachua, Bartow, Bushnell, Chattahoochee, Clewiston, Fort Meade, Fort Pierce, Gainesville, Green Cove Springs, Havana, Homestead, Jacksonville Beach, Key West, Lake Worth, Lakeland, Leesburg, Moore Haven, Mount Dora, New Smyrna Beach, Newberry, Ocala, Orlando, Quincy, St. Cloud, Starke, Vero Beach, Wauchula, and Williston. A Board of Directors that is made up of one member from each of the 29 FMPA members governs FMPA. The voting strength of each member is dependent upon the sale of electricity from FMPA to the municipality's customers. The FMPA has four officers that are elected by the Board of Directors from the 29 members. There are also FMPA staff that include a General Manager and CEO.
- 7. Please provide the "memorandum of understanding" between FMPA and the City of Lake Worth. FMPA has not made a commitment regarding the purchase of the LWG project and has not executed to our knowledge any agreement with the City of Lake Worth concerning the project. Several other entities including an investor-owned utility have expressed interest in purchasing the project.

Please note that the address of LWG is 70 Walnut Street, Wellesley Hills, MA 02481 as indicated on the amended application. Please call me if you have further questions.

Sincerely,

John al 4./91

Kennard F. Kosky, P.E.

Principal

KFK/blr/jkw

cc: Mr. Derald Wildharber, Lake Worth Generation, L.L.C.

Mr. Brian Chatlosh, Lake Worth Generation, L.L.C.

Mr. Tom Tittle, FDEP Southeast District

Mr. James Stormer, Palm Beach County Health Department

Mr. Richard Zwolak, Golder Tampa

Mr. Jim Little, EPA Region IV

Mr. John Bunyak, NPS

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Department of Environmental Protection

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

David B. Struhs Secretary

June16, 2003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Brian Chatlosh, Manager Lake Worth Generation, L.L.C. 245 Winter Street, Suite 300 Waltham, MA 02451

Re: I

Request for Additional Information

Project No. 0990568-003-AC (PSD-FL-266C) Lake Worth Generation, L.L.C. (LWG) Change to Simple Cycle Operation Only

Dear Mr. Chatlosh:

On May 19, 2003, the Department received your application and sufficient fee for an air construction permit to modify the existing PSD air permit to reflect simple cycle operation only. On June 6, 2003, the Department emailed a request for the following information:

- 1. Please provide a copy of the lease agreement between LWG and the City of Lake Worth.
- 2. Will all of the electricity generated be delivered to the grid? Who will get the revenues?
- 3. Who will determine when the gas turbine will startup?
- 4. At this point, who actually owns the gas turbine?
- 5. What is the corporate status and organizational structure of LWG? Who is the general partner?
- 6. What is the corporate status and organizational structure of FMPA? Who are the members?
- 7. Please provide the "memorandum of understanding" between FMPA and the City of Lake Worth.

The application is incomplete. In order to continue processing your application, the Department will need the above requested additional information. Should your response to any of the items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. For any material changes to the application, please include a new certification statement by the authorized representative or responsible official. You are reminded that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days or provide a written request for an additional period of time to submit the information.

If you have any questions regarding this matter, please call me at 850/921-9536.

Sincerely,

Jeffery J. Voer

New Source Review Section

cc: Mr. Ken Kosky, Golder Associates Inc.

Mr. Derald Wildharber, LWG

Mr. Tom Tittle, SED

Mr. James Stormer, PBCHD

Mr. Jim Little, EPA Region 4

Mr. John Bunyak, NPS

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
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 Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, 	C. Signature
or on the front if space permits.	D. Is delivery address different from item 1? Yes
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Mr. Brian Chatlosh	SPS - 02450
Manager Lake Worth Generation, L.L.	C. 25-027
245 Winter Street, Suite 30	G. Service Type
Waltham, MA 02451	Certified Mail
	☐ Insured Mail ☐ C.O.D.
	4. Restricted Delivery? (Extra Fee) Yes
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PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-095	

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Golder Associates Inc.

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

May 16, 2003



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MAY 19 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

BUREAU OF AIR REGULATION

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

P:\Projects\2003\0339569 Lake Worth\44.1\L051603.doc

RECEIVED

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

<u>1a</u>	entification of Facility		
1.	Facility Owner/Company Name:		
<u></u>	Lake Worth Generation, L.L.C. Site Name:		
2.	Lake Worth Generation		
3.	Facility Identification Number:		[] Unknown
4.	Facility Location: Street Address or Other Locator: 117 College	je Street	
	City: Lake Worth County: F	Palm Beach	Zip Code: 33461
5.	Relocatable Facility?	6. Existing F	Permitted Facility?
	[] Yes [X] No	[X] Yes	[] No
A	oplication 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 St	ate: MA	Zip Code: 02481
3.	Application Contact Telephone Numbers:		
	Telephone: (781) 239-8137	Fax: (781) 239-8223
<u>Ar</u>	oplication Processing Information (DEP U	<u>se)</u>	
1.	Date of Receipt of Application:	5/19/200	3
2.	Permit Number:	5/19/2001 1990568 PSD-FL-2	-003-AC
2	PSD Number (if applicable):	000 5	_
J.	13D Number (II applicable).	P317-1-2	uuc

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:____ 1 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
$\overline{}$	O

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) 239-9972 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.

Signature

Date

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

5/12/103

^{*} Attach letter of authorization if not currently on file.

^{*} 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.

Date 5/16/03

* Attach any exception to certification statement.

DEP Form New 62-210-900 (15) Form Effectives 261 1799

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
01	GE 7FA Combustion Turbine	ACM1	NA
-			
<u> </u>			
-			
	·		
			_
	·		

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.
	Duringted on Astrol Data of Community of Constructions
2.	Projected or Actual Date of Commencement of Construction:
3.	Projected Date of Completion of Construction: March 31, 2005
Ar	oplication Comment
	Refer to Part II.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1.	Facility UTM Coor	dinates:		
	Zone: 17	East (km):	592.8 Nort	h (km): 2943.7
2.	Facility Latitude/Lo	ongitude:		
	Latitude (DD/MM/	SS): 26/36/45	Longitude (DD/MM	I/SS): 80/4/4
3.	Governmental	4. Facility Status	5. Facility Major	6. Facility SIC(s):
	Facility Code:	Code:	Group SIC Code:	1044
	0	С	49	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	on, 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	app	lv:
-------	-----	------	-----	-----

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	2. Pollutant Classif.	3. Requested En	missions Cap	4. Basis for Emissions	5. Pollutant Comment
Emitted	Ciassii.	lb/hour	tons/year	Cap	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
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):
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: [] 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):
[] 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):
[] 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):
[X] Not Applicable 10. Alternative Methods of Operation: [] Attached, Document ID: [X] Not Applicable 11. Alternative Modes of Operation (Emissions Trading):
10. Alternative Methods of Operation: [] Attached, Document ID: [x] Not Applicable 11. Alternative Modes of Operation (Emissions Trading):
[] Attached, Document ID: [X] Not Applicable 11. Alternative Modes of Operation (Emissions Trading):
[] Attached, Document ID: [X] Not Applicable 11. Alternative Modes of Operation (Emissions Trading):
11. Alternative Modes of Operation (Emissions Trading):
• •
[] Attached Decument ID: [V] Not Applicable
[] 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

GF 7FA	Combustion	Turbine
	COMBUSTION	IIUIDIIIC

Emissions	Unit	Informati	on Secti	on 1	of	1	
		ALLE OF THE CL		UII	O.		

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 Emission	s Unit Addressed in This	s 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).							
[process or prod		n addresses, as a single emis s which has at least one defi gitive emissions.	· · ·				
[-		n addresses, as a single emis s which produce fugitive em					
2.	Regulated or Unre	egulated Emissions Unit	? (Check one)					
[X] The emissions uemissions unit.	unit addressed in this Em	issions Unit Information Sec	ction is a regulated				
[] The emissions uemissions unit.	unit addressed in this Em	uissions Unit Information Sec	ction is an unregulated				
3.	Description of En	nissions Unit Addressed	in This Section (limit to 60 c	characters):				
	GE 7FA Combusti	on Turbine						
4.	Emissions Unit Io	lentification Number:		[] No ID				
	ID: 001			[] ID Unknown				
5.	Emissions Unit Status Code: C	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? [X]				
9.	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.							

DEP Form No. 62-210.900(1) – Form Effective: 2/11/99

Emissions	<u>Unit</u>	Control	Equipment

1.	Control Equipment/Method	Description ((Limit to 20	0 characters pe	er 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

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:	٥F

Emissions Unit Information Section	1	of	1	GE 7FA Combustion Turbine
---	---	----	---	---------------------------

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 Through	put Rate:		
4.	Maximum Production Rate:			
5.	Requested Maximum Operation	g Schedule:		
		hours/day		days/week
		weeks/year	4,500	hours/year
6.	Operating Capacity/Schedule (Comment (limit to 200 cha	aracters):	
	Maximum heat input and rating 176 MW and 1,817 MMBtu/hr. H			iring. Nautral Gas is

Emissions Unit Information Section	1	of	1	GE 7FA Combustion Turbine
---	---	----	---	---------------------------

C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

List of Applicable Regulations

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

DEP Form No. 62-210.900(1) - Form

Effective: 2/11/99

Emissions	Unit	Inform	nation	Section	1	of	1
	Omt	IIIIOII	nauvn	Section	•	UI	•

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

Emission Point Description and Type

1.	Identification of Point on Pl	ot Plan or	2. Emission Po	oint Type Code:		
	Flow Diagram? See Part II		1			
3.	Descriptions of Emission Po 100 characters per point):	oints Comprising	g this Emissions V	Jnit for VE Tracking	g (limit to	
4.	4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: Unit exhaust through a single stack.					
5.	Discharge Type Code:	6. Stack Heig	ht:	7. Exit Diameter:		
	V		100 feet		22 feet	
8.	Exit Temperature:	9. Actual Vol	umetric Flow	10. Water Vapor:		
	1,108 °F	Rate:		zor (ator (aport	9.47 %	
	.,	2,681,033 ac	efm			
.11.	Maximum Dry Standard Flo	w Rate:	12. Nonstack Er	nission Point Height	:	
		dscfm			feet	
13.	Emission Point UTM Coord	linates:				
	Zone: 17 E	ast (km): 592.8	Norti	h (km): 2,943.7		
14.	Emission Point Comment (l	imit to 200 char	acters):			
	Stack conditions for natural gas firing at a turbine inlet temperature of 45°F.					

Emissions	Unit	Information	Section	1	of	1	

GE 7FA Combustion Turbine

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

<u> </u>	gment Description and Ra					
4.	1. Segment Description (Process/Fuel Type) (limit to 500 characters):					
	Natural Gas					
2.	Source Classification Code	e (SCC):	3. SCC Units	:		
	2-01-002-01	(333).	Million Cuk			
4.	Maximum Hourly Rate: 1.774	5. Maximum A 7,983	Annual Rate:	6. Estimated Annual Activity Factor:		
7.	Maximum % Sulfur:	8. Maximum %	6 Ash:	9. Million Btu per SCC Unit: 1,024		
10	. Segment Comment (limit	to 200 characters)):			
	Maximum and annual base per SCC as HHV.	d on 45°F turbine	inlet. Annual b	ased on 4,500 hr/yr. Million BTU		
Se	gment Description and Ra	ite: Segment 2	of 2			
1.	Segment Description (Proc			naracters):		
	Distillate (No. 2) Fuel Oil	, ,	(
2.	Source Classification Cod	e (SCC):	3. SCC Unit	s:		
	2-01-001-01		1000 Gallo			
4.	Maximum Hourly Rate: 14.42	5. Maximum A 9,369.75	Annual Rate:	6. Estimated Annual Activity Factor:		
7.	Maximum % Sulfur:	8. Maximum 9	6 Ash:	9. Million Btu per SCC Unit:		
1	0.05			100		
10	. Segment Comment (limit			19,200 BTU/lb and 7.1 lb/gallon.		
10	. Segment Comment (limit					
10	. Segment Comment (limit					

1	of	1
	01	E.

F. EMISSIONS UNIT POLLUTANTS (All Emissions Units)

1. Pollutant Emitted	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
со			EL
VOC			EL
_			- ·
			·
	_		

DEP Form No. 62-210.900(1) – Form Effective: 2/11/99

Emissions Unit Information Section1	of1 GE 7FA Combustion Turbin
Pollutant Detail Information Page	of <u>5</u> Particulate Matte
(Regulated E Emissions-Limited and Precons	TTANT DETAIL INFORMATION Emissions Units - struction Review Pollutants Only)
Potential/Fugitive Emissions	
1. Pollutant Emitted: PM/PM ₁₀	2. Total Percent Efficiency of Control:
3. Potential Emissions:	4. Synthetically
17 lb/hour	22.9 tons/year Limited? [X]
5. Range of Estimated Fugitive Emissions:	
[] 1 [] 2 [] 3	to tons/year
6. Emission Factor:	7. Emissions
D C 07 1000 0 11 0000	Method Code:

Allowable Emissions Allowable Emissions 1 of 2

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.

Reference: **GE**, **1998**; **Golder**, **2003**8. Calculation of Emissions (limit to 600 characters):

Refer to Table 1.

AL	Allowable Ellissions Allowable Ellissions		01		
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 En	missions: 20.3 tons/year	
5.	Method of Compliance (limit to 60 character EPA Method 9	<u>l</u> s):			
6.	Allowable Emissions Comment (Desc. of Op Natural Gas Firing for 4,500 hr/yr. Permit No. 0990568-001-AC; PSD-FL-266.	erat	ing Method) (limit to 200	characters):	

DEP Form No. 62-210.900(1) – Form Effective: 2/11/99

Emissions Unit Information Section of	GE 7FA Combustion Turbine
Pollutant Detail Information Page of 5	Particulate Matter

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	4. Synthetically tons/year Limited? []					
5. Range of Estimated Fugitive Emissions:						
	3 to tons/year					
6. Emission Factor:	7. Emissions					
Reference:	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					
Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:					
3. Requested Allowable Emissions and Unit	s: 4. Equivalent Allowable Emissions:					
= 10% Opacity	17 lb/hour 5.5 tons/year					
5. Method of Compliance (limit to 60 charace EPA Method 9	eters):					
 Allowable Emissions Comment (Desc. of Distillate Oil Firing for 650 hr/yr. Permit No. 0990568-001-AC; PSD-FL-266. 	Operating Method) (limit to 200 characters):					

Emissions Unit Information Section	1	_ of1	GE 7FA Combustion Turbine
Pollutant Detail Information Page	2	_ of5	Sulfur Dioxide

${\bf G.}\,$ EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units -

Emissions-Limited and Preconstruction Review Pollutants Only)

<u>Po</u>	tential/Fugitive Emissions			
1.	Pollutant Emitted: SO ₂	2. Total Percent Efficiency of Control:		
3.	Potential Emissions:		4. Synthetically	
	101.5 lb/hour	42.6 tons/year	Limited? [X]	
5.	Range of Estimated Fugitive Emissions:	•		
	[] 1 [] 2 [] 3	to t	ons/year	
6.	Emission Factor:		7. Emissions	
	Reference: GE, 1998; Golder, 2003		Method Code:	
	Calculation of Emissions (limit to 600 chara Refer to Table 1. Pollutant Potential/Fugitive Emissions Com. Annual tons per year based on 3,850 hr/yr of	ment (limit to 200 chara		
Al	lowable Emissions Allowable Emissions	1 of2		
1.	Basis for Allowable Emissions Code: OTHER	2. Future Effective D Emissions:	ate of Allowable	
3.	Requested Allowable Emissions and Units:	4. Equivalent Allowa	able Emissions:	
	1 grain S/100 scf	5 lb/hour	11.3 tons/year	
5.	Method of Compliance (limit to 60 character Fuel Monitoring	rs):		
6.	Allowable Emissions Comment (Desc. of O Natural Gas Firing for 4,500 hr/yr. Permit No. 0990568-001-AC; PSD-FL-266.	perating Method) (limit	to 200 characters):	

Emissions Unit Information Section	_1_	of <u>1</u>	
Pollutant Detail Information Page	2	_ of <u> 5</u>	

GE 7FA Combustion Turbine

Sulfur Dioxide

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 Efficie	ency of Control:
3. Potential Emissions:	•	4. Synthetically
lb/hour	tons/year	Limited? []
5. Range of Estimated Fugitive Emissions:		
[] 1 [] 2 [] 3	to to:	ns/year
6. Emission Factor:		7. Emissions
Reference:		Method Code:
8. Calculation of Emissions (limit to 600 char	acters):	
·		
9. Pollutant Potential/Fugitive Emissions Con	nment (limit to 200 charac	ters):
	•	
Allowable Emissions Allowable Emissions	2 of 2	
1. Basis for Allowable Emissions Code:	2. Future Effective Da	ate of Allowable
OTHER	Emissions:	
3. Requested Allowable Emissions and Units:	4. Equivalent Allowal	ole Emissions:
0.05% S	101.5 lb/ho	ur 33 tons/year
5. Method of Compliance (limit to 60 character	ers):	
Fuel Monitoring		
6. Allowable Emissions Comment (Desc. of Comment	Operating Method) (limit to	o 200 characters):
Distillate Oil Firing for 650 hr/yr.		
Permit No. 0990568-001-AC; PSD-FL-266.		

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Emissions Unit Information Section	_1	of <u>1</u>	GE 7FA Combustion Turbine
Pollutant Detail Information Page	3	of <u>5</u>	Nitrogen Oxide

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

	terriant agreeve Dimissions					
1.	Pollutant Emitted: NO _x	2.	Total Percent Efficie	ncy	of Control:	
3.	Potential Emissions:			4.	Synthetically	
	362.4 lb/hour		245.2 tons/year		Limited? [X]]
5.	Range of Estimated Fugitive Emissions:					
	[] 1 [] 2 [] 3	_	to to	ns/y	ear	
6.	Emission Factor:			7.	Emissions	
	Reference: GE, 1998; Golder, 2003				Method Code: 2	
8.	Calculation of Emissions (limit to 600 chara Refer to Table 1.	cters):			,
9.	Pollutant Potential/Fugitive Emissions Com		(limit to 200 shares	40.00	\	
). 	Annual tons per year based on 3,850 hr/yr of			,	•	
<u>Al</u>	lowable Emissions Allowable Emissions	1	of			
1.	Basis for Allowable Emissions Code: OTHER	2.	Future Effective Da Emissions:	ite o	of Allowable	
3.	Requested Allowable Emissions and Units:	4.	Equivalent Allowal	ole E	Emissions:	
	9 ppmvd at 15% O ₂		66.2 lb/hour		149 tons/year	
5.	Method of Compliance (limit to 60 characte EPA Method 7E and CEM	rs):		_		
6.	Allowable Emissions Comment (Desc. of O Natural Gas Firing for 4,500 hr/yr. Permit No. 0990568-001-AC; PSD-FL-266.	perat	ing Method) (limit to	o 20	0 characters):	

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Emissions Unit Information Section	1	of_	1	GE 7FA Combustion Turbine
Pollutant Detail Information Page _	3	of _	5	Nitrogen Oxides

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

<u> </u>	tentiable united Emissions							
1.	Pollutant Emitted:	2. Total Percent Efficiency of Control:						
3.	Potential Emissions:	4. Synthetically						
٥.	lb/hour	tons/year Limited? []						
5.	Range of Estimated Fugitive Emissions:	<u> </u>						
	[] 1	to tons/year						
6.	Emission Factor:	7. Emissions						
	Reference:	Method Code:						
8.	Calculation of Emissions (limit to 600 charac	cters):						
	·	·						
ı								
9.	Pollutant Potential/Fugitive Emissions Comm	ment (limit to 200 characters):						
		•						
Al	Allowable Emissions 2 of 2							
1.	Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable						
	OTHER	Emissions:						
3.	1	4. Equivalent Allowable Emissions:						
	42 ppm at 15% O₂	362.4 lb/hour 117.8 tons/year						
5.	Method of Compliance (limit to 60 character	rs):						
	EPA Method 7E and CEM							
6	Allowable Emissions Comment (Desc. of Op	perating Method) (limit to 200 characters):						
0.	Distillate Oil Firing for 650 hr/yr.	crading interior) (time to 200 characters).						
	Permit No. 0990568-001-AC; PSD-FL-266.							

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Emissions Unit Information Section	_1_	_ of1	GE 7FA Combustion Turbin
Pollutant Detail Information Page	4	_ of <u>5</u>	Carbon Monoxid

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1.	Pollutant Emitted:	2.	Total 1	Percent	Efficie	ency	of Control	:
	Potential Emissions: 73.4 lb/hour		86.2	tons	/year	4.	Synthetica Limited?	illy [X]
5.	Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3			_ to	to	ns/y	ear	
6.	Emission Factor: Reference: GE, 1998; Golder, 2003					7.	Emissions Method C	
8.	Calculation of Emissions (limit to 600 chara Refer to Table 1.	cters	s):				2	
9.	Pollutant Potential/Fugitive Emissions Com Annual tons per year based on 3,850 hr/yr of	gas	firing a	nd 650			•	j.
1.	Basis for Allowable Emissions Code:		7		tive Da	ite (of Allowabl	e
	OTHER		Emis	sions:				
3.	Requested Allowable Emissions and Units: 9 ppmvd at 15% O ₂	4.	-	valent A 32.4 lb		ole I	Emissions: 72.9 tons/y	/ear
5.	Method of Compliance (limit to 60 character EPA Method 10 and CEM	rs):						
6.	Allowable Emissions Comment (Desc. of O Natural Gas Firing for 4,500 hr/yr. Permit No. 0990568-001-AC; PSD-FL-266.	pera	ing M	ethod) (limit to	o 20	00 character	s):

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Emissions Unit Information Section	<u>1</u> of _	1	GE 7FA Combustion Turbine
Pollutant Detail Information Page	<u>4 of _</u>	5	Carbon Monoxide

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:	4. Synthetically tons/year Limited? []
5.	Range of Estimated Fugitive Emissions:	
	[] 1 [] 2 [] 3	to tons/year
6.	Emission Factor:	7. Emissions
	Reference:	Method Code:
8.	Calculation of Emissions (limit to 600 charac	eters):
9.	Pollutant Potential/Fugitive Emissions Comr	nent (limit to 200 characters):
All	lowable Emissions Allowable Emissions 2	2of2
1.	Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable
	OTHER	Emissions:
3.	Requested Allowable Emissions and Units: 20 ppmvd at 15% O ₂	4. Equivalent Allowable Emissions:
	20 ppinva at 15 % O ₂	73.4 lb/hour 23.9 tons/year
5.	Method of Compliance (limit to 60 character	s):
	EPA Method 10 and CEM	
6.	Allowable Emissions Comment (Desc. of Op	perating Method) (limit to 200 characters):
	Distillate Oil Firing for 650 hr/yr.	
	Permit No. 0990568-001-AC; PSD-FL-266.	

Emissions Unit Information Section _ 1 _ of _ 1	GE 7FA Combustion Turbine
Pollutant Detail Information Page <u>5</u> of <u>5</u>	Volatile Organic Compound

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:
3. Potential Emissions:	4. Synthetically
8.3 lb/hour	8.9 tons/year Limited? [X]
5. Range of Estimated Fugitive Emissions:	
[]1 []2 []3	totons/year
6. Emission Factor:	7. Emissions
Reference: GE, 1998; Golder, 2003	Method Code:
8. Calculation of Emissions (limit to 600 chara Refer to Table 1.	acters):
·	
9. Pollutant Potential/Fugitive Emissions Com	
Annual tons per year based on 3,850 hr/yr of	gas firing and 650 hr/yr distillate oil firing.
,	
·	
Allowable Emissions Allowable Emissions	<u>1</u> of <u>2</u>
Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable
OTHER	Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:
1.4 ppmvw	3.2 lb/hour 7.2 tons/year
5. Method of Compliance (limit to 60 characte	ers):
EPA Method	
6. Allowable Emissions Comment (Desc. of O	perating Method) (limit to 200 characters):
Natural Gas Firing 4,500 hr/yr. Permit No. 0990568-001-AC; PSD-FL-266.	
200.	
	,

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Emissions Unit Information Section	n <u> 1</u>	of	1	_ GE 7FA Combustion Turbine
Pollutant Detail Information Page	5_	of	5	_ Volatile Organic Compound

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:	4. Synthetically
lb/hour	tons/year Limited? []
5. Range of Estimated Fugitive Emissions:	
	to tons/year
6. Emission Factor:	7. Emissions
Reference:	Method Code:
8. Calculation of Emissions (limit to 600 chara	acters):
9. Pollutant Potential/Fugitive Emissions Com	ament (limit to 200 characters):
7. Tollutant Tolential/Tugitive Emussions Con	micht (mit to 200 characters).
	•
Allowable Emissions _	2 of 2
Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable
OTHER	Emissions:
3. Requested Allowable Emissions and Units: 3.5 ppmvw	4. Equivalent Allowable Emissions:
3.3 рршум	8.3 lb/hour 2.7 tons/year
5. Method of Compliance (limit to 60 characte	ers):
• •	
·	
6. Allowable Emissions Comment (Desc. of C	Operating Method) (limit to 200 characters):
Distillate Oil Firing for 650 hr/yr.	
Permit No. 0990568-001-AC; PSD-FL-266.	•

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Emissions Unit Information Section	1	of	1	GE 7FA Combustion Turbine

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

<u> </u>	sible Emissions Limitation: Visible Emission	ons Limitation <u>1</u> of <u>1</u>
1.	Visible Emissions Subtype: VE10	Basis for Allowable Opacity: [] Rule [X] Other
3.	Requested Allowable Opacity: Normal Conditions: 10 % Ex Maximum Period of Excess Opacity Allower	d: 100 % d: 60 min/hour
4.	Method of Compliance: EPA Method 9	
5.	Visible Emissions Comment (limit to 200 chemit No. 0990568-001-AC; PSD-FL-266. FDEP Rule 62-210.700(1). Allowed 2 hr per to the second	naracters): 24 hr for startup, shutdown, and malfunction.
		NITOR INFORMATION Subject to Continuous Monitoring) Monitor1 of2
1.	Parameter Code: EM	2. Pollutant(s): NO _x
3.		
	CMS Requirement:	[] Rule [X] Other
4.	Monitor Information: Manufacturer: To Be Determined Model Number:	[] Rule [X] Other Serial Number:
	Monitor Information: Manufacturer: To Be Determined	

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GE	7FA	Com	bustion	Turbine
QE,	11 A	COIII	pusuvn	I UI DIIIE

Emissions	Unit	Inform	ation	Section	1	Ωf	1
CH112210112	Ome	THILDER	iauvii	Section	•	UI	•

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

<u>Vi</u>	sible Emissions Limitation: Visible Emission	ons Limitation of
1.	Visible Emissions Subtype:	2. Basis for Allowable Opacity:
		[] Rule [] Other
3.	Requested Allowable Opacity:	-
	Normal Conditions: % Ex	xceptional Conditions: %
	Maximum Period of Excess Opacity Allowe	ed: min/hour
4.	Method of Compliance:	
_	Visible Emissions Comment (limit to 200 el	haractara):
).	Visible Emissions Comment (limit to 200 ch	maracters).
	I. CONTINUOUS MO	ONITOR INFORMATION
	(Only Regulated Emissions Units	s Subject to Continuous Monitoring)
<u>Co</u>	ontinuous Monitoring System: Continuous	s Monitor <u>2</u> of <u>2</u>
1.	Parameter Code:	2. Pollutant(s):
	EM	СО
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.	
	·	

1	of	1

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.

Emissions Unit Information Section	1	of	1	GE 7FA Combustion T	urbine
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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/PM₁₀, SO₂, NO₂ 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 3,390 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.

			Original Project				Amended Proje	ct		Difference
	Units	Standard Operation ^a	Backup Fuel Firing ^b	Alternate Methods ^c	Total ^d	Standard Operation ^a	Backup Fuel Firing ^b	Alternate Methods ^e	Total ^f	
<u>Operation</u>										
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
СО	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/PM₁₀ and SO₂ 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/PM₁₀ and SO₂ 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/PM₁₀ and SO₂ 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

		Dail	y Liquid Surf.		Liquid Bulk		_		Vapor	Liquid	Vapor		
		Tempe	eratures (deg F)	Temp.	Vapor	Pressures (psia	1)	Mol.	Mass	Mass	Mol.	Basis for Vapor Pressure
Mixture/Component	Month	Avg.	Min.	Max.	(deg F)	Avg.	Min.	Max.	Weight	Fract.	Fract.	Weight	Calculations
Distillate fuel oil no. 2	AII	R2 3Q	73.77	91.01	76.06	0.0132	0.0101	0.0170	130 0000			100.00	Ontion 5: A=12 101 R-8007

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
D (O (D D)	
Roof Outage (Dome Roof)	40 4404
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	100.000
Surface Temperature (psia):	0.0132
Dally Avg. Liquid Surface Temp. (deg. R):	542.0595
Daily Average Ambient Temp. (deg. F):	74.7167
Ideal Gas Constant R	74.7107
(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	0.5400
Factor (Btu/sqft day):	1,504.5472
r Botor (Biologic Say).	1,004.0472
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
Marking Loopes (Ib):	200 4022
Working Losses (lb):	382.4083

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

Vapor Molecular Weight (lb/lb-mole): Vapor Pressure at Daily Average Liquid	130.0000
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

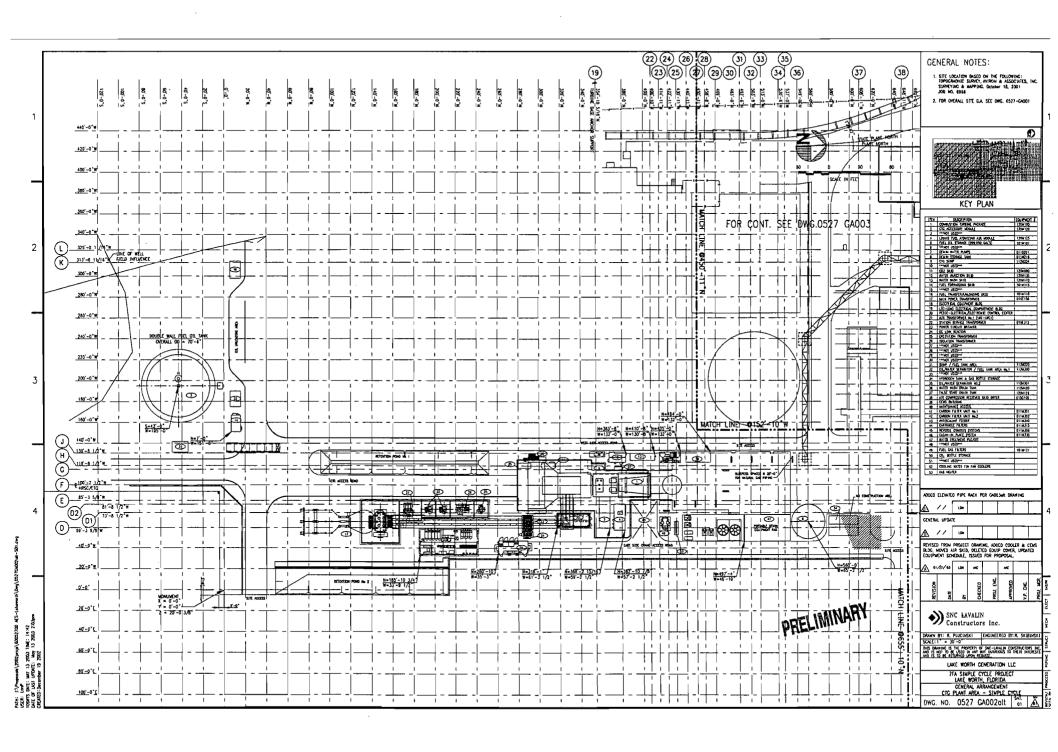
Total Losses (lb): 1,281.5404

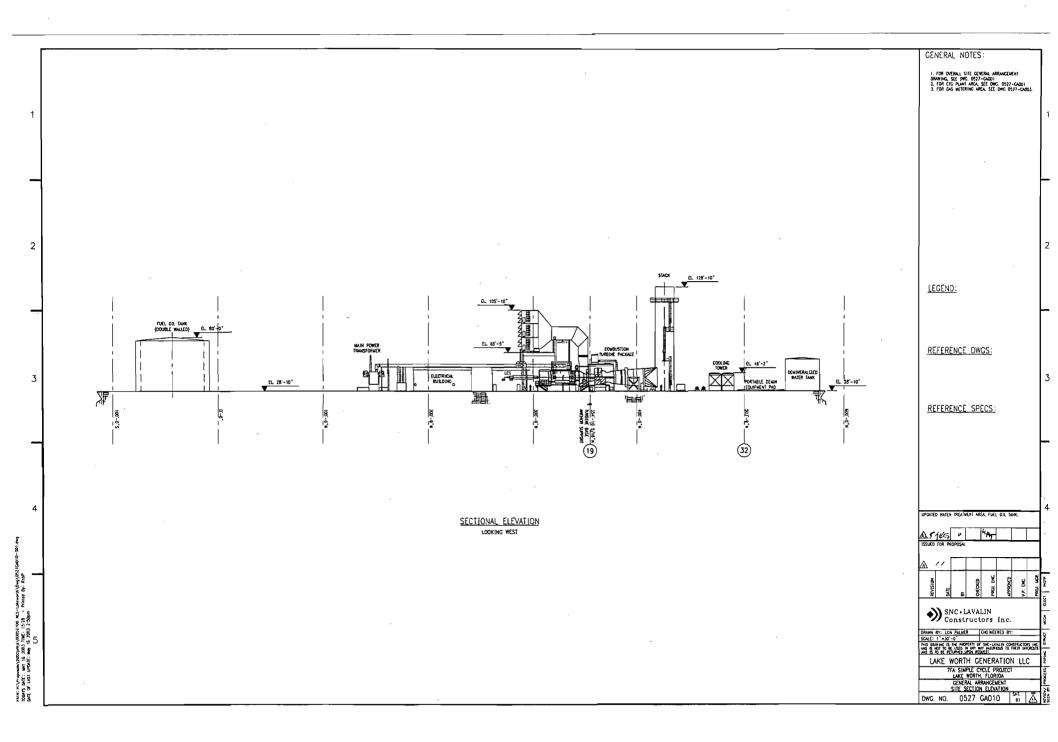
TANKS 4.0 Emissions Report - Detail Format Individual Tank Emission Totals

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





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

		Maximum Predicted	l Concentrations (μg/m³)	EPA Significant
Pollutant	Averaging Time	Simple-Cycle Operation	Combined-Cycle Operation	Impact Levels (μg/m³)
Natural Gas				
SO ₂	Annual	0.0009	0.01	1
2	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				
$\overline{\mathrm{SO}_2}$	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

		Maximum Predicted	PSD Class I Significantt Impact Levels (μg/m³)		
Pollutant	Averaging Time	Simple-Cycle Operation	Combined-Cycle Operation	NPS Recommended	EPA Proposed
N-41 C	•				
Natural Gas SO ₂	Annual	0.00001	0.00001	0.03	0.1
$3O_2$	24-Hour	0.0001	0.0001	0.03	0.1
	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
1 14110	24-Hour	0.001	0.001	0.27	0.3
Fuel Oil					
SO ₂	Annual	0.003	0.0043	0.03	0.1
552	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.



Department of **Environmental Protection**

leb Bush Governor

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

David B. Struhs Secretary

PERMITTEE

Lake Worth Generation, LLC 245 Winter Street, Suite 300 Waltham, MA 02451 Authorized Representative: Brian Chatlosh, Manager

Permit No. 0990568-003-AC Expires: March 31, 2005

186 MW Simple Cycle Gas Turbine

SIC No. 4911

Palm Beach County, Florida

PROJECT AND LOCATION

This permit authorizes Lake Worth Generation, LLC to construct a 186 MW simple cycle gas turbine with electrical generator set and associated equipment in accordance with the application and conditions of this permit. The new electrical generating power plant will be located within the boundaries of the existing Tom G. Smith Power Plant (owned and operated by the City of Lake Worth) at 117 College Street in Lake Worth, Florida 33461.

{Permitting Note: This project was originally configured as a combined cycle gas turbine (Permit No. PSD-FL-266) and was classified as a new PSD major facility in accordance with Rule 62-212.400, F.A.C. This new permit authorizes simple cycle only operation. In accordance with the conditions of this permit, the new facility is considered a minor source of air pollution and is not subject to PSD preconstruction review.}

STATEMENT OF BASIS

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.), and Subpart GG in Part 60 of Title of the Code of Federal Regulations. The above named permittee is authorized to construct the emissions units in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department). This permit supersedes previous air construction Permit No. PSD-FL-266.

APPENDICES

The attached appendices are a part of this permit:

Appendix A.

Citation Format

Appendix B.

Construction Permit General Conditions

Appendix GG. NSPS Provisions

Michael G. Cooke, Director Division of Air Resources Management

Mahal & Coolie

"More Protection, Less Process"

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FACILITY DESCRIPTION

This permit authorizes Lake Worth Generation (LWG) to construct a new simple cycle gas turbine. The permittee will lease property from the City of Lake Worth that is within the boundaries of its existing Tom G. Smith Power Plant. City employees will operate and maintain the new unit under the control of LWG. This new facility consists of the following emissions unit.

EU No.	Emissions Unit Description		
001	186 MW simple cycle gas turbine		

{Permitting Note: The project was originally proposed as a combined cycle unit, but is modified by this permit to authorize simple cycle <u>only</u> operation.}

REGULATORY CLASSIFICATIONS

Title III: The new facility will not be a major source of hazardous air pollutants (HAPs).

<u>Title IV</u>: The new facility operates units subject to applicable Acid Rain provisions of the Clean Air Act.

<u>Title V</u>: The new facility is a Title V major facility pursuant to Chapter 62-213, F.A.C.

<u>PSD</u>: The new facility is not a PSD major facility pursuant to Rule 62-212.400, F.A.C.

NSPS: The gas turbine is subject to New Source Performance Standards of Subpart GG in 40 CFR 60.

Siting: The project is not subject to Chapter 62-17, F.A.C. for Power Plant Site Certification.

RELEVANT DOCUMENTS

The documents listed below are not part of this permit, but specifically relate to this permitting action.

- Project No. 0990568-001-AC: Air Permit No. PSD-FL-266 issued on 11/14/99 and all related documents for a combined cycle gas turbine.
- *Project No. 0990568-002-AC*: Permit modification (PSD-FL-266A) issued on 08/30/00 to revise VOC standards for combined cycle operation and all related documents.
- *No Project Number*: Permitting action (PSD-FL-266B) issued on 04/03/01 to extend permit expiration date (and authority to construct) and all related documents.
- *Project No. 0990568-003-AC*: Application to modify current air permit (PSD-FL-266) for a simple cycle only gas turbine received on May 19, 2003 and all related correspondence.

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

Unless otherwise specified by this permit, the following conditions apply to all activities this facility.

ADMINISTRATIVE REQUIREMENTS

- 1. <u>Permitting Authority:</u> All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.
- Compliance Authorities: All documents related to reports, tests, minor modifications and notifications shall be submitted to the Air Pollution Control Section of the Palm Beach County Health Department at P.O. Box 29 (901 Evernia Street), West Palm Beach, Florida 33402-0029. Copies of these items shall also be submitted to the Department's Air Resources Section of the Southeast District Office at P.O. Box 15425 (400 North Congress Avenue), West Palm Beach, Florida, 33416-5425.
- 3. <u>Previous Permits</u>: This air construction permit supersedes previous Permit No. PSD-FL-266.
- 4. <u>Permit Applications</u>: The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C.
- 5. <u>Citation Format</u>: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code. *Appendix A* lists abbreviations and methods for citing regulations used throughout this permit.
- 6. <u>General Conditions</u>: The owner and operator is subject to, and shall operate under, the attached General Conditions listed in *Appendix B* of this permit. General Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
- 7. Applicable Regulations: Unless otherwise indicated in this permit, the construction and operation of the subject emission units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S. and Florida Administrative Code Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, and 62-297; and the applicable requirements in Title 40 of the Code of Federal Regulations. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations. [Rule 62-210.300, F.A.C.]
- 8. <u>Modifications</u>: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
- 9. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
- 10. Source Obligation: This project is subject to Rule 62-212.400(2)(g), F.A.C., which states, "If a previously permitted facility or modification becomes a facility or modification which would be subject to the preconstruction review requirements of this rule if it were a proposed new facility or modification solely by virtue of a relaxation in any federally enforceable limitation on the capacity of the facility or modification to emit a pollutant (such as a restriction on hours of operation), which limitation was established after August 7,1980, then at the time of such relaxation the preconstruction review requirements of this rule shall apply to the facility or modification as though construction had not yet commenced on it." This includes, but is not limited to, increases in

- maximum heat input rates, hours of operation, pollutant emission rates, or a request for combined cycle operation. [Rule 62-212.400(2)(g), F.A.C.]
- 11. Expiration and Extension: For good cause, the permittee may request that this PSD permit be extended. Such a request shall be submitted at least sixty (60) days before the expiration of this permit. [Rules 62-4.070(3) and 62-4.080, F.A.C.]
- 12. Transfer of Permit: Within thirty (30) days after the sale or legal transfer of a permitted facility, an "Application for Transfer of Air Permit" (DEP Form 62-210.900(7)) shall be submitted to the Permitting Authority. This form must be completed with the notarized signatures of both the permittee and the proposed new permittee. The permittee is encouraged to apply for a permit transfer prior to the sale or legal transfer of a permitted facility. However, the transfer shall not be effective prior to the sale or legal transfer. Until this transfer is approved by the Department, the permittee and any other person constructing, operating, or maintaining the permitted facility shall be liable for compliance with the terms of the permit. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations occurring prior to the sale or legal transfer of the facility. {Permitting Note: In reviewing a request for a transfer of the air permit, the Department will reconsider the issues of "common control" and "single facility" due to the proximity of this new facility within the boundaries the existing Tom G. Smith Power Plant, which is owned operated by the City of Lake Worth.} [Rule 62-4.120, F.A.C.]
- 13. <u>Application for Title IV Permit</u>: At least 24 months before the date on which the new unit begins serving an electrical generator greater than 25 MW, the permittee shall submit an application for a Title IV Acid Rain Permit to the EPA Region 4 office with copy to the Department's Bureau of Air Regulation in Tallahassee. [40 CFR 72]
- 14. <u>Application for Title V Permit</u>: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may require by law. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

EMISSION STANDARDS

- 15. <u>Unconfined Emissions of Particulate Matter</u>: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]
- 16. Odor: No person shall cause, suffer, allow or permit the discharge of air pollutants that cause or contribute to an objectionable odor. An objectionable odor is defined as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(203), F.A.C.]

OPERATIONAL REQUIREMENTS

- 17. <u>Plant Operation Problems</u>: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall notify the Compliance Authorities within one (1) working day. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. [Rule 62-4.130, F.A.C.]
- 18. <u>Circumvention</u>: No person shall circumvent any air pollution control device or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

- 19. Operating Rate During Testing. Unless otherwise specified in this permit, testing of emissions shall be conducted with the emissions unit operating at permitted capacity (90 to 100 percent of the maximum operation rate allowed by the permit). If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity. In this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the 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. [Rule 62-297.310(2), F.A.C.]
- 20. 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 two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]
- 21. <u>Calculation of Emission Rate</u>: The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
- 22. Test Procedures shall meet all applicable requirements of Rule 62-297.310(4), F.A.C.
- 23. <u>Determination of Process Variables</u>: 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. Equipment or instruments used to directly, or indirectly, determine process variables 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. Examples of such devices include belt scales, weight hoppers, flow meters, and tank scales. [Rule 62-297.310(5), F.A.C.]

- 24. Required Stack Sampling Facilities: All emissions units requiring stack testing shall be designed to accommodate testing and sampling facilities. Sampling facilities shall conform to the requirements of Rule 62-297.310(6), F.A.C. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.
- 25. <u>Test Notification</u>: The owner or operator shall notify the Compliance Authorities at least 30 days prior to the scheduled initial NSPS tests and at least 15 days prior to all other scheduled compliance tests. Notification shall include the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and conducting the test. [Rule 62-297.310(7)(a)9., F.A.C. and 40 CFR 60.8]
- 26. 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 shall require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

- 27. Records Retention: All measurements, records, and other data required by this permit shall be recorded in a permanent form and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These records shall be made available to the Department's representatives upon request. [Rule 62-213.440, F.A.C.]
- 28. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical, but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department 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 applicable information listed in Rule 62-297.310(8)(c), F.A.C. [Rule 62-297.310(8), F.A.C.]
- 29. Excess Emissions Reporting: If excess emissions occur, the owner or operator shall notify the Compliance Authorities within one (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. Within thirty (30) days following each calendar quarter, the owner or operator shall submit a report summarizing any incident of the excess emissions or stating that no excess emissions occurred during the given calendar quarter. The summary of each incident shall include the amount, the duration, the cause, and the action taken to minimize and correct the excess emissions. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with § 60.7, Subpart A. Periods of startup, shutdown, and malfunction shall be monitored, recorded, and reported as excess emissions when monitored emission levels exceed any permitted standards. [Rules 62-4.070(3), 62-4.130 and 62-210.700(6), F.A.C.]
- 30. <u>Annual Operating Report (AOR)</u>: The Annual Operating Report form shall be completed each year and submitted to the Compliance Authorities by March 1st of the following year. [Rule 62-210.370(3), F.A.C.]

EU 001. Simple Cycle Gas Turbine

The specific conditions of this section address the following emissions unit.

EU No.	Emissions unit Description
001	Simple Cycle Gas Turbine: This emissions unit consists of a General Electric Model PG7241(FA) gas turbine with electrical generator set. The gas turbine design incorporates dry low-NOx (DLN) combustion technology to reduce NOx emissions when firing natural gas. A water (or steam) injection system is included to reduce NOx emissions when firing distillate oil as a restricted alternate fuel. The General Electric Speedtronic™ Gas Turbine Control System will monitor and control the gas turbine combustion process and operating parameters. An absorption or evaporative cooling system may be installed to reduce the turbine inlet air temperature for a corresponding increase in power generation. Continuous monitors will record carbon monoxide emissions, nitrogen oxide emissions, and the water-to-fuel ratio during oil firing.
	The exhaust stack is 22 feet in diameter and 98 feet tall. When firing natural gas, the gas turbine generates approximately 176 MW of electrical power. Exhaust gases exit the stack at a temperature of 1110° F and a volumetric flow rate of 2,681,000 actual cubic feet per minute. When firing low sulfur distillate oil, the gas turbine generates approximately 186 MW of electrical power. Exhaust gases exit the stack at a temperature of 1080° F and a volumetric flow rate of 2,763,000 actual cubic feet per minute. The exhaust gas parameters are approximate considering base load operation and a turbine inlet air temperature of 45° F.

FEDERAL REGULATIONS

1. NSPS General Provisions: The gas turbine shall comply with all applicable provisions of Subpart GG in 40 CFR 60, the Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C. Appendix GG of this permit identifies the applicable NSPS requirements. The Subpart GG requirement to correct NOx test data to ISO conditions applies; however, such correction shall not be used for determining compliance with the state standards. [40 CFR 60, Subparts A and GG]

PERFORMANCE RESTRICTIONS

- 2. <u>Allowable Fuels</u>: The gas turbine shall fire pipeline natural gas containing no more than 1 grain of sulfur per 100 scf of natural gas. As a restricted alternate fuel, the gas turbine may fire No. 2 distillate oil (or a superior grade) containing no more than 0.05% sulfur by weight. Compliance with the fuel sulfur specifications shall be demonstrated by the record keeping requirements of this permit and the approved Alternate Monitoring Plan. [Application; Rule 62-210.200(PTE), F.A.C.]
- 3. <u>Permitted Capacities</u>: The gas turbine shall operate only in simple cycle mode. Based on the higher heating value of each fuel, a turbine inlet air temperature of 45° F, a relative humidity of 70%, and 100% base load, the permitted capacity shall be defined as the following maximum heat input rates.
 - (a) Gas Firing: The maximum heat input rate is 1817 MMBtu/hour.
 - (b) Oil Firing: The maximum heat input rate is 1965 MMBtu/hour.

The maximum heat input rates will vary depending upon turbine inlet conditions and the gas turbine characteristics. Manufacturer's performance curves, corrected for site conditions or equations for correction to other turbine inlet conditions, shall be provided to the Permitting and Compliance Authorities within 45 days of completing the initial compliance testing. The performance curves shall include DLN operation for gas firing and water (or steam) injection for oil firing. The

EU 001. Simple Cycle Gas Turbine

- permittee shall install, operate, calibrate, and maintain fuel metering systems to monitor the flow of natural gas and distillate oil. [Design; Rule 62-210.200(PTE), F.A.C.]
- 4. <u>Hours of Operation:</u> The gas turbine shall operate no more than 4500 hours during any consecutive 12 months. [Applicant Request; Rules 62-210.200(PTE) and 62-212.400(2)(g), F.A.C.]
- 5. <u>Fuel Consumption Limit</u>: No more than 9,369,750 gallons of distillate oil shall be fired during any consecutive 12 months. *{Permitting Note: The oil firing limit is equivalent to approximately 650 hours of oil firing per year at the maximum firing rate.}* [Applicant Request, Rules 62-210.200(PTE) and 62-212.400(2)(g), F.A.C.]
- 6. Operating Procedures: All operators and supervisors shall be properly trained to operate and maintain the gas turbine and pollution control devices in accordance with the guidelines and procedures established by each manufacturer. The training shall include good operating practices as well as methods of minimizing excess emissions. [Applicant Request; Rule 62-4.070(3), F.A.C.]

EMISSIONS CONTROLS

- 7. <u>DLN Tuning</u>: Prior to the required initial emissions performance testing, the gas turbine, dry low-NOx (DLN) combustors, and SpeedtronicTM control system shall be tuned in accordance with the manufacturer's recommendations to optimize the reduction of CO, NOx, and VOC emissions. Thereafter, these systems shall be maintained and tuned as necessary to ensure efficient combustion. The SpeedtronicTM control system shall be designed and operated to monitor and control the gas turbine combustion process and operating parameters including, but not limited to: fuel distribution and staging, turbine speed, load conditions, combustion temperatures, water injection, and fully automated startup, shutdown, and cool-down. [Design; Rule 62-4.070(3), F.A.C.]
- 8. Water Injection: The permittee shall install, calibrate, operate, and maintain an automated water (or steam) injection system to control NOx emissions when firing distillate oil. This system shall be maintained and adjusted in accordance with the manufacturer's recommendations to minimize NOx emissions. [Design; Rules 62-4.070(3) and 62-4.070(3), F.A.C.]
- 9. <u>Turbine Inlet Air Cooling System</u>: The permittee may install an absorption or evaporative cooling system to reduce the turbine inlet air temperature. [Applicant Request]

EMISSIONS STANDARDS

10. <u>Simple Cycle Operation</u>, <u>Natural Gas</u>: This permit authorizes simple cycle operation of the gas turbine when firing natural gas. Emissions shall not exceed following standards. [Applicant Request; Design; Rule 62-4.070(3), F.A.C.]

Pollutant	Controls f	Emission Standard	
CO a	DLN	9.0 ppmvd corrected to 15% O2 based on a 24-hour CEMS average	
		9.0 ppmvd corrected to 15% O2 and 32.4 lb/hour based on a 3-run test average	
NOx ^b	DLN	9.0 ppmvd corrected to 15% O2 based on a 24-hour CEMS average	
		9.0 ppmvd corrected to 15% O2 and 66.2 lb/hour based on a 3-run test average	
PM/PM10 °	CF/CD	Visible emissions shall not exceed 10% opacity	
SAM/SO2 d	CF ´	1 grain per 100 SCF of gas (fuel specification)	
VOC e	DLN	1.4 ppmvw and 3.2 lb/hour (as methane) based on a 3-run test average	

a. Compliance with the rolling 24-hour CEMS standard shall be demonstrated with data collected from the certified continuous CO emissions monitoring system (CEMS) required by this permit. The CEMS shall

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- calculate and record emissions for each 1-hour block of operation and determine a 24-hour average for each day of operation. Compliance with the 3-run test averages shall be determined by stack testing using EPA Method 10.
- b. Compliance with the rolling 24-hour CEMS standard shall be demonstrated with data collected from the certified continuous NOx emissions monitoring system (CEMS) required by this permit. The CEMS shall calculate and record emissions for each 1-hour block of operation and determine a 24-hour average for each day of operation. Compliance with the 3-run test averages shall be determined by stack testing using EPA Method 7E (or 20).
- c. Compliance with the visible emissions standard shall be determined by conducting EPA Method 9. {Permitting Note: Estimated PM emissions are less than 0.005 lb/MMBtu when firing natural gas.}
- d. Compliance with the SAM/SO2 standard shall be demonstrated by firing only pipeline natural gas and the record keeping and reporting requirements of this permit.
- e. Compliance with the VOC standards shall be determined by stack testing using EPA Method 25A. EPA Method 18 may be performed concurrently to deduct emissions of methane and ethane from the total measured VOC.
- f. DLN means dry low-NOx controls. CF means clean fuels. CD means combustion design.
- 11. Simple Cycle Operation, Distillate Oil: This permit authorizes simple cycle operation of the gas turbine when firing a restricted amount of distillate oil. Emissions shall not exceed the following standards. [Applicant Request; Design; Rule 62-4.070(3), F.A.C.]

Pollutant	Controls f	Emission Standard
CO a	CD	20.0 ppmvd corrected to 15% O2 based on a 24-hour average
		73.4 pounds per hour based on a 3-run test average
NOx ^b	WI	42.0 ppmvd corrected to 15% O2 based on a 24-hour average
		362.4 pounds per hour based on a 3-run test average
PM/PM10 °	CF/CD	Visible emissions shall not exceed 10% opacity (< 0.01 grains/dscf)
SAM/SO2 d	CF/CD	Distillate oil containing no more than 0.05% sulfur by weight (fuel specification).
VOC ^e	CD	3.5 ppmvw (as methane) based on a 3-run test average
·		8.3 pounds per hour (as methane) based on a 3-run test average

- a. Compliance with the rolling 24-hour CEMS standard shall be demonstrated with data collected from the certified continuous CO emissions monitoring system (CEMS) required by this permit. The CEMS shall calculate and record emissions for each 1-hour block of operation and determine a 24-hour average for each day of operation. Compliance with the 3-run test averages shall be determined by stack testing using EPA Method 10.
- b. Compliance with the rolling 24-hour CEMS standard shall be demonstrated with data collected from the certified continuous NOx emissions monitoring system (CEMS) required by this permit. The CEMS shall calculate and record emissions for each 1-hour block of operation and determine a 24-hour average for each day of operation. Compliance with the 3-run test averages shall be determined by stack testing using EPA Method 7E (or 20).
- c. Compliance with the visible emissions standard shall be determined by EPA Method 9. {Permitting Note: Estimated PM emissions are less than 0.009 lb/MMBtu when firing distillate oil.}
- d. Compliance with the SAM/SO2 standard shall be demonstrated by low sulfur distillate oil containing no more than 0.05% sulfur by weight and the record keeping and reporting requirements of this permit.
- e. Compliance with the VOC standards shall be determined by stack testing using EPA Method 25A. EPA Method 18 may be performed concurrently to deduct emissions of methane and ethane from the total

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measured VOC.

- f. CF means clean fuels. CD means combustion design. WI means water injection.
- 12. <u>Annual NOx Emission Cap</u>: NOx emissions from the simple cycle gas turbine shall not exceed 245.0 tons during any consecutive 12 months. [Rules 62-4.070(3) and 62-212.400(2)(g), F.A.C.]

EXCESS EMISSIONS

- 13. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction, shall be prohibited. These emissions shall be included in the calculation of the CEMS emission rates for compliance determinations. [Rule 62-210.700, F.A.C.]
- 14. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown, or malfunction of the gas turbine shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized. Excess emissions occurrences shall not exceed two hours in any 24-hour period. Excluding startup and shutdown, operation below 50% base load is prohibited. If excess emissions occur due to malfunction, the owner or operator shall notify the Compliance Authorities within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. [Vendor Performance Curves; Rule 62-210.700, F.A.C.]

COMPLIANCE MONITORING AND RECORD KEEPING REQUIREMENTS

- 15. <u>Sampling Facilities</u>: The permittee shall design the gas turbine stack to accommodate adequate testing and sampling locations for demonstrating compliance with the applicable emission standards. [Rules 62-4.070(3) and 62-204.800, F.A.C., 40 CFR 60.40a(b)]
- 16. Gas Turbine Testing Capacity: Testing of emissions shall be conducted with the gas turbine operating at permitted capacity. Permitted capacity is defined as 90-100% of the maximum heat input rate allowed by the permit, corrected for the turbine inlet air temperature during the test (with 100% represented by a curve depicting heat input vs. turbine inlet temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. However, subsequent operation is limited by adjusting the entire heat input vs. turbine temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for the turbine inlet air temperature) and 105% of the value reached during the test until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity. Procedures for these tests shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapters 62-204 and 62-297, F.A.C. [Rule 62-297.310(2), F.A.C.]
- 17. <u>Performance Test Methods</u>: Compliance tests shall be performed in accordance with the following reference methods as described in 40 CFR 60, Appendix A (1997 version), and adopted by reference in Rule 62-204.800, F.A.C.
 - (a) EPA Method 7E, "Determination of Nitrogen Oxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)".
 - (b) EPA Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources".
 - (c) *EPA Method 10*, "Determination of Carbon Monoxide Emissions from Stationary Sources". All CO tests shall be conducted concurrently with NOx tests.

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- (d) *EPA Method 20*, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines."
- (e) EPA Methods 18, 25 and/or 25A, "Determination of Volatile Organic Concentrations."

No other test methods may be used for compliance testing without prior written approval from the Department. [Rules 62-297.200 and 62-204.800, F.A.C.; 40 CFR 60, Appendix A]

- 18. <u>Initial Tests Required</u>: Initial compliance with the allowable emission standards specified in this permit shall be determined within 60 days after achieving the maximum production rate, but not later than 180 days after initial operation of the emissions units. Initial tests for emissions from the gas turbine shall be conducted for carbon monoxide, nitrogen oxides, volatile organic compounds, and visible emissions separately for each fuel type. Initial performance test data shall also be converted into the units of the corresponding NSPS Subpart GG emissions standards to demonstrate compliance See Appendix GG. [Rule 62-297.310(7)(a)1, F.A.C.]
- 19. <u>Annual Performance Tests</u>: Annual compliance tests shall be conducted to determine the emissions of carbon monoxide, nitrogen oxides and visible emissions from the gas turbine. Tests required on an annual basis shall be conducted at least once during each federal fiscal year (October 1st to September 30th). When conducted at permitted capacity, the annual NOx continuous monitor RATA required pursuant to 40 CFR 75 may be substituted for the annual compliance stack test. Similarly, the CO continuous monitor RATA pursuant to 40 CFR 60, Appendix B may be substituted for the annual compliance stack test. [Rule 62-297.310(7)(a)4, F.A.C.]
- 20. <u>Tests Prior to Permit Renewal</u>: During the federal fiscal year (October 1st to September 30th) prior to renewing the air operation permit, compliance tests shall be conducted to determine the emissions of volatile organic compounds from the gas turbine. [Rule 62-297.310(7)(a)3, F.A.C.]
- 21. Special Compliance Tests: The Department may require additional performance tests after any substantial modifications and appropriate shake down period including the replacement of dry low-NOx combustors. Shake down periods shall not exceed 100 days after re-starting the gas turbine. [Rule 62-297.310(7)(b), F.A.C.]
- 22. <u>Continuous Monitors</u>: To demonstrate continuous compliance with the emissions limits for CO and NOx, the owner or operator shall install, calibrate, operate, and maintain a continuous emission monitoring systems (CEMS) to measure and record the CO, NOx and oxygen concentrations in the gas turbine exhaust. Alternatively, a monitor for carbon dioxide may be used in place of the oxygen monitor, but the system shall be capable of correcting the emissions to 15% oxygen.

Compliance with the 24-hour rolling averages shall be demonstrated by continuous emissions monitoring data. The 24-hour rolling average shall be determined by calculating the arithmetic average of all hourly emission rates during the averaging period. Each 1-hour average shall be expressed in units of ppmvd corrected to 15% oxygen and calculated using four valid data points approximately 15 minutes apart. (The minimum requirement is two valid data points at least 15 minutes apart.) If any oil is fired during the hour, emissions shall be attributed towards compliance with the standards for oil firing.

Continuous emission monitoring data required by this permit shall be collected and recorded during all periods of operation including startup, shutdown, and malfunction, except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. Although recorded, emissions during periods of startup, shutdown and malfunction are subject to the excess emission conditions specified in this permit.

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The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of: Rule 62-297.520, F.A.C., including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications 2, 3 and 4; 40 CFR 60.7(a)(5); 40 CFR 60.13; 40 CFR 60, Appendix F; and 40 CFR Part 75, whichever is more stringent. A monitoring plan shall be provided to the DEP Emissions Monitoring Section Administrator and EPA for review no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62. The plan shall consist of data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location.

When the CEMS reports CO or NOx emissions in excess of the standards allowed by this permit, the permittee shall notify the Compliance Authorities within one (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. [Rules 62-204.800, 62-210.700, 62-4.070(3), 62-4.130, 62-4.160(8), F.A.C and 40 CFR 60.7].

- 23. <u>Fuel Records</u>: The permittee shall comply with the fuel sulfur specifications in accordance with the following requirements.
 - (a) Natural Gas: The permittee shall maintain records of the sulfur content of the natural gas being supplied for each month of operation. Methods for determining the sulfur content of the natural gas shall be ASTM methods D4084-82, D3246-81 or equivalent methods. These methods shall be used to determine the sulfur content of the natural gas fired in accordance with any EPA-approved custom fuel monitoring schedule (see Alternate Monitoring Plan) or natural gas supplier data or the natural gas sulfur content referenced in 40 CFR 75 Appendix D. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency pursuant to 40 CFR 60.335(e). However, the permittee is responsible for ensuring that the procedures in 40 CFR60.335 or 40 CFR75 are used to determine the fuel sulfur content for compliance with the SO2 standard in 40 CFR 60.333.
 - (b) Low Sulfur Distillate Oil: For all bulk shipments of low sulfur distillate oil received at this facility, the permittee shall obtain from the fuel vendor an analysis identifying the sulfur content. Methods for determining the sulfur content of the distillate oil shall be ASTM D129-91, D2622-94, or D4294-90 or equivalent methods. Records shall specify the test method used and shall comply with the requirements of 40 CFR 60.335(d).

[Rules 62-4.070(3) and 62-4.160(15), F.A.C.]

- 24. <u>Alternate Monitoring Plan</u>: Subject to EPA approval, the following alternate monitoring may be used to demonstrate compliance.
 - (a) The NOx CEMS data may be used in lieu of the monitoring system for water-to-fuel ratio and the reporting of excess emissions in accordance with 40 CFR 60.334(c)(1). The calibration of the water-to-fuel ratio-monitoring device required in 40 CFR 60.335(c)(2) will be replaced by the 40 CFR 75 certification tests of the NOx CEMS.
 - (b) The NOx CEMS data shall be used in lieu of the requirement for reporting excess emissions in accordance with 40 CFR 60.334(c)(1).
 - (c) When requested by the Department, the CEMS emission rates for NOx on this unit shall be corrected to ISO conditions to demonstrate compliance with the NOx standard established in 40 CFR 60.332.

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- (d) A custom fuel monitoring schedule pursuant to Appendix D of 40 CFR 75 for natural gas may be used in lieu of the daily sampling requirements of 40 CFR 60.334(b)(2) provided the following conditions are met.
 - (1) The permittee shall apply for an Acid Rain permit within the deadlines specified in § 72.30.
 - (2) The permittee shall submit a monitoring plan, certified by signature of the Authorized Representative, that commits to using a primary fuel of pipeline supplied natural gas containing no more than 1 grain of sulfur per 100 scf of gas pursuant to § 75.11(d)(2);
 - (3) Each unit shall be monitored for SO₂ emissions using methods consistent with the requirements of 40 CFR 75 and certified by the U.S. EPA.

This custom fuel-monitoring schedule will only be valid when pipeline natural gas is used as a primary fuel. If the primary fuel for these units is changed to a higher sulfur fuel, SO₂ emissions must be accounted for as required pursuant to 40 CFR 75.11(d).

[40 CFR 60, Subpart GG, Applicant Request]

- 25. <u>Daily Operations Log</u>: Before the end of the following calendar day, the owner or operator shall record the following information in a log for the previous day of operation: total hours of operation; gallons of distillate oil fired; heat input (MMBtu) from distillate oil firing; and the average water injection rate (lb/hour) during oil firing. Information may be recorded and stored as an electronic file, but must be available for inspection and/or printing at the request of the Compliance Authorities. [Rule 62-4.160(15), F.A.C.]
- 26. Monthly Operations Summary: By the fifth calendar day of each month, the owner or operator shall record the following information in a log for the previous month of operation: total hours of operation; million cubic feet of natural gas fired; gallons of distillate oil fired; the heat input rate (MMBtu) from distillate oil firing, and tons of NOx emitted. The owner or operator shall also calculate and record the rolling totals for the previous 12 months of operation. Information may be recorded and stored as an electronic file, but must be available for inspection and/or printing at the request of the Compliance Authorities. [Rule 62-4.160(15), F.A.C.]

SECTION IV.

List of Appendices

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SECTION IV.

Appendix A. Citation Format

ABBREVIATIONS AND ACRONYMS

° F - Degrees Fahrenheit

DEP - State of Florida, Department of Environmental Protection

DARM - Division of Air Resource Management

EPA - United States Environmental Protection Agency

F.A.C. - Florida Administrative Code

F.S. - Florida Statute

SOA - Specific Operating Agreement

DLN - Dry Low-NOX Combustion Technology

RULE CITATIONS

The following examples illustrate the methods used in this permit to abbreviate and cite the references of rules, regulations, permit numbers, and identification numbers.

Florida Administrative Code (F.A.C.) Rules:

Example: [Rule 62-213.205, F.A.C.]

Where: 62 - refers to Title 62 of the Florida Administrative Code (F.A.C.)

62-213 - refers to Chapter 62-213, F.A.C. 62-213.205 - refers to Rule 62-213.205, F.A.C.

Facility Identification (ID) Number:

Example: Facility ID No. 0990001

Where: 099 - 3 digit number indicates that the facility is located in Palm Beach County

- 4 digit number assigned by state database identifies specific facility

New Permit Numbers:

Example: Permit No. 0992222-001-AC or 0992222-001-AV

Where: AC - identifies permit as an Air Construction Permit

AV - identifies permit as a Title V Major Source Air Operation Permit

3 digit number indicates that the facility is located in Palm Beach County

2222 - 4 digit number identifies a specific facility

- 3 digit sequential number identifies a specific permit project

Old Permit Numbers:

Example: Permit No. AC50-123456 or AO50-123456

Where: AC - identifies permit as an Air Construction Permit

AO - identifies permit as an Air Operation Permit

- 6 digit sequential number identifies a specific permit project

Appendix B. Construction Permit General Conditions

- 1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- 2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- 3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
- 4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- 5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- 6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- 7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
 - (a) Have access to and copy and records that must be kept under the conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

- 8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - (a) A description of and cause of non-compliance; and
 - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections

SECTION IV.

Appendix B. Construction Permit General Conditions

- 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extend it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- 10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- 11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- 12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
- 13. This permit also constitutes:
 - (a) Determination of Best Available Control Technology (NA);
 - (b) Determination of Prevention of Significant Deterioration (NA); and
 - (c) Compliance with New Source Performance Standards (X).
- 14. The permittee shall comply with the following:
 - (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 - 1) The date, exact place, and time of sampling or measurements;
 - 2) The person responsible for performing the sampling or measurements;
 - 3) The dates analyses were performed;
 - 4) The person responsible for performing the analyses;
 - 5) The analytical techniques or methods used; and
 - 6) The results of such analyses.
- 15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SECTION IV.

Appendix GG. NSPS Provisions

Federal New Source Performance Standards, 40 CFR 60

40 CFR 60, Subpart A - NSPS General Provisions

Applicable portions of 40 CFR 60, Subpart A, General Provisions include:

- 40 CFR 60.7, Notification and Record Keeping
- 40 CFR 60.8, Performance Tests
- 40 CFR 60.11, Compliance with Standards and Maintenance Requirements
- 40 CFR 60.12, Circumvention
- 40 CFR 60.13, Monitoring Requirements
- 40 CFR 60.19, General Notification and Reporting Requirements

{Permitting Note: For copies of these requirements, please contact the Department's New Source Review Section.}

40 CFR 60, Subpart GG - Stationary Gas Turbines

This emissions unit is subject to 40 CFGR 60, Subpart GG for stationary gas turbines adopted by reference in Rule 62-204.800(7)(b), F.A.C. The following conditions follow the original NSPS rule language and numbering scheme. Regulations that are not applicable were omitted for clarity. Because this emissions units is subject to an NSPS, it is also subject to the following federal provisions: 40 CFR 60, Subpart A, General Provisions for sources subject to an NSPS, adopted by reference in Rule 62-204.800(7)(d), F.A.C.; 40 CFR 60, Appendix A - Test Methods, Appendix B - Performance Specifications, Appendix C - Determination of Emission Rate Change, Appendix D - Required Emissions Inventory Information, Appendix F - Quality Assurance Procedures, adopted by reference in Rule 62-204.800(7)(e).

§ 60.330 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to all stationary gas turbines with a heat input at peak load equal to or greater than 10 million BTU per hour, based on the lower heating value of the fuel fired.

§ 60.331 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

- (a) Stationary gas turbine means any simple cycle gas turbine, regenerative cycle gas turbine or any gas turbine portion of a combined cycle steam/electric generating system that is not self propelled. It may, however, be mounted on a vehicle for portability.
- (b) Simple cycle gas turbine means any stationary gas turbine which does not recover heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine, or which does not recover heat from the gas turbine exhaust gases to heat water or generate steam.
- (d) Combined cycle gas turbine means any stationary gas turbine which recovers heat from the gas turbine exhaust gases to heat water or generate steam.
- (f) *Ice fog* means an atmospheric suspension of highly reflective ice crystals.
- (g) ISO standard day conditions means 288 degrees Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.
- (h) Efficiency means the gas turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output based on the lower heating value of the fuel.
- (i) Peak load means 100 percent of the manufacturer's design capacity of the gas turbine at ISO standard day conditions.
- (j) Base load means the load level at which a gas turbine is normally operated.
- (p) Gas turbine model means a group of gas turbines having the same nominal air flow, combustor inlet pressure, combustor inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.

Appendix GG. NSPS Provisions

(q) Electric utility stationary gas turbine means any stationary gas turbine constructed for the purpose of supplying more than one-third of its potential electric output capacity to any utility power distribution system for sale.

§ 60.332 Standard for nitrogen oxides.

- (a) On and after the date of the performance test required by § 60.8 is completed, every owner or operator subject to the provisions of this subpart as specified in paragraphs (b) of this section shall comply with one of the following, except as provided in paragraphs (e) of this section.
 - (1) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of:

STD =
$$(0.0075) \frac{(14.4)}{Y} + F$$

Where:

STD = allowable NOx emissions (percent by volume at 15 percent oxygen and on a dry basis).

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F = NOx emission allowance for fuel-bound nitrogen as defined in the following table:

(3) F shall be defined according to the nitrogen content of the fuel as follows:

Fuel-Bound Nitrogen	"F"
(Percent By Weight)	(NOx Percent By Volume)
N < 0.015	0
0.015 < N < 0.1	0.04(N)
0.1 < N < 0.25	0.004 + 0.0067(N - 0.1)
N > 0.25	0.005

Where, N = the nitrogen content of the fuel (percent by weight).

- (b) Electric utility stationary gas turbines with a heat input at peak load greater than 100 million Btu per hour based on the lower heating value of the fuel fired shall comply with the provisions of paragraph (a)(1) of this section.
- (f) Stationary gas turbines using water or steam injection for control of NOx emissions are exempt from paragraph (a) when ice fog is deemed a traffic hazard by the owner or operator of the gas turbine.

§ 60.333 Standard for sulfur dioxide.

On and after the date on which the performance test required to be conducted by § 60.8 is completed, every owner or operator subject to the provision of this subpart shall comply with one or the other of the following conditions:

(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8 percent by weight.

§ 60.334 Monitoring of operations.

- (a) The owner or operator of any stationary gas turbine subject to the provisions of this subpart and using water injection to control NOx emissions shall install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within +/- 5.0 percent and shall be approved by the Administrator.
- (b) The owner or operator of any stationary gas turbine subject to the provisions of this subpart shall monitor sulfur content and nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows:

Appendix GG. NSPS Provisions

- (1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.
- (2) If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with paragraph (b) of this section.
- (c) For the purpose of reports required under § 60.7(c), periods of excess emissions that shall be reported are defined as follows:
 - (1) Nitrogen oxides. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with § 60.332 by the performance test required in § 60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in § 60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under § 60.335(a).
 - (2) Sulfur dioxide. Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent.
 - (3) Ice fog. Each period during which an exemption provided in § 60.332(g) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

§ 60.335 Test methods and procedures.

- (a) To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.
- (b) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided for in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (f) of this section.
- (c) The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in § 60.332 and 60.333(a) as follows:
 - (1) The nitrogen oxides emission rate (NOx) shall be computed for each run using the following equation:

$$NOx = (NOx_0) (Pr/Po)^{0.5} (e^{-19 (Ho - 0.00633)}) (288^{\circ} K/Ta)^{1.53}$$

Where

NOx = emission rate of NOx at 15 percent oxygen and ISO standard ambient conditions, volume percent.

 $NOx_0 =$ observed NOx concentration, ppm by volume.

Pr = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.

Po = observed combustor inlet absolute pressure at test, mm Hg.

HO = observed humidity of ambient air, g H2O/g air.

SECTION IV.

Appendix GG. NSPS Provisions

E = transcendental constant, 2.718.

Ta = ambient temperature, °K.

- (2) The monitoring device of § 60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with § 60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.
- (3) Method 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The NOx emissions shall be determined at each of the load conditions specified in paragraph (c)(2) of this section.
- (d) The owner or operator shall determine compliance with the sulfur content standard in § 60.333(b) as follows: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels (incorporated by reference--see Sec. 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.
- (e) To meet the requirements of § 60.334(b), the owner or operator shall use the methods specified in paragraphs (a) and (d) of this section to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

SECTION IV.

Appendix GG. NSPS Provisions

Figure 1. Summary Report for Excess NSPS Emissions and Monitoring System Performance

Pollutant (Circle One): SO ₂ NOx TRS H ₂ S CO	Opacity
Reporting period dates: From	to
Company:	
Emission Limitation:	
Address:	•
Monitor Manufacturer and Model No.:	
Date of Latest CMS Certification or Audit:	
Process Unit(s) Description:	
Total source operating time in reporting period ¹ :	·
Emission Data Summary 1	CMS Performance Summary 1
Duration of excess emissions in reporting period due to: a. Startup/shutdown	CMS downtime in reporting period due to: a. Monitor equipment malfunctions
b. Control equipment problems	b. Non-Monitor equipment malfunctions
c. Process problems	c. Quality assurance calibration
d. Other known causes	d. Other known causes
e. Unknown causes	e. Unknown causes
2. Total duration of excess emissions	2. Total CMS Downtime
3. [Total duration of excess emissions] x (100) / [Total source operating time]	3. [Total CMS Downtime] x (100) / [Total source operating time] % ²
For opacity, record all times in minutes. For gases, record al	
For the reporting period: If the total duration of excess emission the total CMS downtime is 5 percent or greater of the total excess emission report described in 40 CFR 60.7(c) shall	ssions is 1 percent or greater of the total operating time otal operating time, both the summary report form and I be submitted.
On a separate page, describe any changes since last quarter in	Civis, process of controls.
I certify that the information contained in this report is true, ac	ccurate, and complete.
Name:	
Signature:	<u> </u>
Title:	
Date:	
Date:	
Date:	

{Note: This format is referenced in § 60.7, Subpart A, General Provisions. It should only be used to summarize compliance and excess emissions with regard to the federal NSPS standards.}

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
 Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	A. Received by (Please Print Clearly) B. Date of Delivery C. Signature Agent Addressee
1. Article Addressed to: Mr. Brian Chatlosh Manager Lake Worth Generation, LLC 245 Winter Street, Suite 300	D. Is delivery address different to the property of the last section. Yes If YES, enter delivery address below: OCT 3 1 2003
Waltham, MA 02451	3. Service Type Certified Mail Registered Insured Mail C.O.D. 4. Restricted Delivery? (Extra Fee) Yes
PS	

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0000	Restricted Delivery Fee (Endorsement Required)		
	Total Postage & Fees	\$	
2870	Sent To Brian Cha	tlosh	
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7	City, State, ZIP+4 Waltham,	MA 02451	
	PS Form 3800, May 2	000	See Reverse for Instructions

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY					
 Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	A. Received by (Please Print Clearly) B. Date of Delivery Agent Addressee					
1. Article Addressed to: Mr. Brian Chatlosh Manager Lake Worth Generation, LLC	D. Is delivery address different from item 1? Yes If YES, enter delivery address below: No					
245 Winter Street, Suite 300 L Waltham, MA 02451	3. Service Type Certified Mail					
^{2.} 7001 0320 0001 3692 555	1					
PS Form 3811, July 1999 Domestic Retu	urn Receipt 102595-99-M-1789					



SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
 Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	A. Received by (Please Print Clearly) B. Date of Delivery C. Signature Agent Addressee
1. Article Addressed to: Mr. Brian Chatlosh Manager Lake Worth Generation, L.L	D. Is delivery address different from item 1?
245 Winter Street, Suite 30 Waltham, MA 02451	Service Type Certified Mail
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PS Form 3811, July 1999 Domestic Ret	urn Receipt 102595-00-M-0952

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THE PALM BEACH POST

Published Daily and Sunday West Palm Beach, Palm Beach County, Florida

PROOF OF PUBLICATION

STATE OF FLORIDA COUNTY OF PALM BEACH

Before the undersigned authority personally appeared Tracey Diglio, who on oath says that she is Telephone Sales Supervisor of The Palm Beach Post, a daily and Sunday newspaper published at West Palm Beach in Palm Beach County, Florida; that the attached copy of advertising, being Notice in the matter DEP Permit # 0990568-003-AC was published in said newspaper in the issues of November 24, 2003. Affiant further says that the said The Post is a newspaper published at West Palm Beach, in said Palm Beach County, Florida, and that the said newspaper has heretofore been continuously published in said Palm Beach County, Florida, daily and Sunday and has been entered as second class mail matter at the post office in West Palm Beach, in said Palm Beach County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that she/her has neither paid nor promised any person, firm or corporation any discount rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and subscribed before this 11th day of December, A.D. 2003

Personally known XX or Produced Identification Type of Identification Produced

KAREN M MCLINTON MY COMMISSION # CC 979669

EMPIRES Nov 15, 2004 -800-3-NOTARY FL No F 30000 & Behaling, Inc

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NO. 7755551
PUBLIC NOTICE OF INTENT
TO ISSUE AIR PERMIT
STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL
PROTECTION
Date Air Bronk No.

PROTECTION
Draft Air Permit No.
0990568-003-AC
Lake Worth Generation, LLC
Change to Simple Cycle Only
Operation
The Department of Environmental Protection (Department) gives notice of its
intent to issue air construction Permit No. 0990566003-AC to Lake Worth Generation, LLC, which authorizes simple cycle only
operation for the gas turbine project under construction. The gas turbine is being installed at the new
Lake Worth Generation, Plant located in Palm Beach
Country at 117 College
Street in Lake Worth, Florida. The applicant's authorized representative is
Mr. Brian Chatlosh, Manager of Lake Worth Generation, LLC. The applicant's mailing address is 245 Winter Street, Suite 300, Waithsam, MA 02451.
In 1999, the Department issued Permit No. PSD-FL-286, which authorized Lake Worth Generation, LLC to construct a new combined cycle gas turbine consisting of a 186 MW gas turbine with electrical generator set and a heat recovery steam generator with duct firing. The original project was subject to preconstruction review for the Prevention of Significant Deterioration (PSD) pursuant to Rule 62-212.400, F.A.C. Initially, the project was designed to provide steam for sale to the adjacent Tom G. Smith Power Plant operated by the City of Lake Worth.

riowever, the next recovery steam generator will not be installed and the applicant now requests a revised permit allowing simple cycle only operation limited to a maximum of 4500 hours per

medium of social supple cycle only operation will result in reductions of potential annual emissions compared to the original project. In addition, the new plant will no longer belong to the List annual emissions compared to the original project. In addition, the new plant will no longer belong to the List of 28 PSD Facility Categories because steam generated electrical power will not be produced. Therefore, the PSD major facility threshold for the project is 250 tons per year. In accordance with Rule 62-212. 400, F.A.C., the revised simple cycle project is not subject to PSD preconstruction review because permit conditions limit all potential emissions below this PSD major facility threshold. No additional air quality modeling was necessary because impacts from simple cycle operation were satisfactorily reviewed for the initial air. construction permit project. The previous permit standards were retained, which represented determinations of the Best Available Control Technology (BACT)

represented determinations of the Best Available
Control Technology (BACT)
for emissions of CO, NOx,
PM, SAM, and SO2 from
large frame gas turbines.
The draft permit removes all
references to combined
cycle operation. Any future
request to add combined
cycle operation. Any future
request to add combined
cycle operation will require a
permit modification and PSD
applicability review.
The Department will issue the
Final Permit with the
attached conditions unless
a response received in

a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit issuance action for a period-of, fourteen (14) days from the date of publication of this Public Notice of Intent to issue Air-Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-

2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed agency action, the Department shall revise the proposed agency action, the Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S. before the dead-line for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding. A person whose substantial interests are affected by the proposed of permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth

, 2400. Any written com-

administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties issted below must be filed within fourteen (14) days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this position.

administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filling of a motion in compliance with Rule 28-106. 205, F.A.C.

A petition that disputes the material facts on which the A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate: (e) A issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require petitioner contends require

petitioner contends require reversal or modification of

the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

ance with the requirements set forth above.

A complete project file is a vailable for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at.

Department of Environmental Protection Bureau of Air Regulation (111 S. Magnolia Drive, Suite 4)

2600 Blair Stone Road, MS #5505

Tallahassee, Florida, Tallahassee Florida. 32399-2400 32399-2400 Telephone: 850/488-0114 Department of
Environmental Protection
Southeast District
Air Resources Section
400 North Congress Avenue
West Palm Beach, Florida West P 33401
Telephone: 561/681-6600
Palm Beach County
Health Department
Air Pollution Control Section
(901 Evernia Street)
P.O. Box 29
West Palm Beach, FL
33402-0029
Telephone: 561/355-3136
PUB: The Palm Beach Post
November 24, 2003

BEST AVAILABLE COPY

the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as equired by Pulie 28-106, 301 FAC.

Because the administrative hearing process is designed to formulate final agency action; the filling of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department, on the application have the right to petition to become a party to the proceeding in accordance with the requirements set forth above.

A complete project (file is a vailable for public set forth above.
A complete project file is a vail a ble for public inspection during normal business hours. 8:00 a m. to 5:00 p.m. Monday through Friday, except legal holidays, at Department of Environmental Protection Bureau of Air Regulation (11 S. Magnolia Drive, Suite 4):
2600 Blair Stone Road, MS #5505
Tallatrassee, Flonda, 32399-2400
Telephone: 850/488-0114 Telephone: 850/488-0114
Department of A
Environmental Protection
Southeast District

Air Resources Section 400 North Congress Avenue West Palm Beach, Florida 33401

West Fall Deach 33401 - 551/681-6600 Telephone: 551/681-6600 Palm Beach County Health Department Air Pollution Control Section (901 Evernia Street) P.O. Box 29 West Palm Beach, FL 33402-00291 Telephone: 561/355-3136 PUB: The Palm Beach Post November: 24: 2003

ments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

anouer rubile Notice. The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding. A person whose substantial interests are affected by the proposed person whose substantial interests are affected by the proposed person whose substantial interests are affected by the proposed person whose substantial interests are affected by the proposed person whose substantial interests are affected by the proposed person whose substantial interests are affected by the proposed person whose substantial interests are affected by the proposed person who as a petition of a different proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3 9 0 0 Commonwealth Boulevard, Mail Station #035, Tallahassee, Florida, 32399 3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S. must be filed within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S. however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petition within fourteen (14) days of receipt of that notice, regardless of the date of publication of the petition within the appropriate time period shall constitute a waiver of that person's right to reque

based must contain the following information: (a) The name and address of following information: (a)
The name and address of each agency affected and each agency's file or identification number, if known; (b) The name address, and telephone number of the petitioner's representative, if any, which shall be the address, shown in the petitioner's representative, if any, which shall be the address, shown in the petitioner's representative, if any, which shall be the address, for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests, will be affected by the agency determination, (c). A statement of all disputed issues of material fact. If there are none, the petitioner or proposed action; (d) A concise statement of the ultimate facts alleged, including the specific facts, the petitioner contends warrant.reversal.or, modification of the agency. Statement of the specific rules or statutes the spetitioner contends require rules or statutes the petitioner contends require reversal or modification of

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C. ..

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PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Draft Air Permit No. 0990568-003-AC

Lake Worth Generation, LLC Change to Simple Cycle Only Operation

The Department of Environmental Protection (Department) gives notice of its intent to issue air construction Permit No. 0990568-003-AC to Lake Worth Generation, LLC, which authorizes simple cycle only operation for the gas turbine project under construction. The gas turbine is being installed at the new Lake Worth Generation Plant located in Palm Beach County at 117 College Street in Lake Worth, Florida. The applicant's authorized representative is Mr. Brian Chatlosh, Manager of Lake Worth Generation, LLC The applicant's mailing address is 245 Winter Street, Suite 300, Waltham, MA 02451.

In 1999, the Department issued Permit No. PSD-FL-266, which authorized Lake Worth Generation, LLC to construct a new combined cycle gas turbine consisting of a 186 MW gas turbine with electrical generator set and a heat recovery steam generator with duct firing. The original project was subject to preconstruction review for the Prevention of Significant Deterioration (PSD) pursuant to Rule 62-212.400, F.A.C. Initially, the project was designed to provide steam for sale to the adjacent Tom G. Smith Power Plant operated by the City of Lake Worth. However, the heat recovery steam generator will not be installed and the applicant now requests a revised permit allowing simple cycle only operation limited to a maximum of 4500 hours per year.

The change to simple cycle only operation will result in reductions of potential annual emissions compared to the original project. In addition, the new plant will no longer belong to the List of 28 PSD Facility Categories because steam generated electrical power will not be produced. Therefore, the PSD major facility threshold for the project is 250 tons per year. In accordance with Rule 62-212.400, F.A.C., the revised simple cycle project is not subject to PSD preconstruction review because permit conditions limit all potential emissions below this PSD major facility threshold. No additional air quality modeling was necessary because impacts from simple cycle operation were satisfactorily reviewed for the initial air construction permit project. The previous permit standards were retained, which represented determinations of the Best Available Control Technology (BACT) for emissions of CO, NOx, PM, SAM, and SO2 from large frame gas turbines. The draft permit removes all references to combined cycle operation. Any future request to add combined cycle operation will require a permit modification and PSD applicability review.

The Department will issue the Final Permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit issuance action for a period of fourteen (14) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections

120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Department's action is based must contain the following information:
(a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection Bureau of Air Regulation (111 S. Magnolia Drive, Suite 4) 2600 Blair Stone Road, MS #5505 Tallahassee, Florida, 32399-2400 Telephone: 850/488-0114 Department of Environmental Protection Southeast District Air Resources Section 400 North Congress Avenue West Palm Beach, Florida 33401 Telephone: 561/681-6600 Palm Beach County Health Department Air Pollution Control Section (901 Evernia Street) P.O. Box 29 West Palm Beach, FL 33402-0029 Telephone: 561/355-3136

The complete project file includes the application, Technical Evaluation and Preliminary Determination, Draft Permit, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Department's reviewing engineer for this project for additional information at the address and phone numbers listed above.