forward to Trina - F/I

Department of Environmental Protection

Jeb Bush
Governor

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

Colleen M. Castille
Secretary

June 7, 2005

- CERTIFIED MAIL - RETURN RECEIPT REQUESTED -

Jennette Curtis
Environmental Director
City of Tallahassee
300 South Adams, St.
Tallahassee, FL 32301-1731

RE: Sam O. Purdom Generating Station
Modification to Conditions of Certification
DEP Case Number PA 97-36B
OGC Case Number 05-0844

INTENT TO MODIFY CONDITIONS OF CERTIFICATION

Dear Ms. Curtis:

On December 23, 2002, the Department of Environmental Protection (DEP) issued a final Title –V permit revision and a NPDES permit renewal was issued on June 3, 2004 for City of Tallahassee – Sam O. Purdom Generating Station (Purdom). Review of the Conditions of Certification for Purdom indicated that a modification would be necessary.

The Department therefore gives notice to Purdom of its intent to modify the conditions of certification for **Purdom** (PA 97-36) to incorporate a final Title V Permit revision and a NPDES permit renewal into the Conditions of Certification. Pursuant to Section 403.516, Florida Statutes ("F.S."), and Rule 62-17.211, Florida Administrative Code ("F.A.C."), all parties to the certification proceeding have 45 days from the issuance of this corrected notice by mail to such party's last address of record in which file a written objection to the modification. A public notice will be published on the Department's internet home page at http://www.dep.state.fl.us/ under the link or button titled "Official Notices" regarding this Intent to Modify the Conditions of Certification. Any person who is not already a party to the certification proceeding and whose substantial interests will be affected by the requested modification has 30 days from the date of publication of the public notice on the FAW to object in writing. Failure to act within the time frame constitutes a waiver of the right to become a party.

Written objections must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, MS 35, Tallahassee, Florida 32399-3000. If the Department does not receive any written objections, then an Order Modifying the Conditions of Certification shall be issued by the Department. If written objections are timely filed which address only a portion of the modification, then pursuant to Rule 62-17.211(1)(b)5., F.AC. the Department shall issue an Order approving that portion of the modification to which no objections were filed, unless that portion of the modification is substantially related to or necessary to implement the portion to which written objections are filed. If written objections are raised, then pursuant to Section 403.516(1)(c), F.S., the applicant may file a petition for modification with the Department and the Division of Administrative Hearings seeking approval for those portions of the modification to which written objections were timely filed.

Mediation is not available in this proceeding.

Any questions regarding this Intent to Modify Conditions of Certification should be directed to Hamilton S. Oven at (850) 245-8002. Questions regarding legal issues should be referred to the Department's Office of General Counsel at (850) 245-2242. Such contact with any of the above does not constitute an objection to the modification.

Sincerely,

Hamilton S. Oven

Hamilton S. Oven, P.E.
Administrator, Siting Coordination Office

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

Sandra Karakos 6/8/05

Clerk Date

CC by certified mail:

James Antista, Esquire
Fish and Wildlife Conservation Commission
6230 South Meridian Street
Tallahassee, FL 32399-1600

Mary Ann Helton, Esquire
Florida Public Service Commission
Gerald Gunter Building
2450 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Greg Smith
Northwest Water Mgmt. District
160 Governmental Center,
Suite 308
Pensacola, FL 32502

Parwez Alam
County Administrator
Leon County Courthouse
310 S. Monroe St.
Tallahassee, FL 32301

Parrish Barwick
Wakulla County Administrator
3093 Crawfordville Highway
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Craig Varn, Esquire
Department of Community Affairs
2555 Shumard Oak Boulevard
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Haydon Burns Building
605 Suwannee Street
Mail Station 58
Tallahassee, FL 32399-0450

Michael Cooke
Division of Air Resource Management
2600 Blair Stone Road MS 5500
Tallahassee, Florida 32399-2400

Gary Sams, Esq
Hopping, Green and Sams
123 South Calhoun Street
Tallahassee, FL 32301

And by hand delivery to:

Scott A. Goorland, Esquire
Department of Environmental Protection
3900 Commonwealth Blvd.
Mail Station 35
Tallahassee, FL 32399-3000

DRAFT

XX/XX/05

- CERTIFIED MAIL - RETURN RECEIPT REQUESTED -

Jennette Curtis
Environmental Director
City of Tallahassee
300 South Adams, St.
Tallahassee, FL 32301-1731

RE: Sam O. Purdom Generating Station
Modification to Conditions of Certification
DEP Case Number PA 97-36B
OGC Case Number 05-0844

FINAL ORDER MODIFYING CONDITIONS OF CERTIFICATION

Dear Ms. Curtis:

On December 23, 2002, the Department of Environmental Protection (DEP) issued a final Title –V permit revision and a NPDES permit renewal was issued on June 3, 2004 for City of Tallahassee – Sam O. Purdom Generating Station (Purdom). Review of the Conditions of Certification for Purdom indicated that a modification would be necessary.

On or before June 10, 2005 all parties to the certification proceeding were provided with notice by certified mail of the Department's intent to modify the Conditions of Certification for this facility, along with a copy of the proposed Order Modifying Conditions of Certification. Additionally, on June 17, 2005, notice of the Department's intent to modify the Conditions of Certification for this facility was published on the Department's internet home page at http://www.dep.state.fl.us/ under the link or button titled "Official Notices." Those notices specified that pursuant to Section 403.516, Florida Statutes ("F.S."), and Rule 62-17.211, Florida Administrative Code ("F.A.C."), all parties to the certification proceeding have 45 days from the issuance of notice by mail to such party's last address of record in which to file a written objection to the modification; that any person who is not already a party to the certification proceeding and whose substantial interests will be affected by the requested modification has 30 days from the date of publication of the public notice on the Department's internet home page to

object in writing; that failure to act within the time frame constitutes a waiver of the right to become a party; and that the Department will issue an Order Modifying the Conditions of Certification for this facility if no written objections are received by the Department.

No objections to the modification have been received by the Department. The Conditions of Certification for Purdom are hereby modified as follows:

- All reference to 'permittee' is changed to licensee
- Final Title V Permit No. 129001-007-AV is attached and incorporated as Appendix A
- NPDES Permit FL0025526 is attached and incorporated as Appendix B

III. GENERAL CONDITIONS

A. Facilities Operation

3. The City shall comply with the terms and conditions contained in NPDES Permit FL0025526, Permit No. PSD-FL- 239/PA97-35, Title V Permit No. 1290001-007-AV and any revisions, modifications or reissuances thereof.

XIII. AIR

A. ~~Unit 8 General Operation Requirements~~ Administrative

1. ~~Applicable Regulations: Unless otherwise indicated in this permit, the construction and operation of the subject emission unit(s) 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, 62-103, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, 62-297; and the applicable requirements of the Code of Federal Regulations Section 40, Part 60 including Subpart A and GG (1997 version), adopted by reference in the Florida Administrative Code regulation [Rule 62-204.800 F.A.C.]. Issuance of this certification does not relieve the facility owner or operator from compliance with any applicable federal permitting requirements or regulations. [Rule 62-210.300, F.A.C.]~~
All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the Bureau of Air Regulation, MS 5500, Florida Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, telephone (850) 488-1344, and the Siting Coordination Office, MS 48, Florida Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, telephone (850) 245-8001. All documents related to reports, tests, and notifications should be submitted to the Department's Northwest District Office,
160 Government Center, Pensacola, FL 32501-5794, Phone Number - (850) 595-8300

2. ~~The maximum heat input rates, based on the lower heating value (LHV) of each fuel to Purdom Unit 8 at ambient conditions of 95°F temperature, 60% relative humidity,~~

~~and 14.7 psi pressure shall not exceed 1,467.7 mmBtu/hr when firing natural gas, nor 1,659.5 mmBtu/hr when firing No. 2 fuel oil. These maximum heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other ambient conditions shall be provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing. These curves or equations shall be used to establish the maximum allowable heat inputs at other ambient conditions for compliance determinations.~~ The terms, conditions, requirements, limitations, and restrictions set forth in Title V Final Permit - 1290001-007 -AV Section III, Subsection F, which is attached as Appendix A to these Conditions, and any modification or amendment to such Title V permit, are incorporated by reference herein, and are binding and enforceable Conditions of this Certification. The licensee is subject to and shall comply with the terms, conditions, requirements, limitations, restrictions set forth in Appendix A. A violation of the terms conditions, requirements, limitations and restrictions in Appendix A is a violation of these Conditions of Certification.

3. ~~Purdom Unit 8 may operate continuously (i.e., 8760 hours per year).~~ The Department is delegated the authority to modify these Conditions of Certification to conform them to any subsequently issued amendment or modification to Permit No. 1290001-007 -AV, pursuant to Conditions XI.

4. ~~Only natural gas or No. 2 fuel oil with a maximum sulfur content of 0.05% by weight shall be fired in the combined cycle combustion turbine.~~ The provisions set forth in Conditions XIII.B excerpted from Permit Title V - 1290001-007 – AV Section III, Subsection F, and are a portion of the provisions that will be enforced.

~~5. The Permittee Licensee shall install duct module(s) suitable for possible future installation of SCR equipment on the combined cycle generating unit.~~

~~6. Dry low NO_x combustors shall be used on Unit 8 when firing natural gas and water injection shall be used when firing No. 2 fuel oil for control of NO_x emissions.~~

~~7. 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.~~

~~8. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the Northwest District Office of DEP as soon as possible, but at least within (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future 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 the conditions of this permit and the regulations. [Rule 62-4.130, F.A.C.]~~

~~9. Operating Procedures: Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C.]~~

~~10. The dry low NOx burner system shall be tuned upon initial operation to optimize emissions reductions and shall be maintained to minimize NOx emissions and CO emissions. While firing natural gas, operation of the unit when the dry low NOx burner system is in the diffusion firing mode shall be minimized.~~

~~11. Circumvention: The owner or operator shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rules 62-210.650, F.A.C.]~~

B. Unit 8 ~~Emission Limits and Standards~~

1. Description:

This emissions unit is a combined cycle combustion turbine (CT) system designated as Unit 8. It consists of a 160 MW (nominal rating) GE Series 7FA combustion turbine with DLN-2.6 (or later version) dry low NOX (gas) and water injection (diesel) burners and a non-fired heat recovery steam generator (HRSG) with a nominal 90 MW steam turbine. The turbine can be fired either by natural gas or no. 2 fuel oil. The compressor inlet air will be conditioned by an evaporative cooler when needed. The turbine is started using the generator and a static start system. Unit 8 also includes a new cooling tower.

2. Permitted Capacity:

Unit No.	MMBtu/hr Heat Input	Fuel Type
8	1696 (LHV @ 59 degrees Fahrenheit, 60% Relative Humidity, and 14.7 psi)	Natural Gas
	1897 (LHV @ 59 degrees Fahrenheit, 60% Relative Humidity, and 14.7 psi)	No. 2 Fuel Oil

These maximum heat input rates will vary depending upon compressor inlet conditions and the combustion turbine characteristics. Manufacturer's curves or equations for correction to other compressor inlet conditions shall have been provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing and shall be resubmitted at any time that they are changed as the result of new testing. These curves or

equations shall be used to establish the maximum allowable heat inputs at other compressor inlet conditions for compliance determinations.
[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; 40 CFR 60.332(b); and, PSD-FL-239/PA97-36.]

~~The following shall apply upon completion of the initial compliance tests:~~

~~1.~~3. ~~Best Available Control Technology.~~ Emission Limits and Standards

The following is a summary of the BACT determinations by DEP:

Table 1. Emission Limits

Pollutant	Fuel	BACT Standard
NOx	Gas	12 ppmvd @ 15 % O_2 (a) (d)
	Oil	42 ppmvd @ 15 % O_2 (a) (b) (d)
SO_2	Gas	Good combustion
	Oil	Good combustion of low (0.05%) sulfur fuel oil
PM/PM_{10}	Gas	Good combustion
	Oil	Good combustion of low (0.05%) sulfur fuel oil
Visible Emissions	Gas	10 percent opacity
	Oil	10 percent opacity
CO	Gas	25 ppmvd (c)
	Oil	90 ppmvd (c)

(a) 30-day rolling average excluding startup, shutdown, malfunction, and fuel switching.
(b) Plus an allowance for fuel bound nitrogen using the formula provided in Condition XIII.B.4.
(c) By testing concurrent to RATA testing or by 3 one hour runs of Method 10.
(d) Not corrected to ISO conditions.

~~2.~~ a. Visible Emissions. Visible emissions shall not exceed 10 percent opacity when firing either natural gas or No. 2 fuel oil. Drift eliminators shall be installed on the cooling tower to reduce PM/PM_{10} emissions.

~~3.~~ b. Oxides of Nitrogen. Oxides of nitrogen emissions when firing natural gas shall not exceed 12 ppmvd at 15% O_2, not corrected to ISO conditions, on a 30-day rolling average basis (except during periods of startup, shutdown, malfunction or fuel switching), as measured by CEMS. When monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate the 30 day rolling average.

~~4.~~ c. Oxides of Nitrogen. Oxides of nitrogen emissions when firing No. 2 fuel oil shall not exceed 42 ppmvd at 15% O_2 on a 30-day rolling average basis (except during periods of startup, shutdown, malfunction or fuel switching), as measured by CEMS, when fuel bound nitrogen (FBN) values are less than or equal to 0.015 percent. For fuel bound

nitrogen values up to 0.03 percent, the allowance (and the adjusted standard) shall be determined, recorded, and maintained upon each new fuel delivery by the following formula:

STD = 0.0042 + F where:
STD = allowable NO_X emissions (percent by volume at 15 percent O_2 and on a dry basis).
F = NO_X emission allowance for fuel-bound nitrogen defined by the following table:

Fuel-Bound Nitrogen(% by Weight)	**F (NO_X % by Volume)**
$0 < N \leq 0.015$	0
$0.015 < N \leq 0.03$	0.04 (N-0.015)

where: N = the nitrogen content of the fuel (% by weight)

Note: 0.0042 percent = 42 ppm

~~5.~~ d. Oxides of Nitrogen. Beginning with the calendar year following successful completion of the initial performance test for Unit 8, annual emissions of NO_X shall not exceed 467 tons per year from the Purdom facility (Unit 8, Unit 7, GT1, GT2, and the auxiliary boiler) on a calendar year basis, as measured by applicable compliance methods. [Requested by the applicant]

~~6.~~ e. Sulfur Dioxide. Beginning with the calendar year following successful completion of the initial performance test for Unit 8, annual emissions of SO_2 shall not exceed 80 tons per year from the Purdom facility (Unit 8, Unit 7, GT1, GT2, and the auxiliary boiler) on a calendar year basis, as measured by applicable compliance methods. [Requested by the applicant]

~~7.~~ f. Carbon Monoxide. Carbon monoxide emissions when firing natural gas shall not exceed 25 ppmvd as measured by Method 10.

~~8.~~ g. Carbon Monoxide. Carbon monoxide emissions when firing No. 2 fuel oil shall not exceed 90 ppmvd as measured by Method 10.

~~C~~.4. Unit 8 Excess Emissions

~~1.~~ a. Excess emissions resulting from startup, shutdown, malfunction or fuel switching shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized but in no case exceed four hours in any 24-hour period for cold startup or two hours in any 24-hour period for other reasons unless specifically authorized by DEP for longer duration.

~~2.~~ b. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be

prevented during startup, shutdown or malfunction shall be prohibited pursuant to Rule 62-210.700, F.A.C.

~~3.~~ c. Excess Emissions Report: If excess emissions occur due to malfunction, the owner or operator shall notify DEP's Northwest District office within (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. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. [Rules 62-4.130 and 62-210.700(6), F.A.C.]

5. Compliance, Reporting and Record Keeping:

~~D. Unit 8 Compliance Determination~~

~~1. Compliance with the allowable emission limiting standards shall be determined within 60 days after achieving the maximum production rate, for each fuel, at which this unit will be operated, but not later than 180 days of initial operation of the unit for that fuel, and annually thereafter as indicated in this permit, by using the following reference methods as described in 40 CFR 60, Appendix A (1997 version), and adopted by reference in Chapter 62-297, F.A.C.~~

~~Initial (I) compliance tests shall be performed on Unit 8 while firing each fuel (gas, oil).~~

a. Annual (A) compliance tests shall be performed during every federal fiscal year (October 1 - September 30) pursuant to Rule 62-297.340, F.A.C.~~, on Unit 8 as indicated. The following reference methods shall be used:~~

~~Method 9 Visual Determination of the Opacity of Emissions from Stationary Sources (I, A); annual on oil if greater than 400 hours of oil firing; however, testing on gas is required only once every five years.~~

~~Method 10 Determination of Carbon Monoxide Emissions from Stationary Sources (I, A). Testing may be conducted at less than capacity. Annual compliance testing may be conducted concurrent with the annual RATA testing required pursuant to 40 CFR 75 (gas only).~~

~~Method 20 Determination of Oxides of Nitrogen and diluent emissions from Stationary Gas Turbines (I only, for compliance with 40 CFR 60 Subpart GG) Determination of Oxides of Nitrogen emissions will be by a Continuous Emissions Monitoring System (CEMs). A CEMS operated and maintained in accordance with 40 CFR 75 may be used. Compliance with the NOx emissions standards in Table 1 shall be demonstrated with this CEMS system based on a 30 day rolling average. Based on CEMS data at the end of each operating day, a new 30 day average emission rate is calculated from the arithmetic average of all valid hourly~~

~~emission rates during the previous 30 operating days. Valid hourly emission rates shall not include periods of startup (including fuel switching), shutdown, or malfunction as defined in Rule 62-210.200 where emissions exceed the NOx standard in Table 1. These excess emission periods shall be reported as required in Section C. A valid hourly emission rate shall be calculated for each hour in which two NOx concentrations are obtained at least 15 minutes apart.~~

~~Note: No other methods may be used for compliance testing unless prior DEP approval is received in writing. The DEP may request a special compliance test pursuant to Rule 62-297.340(2), F.A.C., when, after investigation (such as complaints, increased visible emissions, or questionable maintenance of control equipment), there is reason to believe that any applicable emission standard is being violated.~~

~~2. Notwithstanding the requirements of Rule 62-297.340, F.A.C., the exclusive use of fuel oil with a maximum sulfur content limit of 0.05% or less, by weight, is the method for determining compliance for SO_2 and PM_{10}. For the purposes of demonstrating compliance with the 40 CFR 60.333 SO_2 standard and the 0.05% S limit, fuel oil analysis using ASTM D2880-71 or D4294 (or equivalent) for the sulfur content of liquid fuels and D1072-80, D3031-81, D4084-82 or D3246-81 (or equivalent) for sulfur content of gaseous fuel shall be utilized in accordance with the EPA approved custom fuel monitoring schedule in Condition XIII.F.3. However, the permittee is responsible for ensuring that the procedures above are used for determination of fuel sulfur content. 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) (1997 version). For the purposes of demonstrating compliance with the emissions caps (Conditions XIII.B.5. and B.6.), natural gas and fuel oil supplier data for sulfur content may be submitted or the natural gas sulfur content referenced in 40 CFR 75 Appendix D may be utilized.~~

~~3.~~ b. An initial test for CO, concurrent with the initial NOx test, is required. The initial NOx and CO test results shall be the average of three valid one-hour runs. The DEP's Northwest District office shall be notified, in writing, at least 30 days prior to the initial compliance tests and at least 15 days before annual compliance test(s). Testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 95-100 percent of the maximum heat input rate allowed by the permit, corrected for the average ambient air temperature during the test (with 100 percent represented by a curve depicting heat input vs. ambient temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. In this case, subsequent operation is limited by adjusting the entire heat input vs. ambient temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for ambient temperature) and 105 percent 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. Compliance test results shall be submitted to the DEP's Northwest District office no later than 45 days after completion of the last test run.

~~E. Unit 8 Notification, Reporting and Recordkeeping~~

~~1. All measurements, records, and other data required to be maintained by the City of Tallahassee shall be 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 DEP representatives upon request.~~

~~2.~~ c. Emission Compliance Stack Test Reports: A test report indicating the results of the required compliance tests shall be filed with the DEP NW District Office as soon as practical, but no later than 45 days after the last sampling run is completed. [Rule 62-297.310(8), F.A.C.]. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8), F.A.C.

~~F. Unit 8 Monitoring Requirements~~

~~1. The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxides emissions from Unit 8. Thirty day rolling average periods when NOx emissions (ppmvd @ 15% oxygen) are above the BACT standards (12/42 ppmvd for gas/oil) shall be reported to the DEP Northwest District Office pursuant to Rule 62-4.160(8), F.A.C. The continuous emission monitoring systems must comply with the certification and quality assurance, and other applicable requirements from 40 CFR 75. Periods of startup, shutdown, malfunction, and fuel switching shall be monitored, recorded, and reported as excess emissions when emission levels exceed the standards in Table 1 following the format of 40 CFR 60.7 (1997 version). The NOx CEMS shall be used in lieu of the water/fuel monitoring system and fuel bound nitrogen (FBN) monitoring, as required for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1997 version). The calibration of the water/fuel monitoring device required in 40 CFR 60.335 (c)(2) (1997 version) will be replaced by the 40 CFR 75 certification tests of the NOx CEMS. Upon request from DEP, the CEMS emission rates for NOx on Unit 8 shall be corrected to ISO conditions to demonstrate compliance with the NOx standard established in 40 CFR 60.332.}~~

~~2. The following monitoring schedule for No. 2 fuel oil shall be followed: For all bulk shipments of No. 2 fuel oil received at the Purdom Station, an analysis which reports the sulfur content and fuel bound nitrogen content of the fuel shall be provided by the fuel vendor or other sources which follow the appropriate fuel test methods listed in Specific Condition XIII.D.2. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40 CFR 60.335(d).~~

~~3. The following custom monitoring schedule for natural gas is approved in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2).~~

~~a. Monitoring of natural gas nitrogen content shall not be required.~~

~~b. Analysis of the sulfur content of natural gas shall be conducted using one of the EPA-approved ASTM reference methods in Condition XIII.D.2. for the measurement of sulfur in gaseous fuels, or an approved alternative method. Once Unit 8 becomes operational, monitoring of the sulfur content of the natural gas shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then fuel sulfur monitoring shall be conducted once per quarter for six quarters and after that, semiannually.~~

~~c. Should any sulfur analysis indicate noncompliance with 40 CFR 60.333, the City shall notify DEP of such excess emissions and the customized fuel monitoring schedule shall be reexamined. The sulfur content of the natural gas will be monitored weekly during the interim period while the monitoring schedule is reexamined.~~

~~d. The City shall notify DEP of any change in natural gas supply for reexamination of this monitoring schedule. A substantial change in natural gas quality (i.e., sulfur content variation of greater than 1 grain per 100 cubic foot of natural gas) shall be considered as a change in the natural gas supply. Sulfur content of the natural gas will be monitored weekly by the natural gas supplier during the interim period when this monitoring schedule is being reexamined.~~

~~e. Records of sampling analysis and natural gas supply pertinent to this monitoring schedule shall be retained by the City for a period of five years, and shall be made available for inspection by the appropriate regulatory personnel.~~

~~f. The City may obtain the sulfur content of the natural gas from the fuel supplier provided the test methods listed in Specific Condition XII.D.2. are used.~~

~~4. Determination of Process Variables:~~

~~a. The permittee shall operate and maintain equipment and/or instruments necessary to determine process variables, such as process weight input or heat input, when such data is needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.~~

~~b. Equipment and/or instruments used to directly or indirectly determine such process variables, including devices such as belt scales, weigh hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value. [Rule 62-297.310(5), F.A.C.]~~

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~~G. Unit 8 Rule Requirements~~

~~1. The emission unit shall be operated in compliance with all applicable requirements of 40 CFR 60, Subpart A, Appendix A and Appendix B (1997 version), Subpart GG - Standards of Performance for Stationary Gas Turbines (1997 version), and Rule 62-204.800 (7) (b) 38, F.A.C., except as otherwise specified herein. The Subpart GG requirement to correct test data to ISO conditions applies. However, such correction is not used for compliance determinations with the BACT standard(s). All notifications and reports required by this specific condition shall be submitted to the DEP's Northwest District office.~~

~~2. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements and regulations (Rule 62-210.300(1), F.A.C.).~~

~~3. Except as otherwise specified herein, the emission unit shall be operated in compliance with all applicable provisions of Rule 62-210.650, F.A.C.: Circumvention; Rule 62-210.700, F.A.C.: Excess Emissions; Rule 62-204.800 (7) (b) 38, F.A.C.: Standards of Performance for New Stationary Sources (NSPS); Chapter 62-297, F.A.C.: Stationary Sources - Emissions Monitoring; and, Rule 62-4.130, F.A.C.: Plant Operation - Problems.~~

~~4. If construction does not commence within 18 months of issuance of this permit, the permittee shall obtain from the DEP's Bureau of Air Regulation a review and, if necessary a modification of the BACT determination and allowable emissions [40 CFR 52.21(r)(2) (1997 version]).~~

~~5.~~ d. Quarterly excess emission reports, in accordance with 40 CFR 60.7 (7) (c) (1997 version), shall be submitted to the DEP's Northwest District office.

~~6.~~ e. Pursuant to Rule 62-210.370(2), F.A.C., Annual Operation Reports, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. Annual operating reports shall be sent to the DEP's Northwest District office by March 1st of each year.

~~7. Stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C.~~

~~8. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (Rule 62-4.090, F.A.C.).~~

f. All measurements, records, and other data required to be maintained by the City of Tallahassee shall be 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 DEP representatives upon request.

~~H. Unit 8 Modifications~~

~~The permittee shall give written notification to the Department when there is any modification to this facility. This notice shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such notice shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and the anticipated completion date of the change.~~

~~I. Compliance with Facility-Wide Caps~~

~~1.~~ g. Compliance with the annual facility-wide NOx cap shall be determined by adding the annual NO_X emissions in tons per year determined by the CEMS required by 40 CFR 75 for Unit 8 along with existing Unit 7 to annual NOx emissions calculated for existing units GT1, GT2 and the auxiliary boiler determined by the following formulas:

GT 1 & GT 2 NOx (natural gas) = (Fuel Usage) X (Heating Value of Natural Gas) X (0.44 lb/mmBtu) X units conversion factors
Fuel Usage shall be measured by fuel meter, recorded daily when unit is operated
Heating Value of Natural Gas will be determined from fuel supplier data
0.44 lb/mmBtu = AP-42 emission factor

GT 1 & GT 2 NOx (fuel oil)= (Fuel Usage) X (Heating Value of Fuel Oil) X (0.698 lb/mmBtu) X units conversion factors
Fuel Usage shall be measured by fuel meter, recorded daily when unit is operated
Heating Value of Fuel Oil will be determined from fuel supplier data
0.698 lb/mmBtu = AP-42 emission factor

Aux. Boiler NOx (natural gas) = (Fuel Usage) X (140 lb/mm CF) X units conversion factors
Fuel Usage shall be measured by flow meter, recorded daily when unit is operated140 lb/mmCF = AP-42 emission factor

~~2.~~ h. Compliance with the annual facility-wide SO_2 cap shall be determined by adding the annual SO_2 emissions in tons per year determined by the methods required by 40 CFR 75 for Unit 8 along with existing Unit 7 to annual SO_2 emissions calculated for existing units GT1, GT2 and the auxiliary boiler determined by the following formulas:

GT 1 & GT 2 SO_2 Emissions (natural gas)= (Fuel Usage) X (Heating Value of Natural Gas) X (0.0006 lb/mmBtu) X units conversion factors
Fuel Usage shall be measured by fuel meter, recorded daily when unit is operated

Heating Value of Natural Gas from fuel supplier data
Sulfur Content default of NADB = 0.0006 lb-SO2/mmBtu

GT 1 & GT 2 SO_2 Emissions (fuel oil) = (Fuel Usage) X (Fraction Sulfur in the fuel oil) X (Molecular weight SO2 / Molecular weight of S) X (Conversion factor) X units conversion factors

Fuel Usage shall be measured by fuel meter, recorded daily when unit is operated
% Sulfur will be determined from fuel oil analysis each time fuel is delivered (i.e., 0.05% S = 0.0005 in the above formula)
Molecular weight of SO_2 = 64
Molecular weight of S = 32
Conversion factor of 95% = 0.95

Aux. Boiler SO_2 Emissions (natural gas)= (Fuel Usage) X (Heating Value of Natural Gas) X (0.0006 lb/mmBtu) X units conversion factors

Fuel Usage shall be measured by fuel meter, recorded daily when unit is operated
Heating Value of Natural Gas from fuel supplier data
Sulfur Content default of NADB = 0.0006 lb/mmBtu

~~J. Purdom Station Conditions~~

~~For Purdom Station air operating conditions see the Title V Air Operation Permit, Permit No. 1290001-03-AV attached as Appendix I (Reserved).~~

XIV. Stormwater Discharge

B. New construction on the Purdom site must meet the requirements of Chapter 62-25 of the Florida Administrative Code, as well as the design requirements presented in the Site Certification Application (SCA). ~~The~~ Any new stormwater facilities associated with Purdom Unit 8 will not become operational until an engineer practicing in the State of Florida in compliance with Section 471.003(2)(d) Florida Statutes, and with the appropriate experience in surface water design, certifies that these facilities have been constructed in accordance with the design as approved by the Florida Department of Environmental Protection (FDEP).

XVII. NPDES

~~This Condition of Certification is issued under the provisions of Chapter 403, Florida Statutes, and applicable rules of the Florida Administrative Code and constitutes authorization to discharge to waters of the state under the National Pollutant Discharge Elimination System. The City of Tallahassee is hereby authorized to operate the facilities shown in the Purdom Unit 8 Site Certification Application and other documents on file with the Department and made a part hereof and as specifically described in NPDES Permit No. FL 0025526. Until Permit No. FL 0025526 is updated to address Unit 8, the Purdom Station will be allowed to operate as follows:~~

The terms, conditions, requirements, limitations, and restrictions set forth in NPDES Final Permit No. FL 0025526, which is attached as Appendix B to these Conditions, and any modification or amendment to such NPDES permit, are incorporated by reference herein, and are binding and enforceable Conditions of this Certification. The licensee is subject to and shall comply with the terms, conditions, requirements, limitations, restrictions set forth in Appendix B. A violation of the terms conditions, requirements, limitations and restrictions in Appendix B is a violation of these Conditions of Certification. The Department is delegated the authority to modify these Conditions of Certification to conform them to any subsequently issued amendment or modification to Permit No. FL 0025526, pursuant to Conditions XI.

A. ~~Operation~~: Description:

~~Of an industrial wastewater treatment and disposal system to serve the referenced Purdom Station which includes a steam electric power generation plant and combustion turbine units. The facility presently includes three fossil fueled steam electric units, Units 5 and 6 each rated at 22 MW (nominal) and Unit 7 rated at 44 MW (nominal), and two combustion turbines, Units GT-1 and GT-2, each rated at 12.3 MW (nominal). After permanent shutdown of Units 5 and 6, Unit 8, a 250 MW (nominal) combined cycle unit will become operational. The existing facility discharge consists of once-through non-contact cooling water, low volume wastes, and chemical and non-chemical metal cleaning wastes. Upon Commercial Operation of Unit 8, the discharge will only consist of once-through non-contact cooling water from Unit 7 and GT-1 and GT-2. For the purpose of Condition XVI, "Commercial Operation" means that Unit 8 achieves the following:~~

~~1. Successful completion of performance tests for electric power output and heat rate;~~

~~2. The Unit produces at least ninety-five percent (95%) of the Guaranteed Net Power Output;~~

~~3. The Unit operates at no more than one hundred five percent (105%) of the Guaranteed Heat Rate;~~

~~4. The Unit meets all applicable air emission conditions contained in the Permits while firing the Guaranteed Fuel, and~~

~~5. The zero discharge wastewater treatment system is operating in a reliable manner.~~

The facility consists of four generating units: One steam electric generating unit (Unit 7), one combined cycle unit (Unit 8), and two gas/combustion turbine units (GT-1 and GT-2) used for peaking capacity. The maximum nameplate generating capacities for these units are 44 megawatts (MW), 250 MW, and 12.3 MW each, respectively. Units 8, GT-1, and GT-2 are fired by No. 2 fuel oil or natural gas. Unit 7 is fired by No. 6 fuel oil or natural gas. Unit 7

incorporates a once-through non-contact condenser cooling water (OTCW) system with intake water from the St. Marks River. Unit 8 operates as a zero discharge (ZD) system, except during ZD system maintenance downtime, when Unit 8 maintenance blowdown discharges into the Unit 7 OTCW discharge through an internal outfall. Unit 8 makeup water consists of reclaimed water from the City of St. Marks domestic wastewater treatment plant, industrial wastewater from the St. Marks Powder, Inc. facility, and surface water from the St. Marks River. Unit 7 OTCW discharges to the St. Marks River, a Class III fresh water.

B. Treatment:

~~Existing treatment includes lime treatment consisting of mixing, flocculation, and sedimentation of low volume wastewaters and metal cleaning wastewaters, air flotation and gravity separation for oily wastewaters, and pH adjustment for low volume wastewaters and metal cleaning wastewaters. Non-contact cooling waters require only dechlorination, if chlorination is practiced. Upon Commercial Operation of Unit 8, only non-contact cooling water from Unit 7 and GT-1 and GT-2 will be discharged; the existing treatment system will be abandoned.~~

Wastewater from the Purdom facility consists of OTCW from Unit 7, maintenance blowdown from Unit 8, and once-through, non-contact auxiliary equipment cooling water from Units GT-1 and GT-2. Maintenance blowdown consists of cooling tower blowdown (CTBD) from Unit 8 and low volume waste (LVW) from Units 7 and 8. LVW includes floor drains, boiler blowdown, demineralizer regeneration waste, laboratory wastes, and miscellaneous equipment washes. Unit 8 cooling tower water is treated by pH adjustment, mixing, sedimentation, and disinfection with sodium hypochlorite, and by the addition of sulfuric acid, scale inhibitor, corrosion inhibitor, and copper corrosion inhibitor. LVW is treated in an oil/water separator and then routed to the Unit 8 Cooling Tower for use as makeup water.

C. Effluent Disposal and Limitations:

1. Surface Water Discharge:

An existing 61.9 MGD maximum discharge of OTCW from Unit 7 to the discharge canal at outfall D-001 (formerly I-017) and thence to the St. Marks River (Class III Fresh waters) from Unit 7 through D-001 located approximately at latitude 30° 09' 00" N, longitude 84° 10' 00" W.

An existing 1.0 MGD maximum discharge of once-through auxiliary equipment cooling water (AECW) from Units GT-1 and GT-2 to the discharge canal at D-005 and thence to the St. Marks River (Class III Fresh waters) from combustion turbines GT-1 and GT-2 through D-005. The discharge is located approximately at latitude 30° 09' 72.1" N, longitude 84° 12' 00.4" W.

2. Internal Outfalls:

This permit authorizes discharge of maintenance blowdown via a new internal outfall I-002 from Unit 8 into a concrete structure in which it mixes with OTCW from Unit 7 before entering the discharge canal.

3. Stormwater Outfalls:

An existing stormwater discharge to the St. Marks River (Class III Fresh waters) through D-003 from the North diked petroleum storage area located approximately at latitude 30° 09' 76.0" N, longitude 84° 11' 91.4" W.

An existing stormwater discharge to the St. Marks River (Class III Fresh waters) through D-004 from the south diked petroleum storage area located approximately at latitude 30° 09' 66.7" N, longitude 84° 11' 94.4" W.

D. Effluent Limitations and Monitoring Requirements

1. Surface Water Discharge

During the period beginning on the issuance date and lasting through the expiration date of this permit, the licensee is authorized to discharge Once-through non-contact condenser cooling water from Unit 7 at Outfall D-001 (formerly I-017). Discharge will be limited and monitored as outlined in NPDES Permit FL 0025526, specifically I.A.1.-13.

2. Monitoring and Reporting

Sample collection, monitoring and reporting are outlined in NPDES Permit FL0025526, specifically I.E.1.-12. Unless specified otherwise in this permit, all reports and notifications required by this permit, including twenty-four hour notifications, shall be submitted to or reported to the Northwest District Office at the address specified below:

Northwest District Office
160 Government Center
Pensacola, FL 32501-5794

Phone Number - (850) 595-8300
FAX Number - (850) 595-8300 (All FAX copies shall be followed by original copies.)

~~**IN ACCORDANCE WITH:** The limitations, monitoring requirements, and other conditions set forth in Parts I through V below.~~

~~**Part I. Effluent Limitations and Monitoring Requirements**~~

~~A. Surface Water Discharges~~

~~1. During the period beginning on the effective date of this certification, and lasting until Unit 8 achieves Commercial Operation, the City of Tallahassee is authorized to discharge from outfall D001: once-through cooling water and auxiliary equipment cooling water from Unit 5 to the St. Marks River.~~

~~a. Such discharges shall be limited and monitored as specified below:~~

~~Parameter~~	~~Discharge Limitations~~			~~Monitoring Requirements~~	
	~~Daily Avg.~~	~~Daily Max.~~	~~Instantaneous Max~~	~~Measurement Frequency~~	~~Sample Type~~
~~Flow, MGD~~	~~Report~~	~~Report~~	~~N/A~~	~~Daily~~	~~Hourly Log~~
~~Discharge Temperature, °F~~	~~90.0~~	~~95.0~~	~~N/A~~	~~Continuous [1]~~	~~Recorder~~
~~Total Residual Chlorine (TRC), mg/l~~	~~N/A~~	~~N/A~~	~~0.01~~	~~1/Discharge~~	~~Multiple Grabs [2]~~
~~Total Time of Chlorine Addition~~	~~N/A~~	~~120~~	~~N/A~~	~~Daily~~	~~Log~~

~~b. Limitations and monitoring requirements for TRC are not applicable for any period in which chlorine is not added to Unit 5.~~

~~c. Auxiliary equipment cooling water from Unit 5 may be discharged without limitations or monitoring requirement.~~

~~d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: flow at the plant intake; temperature and TRC at the throat of the discharge structure from Unit 5; chlorine addition at the point of addition.~~

~~(1) Readings shall be taken 2 per each operating shift from continuous temperature recorders and averaged for daily average.~~

~~(2) Multiple grabs shall consist of grab samples collected at approximately the beginning of the period of TRC discharge and once per 15 minutes thereafter until the end of the period of TRC discharge.~~

~~2. During the period beginning on the effective date of this certification, and lasting until Unit 8 achieves Commercial Operation, the City of Tallahassee is authorized to discharge from outfall D002: once-through cooling water and auxiliary equipment cooling water from Units 6 and 7, and cooling water from GT-1 and GT-2 to the St. Marks River.~~

a. Such discharges shall be limited and monitored as specified below:

Parameter	Discharge Limitations			Monitoring Requirements	
	Daily Avg.	Daily Max.	Instantaneous Max	Measurement Frequency	Sample Type
Flow, MGD	Report	Report	N/A	Daily	Hourly Log
Discharge Temperature, °F	90.0	95.0	N/A	Continuous [1]	Recorder
Total Residual Chlorine (TRC), mg/l	N/A	N/A	0.01	1/Discharge	Multiple Grabs [2]
Total Time of Chlorine Addition	N/A	120	N/A	Daily	Log

b. Limitations and monitoring requirements for TRC are not applicable for any period in which chlorine is not added to either Unit 6 or 7.

c. Auxiliary equipment cooling water from Units 6 and 7 may be discharged without limitations or monitoring requirements.

d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: flow at the plant intake; temperature and TRC at the center of the discharge canal for Units 6 and 7, opposite the gas turbine intake structure; chlorine addition at the point of addition.

(1) Readings shall be taken 2 per each operating shift from continuous temperature recorders and averaged for daily average.

(2) Multiple grabs shall consist of grab samples collected at approximately the beginning of the period of TRC discharge and once per 15 minutes thereafter until the end of the period of TRC discharge.

3. During the period beginning on the effective date of this certification, and lasting until Unit 8 achieves Commercial Operation, the City of Tallahassee is authorized to discharge from outfall D005: chemical and non-chemical metal cleaning wastes to Pond No. 1 to the St. Marks River.

a. Such discharges shall be limited and monitored as specified below:

	Discharge Limitations	Monitoring Requirements

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Parameter	Daily Average	Daily Maximum	Measurement Frequency	Sample Type
Flow, MGD	Report	Report	Continuous [1]	Flow Indicator
Total Suspended Solids, mg/l	30.0	100.0	1/Discharge	Grab
Oil & Grease mg/l	N/A	5.0	1/Discharge	Grab
Copper (Total), mg/l	N/A	0.03	1/Discharge	Grab
Iron (Total) mg/l	1.0	1.0	1/Discharge	Grab

b. The pH shall not be less than 6.0 standard units nor greater than 8.5 standard units and shall be monitored 1/month by a grab sample.

c. There shall be no discharge of floating solids or visible foam in other than trace amounts.

d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: in the discharge line from Ponds 1 and 2 prior to actual discharge to the receiving waters.

(1) Flow shall be measured continuously throughout the period of discharge.

4. During the period beginning on the effective date of this certification, and lasting until Unit 8 achieves Commercial Operation, the City of Tallahassee is authorized to discharge from outfall D006: low volume wastes including boiler blowdown, demineralizer regeneration wastewater, and laboratory sampling wastewater to Pond No. 2 to the St. Marks River.

a. Such discharges shall be limited and monitored as specified below:

Parameter	Discharge Limitations		Monitoring Requirements	
	Daily Average	Daily Maximum	Measurement Frequency	Sample Type

Flow, MGD	Report	Report	Daily	Flow Indicator
Total Suspended Solids, mg/l	30.0	100.0	1/Discharge	Grab
Oil & Grease mg/l	N/A	5.0	1/Discharge	Grab

b. The pH shall not be less than 6.0 standard units nor greater than 8.5 standard units and shall be monitored 1/month by a grab sample.

c. The City of Tallahassee is authorized to discharge DEP approved boiler chemicals in boiler blowdown, boiler lay-up water or other similar "cold discharges" without limitation or monitoring requirements.

d. There shall be no discharge of floating solids or visible foam in other than trace amounts.

e. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: In the discharge line from ponds 1 and 2 prior to actual discharge to the receiving waters.

5. During the period beginning when Unit 8 achieves Commercial Operation, and continuing indefinitely thereafter, the City of Tallahassee is authorized to discharge from outfall D002: once-through cooling water and auxiliary equipment cooling water from Unit 7, and cooling water from GT-1 and GT-2 to the St. Marks River.

a. Such discharges shall be limited and monitored as specified below:

Parameter	**Discharge Limitations**			**Monitoring Requirements**	
	Daily Avg.	**Daily Max.**	**Instantaneous Max**	**Measurement Frequency**	**Sample Type**
Flow, MGD	Report	Report	N/A	Daily	Hourly Log
Discharge Temperature, □F	90.0	95.0	N/A	Continuous [1]	Recorder
Total Residual Chlorine (TRC), mg/l	N/A	N/A	0.01	1/Discharge	Multiple Grabs [2]
Total Time of Chlorine	N/A	120	N/A	Daily	Log

Addition					

b. Limitations and monitoring requirements for TRC are not applicable for any period in which chlorine is not added to Unit 7.

c. Auxiliary equipment cooling water from Unit 7 may be discharged without limitations or monitoring requirements.

d. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: Flow at the plant intake; temperature and TRC at the center of the discharge canal for Unit 7, opposite the gas turbine intake structure; chlorine addition at the point of addition.

(1) Readings shall be taken 2 per each operating shift from continuous temperature recorders and averaged for daily average.

(2) Multiple grabs shall consist of grab samples collected at approximately the beginning of the period of TRC discharge and once per 15 minutes thereafter until the end of the period of TRC discharge.

B. Other Limitations and Monitoring Requirements

1. The approved analytical methods and corresponding Department established MDL (method detection limits) and PQL (practical quantification limit) are listed for the following parameters:

Parameter	EPA Method	MDL (µg/l)	PDL (µg/l)
Total Suspended Solids	160.2	4000.0	4000.0
Oil & Grease	413.1	5000.0	5000.0
Total Recoverable Copper	220.2	1.0	5.0
Total Recoverable Iron	236.2/200.7/236.1	2.0/10.0/30.0	10.0/50.0/100.0
Temperature	170.1	0.10 C	0.10 C
Total Residual Chlorine	330.1	10.0	10.0
pH	150.1	0.01 s.u.	0.01 s.u.

The MDLs and PQLs listed above shall constitute the minimum reporting levels for the life of the certification. The Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those listed above. Unless otherwise specified, sample results shall be reported as follows:

a. Results greater than or equal to the PQL shall be reported as the measured quantity.

~~b. Results less than the PQL and greater than or equal to the MDL shall be reported as the PQL followed by the lab code "m", and shall be deemed equal to the MDL when necessary to calculate an average for that parameter.~~

~~c. Results less than the MDL shall be reported as the MDL followed by the lab code "u". A value of one half the MDL or half the effluent limit, whichever is lower, shall be used for that sample when necessary to calculate an average for that parameter. Values less than the MDL are considered to demonstrate compliance with an effluent limit or monitoring requirement. [62-4.246, 6-13-96]~~

~~2. Monitoring results obtained for each calendar month shall be summarized for that month and reported on a Discharge Monitoring Report (DMR), Form 62-620.910(10), postmarked no later than the 28th day of the month following the completed calendar month. For example, data for January shall be submitted by February 28. Signed copies of the DMR shall be submitted to the address specified below:~~

~~Florida Department of Environmental Protection~~
~~Wastewater Facilities Regulation Section, Mail Station 3550~~
~~Twin Towers Office Building, 2600 Blair Stone Road~~
~~Tallahassee, Florida 32399-2400~~

~~If no discharge occurs during the reporting period, sampling requirements of this certification do not apply. The statement "No Discharge" shall be written on the DMR form. If, during the term period of this certification, the facility ceases to discharge, the Department shall be notified immediately upon cessation of discharge. Such notification shall be in writing. Additionally, the City of Tallahassee shall notify the Department within 30 days, in writing, of the permanent shutdown of Units 5 and 6, and of the commencement of Commercial Operation of Unit 8.~~

~~3. Unless specified otherwise in this certification, all other reports and notifications required by these Conditions, including twenty-four hour notifications, shall be submitted to or reported to, as appropriate, the Department's Northwest District Office at the address specified below:~~

~~Florida Department of Environmental Protection~~
~~Industrial Wastewater Section~~
~~160 Government Center~~
~~Suite 308~~
~~Pensacola, Florida 32501-5794~~
~~Phone Number (850) 444-8300~~

~~4. The City of Tallahassee shall report all visible discharges of floating materials, such as ash or an oil sheen, when submitting DMRs.~~

~~5. There shall be no discharge of polychlorinated biphenyl compounds (PCBs) such as those commonly used for transformer fluid.~~

~~6. The City of Tallahassee shall provide safe access points for obtaining representative samples which are required by this certification.~~

~~7. The City of Tallahassee shall ensure that all laboratory analytical data submitted to the Department is from a laboratory which has a currently valid and Department approved Comprehensive Quality Assurance Plan (CompQAP) [or a CompQAP pending approval] for all parameters being reported as required by 62-160, Florida Administrative Code.~~

~~8. Discharge of hydrazine in boiler blowdown is authorized without limitation or monitoring requirements.~~

~~9. The City of Tallahassee is authorized to use St. Marks River water for fire protection in case of emergency and to perform normal and reasonable testing of the fire protection system. The provisions of Part I, Section A.1 and A.2 of this condition of certification do not apply under these emergency or testing conditions.~~

~~**C. Reopener Clause**~~

~~1. This certification shall be modified to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(23)(C) and (D), 304(b)(2) and 307(a)(2) of the Clean Water Act (the Act), as amended, if the effluent standard or limitation so issued or approved:~~

~~a. Contains different conditions or is otherwise more stringent than any condition in the permit/or;~~

~~b. Controls any pollutant not addressed in the certification. The certification, as modified under this paragraph shall contain any other requirements of the Act then applicable.~~

~~2. The certification may be reopened to adjust effluent limitations or monitoring requirements should future wasteload allocation determinations, water quality studies, DEP approved changes in water quality standards, or other information show a need for a different limitation or monitoring requirement.~~

~~**D. Stormwater from Diked Petroleum Storage or Handling Area**~~

~~The City of Tallahassee is authorized to discharge stormwater from diked petroleum storage or handling areas, provided the following conditions are met:~~

~~1. The facility shall have a valid SPCC Plan pursuant to 40 CFR 112.~~

~~2. In draining the diked area, a portable oil skimmer or similar device or absorbent material shall be used to remove oil and grease (as indicated by the presence of a sheen) immediately prior to draining.~~

~~3. Monitoring records shall be maintained in the form of a log and shall contain the following information, as a minimum:~~

~~a. Date and time of discharge,~~

~~b. Estimated volume of discharge,~~

~~c. Initials of person making visual inspection and authorizing discharge, and~~

~~d. Observed conditions of storm water discharged.~~

~~4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of a visible oil sheen at any time.~~

~~**Part II. Operation and Maintenance Requirements**~~

~~**A. Operation of Treatment and Disposal Facilities**~~

~~1. The City of Tallahassee shall ensure that the operation of this facility is as described in the application and supporting documents.~~

~~2. The operation of the pollution control facilities described in this certification shall be under the supervision of a person who is qualified by formal training and/or practical experience in the field of water pollution control appropriate for those facilities.~~

~~**B. Record-Keeping Requirements**~~

~~The City of Tallahassee shall maintain the following records on the site of the permitted facility and make them available for inspection:~~

~~1. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip-chart recordings for continuous~~

~~monitoring instrumentation, including, if applicable, a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;~~

~~2. Copies of all reports, other than those required in item 1. above, required by the permit for at least three years from the date the report was prepared, unless otherwise specified by Department rule;~~

~~3. Records of all data, including reports and documents used to complete the application for this certification at least three years from the date the application was filed, unless otherwise specified by Department rule;~~

~~4. A Copy of the Site Certification;~~

~~5. A copy of any required record drawings;~~

~~6. Copies of the logs and schedules showing plant operations and equipment maintenance for three years from the date on the logs or schedule.~~

~~**Part III. Compliance Schedule**~~

~~The City of Tallahassee shall achieve compliance on start of discharge.~~

~~**Part IV. Other Specific Conditions**~~

~~**A. Specific Conditions Applicable to All Permits**~~

~~1. Drawings, plans, documents or specifications submitted by the City of Tallahassee, not attached hereto, but retained on file with the Department, are made a part hereof.~~

~~2. If significant historical or archaeological artifacts are discovered at any time within the project site, the City of Tallahassee shall immediately notify the Department at the address shown in I.B.3., above, and the Bureau of Historic Preservation, Division of Historical Resources, R.A. Gray Building, 500 South Bronough, Tallahassee, Florida, 32399-0250.~~

~~3. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.) Florida Statutes, applicable portions of reports to be submitted under this certification shall be signed and sealed by the professional(s) who prepared them.~~

~~4. This certification satisfies industrial wastewater program permitting requirements only and does not authorize operation of this facility prior to obtaining any other permits required by federal agencies.~~

~~**B. Duty to Reapply**~~

~~This condition is not applicable under Site Certification.~~

~~**C. Specific Conditions Related to Best Management Practices**~~

~~The City of Tallahassee shall comply with the Best Management Practices portion of the Purdom Station Storm Water Pollution Prevention Plan (SWPPP).~~

~~**D. Specific Conditions Relating to Existing Manufacturing, Commercial, Mining, and Silviculture Wastewater Facilities or Activities**~~

~~1. Existing manufacturing, commercial, mining, and silvicultural wastewater facilities or activities that discharge into surface waters shall notify the Department as soon as they know or have reason to believe: [62-620.624(1)]~~

~~a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the certification, if that discharge will exceed the highest of the following levels:~~

~~(1) One hundred micrograms per liter~~

~~(2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl 4,6-dinitrophenol; and one milligram per liter for antimony, or~~

~~(3) Five times the maximum concentration value reported for that pollutant in the permit application.~~

~~b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following levels:~~

~~(1) Five hundred micrograms per liter;~~

~~(2) One milligram per liter for antimony; or~~

~~(3) Ten times the maximum concentration value reported for that pollutant in the permit application.~~

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Any party to the this Order has a right to seek judicial review of it pursuant to Section 120.68, Florida Statutes by filing a Notice of Appeal, pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, 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 of Appeal must be filed within thirty days from the date this Order is filed with the Clerk of the Department of Environmental Protection.

Executed in Tallahassee, Florida.

_____
Hamilton S. Oven, P.E.
Administrator, Siting Coordination Office

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

_____ _____
Clerk Date

DRAFT

CC by certified mail:

James Antista, Esquire
Fish and Wildlife Conservation Commission
6230 South Meridian Street
Tallahassee, FL 32399-1600

Mary Ann Helton, Esquire
Florida Public Service Commission
Gerald Gunter Building
2450 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Greg Smith
Northwest Water Mgmt. District
160 Governmental Center,
Suite 308
Pensacola, FL 32502

Parwez Alam
County Administrator
Leon County Courthouse
310 S. Monroe St.
Tallahassee, FL 32301

Parrish Barwick
Wakulla County Administrator
3093 Crawfordville Highway
Crawfordville FL 32327

Craig Varn, Esquire
Department of Community Affairs
2555 Shumard Oak Boulevard
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Sheauching Yu, Esquire
Department of Transportation
Haydon Burns Building
605 Suwannee Street
Mail Station 58
Tallahassee, FL 32399-0450

Michael Cooke
Division of Air Resource Management
2600 Blair Stone Road MS 5500
Tallahassee, Florida 32399-2400

Gary Sams, Esq
Hopping, Green and Sams
123 South Calhoun Street
Tallahassee, FL 32301

And by hand delivery to:

Scott A. Goorland, Esquire
Department of Environmental Protection
3900 Commonwealth Blvd.
Mail Station 35
Tallahassee, FL 32399-3000

CITY OF TALLAHASSEE

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SCOTT MADDOX
Mayor
JOHN PAUL BAILEY
Mayor Pro Tem

CHARLES E. BILLINGS
Commissioner
DEBBIE LIGHTSEY
Commissioner
STEVE MEISBURG
Commissioner

ANITA R. FAVORS
City Manager
ROBERT B. INZER
City Treasurer-Clerk

JAMES R. ENGLISH
City Attorney
RICARDO FERNANDEZ
City Auditor

October 13, 2000

CERTIFIED MAIL

Mr. Clair H. Fancy, Chief
Bureau of Air Regulation (BAR)
Florida Department of Environmental Protection (FDEP)
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Mail Station 5505

Re: Notification of Performance Testing Schedule
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Fancy:

This letter is submitted in accordance with Chapter 40 of the Code of Federal Regulations, Part 60.8(d), as adopted by reference in Rule 62-204.800, Florida Administrative Code (FAC) and Rule 62-297.310(7)(a)9, FAC, notifying you of performance testing tentatively scheduled to begin at 9:00 AM on November 16, 2000. The City of Tallahassee has scheduled the performance testing for visible emissions (Method 9), carbon monoxide (Method 10), and oxides of nitrogen (Method 20), while firing No. 2 fuel oil, of the above-referenced emission unit (a nominal 160 MW GE Series MS7FA combustion turbine attached to a non-fired heat recovery steam generator with a nominal 90 MW steam turbine) at the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, Florida.

If you have any questions regarding this performance testing notification, please feel free to contact either myself at (850) 891-5534 or Ms. Jennette Curtis at (850) 891-8850.

Yours Truly,

Robert McGarrah, Superintendent
Electric Production Division

cc: Winston A. Smith, EPA Region IV
B. Cowart, COT
G. King, COT
J. Curtis, COT

rmlt1203.doc

CITY OF TALLAHASSEE

CITY HALL
300 S. ADAMS ST.
TALLAHASSEE, FL
32301-1731
850/891-0010
TDD 1-800/955-8771

SCOTT MADDOX
Mayor
JOHN PAUL BAILEY
Mayor Pro Tem

CHARLES E. BILLINGS
Commissioner
DEBBIE LIGHTSEY
Commissioner
STEVE MEISBURG
Commissioner

ANITA R. FAVORS
City Manager
ROBERT B. INZER
City Treasurer-Clerk

JAMES R. ENGLISH
City Attorney
RICARDO FERNANDEZ
City Auditor

August 29, 2000

via FACSIMILE & CERTIFIED MAIL

Mr. Clair H. Fancy, Chief
Bureau of Air Regulation (BAR)
Florida Department of Environmental Protection (FDEP)
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Mail Station 5505

Re: Notification of Performance Testing Schedule
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Fancy:

The City of Tallahassee submits this letter notifying you of the revised schedule for completion of performance testing required under Specific Condition D.1 of the above-referenced permit. Originally scheduled for August 4, 2000, the City of Tallahassee has tentatively re-scheduled the performance testing to begin at 10:00 AM on September 15, 2000, for visible emissions (Method 9), carbon monoxide (Method 10), and oxides of nitrogen (Method 20) on the above-referenced emission unit (a nominal 160 MW GE Series MS7FA combustion turbine attached to a non-fired heat recovery steam generator with a nominal 90 MW steam turbine) at the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, Florida.

As noted in the original notification (dated June 19, 2000), the actual performance test date continues to be subject to change as a result of schedule impacts during completion of adjustments to the unit. The City of Tallahassee will re-notify your office of any schedule changes that occur.

If you have any questions regarding this performance testing notification, please feel free to contact either myself at (850) 891-5534 or Ms. Jennette Curtis at (850) 891-8850.

Yours Truly,

Robert McGarrah, Superintendent
Electric Production Division

cc: Winston A. Smith, EPA Region IV
B. Cowart, COT
G. King, COT
J. Curtis, COT

rmlt1203.doc

Relative Accuracy and Bias Determination

Performed by:
Spectrum Systems Inc.
Pensacola, Florida

Performed for:
City of Tallahassee
Purdom Generating Station

Unit 8
NOx Monitor

Run Number	Date of Run	Start Time	Stop Time	Unit Load	RM-7E Nox PPM @15%	CEM Nox PPM @15%	Difference Nox PPM
1	8/31 30-Aug	17:27	15:48	154	8.283	8.681	-0.398
2	30-Aug	18:10	18:31	155	8.301	8.720	-0.419
3	30-Aug	18:44	19:05	156	8.279	8.724	-0.445
4	30-Aug	19:15	19:36	157	8.275	8.710	-0.435
5	31-Aug	09:26	09:47	158	8.372	8.529	-0.157
6	31-Aug	10:00	10:21	156	8.537	8.686	-0.149
7	9/1/00 31-Aug	10:31	10:52	155	8.226	8.581	-0.355
8	31-Aug	11:14	11:35	155	8.352	8.748	-0.396
9	31-Aug	11:51	12:12	155	8.402	8.576	-0.174
Average:				156	8.336	8.662	-0.325
Standard Deviation							0.127
Confidence Coefficient:							0.097
Relative Accuracy:							5.07

T-Factor: 2.306

Simple cycle
~83 MW steam
No foggers

Uncorrected NO_x: ~10.2 ppm

O_2: ~13.8 %

Run 1

DATE	TIME	NOX11	CO212	GEN13	NOXD14	WATER15
08/31/2000	172800	9.700	3.800	154.600	8.600	0.140
08/31/2000	172900	9.700	3.800	154.800	8.600	0.140
08/31/2000	173000	9.700	3.800	154.400	8.700	0.140
08/31/2000	173100	9.700	3.800	154.400	8.700	0.150
08/31/2000	173200	9.800	3.800	154.100	8.700	0.160
08/31/2000	173300	9.700	3.700	154.100	8.800	0.170
08/31/2000	173400	9.700	3.800	154.300	8.600	0.150
08/31/2000	173500	9.800	3.800	154.400	8.700	0.160
08/31/2000	173600	9.800	3.800	154.100	8.700	0.140
08/31/2000	173700	9.700	3.800	154.100	8.600	0.140
08/31/2000	173800	9.800	3.800	154.000	8.700	0.140
08/31/2000	173900	9.700	3.800	154.300	8.600	0.150
08/31/2000	174000	9.700	3.800	154.300	8.600	0.140
08/31/2000	174100	9.700	3.800	154.400	8.700	0.160
08/31/2000	174200	9.700	3.800	154.700	8.700	0.150
08/31/2000	174300	9.700	3.800	154.600	8.700	0.150
08/31/2000	174400	9.800	3.800	154.700	8.700	0.160
08/31/2000	174500	9.900	3.800	154.800	8.800	0.130
08/31/2000	174600	9.800	3.800	154.600	8.700	0.150
08/31/2000	174700	9.800	3.800	154.800	8.700	0.150
08/31/2000	174800	9.700	3.800	154.800	8.700	0.150
	AVG	9.743	3.795	154 MW	8.681 corrected NOx	0.149

NOXRT16
0.032
0.032
0.032
0.032
0.032
0.033
0.032
0.032
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0.032
0.032
0.032
0.032
0.032
0.032
0.032
0.032
0.032
0.032
0.032
0.032
0.032
0.032
0.032
lb/MMBtu

Unit 8 GT Gas Usage

Date:	9/1/00	GT End	GT Lbs	MCF/h
TIME		Intergrator	Total	Usage
12:00 MN		4255620	0	0.00
1:00 AM		4261380	57600	1260.39
2:00 AM		4267080	57000	1247.26
3:00 AM		4271820	47400	1037.20
4:00 AM		4277040	52200	1142.23
5:00 AM		4282560	55200	1207.88
6:00 AM		4287660	51000	1115.97
7:00 AM		4292880	52200	1142.23
8:00 AM		4299770	68900	1507.66
9:00 AM		4306132	63620	1392.12
10:00 AM		4313520	73880	1616.63
11:00 AM		4320600	70800	1549.23
12:00 PM			0	0.00
1:00 PM			0	0.00
2:00 PM			0	0.00
3:00 PM			0	0.00
4:00 PM			0	0.00
5:00 PM			0	0.00
6:00 PM			0	0.00
7:00 PM			0	0.00
8:00 PM			0	0.00
9:00 PM			0	0.00
10:00 PM			0	0.00
11:00 PM			0	0.00
12:00 AM			0	0.00
			MCF	14218.82

165 MW

243 MW

— NO EVAP cooler

Design MAX: 88 ST
MW output 180 GT

CITY OF TALLAHASSEE

ELECTRIC OPERATIONS
2602 JACKSON BLUFF RD.
TALLAHASSEE, FL 32304
850/891-5001 OFFICE
850/891-5033 FAX

August 23, 2000

CERTIFIED MAIL

Mr. Clair H. Fancy, Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Mail Station 5505

Re: Revised Schedule of Continuous Monitoring System Performance Demonstration
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Fancy:

The City of Tallahassee has deemed it necessary to revise the schedule for completing demonstration of the continuous monitoring system (CMS) performance in accordance with Chapter 40 of the Code of Federal Regulations (CFR) Part 60.7(a)(5), as adopted by reference in 62-204.800, Florida Administrative Code. The demonstration is tentatively scheduled to take place on August 30, 2000. In compliance with Specific Condition F.1. of Permit No. PSD-FL-239, the CMS performance demonstration will be represented by completing the certification tests required under 40 CFR 75 on the above-referenced emission unit (a nominal 160 MW GE Series MS7FA combustion turbine attached to a non-fired heat recovery steam generator with a nominal 90 MW steam turbine) at the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, Florida.

As noted in the original notification (dated July 18, 2000), the actual performance test date continues to be subject to change as a result of schedule impacts during completion of adjustments to the unit. The City of Tallahassee will re-notify your office of any schedule changes that occur.

If you have any questions regarding this CMS performance demonstration notification, please feel free to contact either myself at (850) 891-5534 or Ms. Jennette Curtis at (850) 891-8850.

Yours Truly,

Robert McGarrah, Superintendent
Electric Production Division

cc: Winston A. Smith, EPA Region IV
B. Cowart, COT
G. King, COT
J. Curtis, COT

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PSD-FL-239
Main File

CITY OF TALLAHASSEE

ELECTRIC OPERATIONS
2602 JACKSON BLUFF RD.
TALLAHASSEE, FL 32304
850/891-5001 OFFICE
850/891-5033 FAX

July 24, 2000

CERTIFIED MAIL

Mr. Clair H. Fancy, Chief
Bureau of Air Regulation (BAR)
Florida Department of Environmental Protection (FDEP)
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Mail Station 5505

Re: Notification of Continuous Monitoring System Performance Demonstration
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Fancy:

The City of Tallahassee, in accordance with Chapter 40 of the Code of Federal Regulations (CFR) Part 60.7(a)(5), as adopted by reference in 62-204.800, Florida Administrative Code (FAC), submits this letter as notification that demonstration of the continuous monitoring system (CMS) performance is scheduled to commence on August 22, 2000. In compliance with Specific Condition F.1. of Permit No. PSD-FL-239, the CMS performance demonstration will be represented by completing the certification tests required under 40 CFR 75 on the above-referenced emission unit (a nominal 160 MW GE Series MS7FA combustion turbine attached to a non-fired heat recovery steam generator with a nominal 90 MW steam turbine) at the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, Florida.

It should be noted that this unit is still being adjusted for proper operation. Thus, the actual performance test date is subject to change as a result of schedule impacts during completion of adjustments to the unit. As such, it should be understood that the CMS performance demonstration date may fluctuate. The City of Tallahassee will re-notify your office of any schedule changes that occur.

If you have any questions regarding this CMS performance demonstration notification, please feel free to contact either myself at (850) 891-5534 or Ms. Jennette Curtis at (850) 891-8850.

Yours Truly,

Robert McGarrah, Superintendent
Electric Production Division

cc: Winston A. Smith, EPA Region IV
B. Cowart, COT
G. King, COT
J. Curtis, COT

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CITY OF TALLAHASSEE

ELECTRIC OPERATIONS
2602 JACKSON BLUFF RD.
TALLAHASSEE, FL 32304
850/891-5001 OFFICE
850/891-5033 FAX

June 19, 2000

CERTIFIED MAIL

RECEIVED

JUN 20 2000

BUREAU OF AIR REGULATION

Mr. Clair H. Fancy, Chief
Bureau of Air Regulation (BAR)
Florida Department of Environmental Protection (FDEP)
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Mail Station 5505

Re: Notification of Performance Testing Schedule
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Fancy:

This letter is submitted in accordance with Chapter 40 of the Code of Federal Regulations, Part 60.8(d), as adopted by reference in Rule 62-204.800, Florida Administrative Code (FAC) and Rule 62-297.310(7)(a)9, FAC, notifying you of performance testing tentatively scheduled for 10:00 AM on August 4, 2000. The City of Tallahassee has scheduled the performance testing for visible emissions (Method 9), carbon monoxide (Method 10), and oxides of nitrogen (Method 20) of the above-referenced emission unit (a nominal 160 MW GE Series MS7FA combustion turbine attached to a non-fired heat recovery steam generator with a nominal 90 MW steam turbine) at the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, Florida.

It should be noted that this unit has just recently undergone initial startup and is still being adjusted for proper operation. Thus, the actual performance test date is subject to change as a result of schedule impacts during the completion of adjustments to the unit. The City of Tallahassee will provide notice to the proper authorities, in accordance with the same regulations listed above, of any schedule changes that occur.

If you have any questions regarding this performance testing notification, please feel free to contact either myself at (850) 891-5534 or Ms. Jennette Curtis at (850) 891-8850.

Yours Truly,

Robert McGarrah, Superintendent
Electric Production Division

cc: Winston A. Smith, EPA Region IV
B. Cowart, COT
G. King, COT
J. Curtis, COT
M. Hurley

rmlt1203.doc

Florida Department of
Environmental Protection

Memorandum

KAS

FROM: Karen Skinner, Siting Coordination Office
MS 48 487-0472

TO: Doug Fry, Water Facilities, MS 3500
Raoul Clarke, Waste, MS 4550
Al Linero, Air Resource Management, MS 5505

DATE: June 16, 2000

SUBJECT: City of Tallahassee's Arvah B. Hopkins Power Plant Modification Request

We have prepared a draft Final Order for this project, which includes not only the changes requested by Tallahassee, but also updates in the rule citations. We believe the citation changes to be accurate, but, as previously arranged, are requesting your verification of the changes. Also, this is the opportunity to suggest any other type of changes to the Hopkins conditions.

Once we have received your comments, and discussed with Tallahassee any alterations necessitated by your comments, we will revise the draft accordingly, and condense those portions which need no changes for the purpose of the Order. The draft Final Order will then be sent to the parties to provide opportunity for objections, and notice will also be published in the Florida Administrative Weekly for the same purpose.

Please submit your comments by July 14th.

KS/ks

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In Re: City of Tallahassee)	
Arvah B. Hopkins Power Plant)	DEP FILE NO. PA 74-03H
Modification of Conditions)	OGC CASE NO. _____
of Certification)	
Leon County, Florida)	
_____)	

FINAL ORDER MODIFYING CONDITIONS OF CERTIFICATION

On May 20, 1975, the Florida Pollution Control Board, sitting as the Siting Board, issued a final order approving certification for the City of Tallahassee's Arvah B. Hopkins Generating Station. That certification order approved the construction and operation of an oil-fired/natural gas-fired power plant and associated facilities located in Leon County, Florida. The certification was modified on June 27, 1977, May 30, 1979, October 5, 1984, October 24, 1986, October 21, 1987, June 6, 1990, and May 18, 1994.

On May 12, 2000, the City requested that the Certification be modified to conform the Conditions to Industrial Wastewater Facility Permit No. FL0025518 for the Hopkins Power Plant, which the Department renewed on November 7, 1997. This action requires the Department to make certain modifications to conform the Conditions of Certification for the above referenced facility to the revised Industrial Wastewater Facility permit. In conjunction with the Industrial Wastewater-based changes, the Department also intends to update the rule citations.

Copies of the proposed modifications were made available for public review on May 12, 2000. On _____, 2000, a Notice of Intent to Issue Proposed Modification of Power Plant Certification was published in the Florida Administrative Weekly. On _____, 2000, all parties to the original proceeding were furnished with a copy of

the Notice of Intent to Issue Proposed Modification of Power Plant Certification and with a copy of the proposed final order. The notices specified that all parties to the original certification proceeding have 45 days from the issuance of the notice by mail to such party's last address of record in which to object to the requested modification. Failure of any of the parties to file a response constitutes a waiver of objection to the requested modification. The notices further specified that any person who is not already a party to the certification proceeding and whose substantial interest is affected by the requested modification has 30 days from the date of publication of the public notice to object in writing. If no objections are received, then a Final Order approving the modification shall be issued by the Department. If objections are raised and agreement cannot be subsequently reached, then pursuant to §403.516(1)(c), F.S., the applicant may file a petition for modification seeking approval for those portions of the request for modification to which written objections were timely filed. No written objections to the proposed modifications have been received by the Department. Accordingly, in the absence of any timely objection,

IT IS ORDERED:

The proposed changes to the City of Tallahassee's Hopkins Power Plant Conditions of Certification in accordance with Rule 62-17.211(4), F.A.C., as necessary to conform to Permit No. FL0025518, are APPROVED. Pursuant to Section 403.516(1)(b), F.S., the conditions of certification for the Hopkins Power Plant, are MODIFIED as follows:

STANDARD

1. Change in Discharge

All discharges or emissions authorized herein shall be consistent with the terms and conditions of this certification. The discharge of any pollutant identified in this certification more frequent than or at a level in excess of that authorized shall constitute a violation of the certification. Any anticipated facility expansions, production increases,

or process modifications which will result in new, different or increased discharges of pollutants or expansion in steam generating capacity must be reported by submission of a new application.

2. Noncompliance Notification

If, for any reason, the City of Tallahassee does not comply with or will be unable to comply with any limitation specified in this certification, the permittee shall notify the appropriate district administrator or subdistrict office of the Department by telephone during the working day that said noncompliance occurs and shall confirm this within forty-eight (48) hours of becoming aware of such condition, and shall supply the following information:

A. ~~a)~~ A description of the discharge and cause of non-compliance; and

B. ~~b)~~ The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time, the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrent of the noncomplying discharge.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this certification.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact resulting from noncompliance with any limitation specified in this certification, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Right of Entry

The City of Tallahassee shall allow the Secretary of the Department and/or authorized representatives, upon the presentation of credentials:

A. ~~a.~~ To enter upon the permittee's premises were an effluent source is located or in which records are required to be kept under the terms and conditions of this permit; and

B. ~~b.~~ To have access to and copy any records required to be kept under the conditions of this certification; and

C. ~~c.~~ To inspect any monitoring equipment or monitoring method required in this certification and to sample any discharge or pollutants.

6. Revocation or Suspension

After notice and opportunity for a hearing, this certification may be suspended, or revoked in whole or in part during its terms for cause including, but not limited to, the provision or Section 403.512, Chapter 403, Florida Statutes.

7. Civil and Criminal Liability

Nothing in this certification shall be construed to preclude the institution of any legal action or relieve the permittee from responsibilities, liabilities, or penalties established pursuant to any applicable State Statutes, or Regulation, including Departmental rules and regulations promulgated by the Department pursuant to Chapter 403, F.S.

8. Property Rights

The issuance of this certification does not convey any property rights in either real or personal property, or any exclusive privileges, nor 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.

9. Severability

The provisions of this certification are severable, and if any provision of this certification or the application of any provision of this certification to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of the certification shall not be affected thereby.

10. Certification Period

This certification shall be in perpetuity as to the use as a steam electric generating unit, provided all conditions of certification are complied with, and subject to the Florida Electric Power Plant Siting Law, Section 403.501-403.518 ~~403.519~~, F.S., and amendments thereto.

11. Legal Action

Nothing in this certification shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable Florida Statute, or regulation, including Departmental rules and regulations promulgated by the Department pursuant to Chapter 403, Florida Statutes.

12. Unforeseen Circumstances

Before engaging in a construction activity which may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than that evaluated in the certification application, the applicant shall provide both telephone and written notification to the Department. This shall include unexpected harmful effects or evidence of irreversible damage, not previously identified.

SPECIAL

1. Air

Arvah Hopkins Unit No. 2 shall be operated in accordance with Chapters 62-210, 62-212, 62-213, 62-296, and 62-297, ~~17-210, 17-212, 17-213, 17-296, and 16-297,~~ F.A.C.

A. Stack Emissions

Emissions shall be controlled so as not to exceed the appropriate standards specified in Chapter 62-296 ~~17-296~~, F.A.C, and any subsequent amendments, unless excepted by a variance. Emissions of sulfur dioxide from Unit No. 2 shall not exceed 1.4 pounds per million Btu (mmBtu) heat input. Emissions of particulate matter from Unit No. 2 shall not exceed 0.1 pounds per mmBtu heat input when firing fuel oil. No particulate limit shall apply when firing natural gas. The provisions of section 62-210.700 ~~17-210.700~~, F.A.C., regarding excess emissions are applicable to Unit No. 2.

B. Stack Height

The stack serving Unit No. 2 shall be not less than 250 feet high.

C. Conditions for Stack Testing

Testing of emissions shall be conducted with the source operating at permitted capacity. Permitted capacity is defined as 90-100% of the maximum operating rate allowed by this certification. If it is impracticable to test at permitted capacity, then sources may be tested at less than capacity; in this case subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen consecutive days for purposes of additional compliance testing to regain the permitted capacity in the conditions of certification.

D. Stack Sampling

A suitably installed and accessible stack sampling platform as approved by the Department of Environmental Protection will be provided on the Unit No. 2 stack. Stack Sampling tests for particulates shall be performed annually before the end of the federal fiscal year (September 30th) in conformance with Chapter 62-297 ~~17-297~~, F.A.C, and in conformance with DEP methods or EPA methods 1, 2, 3, and 5 or 17 or as otherwise approved by the Department. In accordance with Rule *62-297.310(7)(a)b.* ~~17-297.310(7)(a)b.~~, F.A.C., no particulate or visible emission tests shall be required in any federal fiscal year in which the fossil fuel steam generator did not burn fuel oil for more than 400 hours other than during startup. Results of the stack tests shall be submitted to the Northwest District Office of the Department within 45 days after completion of the tests. The City of Tallahassee shall notify the Department at least 15 days prior to the stack test to allow witnessing, whenever possible, of the test. The Department may waive the 15-day notice requirement on a case-by-case basis.

E. Equipment

Major equipment changes that will affect air emissions or which may have a substantial environmental impact shall be approved by the Department prior to the placing of orders for equipment or the start of construction. Where deemed necessary,

an environmental assessment on the effect of the change shall be prepared. (An example of a major change is the installation of flue-gas desulfurization equipment, or conversion of facilities to the use of coal). This condition supplements Standard Condition 1.

F. Fuel Oil

The sulfur content of fuel oils consumed shall be analyzed and records of such analyses shall be maintained for inspection by the Department.

G. Annual Reporting

An annual operation report shall be submitted by the City by March 1 of each year utilizing DEP Form *62-210.900(4)* ~~17-210.900(4)~~, F.A.C.

2. Water

A. Effluent Standards

Wastewater discharged from the site shall meet the standards set forth in Chapter 62-302 ~~17-302~~, F.A.C., and any subsequent amendments, unless excepted by variance. In addition to other treatment processes, the City of Tallahassee may use up to three treatment ponds to meet the standards set forth in Chapter 62-302 ~~17-302~~, F.A.C. The following specific limits are identified:

(1) ~~a)~~ pH shall be in accord with Chapter 62-302.530(52)(c) ~~17-302~~, F.A.C.

(2) ~~b)~~ Chlorine: Chlorination shall be conducted in such a manner that a chlorine residual in the effluent at County Road 1585 does not exceed 0.01 mg/l.

(3) ~~c)~~ Phosphorus: The effluent shall not contain phosphorus in amounts greater than 1.65 mg/l, as P.

(4) ~~d)~~ Sulfate: Hydrochloric acid or sulfuric acid or both may be utilized for pH adjustment and scale control in the cooling tower. Sulfuric acid may be used for resin regeneration and neutralization of the treatment pond effluent. The sulfates as SO_4 in the final combined effluent at the Point of Discharge (POD) shall not exceed 250 mg/l, as SO_4.

(5) ~~e)~~ Chloride: Chloride shall not exceed 250 mg/l at the POD.

(6) ~~f)~~ Deleterious Substances: No organic or inorganic substance which is not specifically described in the application shall be added to the effluent.

(7) ~~g)~~ Temperature: The temperature at the point of discharge shall never exceed 80°F. The POD has been determined by the Department to be where effluent from the plant physically leaves the plant site at County Road 1585.

(8) ~~h)~~ Copper: Compliance with the water quality criteria shall be measured at the boundary of an 800 meter mixing zone extending from the POD.

(9) ~~i)~~ The permanent use of a copper corrosion inhibitor, such as Betz DE-1213 (Copper-trol Cu-1) or equivalent, is allowed provided:

a. ~~1)~~ the discharge concentration of the copper corrosion inhibitor does not exceed 20 mg/l at the POD;

b. ~~2)~~ treatment will not be more frequent than once per two weeks; and

c. ~~3)~~ treatment of the towers will be separated by at least one week.

B. Monitoring

Water quality monitoring shall be performed at the POD. The program shall be approved by the Department. The purpose of the program shall be to measure those chemical parameters that are determined to be most indicative of the effects of the power plant liquid discharges. The City of Tallahassee may periodically request that the Department review the monitoring program. After such review the Department may authorize a reduction or modification of the following monitoring program.

Name	STORET Code	Reporting Units	Monitoring Point	Frequency
Chlorine, total residual	50060	mg/l	POD	1/M(a)
Oil & Grease	00550	mg/l	POD	1/M
pH, field	00400	pH unit	POD	C(b)
flow rate	50050	mgd	POD	C(b)
Temperature, water	00010	°C	POD	C(b)
Conductivity, adj. to 25 °C	00095	micromho	POD	C(b)
~~Phosphorus, total~~	~~00665~~	~~mg/l P~~	~~POD~~	~~1/M~~
~~Ortho-phosphate, total~~	~~70507~~	~~mg/l P~~	~~POD~~	~~1/M~~
~~Sulfate, total~~	~~00945~~	~~mg/l SO_4~~	~~POD~~	~~1/M~~
~~Solids, total dissolved~~	~~70300~~	~~mg/l~~	~~POD~~	~~1/M~~
Oxygen, dissolved	00300	mg/l O_2	POD	1/M
Iron, total	01045	ug/l Fe	POD	1/Q
Mercury, total	71900	ug/l Hg	POD	1/Q
Chromium, total	01034	ug/l Cr	POD	1/Q
Copper, total	01042	ug/l Cu	MZ	1/Q(c)

Lead, total	01051	ug/l Pb	POD	1/Q

(a) Measured only during periods of chlorination.

(b) Measured continuously at the POD. Estimate daily average from data collected once every hour, and report daily average, daily high and daily low from that data. Also, through November 30, 1995, ambient temperature of cooling tower makeup water (groundwater) shall be obtained daily and reported monthly. Additionally, the City of Tallahassee shall separately conduct a single, one-day study during the summer months (June-September of 1994 or 1995) to examine the intra-day variations in the groundwater temperature used for cooling tower make-up water. Temperature values shall be collected on an hourly basis for a twenty-four hour period. Results of this one day study shall be submitted with the next Monthly Operation Report immediately following the completion of this one day study, with copies submitted to the Office of Siting Coordination and the Bureau of Water Facilities Planning and Regulation. Groundwater temperature data provided pursuant to this paragraph shall be obtained from a cooling tower make-up production well.

(c) MZ (mixing zone) boundary 800 meters downstream of POD.

Testing procedures may be ASTM procedures, Standard Methods, or other methods, as approved by the Department.

C. Cooling Tower Blowdown

The total discharge from the cooling tower of Unit No. 2 shall not exceed 2.9 cubic feet per second (1,300 gallons per minute). The City of Tallahassee shall install and operate a heat exchanger to insure that the cooling tower effluent never exceeds 80 °F at the P.O.D.[1]

[1]The City of Tallahassee shall install and operate the heat exchanger referenced in Special Condition 2.C. by no later than 12 months after the date of this Order {Order date: 5/18/94}. The City of Tallahassee shall notify the Department when the City has installed the heat exchanger. The modified Conditions of Certification related to thermal

discharges and temperature limitations shall be applicable on the 30th day after the City of Tallahassee has filed such notice with the Department.

3. Ground Water Monitoring

Groundwater shall be monitored for the parameters, and in accordance with the frequency described below. Water samples from the well(s) supplying make-up water to the cooling towers shall be taken concurrently with the water samples taken of the receiving stream. Wells not on line at the time of the sampling of the receiving stream may be sampled at other appropriate time intervals. Data shall be provided to the Department on a quarterly basis for the following:

Measurement	**Reporting Units**	**Frequency**
~~Sulfate~~	~~mg/l SO4~~	~~1/M~~
~~Chloride~~	~~mg/l Cl~~	~~1/M~~
Total Hardness	mg/l CaCo3	1/6M
pH	pH units	1/M
M alkalinity	mg/l CaCo3	1/6M
Conductivity	micromho	1/M
~~Solids, Total~~	~~mg/l~~	~~1/6M~~

The monitoring program shall be reviewed every two years by the Department.

4. Archeological Sites

The 231 acre Hopkins site shall be examined by the appropriate archaeological agency to identify areas of archaeological significance. Subsequently, efforts shall be made to remove, mark or otherwise protect the archeological values. This shall not apply to the area already occupied by structures or the area upon which foundations for the boiler, generator, cooling tower, and stack are to be located.

5. Site Drainage and Erosion Control

A. Provision shall be made to control sediment runoff during and after construction, utilizing the latest techniques developed by the DOT/DEP. Sediment and oil traps shall be installed and maintained where necessary to achieve the goals of pollution control.

B. A control program shall be established by the applicant to provide periodic review of all construction activities to assure protection of the environment.

C. When new or revised site drainage is undertaken it shall be constructed to minimized the direct effect of runoff from parking areas and other impervious surfaces.

6. Delegation - Modification of Special Provisions

A. The Department may modify the provisions of the special conditions dealing with sampling, monitoring, reporting, and specifications for control equipment or related time schedules as necessary to attain the objectives of Chapter 403, Florida Statutes, upon mutual agreement with the permittee. Such modifications and agreement shall be in writing. Such modifications will not take effect until after prominent public notice giving a period of thirty (30) days for public review and comment of the Department's intent to modify said special conditions. If requested, the Secretary may provide opportunity for a public hearing on the proposed modifications prior to taking final agency action.

B. For modifications in relation to federally delegated or approved permit programs, if no written objection is raised following notice to the parties and the public pursuant to Section 403.516(1)(b), F.S., the department shall modify a certification order and conditions of certification to conform to any subsequent department-issued amendments, modifications or renewals of any separately-issued prevention of significant deterioration (PSD) permit, Title V Air Operation permit, National Pollutant Discharge Elimination System (NPDES) permit, or any other permit for the certified

electrical power plant issued by the department under a federally delegated or approved permit program so long as no state rule exists which conflicts or is more stringent than the provisos of the federal permits.

7. Polychlorinated Biphenyl Compounds

There shall be no discharge of polychlorinated biphenyl compounds.

Any party to this Notice has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes (F. S.) by the filing of a Notice of Appeal, pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department Environmental Protection, 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 fee, with the appropriate district court of appeal. The Notice of Appeal must be filed within 30 days of the date that this Final Order is filed with the Department of Environmental Protection.

DONE AND ENTERED this _____ day of_____ 2000, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

_____

KIRBY B. GREEN, III
Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000
Telephone: (850) 488-7131

FILING AND ACKNOWLEDGMENT:

FILED, on this date, pursuant to
§.120.52 Florida Statutes, with the

designated Department Clerk,
receipt of which is hereby acknowledged.

_____
CLERK

_____
DATE

CERTIFICATE OF SERVICE

I CERTIFY that a true and correct copy of the foregoing Final Order Modifying Conditions of Certification was sent by U.S. Mail or *Interagency Delivery to:

James S. Alves, Esq.
Hopping Green Sams & Smith, P.A.
Post Office Box 6526
Tallahassee, Florida 32314

***Via Interagency Delivery**
James V. Antista, General Counsel
Fish & Wildlife Conservation Commission
Bryant Building
620 South Meridian Street
Tallahassee, Florida 32399-1600

***Via Interagency Delivery**
Cari Roth
General Counsel
Department Of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100

Via Interagency Delivery
Catherine Bedell, Esq.
General Counsel
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

***Via Interagency Delivery**
Sheauching Yu, Assistant General Counsel
Department Of Transportation
Haydon Burns Bldg., M.S. 58
605 Suwannee Street
Tallahassee, Florida 32399-0450

and by interoffice delivery to:

Bobby Cooley, Director
DEP Northwest District Office

Hamilton "Buck" Oven, P.E.
Administrator
DEP Siting Coordination Office

on this ___ day of _____ 2000.

STATE OF FLORIDA DEPARTMENT

OF ENVIRONMENTAL PROTECTION

SCOTT A. GOORLAND
Assistant General Counsel
Florida Bar No. 0066834

Douglas Building, MS 35
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000
Telephone: (850) 488-9314

Department of
Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

June 15, 2001

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Robert McGarrab, Superintendent
Electric Power Production Division
City of Tallahassee
300 South Adams Street
Tallahassee, Florida 32301

Re: DEP File No. PSD-FL-239 (PA97-36)
Interpretation of Condition

Dear Mr. McGarrab:

We reviewed your letter dated May 29 requesting a formal document summarizing our review of your interpretation of the permit condition related to applicability of the facility-wide emission caps. Conditions Nos. B5 and B6 are as follow:

Oxides of Nitrogen. Beginning with the calendar year following successful completion of the initial performance test for Unit 8, annual emissions of NO_X shall not exceed 467 tons per year from the Purdom facility (Unit 8, Unit 7, GT1, GT2, and the aux boiler) on a calendar year basis, as measured by applicable compliance methods. (Requested by the applicant).

Sulfur Dioxides. Beginning with the calendar year following successful completion of the initial performance test for Unit 8, annual emissions of SO_2 shall not exceed 80 tons per year from the Purdom facility (Unit 8, Unit 7, GT1, GT2, and the aux boiler) on a calendar year basis, as measured by applicable compliance methods. (Requested by the applicant).

The City conducted compliance testing on the main fuel (natural gas) for Unit 8 almost one year ago. We understand that compliance testing on the back-up fuel oil has not yet been conducted. We believe the tests on natural gas are the initial compliance tests and that they were successfully completed.

We have numerous situations such as cement plants that are permitted to burn various fuels such as tires and other solid fuels that have only tested on coal. We consider those projects to have completed initial testing notwithstanding the fact that they have postponed testing on back-up, supplementary, or waste fuels.

We agree that higher than expected burning on fuel oil related to shakedown for fuel oil firing may cause the facility to use more of the cap than would typically be attributed to fuel oil use.

Conditions B5 and B6 are hereby modified as follows:

Oxides of Nitrogen. Beginning with the calendar year 2001 ~~following successful completion of the initial performance test for Unit 8~~, annual emissions of NO_X shall not exceed 467 tons per year from the Purdom facility (Unit 8, Unit 7, GT1, GT2, and the aux boiler) on a calendar year basis, as measured by applicable compliance methods. The cap may be exceeded only in 2001 and only to the extent that the cause is directly attributable to shakedown and compliance testing on Unit 8 related to fuel oil firing. (Requested by the applicant).

Sulfur Dioxides. Beginning with the calendar year 2001 ~~following successful completion of the initial performance test for Unit 8~~, annual emissions of SO_2 shall not exceed 80 tons per year from the Purdom facility (Unit 8, Unit 7, GT1, GT2, and the aux boiler) on a calendar year basis, as measured by applicable compliance methods. The cap may be exceeded only in 2001 and only to the extent that the cause is directly attributable to shakedown and compliance testing on Unit 8 related to fuel oil firing. (Requested by the applicant).

This letter shall be attached to the referenced permit and is hereby made a part of the permit.

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 of the Florida Statutes. 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 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) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen 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 of the Florida Administrative Code.

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 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.

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. Mediation is not available in this proceeding.

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. 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.

This Permit Amendment constitutes final agency action unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition that conforms to Rule 62-110.106, F.A.C. Upon timely filing of a petition or a request for an extension of time this Notice will not be effective until further Order of the Department.

If either a petition for administrative hearing or a request for extension of time is not timely filed with the Department, then this Permit Amendment shall constitute final agency action. Any party to this order would then have the right to seek judicial review pursuant to Rule 9.110, 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 of appeal must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Howard L. Rhodes

Howard L. Rhodes, Director
Division of Air Resources
Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Permit Modification was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 6/18/01 to the person(s) listed:

Robert McGarrab, COT*
Buck Oven, DEP PPSO

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.

Charlotte J. Hayes 6/18/01
(Clerk) (Date)

6/1 AL
pls draft response. Clair

CITY OF TALLAHASSEE

ELECTRIC OPERATIONS
2602 JACKSON BLUFF RD.
TALLAHASSEE, FL 32304
850/891-5001 OFFICE
850/891-5033 FAX

May 29, 2001

CERTIFIED MAIL

Mr. Clair H. Fancy, Chief
Bureau of Air Regulation (BAR)
Florida Department of Environmental Protection (FDEP)
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Mail Station 5505

Re: Confirmation of Permit Condition
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Fancy:

Since mid-December, the City of Tallahassee has been attempting to get the above-referenced unit properly operating on fuel oil (successful performance testing on natural gas occurred on September 15, 2000). However, due to multiple unforeseen circumstances (detailed in performance test extension requests to EPA dated January 29th and March 1st of this year), we have had to extend the fuel oil shakedown period on the unit. Due to this extended shakedown period, an unexpected increase in fuel oil fired in Unit 8 has occurred and the performance testing has not yet been completed. Thus, the City would like to confirm its interpretation of Condition Nos. B.5. and B.6. of Permit No. PSD-FL-239, which it had voluntarily proposed. These conditions are as follows:

> *Oxides of Nitrogen. Beginning with the calendar year following successful completion of the initial performance test for Unit 8, annual emissions of NOx shall not exceed 467 tons per year from the Purdom facility (Unit 8, Unit 7, GT1, GT2, and the aux boiler) on a calendar year basis, as measured by applicable compliance methods. [Requested by the applicant]*
>
> *Sulfur Dioxide. Beginning with the calendar year following successful completion of the initial performance test for Unit 8, annual emissions of SO2 shall not exceed 80 tons per year from the Purdom facility (Unit 8, Unit 7, GT1, GT2, and the aux boiler) on a calendar year basis, as measured by applicable compliance methods. [Requested by the applicant]*

As "successful completion of the initial performance test" on fuel oil has not occurred yet, it is the City's position that application of the facility-wide caps associated with Purdom is not yet effective. Even though these limits are not effective for calendar year 2001, the City will provide information to the Department demonstrating that all emissions measured during calendar 2001 from Unit 7, GT1, GT2 and the auxiliary boiler and all emissions associated with the burning of natural gas in Unit 8 during calendar year 2001 comply with these facility-wide caps.

The City respectfully requests the Department's confirmation of the interpretation outlined above and would appreciate a formal document summarizing your consideration of this matter.

If you have any questions about the City's interpretation of the permit conditions listed above, please feel free to contact either myself at (850) 891-5534 or Ms. Jennette Curtis at (850) 891-8850.

Yours Truly,

Robert McGarrah, Superintendent
Electric Production Division

cc: Martin Costello, FDEP
B. Cowart, COT
G. King, COT
J. Curtis, COT

PSD-FL-239

AL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAR 20 2001

RECEIVED
MAR 26 2001
BUREAU OF AIR REGULATION

4APT-ARB

Mr. C.H. Fancy, P.E.
Chief
Bureau of Air Regulation
Department of Environmental Protection
Division of Air Resource Management
Mail Station 5500
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SUBJ: Initial Performance Test Extension Request Submitted by the City of Tallahassee for Unit No. 8 at the Sam O. Purdom Generating Station, Tallahassee, Florida

Dear Mr. Fancy:

The purpose of this letter is to provide you with a written determination regarding the referenced request that was sent to U.S. Environmental Protection Agency (EPA) Region 4 and to you in a March 2, 2001, letter from the City of Tallahassee. Unit No. 8 is a combined cycle combustion turbine which is subject to 40 C.F.R. Part 60, Subpart GG (Standards of Performance for Stationary Gas Turbines). The City requested an extension of the deadline for completing testing under New Source Performance Standards (NSPS) because it cannot fire the turbine with fuel oil at the present time. Since the City needs to correct an operating problem that is preventing it from firing oil, an extension of the deadline for testing would be acceptable to Region 4, and based upon the information provided by the City, an extension of 720 operating hours following the restart of the turbine on oil would be reasonable. Details regarding the operating problem that is preventing oil firing and the basis for our determination are provided in the remainder of this letter.

Under the provisions of 40 C.F.R. §60.8(a), an initial performance test must be conducted on facilities subject to NSPS no later than 60 days after reaching maximum capacity or 180 days after startup, whichever comes first. Based upon the date that Unit No. 8 was first fired with oil at its maximum operating rate, the deadline for completing an initial performance test on the turbine would have been January 30, 2001. When the City attempted to fire Unit No. 8 with oil on January 28, 2001, leaks in the water injection system used to control nitrogen oxides (NO_x) emissions were found. Because the City was unable to repair the water injection system prior to the deadline for testing, it requested an extension of the deadline. This request was made in a letter dated January 29, 2001, and in a February 8, 2001, letter to the Florida Department of Environmental Protection, we approved this request and granted an extension of 30 days following the restart of the unit on oil to complete the performance test.

The City completed the repairs on the turbine's water injection system on January 31, 2001, but problems with the atomizing air compressor in the unit prevented it from achieving sustained operation on oil following the restart. The atomizing air compressor appears to be causing vibrations which are making the compressor trip, and this forces the turbine into a shutdown mode. Because of the shutdowns caused by the atomizing air compressor, Unit No. 8 operated on oil for only about 60 hours during the first nine calendar days after the restart of the unit on oil. In order to prevent damage to the unit, the turbine manufacturer (General Electric) has asked the City to suspend oil firing until the unit can be visually inspected in order to identify the reason for the vibrations that are causing the unit to shut down. Suspending oil firing until an inspection is conducted and repairs are finished will prevent the City from completing an initial performance under the terms of the extension granted in our February 8, 2001, letter. Therefore, the City's March 2, 2001, letter asked that the testing deadline be extended for 720 operating hours, but not more than 90 calendar days, following a restart on fuel oil.

Since the City has fired Unit No. 8 with fuel oil for a relatively small amount of time so far, extending the deadline for completing an initial performance test during oil firing is acceptable to Region 4. Because Unit No. 8 has been fired with oil on only a limited basis, it is possible that the City may encounter additional problems when the unit resumes operation. Since this factor makes it difficult to predict the number of days it will take to successfully bring the unit back on line and prepare it for testing, granting an extension based upon hours of operation will be a better approach than granting one based upon calendar days in the City's case. Another advantage of basing the extension on operating hours, instead of operating days, is that it will reduce the likelihood that the City will need to submit any further requests for testing extensions on Unit No. 8

Based upon extensions that we have approved for other facilities that have not been able to operate on the deadline for testing, giving the City up to 720 operating hours following the restart of Unit No. 8 on oil to complete an initial performance would be reasonable. The majority of the extensions we have granted in the past have given owners and operators 30 calendar days following the restart of an affected facility to complete testing. If the restart of Unit No. 8 on oil is relatively trouble free, extending the testing deadline by 720 operating hours will ensure that testing is completed within roughly the same number of calendar days following the restart as other facilities for which we have granted extensions in the past. In the event that any unexpected problems are encountered following the restart of Unit No. 8, extending the testing deadline for up to 90 calendar days following the restart would be acceptable since expediting the completion of the testing will not be a high priority if the unit is running only intermittently while any new problems are being resolved.

If you have any questions about the issues addressed in this letter, please contact Mr. David McNeal of the EPA Region 4 staff at (404) 562-9102.

Sincerely,

Edward M Cannon for ow

R. Douglas Neeley
Chief
Air and Radiation Technology Branch
Air, Pesticides and Toxics
Management Division

cc: Mr. Martin Costello
FL DEP

Mr. Robert McGarrah, Superintendent
Electric Production Division

CITY OF TALLAHASSEE

ELECTRIC OPERATIONS
2602 JACKSON BLUFF RD.
TALLAHASSEE, FL 32304
850/891-5001 OFFICE
850/891-5033 FAX

March 2, 2001

Via Fax and Certified Mail

Mr. Winston A. Smith, Director
Air, Pesticides & Toxics Management Division
United States Environmental Protection Agency
Region 4
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-3104

Re: Initial Performance Testing Schedule Extension
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Smith:

The City of Tallahassee submits this letter seeking approval from the US EPA for an additional extension to complete initial performance testing of the above-referenced unit due to our current inability to operate the unit on oil. The unit, subject to regulation under 40 CFR 60, Subpart GG, initiated firing on No. 2 fuel oil on November 28, 2000. On December 1, 2000, the City achieved "maximum production rate" for firing No. 2 fuel oil in the unit. As such, initial performance testing on No. 2 fuel oil was scheduled to be completed no later than January 30, 2001. Due to difficulties with water injection system leaks, the City was unable to complete the initial performance test by the January 30, 2001, deadline and was granted a 30-day extension [from the date oil firing resumed after January 30, 2001] by the US EPA (dated February 8, 2001). The City repaired the water injection system and was able to resume oil firing again on January 31, 2001. However, the City was able to fire oil for only four calendar days since January 31, 2001 (for a total of nine calendar days [60.3 hrs of total oil operation] since the unit first fired oil on November 28, 2000) due to an additional operational difficulty that has arisen.

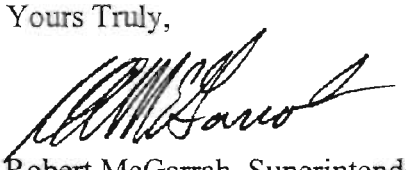
The current difficulty appears to be associated with the atomizing air compressor. A vibration sensor on the compressor trips while operating on oil, sending the entire unit into a shutdown mode. The manufacturer (General Electric) has not been able to identify the cause of the vibration and will require a temporary outage to visually inspect and repair the source of the vibration in the atomizing air compressor. Until such time, General Electric has directed the City to refrain from operating the unit on oil. General Electric's directive is attached.

Finally, note that this unit primarily operates on natural gas, and that it passed all NSPS-required performance tests for this fuel in September 2000.

For the above reasons, the City hereby requests an initial performance test extension of 90 days from the date that the unit is able to resume fuel oil firing, but not exceeding 720 hours of oil firing following the manufacturer-mandated inspection and repairs to the atomizing air compressor.

If you have any questions regarding this performance testing extension request, please feel free to contact either myself at (850) 891-5534 or Ms. Jennette Curtis at (850) 891-8850.

Yours Truly,



Robert McGarrah, Superintendent
Electric Production Division

cc: Dave McNeal, US EPA Region IV
Clair Fancy, FDEP
Martin Costello, FDEP
B. Cowart, COT
G. King, COT
J. Curtis, COT

e

General Electric International, Inc.
03/01/01

TO: City of Tallahassee

ATTN: Mr. Gordon King

RE: Atomizing Air Compressor Outage

Gordon,

As a precautionary step, GE would like to make an overall inspection of the Atomizing Air Compressor at the next available time. This request comes as a result of the engineering study as to what occurred during our last attempt to transfer from Gas fuel to Liquid fuel.

I apologize for any inconvenience this might cause the City of Tallahassee, however we cannot proceed with liquid fuel commissioning and transfers between fuels until this inspection has been made and is satisfactory.

This critical inspection will hopefully prove to save us from another unplanned trip and/or damage from possible equipment failure in the future.

Best Regards,

Karl Bauer

Karl A. Bauer
GE – Start up Engineer
1 River Road, Bld. 36-6
Schenectady, NY 12345
(518) 209-1140 Cell.

2/14
copy Jim
original to AT for
PSD File

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

FEB 0 8 2001

RECEIVED
FEB 14 2001
BUREAU OF AIR REGULATION

4APT-ARB

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation
Department of Environmental Protection
Division of Air Resource Management
Mail Station 5500
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SUBJ: Initial Performance Test Extension Request Submitted by the City of Tallahassee for Unit No. 8 at the Sam O. Purdom Generating Station, Tallahassee, Florida

Dear Mr. Fancy:

The purpose of this letter is to provide you with a written determination regarding the referenced request that was sent to U.S. Environmental Protection Agency (EPA) Region 4 and to you in a January 29, 2001, letter from the City of Tallahassee. Unit No. 8 is a combined cycle system that includes a turbine which is subject to 40 C.F.R. Part 60, Subpart GG (Standards of Performance for Stationary Gas Turbines). The City requested an extension of the deadline for completing testing under New Source Performance Standards (NSPS) because it has experienced a number of operating problems since the startup of the turbine, and these problems are preventing the City from firing the turbine with fuel oil at the present time. Based upon our review of the information that the City provided with its request, extending the testing deadline for the turbine until 30 days after it restarts on fuel oil is acceptable to Region 4. Details regarding the specific operating problems experienced by the City and the basis for our determination are provided in the remainder of this letter.

According to its January 29, 2001 letter, the City has experienced problems with both the fuel oil feed system and the water injection system used for controlling nitrogen oxides (NO_x) emissions from Unit No. 8. The fuel oil feed system problems were caused by fuel filter plugging that the company attributed to degradation of the fuel hoses used on the unit, and these hoses were replaced prior to the deadline for completing an initial performance test under Subpart GG. The City attempted to fire the unit with fuel oil on January 28, 2001, in preparation for an initial performance test scheduled for January 30, 2001. This test had to be postponed, however, because of leaks in the system used to inject water for NO_x control. According to the City's January 29, 2001, letter, these leaks may have been caused by improper reinstallation of the water injection system after a scheduled outage in December 2000.

Under the provisions of 40 C.F.R. §60.8(a), an initial performance test on facilities subject to NSPS must be conducted no later than 60 days after reaching maximum capacity or 180 days after startup, whichever comes first. Based upon the date that Unit No. 8 was first fired at its maximum capacity with fuel oil, the deadline for completing the initial performance test on the unit would have been January 30, 2001. Since the unit is currently unable to operate on fuel oil pending repairs to the water injection system, the City asked that deadline for completing the initial performance test be extended until 30 days after the unit is restarted on oil following the completion of the water injection system repairs. The City's proposal is acceptable to Region 4 since the amount of additional time requested for completing the testing is consistent with previous extensions that EPA has approved for owners and operators of other facilities that have been unable to operate on the deadline for initial performance testing.

If you have any questions about the issues addressed in this letter, please contact Mr. David McNeal of the EPA Region 4 staff at (404) 562-9102.

Sincerely,

Winston A. Smith
Director
Air, Pesticides and Toxics
Management Division

cc: Mr. Martin Costello
FL DEP

Mr. Robert McGarrah, Superintendent
Electric Production Division

A2

CITY OF TALLAHASSEE

ELECTRIC OPERATIONS
2602 JACKSON BLUFF RD.
TALLAHASSEE, FL 32304
850/891-5001 OFFICE
850/891-5033 FAX

February 1, 2001

CERTIFIED MAIL

Mr. Clair H. Fancy, Chief
Bureau of Air Regulation (BAR)
Florida Department of Environmental Protection (FDEP)
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Mail Station 5505

Re: Notification of Revised Performance Testing Schedule
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Fancy:

The City of Tallahassee submits this letter notifying you of the revised schedule for completion of No. 2 fuel oil performance testing required under Specific Condition D.1 of the above-referenced permit. Originally scheduled for November 16, 2000, and subsequently re-scheduled for December 20 and 29, 2000, and January 30, 2001, the City of Tallahassee has tentatively re-scheduled the performance testing to begin at approximately 7:30 AM on February 8, 2001, for visible emissions (Method 9), carbon monoxide (Method 10), and oxides of nitrogen (Method 20) on the above-referenced emission unit (a nominal 160 MW GE Series MS7FA combustion turbine attached to a non-fired heat recovery steam generator with a nominal 90 MW steam turbine) at the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, Florida.

Please note that delays have occurred as a result of fuel oil feed process and water injection system difficulties. Although the City believes that the difficulties have been properly addressed, the actual performance test date will continue to be subject to change.

If you have any questions regarding this performance testing notification, please feel free to contact either myself at (850) 891-5534 or Ms. Jennette Curtis at (850) 891-8850.

Yours Truly,

Robert McGarrah, Superintendent
Electric Production Division

cc: Winston A. Smith, EPA Region IV
Martin Costello, FDEP
B. Cowart, COT
G. King, COT
J. Curtis, COT

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CITY OF TALLAHASSEE

ELECTRIC OPERATIONS
2602 JACKSON BLUFF RD.
TALLAHASSEE, FL 32304
850/891-5001 OFFICE
850/891-5033 FAX

January 26, 2000

via FAX and CERTIFIED MAIL

Mr. Clair H. Fancy, Chief
Bureau of Air Regulation (BAR)
Florida Department of Environmental Protection (FDEP)
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Mail Station 5505

Re: Notification of Revised Performance Testing Schedule
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Fancy:

The City of Tallahassee submits this letter notifying you of the revised schedule for completion of No. 2 fuel oil performance testing required under Specific Condition D.1 of the above-referenced permit. Originally scheduled for November 16, 2000, and subsequently re-scheduled for December 20 and 29, 2000 the City of Tallahassee has tentatively re-scheduled the performance testing to begin at approximately 7:30 AM on January 30, 2001, for visible emissions (Method 9), carbon monoxide (Method 10), and oxides of nitrogen (Method 20) on the above-referenced emission unit (a nominal 160 MW GE Series MS7FA combustion turbine attached to a non-fired heat recovery steam generator with a nominal 90 MW steam turbine) at the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, Florida.

Please note that delays have occurred as a result of fuel oil feed process difficulties and that the unit will undergo evaluation this weekend to assure that performance testing may occur on January 30th at loads specified in 40 CFR 60, Subpart GG. As such, the actual performance test date will continue to be subject to change.

We apologize for the delay in submitting this letter to your office. But, it should also be noted that today is the first time since the beginning of January that the City has recognized that performance testing was still possible within the 60 day time frame cited in 40 CFR 60.8.

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If the City determines that testing on January 30, 2001, is not possible, a letter will be submitted to the EPA justifying the need for a 30 day extension to complete performance testing.

If you have any questions regarding this performance testing notification, please feel free to contact either myself at (850) 891-5534 or Ms. Jennette Curtis at (850) 891-8850.

Yours Truly,

Robert McGarrah, Superintendent
Electric Production Division

cc: Winston A. Smith, EPA Region IV
Martin Costello, FDEP
B. Cowart, COT
G. King, COT
J. Curtis, COT

CITY OF TALLAHASSEE

ELECTRIC OPERATIONS
2602 JACKSON BLUFF RD.
TALLAHASSEE, FL 32304
850/891-5001 OFFICE
850/891-5033 FAX

January 29, 2001

Via Fax and Certified Mail

Mr. Winston A. Smith, Director
Air, Pesticides & Toxics Management Division
United States Environmental Protection Agency
Region 4
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-3104

Re: Initial Performance Testing Schedule Extension
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Smith:

This letter is submitted to your office seeking an extension to the initial performance test 60-day deadline required under 40 CFR 60.8. The unit, subject to regulation under 40 CFR 60, Subpart GG, initiated firing on No. 2 fuel oil on November 28, 2000. On December 1, 2000, the City achieved "maximum production rate" for firing No. 2 fuel oil in the unit. As such, initial performance testing on No. 2 fuel oil was scheduled to be completed no later than January 30, 2001. However, since achieving the maximum production rate, the City has experienced fuel line filter plugging and water injection system leaks and now projects that the unit will not be able to operate while firing fuel oil before the 60-day deadline has expired.

Originally, the fuel line filter plugging was associated with possible algal contamination of the fuel oil. The City contracted filtering and cleaning of the fuel oil, which delayed the December 20, 2000, initial performance test schedule by nine days. On the morning of December 29, 2000, the City found that fuel line filter plugging was a continuing source of difficulty and had to again postpone initial performance testing. However, fuel line filter plugging was then projected to be associated with fuel hose degradation. Replacement fuel hoses were installed on January 26, 2001, and initial performance testing was re-scheduled for January 30, 2001. On January 28, 2001, the unit was brought online firing fuel oil, and water injection system leaks were noted, causing postponement of the January 30, 2001 testing. The City speculates that the latest difficulty encountered (water injection system leaks) may be associated with improper re-installation of the water injection system after a scheduled maintenance outage that occurred between December 1 and 13, 2000.

As a result of the maintenance outage and mechanical failures that have been encountered, the City has only been able to fire fuel oil in the unit during five calendar days, including November 28, 2000 (the initial start up date).

In accordance with past extensions granted by the EPA, the City hereby requests an initial performance test extension of 30 days from the date that the unit is able to resume fuel oil firing following repairs to the water injection system.

If you have any questions regarding this performance testing extension request, please feel free to contact either Ms. Jennette Curtis at (850) 891-8850 or me at (850) 891-5534.

Yours Truly,

Robert McGarrah, Superintendent
Electric Production Division

RM:lh

cc: Dave McNeal, US EPA Region IV
Clair Fancy, FDEP
Martin Costello, FDEP
B. Cowart, COT
G. King, COT
J. Curtis, COT

AL

CITY OF TALLAHASSEE

ELECTRIC OPERATIONS
2602 JACKSON BLUFF RD.
TALLAHASSEE, FL 32304
850/891-5001 OFFICE
850/891-5033 FAX

December 19, 2000

CERTIFIED MAIL

Mr. Clair H. Fancy, Chief
Bureau of Air Regulation (BAR)
Florida Department of Environmental Protection (FDEP)
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Mail Station 5505

RECEIVED
DEC 20 2000
BUREAU OF AIR REGULATION

Re: Notification of Revised Performance Testing Schedule
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Fancy:

The City of Tallahassee submits this letter notifying you of the revised schedule for completion of No. 2 fuel oil performance testing required under Specific Condition D.1 of the above-referenced permit. Originally scheduled for November 16, 2000, and subsequently re-scheduled for December 20, 2000, the City of Tallahassee has postponed testing once again and has tentatively re-scheduled the performance testing to begin at approximately 7:30 AM on December 29, 2000, for visible emissions (Method 9), carbon monoxide (Method 10), and oxides of nitrogen (Method 20) on the above-referenced emission unit (a nominal 160 MW GE Series MS7FA combustion turbine attached to a non-fired heat recovery steam generator with a nominal 90 MW steam turbine) at the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, Florida.

The actual performance test date will continue to be subject to change as a result of schedule impacts during completion of adjustments to the unit. The City of Tallahassee will re-notify your office of any schedule changes that occur.

If you have any questions regarding this performance testing notification, please feel free to contact either myself at (850) 891-5534 or Ms. Jennette Curtis at (850) 891-8850.

Yours Truly,

Robert McGarrah, Superintendent
Electric Production Division

cc: Winston A. Smith, EPA Region IV
Martin Costello, FDEP
B. Cowart, COT
G. King, COT
J. Curtis, COT

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CITY OF TALLAHASSEE

ELECTRIC OPERATIONS
2602 JACKSON BLUFF RD.
TALLAHASSEE, FL 32304
850/891-5001 OFFICE
850/891-5033 FAX

December 12, 2000

CERTIFIED MAIL

Mr. Clair H. Fancy, Chief
Bureau of Air Regulation (BAR)
Florida Department of Environmental Protection (FDEP)
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Mail Station 5505

Re: *Notification of Initial Startup on Fuel Oil*
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Fancy:

On November 28, 2000, the City of Tallahassee initiated startup on fuel oil of a GE Series MS7FA combined-cycle combustion turbine at the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, Florida. The City of Tallahassee submits this letter as notification of the initial startup date in accordance with Chapter 40 of the Code of Federal Regulations Part 60.7(a)(3), as adopted by reference in Chapter 62-204.800, Florida Administrative Code.

If you have any questions regarding this initial startup notification, please feel free to contact either Ms. Jennette Curtis at (850) 891-8850 or me at (850) 891-5534.

Yours truly,

Robert McGarrah, Superintendent
Electric Production Division

REM/lh

cc: Winston A. Smith, EPA Region IV
B. Cowart, COT
G. King, COT
J. Curtis, COT

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CITY OF TALLAHASSEE

ELECTRIC OPERATIONS
2602 JACKSON BLUFF RD.
TALLAHASSEE, FL 32304
850/891-5001 OFFICE
850/891-5033 FAX

December 12, 2000

CERTIFIED MAIL

Mr. Clair H. Fancy, Chief
Bureau of Air Regulation (BAR)
Florida Department of Environmental Protection (FDEP)
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Mail Station 5505

Re: Notification of Revised Performance Testing Schedule
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Fancy:

The City of Tallahassee submits this letter notifying you of the revised schedule for completion of No. 2 fuel oil performance testing required under Specific Condition D.1 of the above-referenced permit. Originally scheduled for November 16, 2000, the City of Tallahassee has tentatively re-scheduled the performance testing to begin at approximately 7:30 AM on December 20, 2000, for visible emissions (Method 9), carbon monoxide (Method 10), and oxides of nitrogen (Method 20) on the above-referenced emission unit (a nominal 160 MW GE Series MS7FA combustion turbine attached to a non-fired heat recovery steam generator with a nominal 90 MW steam turbine) at the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, Florida.

The actual performance test date is subject to change as a result of schedule impacts during completion of adjustments to the unit. The City of Tallahassee will re-notify your office of any schedule changes that occur.

If you have any questions regarding this performance testing notification, please feel free to contact either Ms. Jennette Curtis at (850) 891-9850 or me at (850) 891-5534.

Yours truly,

Robert McGarrah, Superintendent
Electric Production Division

REM/lh

cc: Winston A. Smith, EPA Region IV
Martin Costello, FDEP
B. Cowart, COT
G. King, COT
J. Curtis, COT

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10-30-00
02:35 Hand Delivered

CITY OF TALLAHASSEE

ELECTRIC OPERATIONS
2602 JACKSON BLUFF RD.
TALLAHASSEE, FL 32304
850/891-5001 OFFICE
850/891-5033 FAX

October 30, 2000

Hand Delivered

Mr. Clair H. Fancy, Chief
Bureau of Air Regulation (BAR)
Florida Department of Environmental Protection (FDEP)
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Mail Station 5505

RECEIVED
OCT 30 2000
BUREAU OF AIR REGULATION

Re: Performance Testing Results
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Fancy:

Pursuant to Specific Condition A.2 of the above-referenced permit, the City of Tallahassee submits the attached manufacturer's curves for natural gas firing of the Unit 8 combined cycle combustion turbine (a nominal 160 MW GE Series MS7FA combustion turbine attached to a non-fired heat recovery steam generator with a nominal 90 MW steam turbine) at the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, Florida. The curves represent corrections relative to the turbine compressor inlet temperature (Curve No. 522HA852) and specific humidity (Curve No. 498HA697).

As this unit has just recently initiated operation (May 2000), the City of Tallahassee continues to monitor, test and fine-tune the unit to optimize performance. If, for any reason, the City identifies any deviation from the attached curves, we will contact the Department to explain details of the findings and resolution. Based on information and belief formed after reasonable inquiry of individuals primarily responsible for obtaining the information, I certify that the statements and information in this report are to the best of my knowledge and belief true, accurate, and complete.

If you have any questions regarding this compliance test notification, please feel free to contact either myself at (850) 891-5534 or Ms. Jennette Curtis at (850) 891-8850.

Yours Truly,

Robert McGarrah, Superintendent
Electric Production Division

cc: B. Cowart, COT
G. King, COT
J. Curtis, COT

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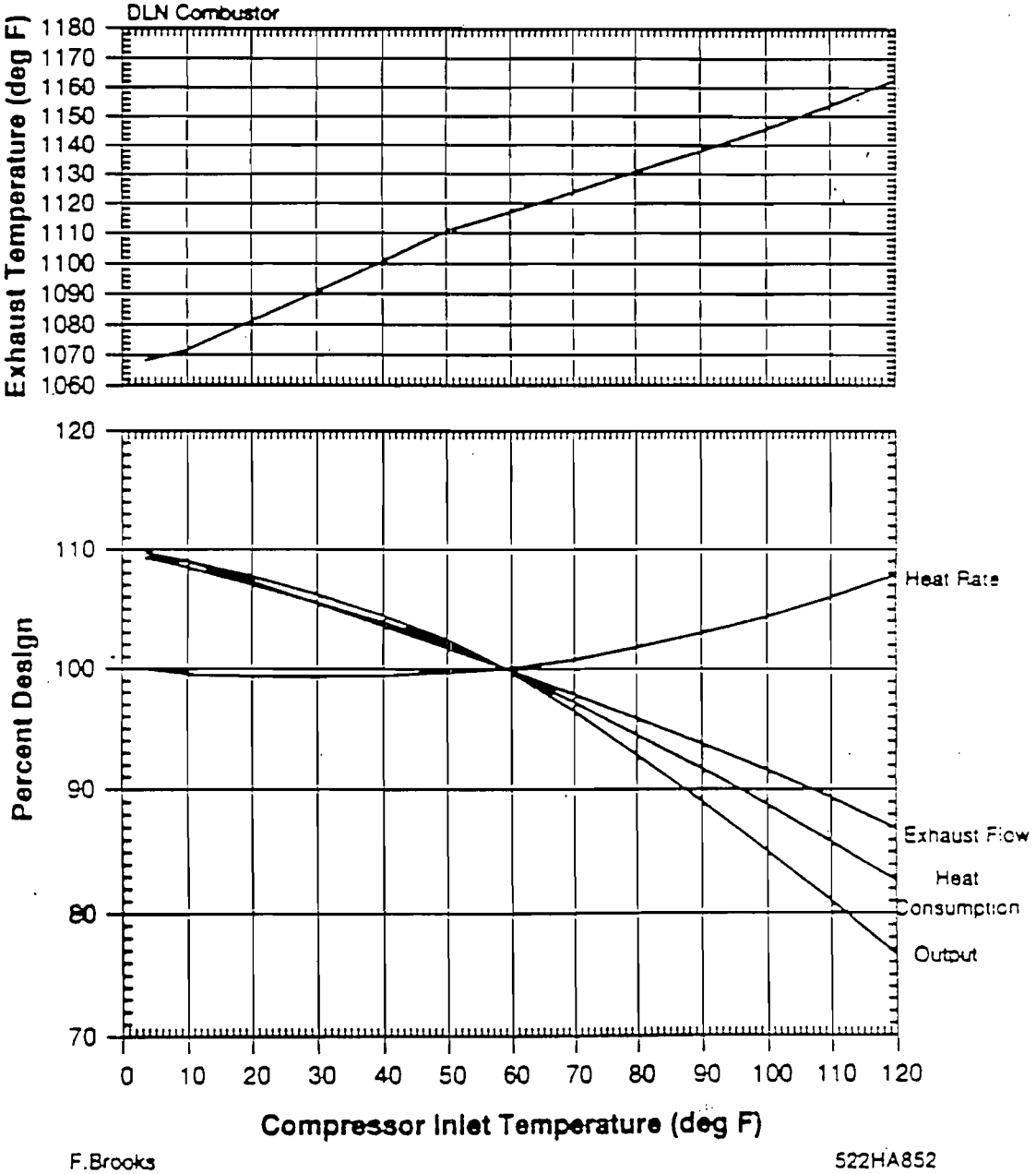
GENERAL ELECTRIC MODEL PG7241(FA) GAS TURBINE

Effect of Compressor Inlet Temperature on
Output, Heat Rate, Heat Consumption, Exhaust Flow
And Exhaust Temperature at Baseload

Fuel: Methane
Design Values on Curve 522HA851 Rev 0
DLN Combustor



F.Brooks
1/24/97

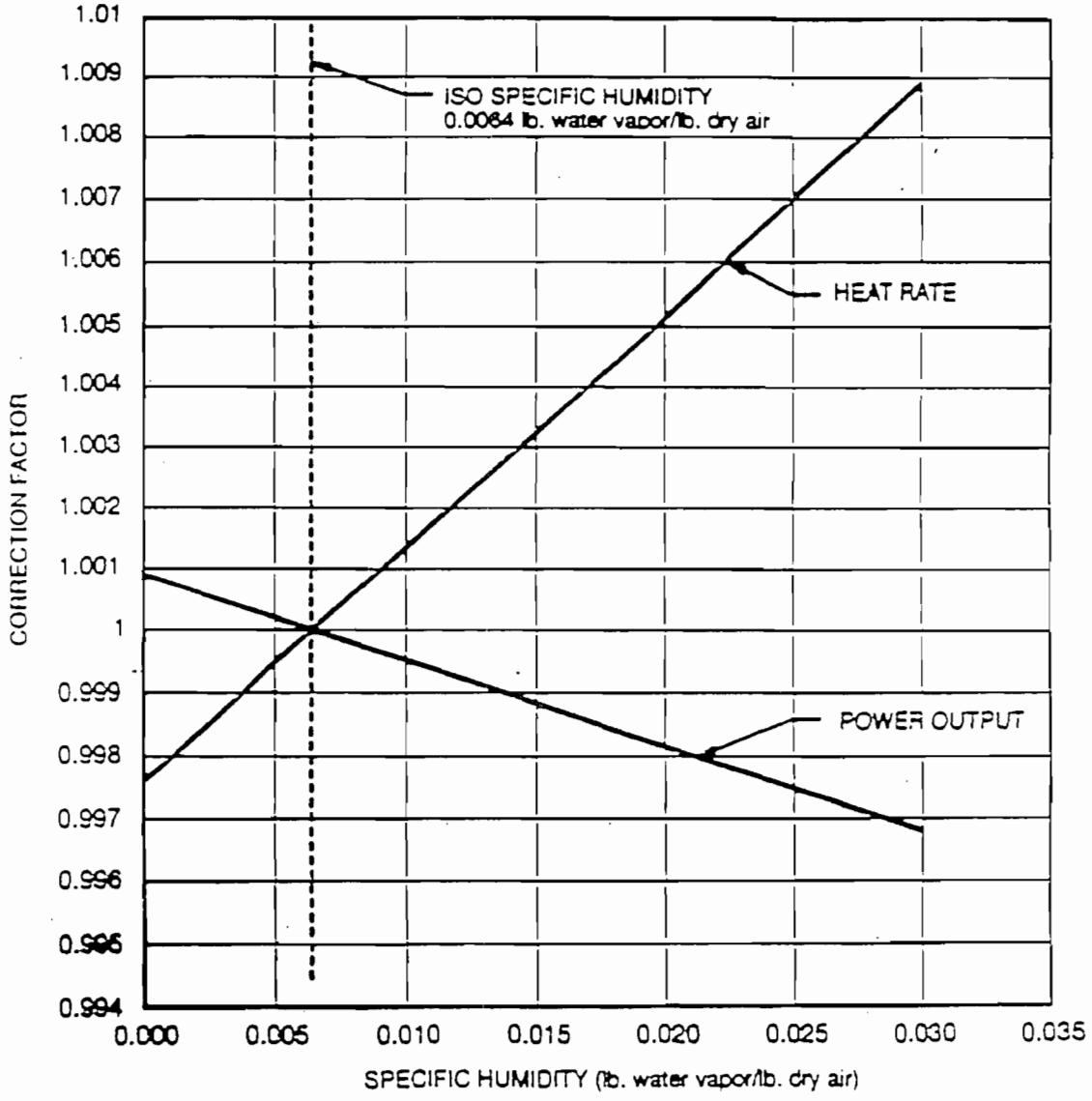
522HA852
Rev - 0

WEB

General Electric MS6001, MS7001 And MS9001 Gas Turbines

Corrections To Output And Heat Rate
For Non–Iso Specific Humidity Conditions

For Operation At Base Load On Exhaust
Temperature Control Curve



10/10/89
DA JAQUEWAY

498HA697
REV B

CITY OF TALLAHASSEE

ELECTRIC OPERATIONS
2602 JACKSON BLUFF RD.
TALLAHASSEE, FL 32304
850/891-5001 OFFICE
850/891-5033 FAX

October 27, 2000

FedEx

Mr. Clair H. Fancy, Chief
Bureau of Air Regulation (BAR)
Florida Department of Environmental Protection (FDEP)
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Mail Station 5505

Re: Performance Testing Results
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Fancy:

On September 15, 2000, the City of Tallahassee completed performance testing, in accordance with Specific Condition D.1 of the above-referenced permit, for visible emissions (Method 9), carbon monoxide (Method 10), and oxides of nitrogen (Method 20) on the above-referenced emission unit (a nominal 160 MW GE Series MS7FA combustion turbine attached to a non-fired heat recovery steam generator with a nominal 90 MW steam turbine) at the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, Florida. Results of the testing are contained in the attached report (two copies). Based on information and belief formed after reasonable inquiry of individuals primarily responsible for obtaining the information, I certify that the statements and information in this report are to the best of my knowledge and belief true, accurate, and complete.

If you have any questions regarding this compliance test notification, please feel free to contact either myself at (850) 891-5534 or Ms. Jennette Curtis at (850) 891-8850.

Yours Truly,

Robert McGarrah, Superintendent
Electric Production Division

cc: Winston A. Smith, EPA Region IV
B. Cowart, COT
G. King, COT
J. Curtis, COT

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CITY OF TALLAHASSEE

CITY HALL
300 S. ADAMS ST.
TALLAHASSEE, FL
32301-1731
850/891-0010
TDD 1-800/955-8771

SCOTT MADDOX
Mayor
JOHN PAUL BAILEY
Mayor Pro Tem

CHARLES E. BILLINGS
Commissioner
DEBBIE LIGHTSEY
Commissioner
STEVE MEISBURG
Commissioner

ANITA R. FAVORS
City Manager
ROBERT B. INZER
City Treasurer-Clerk

JAMES R. ENGLISH
City Attorney
RICARDO FERNANDEZ
City Auditor

October 27, 2000

FedEx

Mr. Clair H. Fancy, Chief
Bureau of Air Regulation (BAR)
Florida Department of Environmental Protection (FDEP)
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Mail Station 5505

Re: Continuous Monitoring System Performance Demonstration
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Fancy:

On August 31 and September 1, 2000, the City of Tallahassee completed demonstration of the continuous monitoring system (CMS) performance, in compliance with Specific Condition F.1. of Permit No. PSD-FL-239 on the above-referenced emission unit (a nominal 160 MW GE Series MS7FA combustion turbine attached to a non-fired heat recovery steam generator with a nominal 90 MW steam turbine) at the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, Florida. Results of the demonstration are contained in the attached report (two copies). Based on information and belief formed after reasonable inquiry of individuals primarily responsible for obtaining the information, I certify that the statements and information in the report are to the best of my knowledge and belief true, accurate, and complete.

If you have any questions regarding this compliance test notification, please feel free to contact either myself at (850) 891-5534 or Ms. Jennette Curtis at (850) 891-8850.

Yours Truly,

Robert McGarrah, Superintendent
Electric Production Division

cc: Winston A. Smith, EPA Region IV
B. Cowart, COT
G. King, COT
J. Curtis, COT

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2.0 SUMMARY AND DISCUSSION OF RESULTS

Unit 8 at the Purdom Plant was found to be operating within compliance limits. Tables 1 (70, 80 and 90 % of full load) and 2 (Full Load Test) summarize the emissions results.

Oxides of Nitrogen emissions at full load averaged 8.74 ppmvd @ 15% O_2, which is within the permitted standard of 12 ppmvd @ 15% O_2.

Full load CO emissions averaged 0.85 ppmvd, which is also within the permitted limit of 25 ppmvd.

Compliance with Federal New Source Performance Standards (NSPS) by 40CFR 60 Subpart GG, were calculated by first adjusting observed NO_x concentrations to 15% O_2 and than finally to ISO standard ambient conditions using the following equation:

$$\text{ISO } NO_x \text{ Emissions} = (NO_{xobs}\text{ppm})\left(P_{ref}/P_{obs}\right)^{0.5} e^{19(H_{obs}-0.00633)} (288°K/T_{amb})^{1.53}$$

Where:
NO_{xobs} = measured NO_x ppm at 15% O_2
P_{ref} = reference combustor inlet absolute pressure at 101.3 kilopascal ambient pressure (29.92 in. Hg)
P_{obs} = measured combustor inlet absolute pressure at test ambient pressure (actual barometric pressure in in. Hg)
H_{obs} = specific humidity at ambient air at test (g H_2O/g air)
T_{amb} = temperature of ambient air at test
e = 2.718 - transcendental constant

Oxide of nitrogen emissions at ISO ambient conditions averaged 10.87 ppm.

Mass emissions for NO_x and CO in pounds per hour were calculated using the actual heat input (HHV)and the pollutant concentration.

The fuel analysis of the natural gas stream was obtained from the Florida Gas Transmission and showed 3.57 ppm Sulfur and 0.89 lbs/hr SO_2 at full load. SO_2 emissions represented here, were calculated based on this value and the fuel flow rate.

Table 1. **Emission Summary**
Combustion Turbine Unit 8 - Gas Fired
City of Tallahassee Sam O. Purdom Plant
Tallahassee, Florida
September 15, 2000

Run Number	Time	Oxygen %	NOx Emissions ppm	ppm 15% O2	ppm @ ISO	lbs/hr	lbs/MMBTU	CT Gas Flow 100scf/hr	Heat Input MMBTUH HHV	SO2 lbs/hr
70% Load										
1	0753-0817	14.06	8.80	7.59	8.72	30.35	0.028	10495	1085.5	0.620
2	0828-0852	14.01	8.54	7.31	8.70	29.71	0.027	10659	1102.5	0.630
3	0900-0924	13.99	8.27	7.06	8.54	29.98	0.026	11151	1153.4	0.660
4	0932-0956	13.98	8.10	7.00	8.47	29.33	0.025	11151	1153.4	0.660
Average	---	14.01	8.43	7.24	8.61	29.84	0.027	10864	1123.7	0.643
80% Load										
1	1022-1038	13.92	7.04	5.95	7.46	28.07	0.022	12381	1280.6	0.730
2	1046-1102	13.91	7.34	6.19	7.78	29.20	0.023	12381	1280.6	0.730
3	1109-1125	13.87	7.37	6.18	7.76	30.30	0.023	12873	1331.5	0.760
Average	---	13.90	7.25	6.11	7.67	29.19	0.023	12545	1297.6	0.740
90% Load										
1	1143-1159	13.76	7.86	6.49	8.88	34.25	0.024	13857	1433.3	0.820
2	1208-1224	13.86	8.12	6.81	8.40	35.93	0.025	13857	1433.3	0.820
3	1231-1247	13.81	7.89	6.64	8.19	35.07	0.024	13857	1433.3	0.820
Average	---	13.81	7.96	6.65	8.49	35.08	0.024	13857	1433.3	0.820

Natural Gas Fd-Factor = 8710 MMBTU/dscf ***Heat Input HHV = (gas flow)(gross calorific value)/10E06***
lbs/hr = ppm(2.595 x 10^E-9)MW (20.9/20.9-%O2)(Fd)(Heat Input HHV)
MW NOx = 46 lbs/lb-mole

Table 2. **Emission Summary**
Combustion Turbine Unit 8 - Gas Fired - Full Load
City of Tallahassee Sam O. Purdom Plant
Tallahassee, Florida
September 15, 2000

Run Number	Time	Oxygen %	NOx Emissions ppm	ppm 15% O2	ppm @ ISO	lbs/hr	lbs/MMBTU	CO Emissions ppm	lbs/hr	lbs/MMBTU	CT Gas Flow 100scf/hr	Heat Input MMBTUH HHV	SO2 lbs/hr
Full Load													
1	1303-1403	13.61	10.84	8.77	10.55	50.70	0.032	0.88	2.52	0.002	15169	1568.9	0.900
2	1418-1518	13.70	10.83	8.87	11.15	50.71	0.033	0.86	2.45	0.002	15005	1552.0	0.890
3	1529-1629	13.63	10.58	8.59	10.92	48.71	0.032	0.80	2.24	0.001	14882	1539.3	0.880
Average	---	13.65	10.75	8.74	10.87	50.04	0.032	0.85	2.40	0.002	15019	1553.4	0.890

Natural Gas Fd-Factor = 8710 MMBTU/dscf
lbs/hr = ppm(2.595 x 10^E-9)MW (20.9/20.9-%O2)(Fd)(Heat Input HHV)
Heat Input HHV = (gas flow)(gross calorific value)/10E06
MW NOx = 46 lbs/lb-mole
MW CO = 28 lbs/lb-mole
Allowable Emissions
NOx =12 ppmvd @ 15%O2
CO = 25 ppmvd

AL

CITY OF TALLAHASSEE

ELECTRIC OPERATIONS
2602 JACKSON BLUFF RD.
TALLAHASSEE, FL 32304
850/891-5023 OFFICE
850/891-5033 FAX

December 20, 1999

RECEIVED
DEC 21 1999
BUREAU OF AIR REGULATION

VIA CERTIFIED MAIL; RETURN RECEIPT REQUESTED

Mr. Clair H. Fancy, Chief
Bureau of Air Regulation (BAR)
Florida Department of Environmental Protection (FDEP)
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Mail Station 5505

Re: Anticipated Initial Startup Notification
Unit 8 Combined Cycle Combustion Turbine
Permit No. PSD-FL-239
Sam O. Purdom Generating Station

Dear Mr. Fancy:

The City of Tallahassee (City) submits this letter as notification of the anticipated initial startup date in accordance with Chapter 40 of the Code of Federal Regulations (CFR) Part 60.7(a), as adopted by reference in 62-204.800, Florida Administrative Code (FAC). The City anticipates initial startup on January 25, 2000, of the above-referenced emission unit (160 MW (nominal rating) GE Series MS7FA combustion turbine attached to a non-fired heat recovery steam generator (HRSG) with a nominal 90 MW steam turbine) at the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, Florida.

It should be emphasized that this unit is still being constructed and that the initial startup date is subject, among other things, to completion of construction according to the proposed schedule and all materials comprising the unit being properly installed and in good working order. Thus, it should be understood that the anticipated startup date may be delayed. Pursuant to 40 CFR 60.7(a)(3), as adopted by reference in 62-204.800, FAC, the City will submit a notification of the actual date of initial startup postmarked within 15 days after initial startup.

If you have any questions regarding this anticipated initial startup notification, please feel free to contact either myself at (850) 891-5534 or Ms. Jennette Curtis at (850) 891-8850.

Yours truly,

Robert McGarrah
Superintendent of Production

cc: Winston A. Smith, EPA Region IV
Ben Cowart
Gordon King
Jennette Curtis

rmlt1203.doc

CITY OF TALLAHASSEE

CITY HALL
300 S. ADAMS ST.
TALLAHASSEE, FL
32301-1731
850/891-0010
TDD 1-800/955-8771

December 14, 1999

Mr. Al Linero
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Linero:

The City of Tallahassee would like to invite you on a tour of the of the new 250 MW combined-cycle Unit (No. 8) being constructed at the Sam O. Purdom Generating Station. The tour will be conducted on Friday, January 28th at 1:30 p.m.

As you were involved in the permitting of this project we thought this would be an excellent opportunity for us to provide you with an update on the project and an opportunity for you to observe the actual construction of the unit.

We will have members of the City's Unit 8 project team available to answer questions. We would not expect the tour to last more than 1 to 1-1/2 hours (depending upon the number of questions).

As a reminder, this is an industrial construction site so please dress accordingly. Hard hats and safety glasses will be provided at the facility. I've attached a map that provides the directions to the plant and offices.

I hope that you will take this opportunity to come visit us and our facility. In order to ensure that we are adequately prepared, please call Nancy Strickland at 850-891-8852 to let us know if you will be able to join us on the 28th.

Sincerely,

Jennette Curtis

Jennette Curtis
Environmental Manager

JC/ns

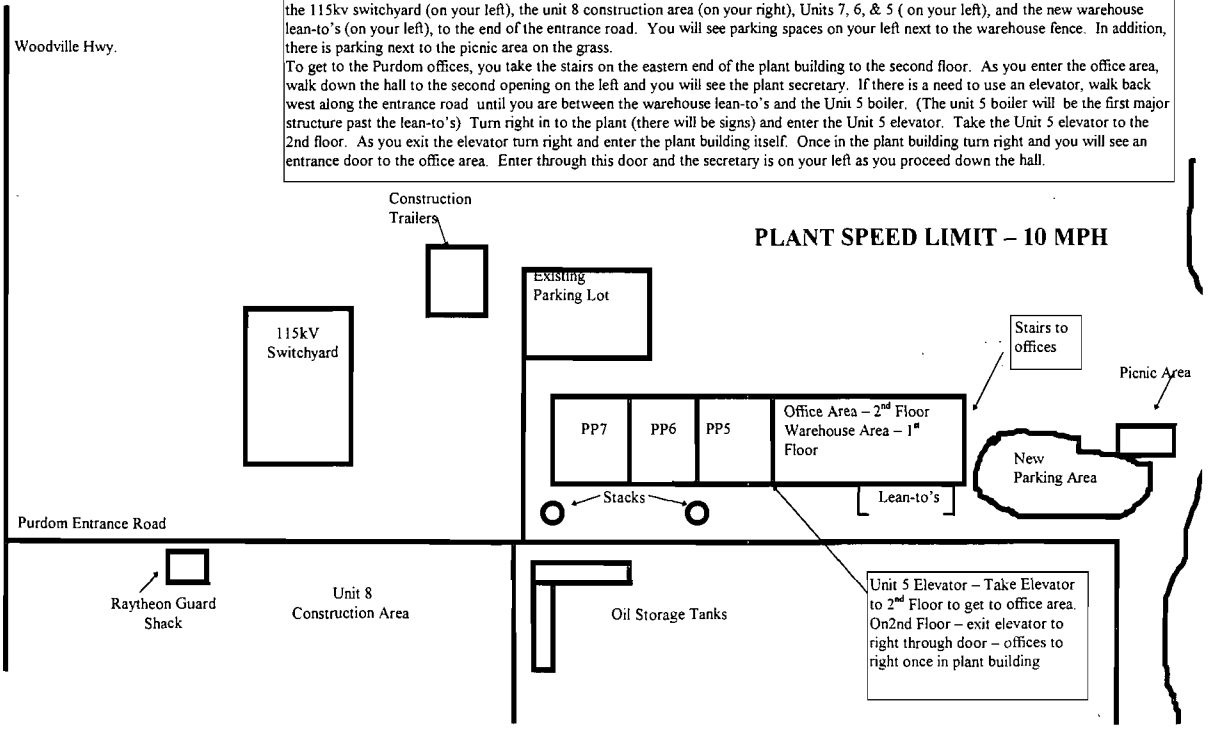
Attachment (map)

c cc: Ricardo Fernandez, Assistant City Manager, w/o attachment
Kevin Wailes, Electric Utility Manager, w/o attachment
Gary Brinkworth, Utility Business and Customer Services Director, w/o attachment
Rob McGarrah, Production Superintendent, w/o attachment
Gordon King, Purdom Plant, Supervisor, w/o attachment

c/userdata/winword/environmentalmanagement/envserv/PP8Team/PP8ConstTourLetter.doc

Purdom Entrance and Parking Instructions: Take Woodville Highway south to St. Marks. Turn left (east) into the Purdom entrance road and continue east on the entrance road. You will approach the Raytheon guard shack on the right. Stop and check in with guard. (If you are in a city vehicle the guard will wave you in, otherwise you will have to register with the guard.) Continue east on the entrance road past the 115kv switchyard (on your left), the unit 8 construction area (on your right), Units 7, 6, & 5 (on your left), and the new warehouse lean-to's (on your left), to the end of the entrance road. You will see parking spaces on your left next to the warehouse fence. In addition, there is parking next to the picnic area on the grass.

To get to the Purdom offices, you take the stairs on the eastern end of the plant building to the second floor. As you enter the office area, walk down the hall to the second opening on the left and you will see the plant secretary. If there is a need to use an elevator, walk back west along the entrance road until you are between the warehouse lean-to's and the Unit 5 boiler. (The unit 5 boiler will be the first major structure past the lean-to's) Turn right in to the plant (there will be signs) and enter the Unit 5 elevator. Take the Unit 5 elevator to the 2nd floor. As you exit the elevator turn right and enter the plant building itself. Once in the plant building turn right and you will see an entrance door to the office area. Enter through this door and the secretary is on your left as you proceed down the hall.



ORIGINAL TO CLAIR
XC: HLR 10/14

CITY OF TALLAHASSEE

ELECTRIC OPERATIONS
2602 JACKSON BLUFF RD.
TALLAHASSEE, FL 32304
850/891-5023 OFFICE
850/891-5033 FAX

October 12, 1998

CERTIFIED MAIL

RECEIVED
OCT 1 [illegible] 1998
DIVISION OF AIR
RESOURCES MANAGEMENT

Mr. Hamilton Oven
Siting Coordinator Office, MS 48
and
Mr. Howard L. Rhodes, Director
Bureau of Air Regulation, MS 5505

Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Commencement of Construction Notification
Unit 8 - Air Construction Permit No. PSD-FL-239
Site Certification PA 97-35
Sam O. Purdom Generating Station

Dear Messrs. Oven and Rhodes:

This letter is being provided to inform you of the commencement of construction date in accordance with Site Certification Condition XII.D, Air Construction Permit Condition Section III, Subsection G.4, and Chapter 40 Code of Federal Regulations (CFR) Part 60.7(a), as adopted by reference in 62-204.800, Florida Administrative Code (FAC). A continuous program of construction of Unit 8 commenced with a groundbreaking ceremony on October 3, 1998 at the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, Florida. The project includes construction of a GE series MS7FA combined cycle combustion turbine subject to regulation under 40 CFR Part 60, Subpart GG, as adopted by reference in 62-204.800, FAC.

If you have any questions regarding this commencement notification, please feel free to contact either myself at (904) 891-5535 or Ms. Jennette Curtis at (904) 891-8850.

Yours Truly,

R. E. McGarrah
Superintendent, Production

cc: Winston A. Smith, Director, EPA Region IV
Bobby A. Cooley, Director, FDEP-Northwest District Office
Ben Cowart, COT
Gordon King, COT
Jennette Curtis, COT
Gary Sams, HGSS
Angela Morrison, HGSS
Doug Fulle, FWENC
Frank Michel, Raytheon

RECEIVED
OCT 15 1998
BUREAU OF
AIR REGULATION

c:\files\purdom8\rmlt0915.doc

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Ms. Jeanette Curtis, EA
City of Tallahassee Utilities
300 S. Adams St.
Tallahassee, FL 32301

4a. Article Number
P 265 659 363

4b. Service Type
☐ Registered ☑ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery JUN 15 1998

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6.

Thank you for using Return Receipt Service.

Your RETURN ADDRESS completed on the reverse side?

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to: Brian Beals
Street & Number: EPA - Region IV
Post Office, State, & ZIP Code: Atlanta GA

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	6-17-98

PS Form **3800**, April 1995

P 265 659 364

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

Mr. Brian Beals, Section Chief
Air, Radiation Technology Branch
US EPA - Region IV
61 Forsyth Street
Atlanta, GA 30303

4a. Article Number
P 265 659 364

4b. Service Type
☐ Registered ☑ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery 6-19-98

5. Received By: *(Print Name)* Bruce Hite

6. Signature: *(Addressee or Agent)* X Bruce Hite

8. Addressee's Address *(Only if requested and fee is paid)*

Thank you for using Return Receipt Service.

Is your RETUR[N] the reverse side?

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to: Jeanette Curtis
Street & Number: COT
Post Office, State, & ZIP Code: TLH

Postage	$ 3.23
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	6-16-98

TALLAHASSEE FL 1998 USPS

PS Form **3800**, April 1995

P 265 659 363

P 265 659 361

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to	Mr. Ronald Mowrey
Street & Number	515 N Adams St.
Post Office, State, & ZIP Code	Tall FL 32301
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$ 3.23
Postmark or Date	6/16/98

PS Form **3800**, April 1995

P 265 659 362

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to	Mr. Gary Sams
Street & Number	123 S. Calhoun
Post Office, State, & ZIP Code	Tall FL
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$ 3.23
Postmark or Date	6/16/98

PS Form **3800**, April 1995

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. Ronald A. Mowrey, Esq
515 N. Adams St.
Tallahassee, FL 32301

4a. Article Number
P 265 659 361

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
6-18-98

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
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- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Mr. Gary Sams, Esq.
Hoppins, Sack, Sams & Smith
123 S. Calhoun
PO Box 6526
Tallahassee, FL 32314

4a. Article Number
P 265 659 362

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
JUN 18

5. Received By: *(Print Name)*
Jan Shaw

8. Addressee's Address *(Only if requested and fee is paid)*

6 Signature: *(Addressee or Agent)*
X

Thank you for using Return Receipt Service.

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Commissioner Maxie Lawhon, Vice-Chairman
P O Box 224
Sopchoppy, FL 32358

4a. Article Number
P 265 659 368

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
6-19-98

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X Maxie Lawhon

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

PS Form **3800**, April 1995

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to Commissioner Maxie Lawhon
Street & Number
Post Office, State, & ZIP Code Sopchoppy FL

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	COT 6-17-98

Best Available Copy

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. Ed Middleswart
Dept. of Environmental Protection
160 Govenmental Center
Pensacola, FL 32501-5794

4a. Article Number
P 265 659 367

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
6-17-98

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

PS Form **3800**, April 1995

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to Ed. Middleswart
Street & Number
Post Office, State, & ZIP Code PENSACOLA FL

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	COT 6-17-98

P 265 659 367

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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. Chuck Shields
Mayor
P O Box 296
St. Marks, FL 32355

4a. Article Number
P 265 659 366

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
6/17/98

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X

PS Form **3811,** December 1994 102595-97-B-0179 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to Chuck Shields
Street & Number
Post Office, State, & ZIP Code St. Marks FL

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	6-17-98 CDT

PS Form **3800**, April 1995

P 265 659 366

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. John Bunyak, Chief
Policy, Planning & Permit Review Branch
NPS-Air Quality Division
P.O. Box 25287
Denver, CO 80225

4a. Article Number
P 265 659 365

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
6-22-98

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X

PS Form **3811,** December 1994 102595-97-B-0179 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to John Bunyak
Street & Number NPS
Post Office, State, & ZIP Code Denver CO

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	6-17-98 CDT

PS Form **3800**, April 1995

P 265 659 365

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "*Return Receipt Requested*" on the mailpiece below the article number.
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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Commissioner Mike Stewart
754 Rehwinkle Road
Crawfordville, FL 32326

4a. Article Number P 265 659 372

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery 6-19-98

5. Received By: *(Print Name)* Anne Q. Stewart

6. Signature: *(Addressee or Agent)* X Anne Q. Stewart

8. Addressee's Address *(Only if requested and fee is paid)*

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to: Comm. Mike Stewart
Street & Number: 754 Rehwinkle Rd.
Post Office, State, & ZIP Code: Crawfordville, FL

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	6-17-98 CRT

PS Form **3800**, April 1995

P 265 659 372

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3 Article Addressed to:

Mr. Edward Mills IV
Wakulla County Planning Director
P O Box 1263
Crawfordville, FL 32326

4a. Article Number P 265 659 373

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

5 Received By: *(Print Name)* LaJada Sanders

6 Signature: *(Addressee or Agent)* X LaJada Sanders

8. Addressee's Address *(Only if requested and fee is paid)*

Is your RETURN

Thank you for using Return Receipt Service.

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to: Comm. M. Stewart
Street & Number: Crawf. FL
Post Office, State, & ZIP Code:

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	6-17-98

PS Form **3800**, April 1995

P 265 659 373

P 265 659 371

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to: Comm. J. W. Pope
Street & Number: Crawfordville FL
Post Office, State, & ZIP Code:

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	6-17-98

PS Form **3800**, April 1995

ed on the reverse side?

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I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Commissioner J. Wyatt Pope, Ph.D.
P O Box 1444
Crawfordville, FL 32326

4a. Article Number: P 265 659 371

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery: 6-18-98

5. Received By: *(Print Name)* Jeanne Pope

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)* X Jeanne Pope

Is your RETURN AD

Thank you for using Return Receipt Service.

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

P 265 659 369

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to: Comm. Leon Nettles
Street & Number: 467 Old Magnolia Rd
Post Office, State, & ZIP Code: Crawfordville FL

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	6-17-98

PS Form **3800**, April 1995

Is yo... ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Commissioner Leon Nettles
467 Old Magnolia Rd
Crawfordville, FL 32326

4a. Article Number: P 265 659 369

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery: 6/22/98

5. Received By: *(Print Name)* Leon E Nettles

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)* X

Thank you for using Return R...

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

P 265 659 370

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to Connie M. Crum	
Street & Number Panacea FL	
Post Office, State, & ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form **3800**, April 1995

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

June 16, 1998

To: Public Commentors, Public Hearing Participants and Interested Persons
(see address list attached)

Re: PSD Permit No. PSD-FL-239
City of Tallahassee
Purdom Generating Station, Unit 8

Enclosed are attachments which supplement the Final Determination for the above referenced PSD Permit issued on May 28, 1998. This supplement to the Final Determination addresses questions from the transcript of the public meeting held on October 30, 1997 in Crawfordville which were not previously listed because the transcript was not available at the time the permit was issued.

In addition to the appeal process described in the previous Notice of Final Permit, federal appeals procedures concerning this air permit are outlined in 40 CFR 124.19 which is also attached. Any person who filed comments on the above referenced permit or participated in the public meeting may petition the Environmental Appeals Board to review any condition of the permit decision. The petition must be submitted to the Regional Administrator within 30 days from service of this notice. Petitions may be addressed to Mr. John H. Hankinson, Jr., Regional Administrator, U.S. Environmental Protection Agency, Region 4, Air, Pesticides and Toxics Management Division, 61 Forthsyth Street, Atlanta, GA 30303.

The record for the above referenced permit, which contains all comments received, the public meeting transcripts, written materials submitted, EPA's comments and DEP's responses to comments, and other relevant information and analysis may be reviewed at the Department of Environmental Protection's Division of Air Resources Management office located at 111 South Magnolia Drive in Tallahassee during office hours of 8:00 am to 5:00 pm Monday through Friday, phone number (850) 488-0114, attention Kim Tober. For other information contact Martin Costello, Professional Engineer II, or A. A. Linero, P.E. Administrator, New Source Review Section, at the above phone number

Sincerely,

A. A. Linero, P.E.

for C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Supplement to the Final Determination for PSD Permit PSD-FL-239 was sent by certified mail before the close of business on 6-17-98 to the person(s) listed:

Addressee List:

Ms. Jennette Curtis, City of Tallahassee
Mr. Brian Beals, EPA
Mr. John Bunyak, NPS
Mr. Ed Middleswart, NWD
Mr. Ronald A. Mowrey, Esq.
Mr. Edward Mills IV, Wakulla County Planning Director
Mr. Chuck Shields, Mayor of St. Marks
Mr. Gary Sams, Esq.
Wakulla County Commissioner Maxie Lawhon, Vice-Chairman
Wakulla County Commissioner Warren Crum, Chairman
Wakulla County Commissioner Mike Stewart
Wakulla County Commissioner Leon Nettles
Wakulla County Commissioner J. Wyatt Pope, Ph.D.

Clerk Stamp

Kina Tober (Clerk) 6-17-98 (Date)

PART 124—PROCEDURES FOR DECISIONMAKING

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APPENDIX A TO PART 124—GUIDE TO DECISIONMAKING UNDER PART 124

AUTHORITY: Resource Conservation and Recovery Act, 42 U.S.C. 6901 *et seq.*; Safe Drinking Water Act, 42

U.S.C. 300(f) *et seq.*; Clean Water Act, 33 U.S.C. 1251 *et seq.*; Clean Air Act, 42 U.S.C. 7401 *et seq.*

SOURCE: 48 FR 14264, Apr. 1, 1983, unless otherwise noted.

Subpart A—General Program Requirements

§ 124.1 Purpose and scope.

(a) This part contains EPA procedures for issuing, modifying, revoking and reissuing, or terminating all RCRA, UIC, PSD and NPDES "permits" (including "sludge-only" permits issued pursuant to § 122.1(b)(3)), other than RCRA and UIC "emergency permits" (see §§ 270.61 and 144.34) and RCRA "permits by rule" (§ 270.60). The latter kinds of permits are governed by part 270. RCRA interim status and UIC authorization by rule are not "permits" and are covered by specific provisions in parts 144, subpart C, and 270. This part also does not apply to permits issued, modified, revoked and reissued or terminated by the Corps of Engineers. Those procedures are specified in 33 CFR parts 320–327. The procedures of this part also apply to denial of a permit for the active life of a RCRA hazardous waste management facility or unit under § 270.29.

(b) Part 124 is organized into six subparts. Subpart A contains general procedural requirements applicable to all permit programs covered by these regulations. Subparts B through F supplement these general provisions with requirements that apply to only one or more of the programs. Subpart A describes the steps EPA will follow in receiving permit applications, preparing draft permits, issuing public notice, inviting public comment and holding public hearings on draft permits. Subpart A also covers assembling an administrative record, responding to comments, issuing a final permit decision, and allowing for administrative appeal of the final permit decision. Subpart B is reserved for specific procedural requirements for RCRA permits. There are none of these at present but they may be added in the future. Subpart C contains definitions and specific procedural requirements for PSD permits. Subpart D applies to NPDES permits until an evidentiary hearing begins, when subpart E procedures take over for EPA-issued NPDES permits and EPA-terminated RCRA permits. Subpart F, which is based on the "initial licensing" provisions of the Administrative Procedure Act (APA), can be used instead of subparts A through E in appropriate cases.

(c) Part 124 offers an opportunity for three kinds of hearings: A public hearing under subpart A, an evidentiary hearing under subpart E, and a panel hearing under subpart F. This chart describes when these hearings are available for each of the five permit programs.

HEARINGS AVAILABLE UNDER THIS PART

Programs	Subpart		
	(A)	(E)	(F)
	Public hearing	Evidentiary hearing	Panel hearing
RCRA	On draft permit, at Director's discretion or on request (§ 124.12).	(1) Permit termination (RCRA section 3008). (2) With NPDES evidentiary hearing (§ 124.74(b)(2)).	(1) At RA's discretion in lieu of public hearing (§§ 124.12 and 124.111(a)(3)). (2) When consolidated with NPDES draft permit processed under Subpart F (§ 124.111(a)(1)(i)).
UIC	On draft permit, at Director's discretion or on request (§ 124.12).	With NPDES evidentiary hearing (§ 124.74(b)(2)).	(1) At RA's discretion in lieu of public hearing (§§ 124.12 and 124.111(a)(3)). (2) When consolidated with NPDES draft permit processed under Subpart F (§ 124.111(a)(1)(i)).
PSD	On draft permit, at Director's discretion or on request (§ 124.12).	Not available (§ 124.71(c))	When consolidated with NPDES draft permit processed under Subpart F if RA determines that CAA one year deadline will not be violated.
NPDES (other than general permit).	On draft permit, at Director's discretion or on request (§ 124.12).	(1) On request to challenge any permit condition or variance (§ 124.74). (2) At RA's discretion for any 301(h) request (§ 124.64(b)).	(1) At RA's discretion when first decision on permit or variance request (§ 124.111). (2) At RA's discretion when request for evidentiary hearing is granted under § 124.75(a)(2) (§§ 124.74(c)(8) and 124.111(a)(2)). (3) At RA's discretion for any 301(h) request (§ 124.64(b)).

HEARINGS AVAILABLE UNDER THIS PART—Continued

Programs	Subpart		
	(A)	(E)	(F)
	Public hearing	Evidentiary hearing	Panel hearing
NPDES (general permit).	On draft permit, at Director's discretion or on request (§ 124.12).	Not available (§ 124.71(a))	At RA's discretion in lieu of public hearing (§ 124.111(a)(3)).
404	On draft permit or on application when no draft permit, at Director's discretion or on request (§ 124.12).	Not available (§ 124.71)	Not available (§ 124.111).

(d) This part is designed to allow permits for a given facility under two or more of the listed programs to be processed separately or together at the choice of the Regional Administrator. This allows EPA to combine the processing of permits only when appropriate, and not necessarily in all cases. The Regional Administrator may consolidate permit processing when the permit applications are submitted, when draft permits are prepared, or when final permit decisions are issued. This part also allows consolidated permits to be subject to a single public hearing under § 124.12, a single evidentiary hearing under § 124.75, or a single non-adversary panel hearing under § 124.120. Permit applicants may recommend whether or not their applications should be consolidated in any given case.

(e) Certain procedural requirements set forth in part 124 must be adopted by States in order to gain EPA approval to operate RCRA, UIC, NPDES, and 404 permit programs. These requirements are listed in §§ 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA) and signaled by the following words at the end of the appropriate part 124 section or paragraph heading: *(applicable to State programs see §§ 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA)).* Part 124 does not apply to PSD permits issued by an approved State.

(f) To coordinate decisionmaking when different permits will be issued by EPA and approved State programs, this part allows applications to be jointly processed, joint comment periods and hearings to be held, and final permits to be issued on a cooperative basis whenever EPA and a State agree to take such steps in general or in individual cases. These joint processing agreements may be provided in the Memorandum of Agreement developed under §§ 123.24 (NPDES), 145.24 (UIC), 233.24 (404), and 271.8 (RCRA).

[48 FR 14264, Apr. 1, 1983, as amended at 54 FR 9607, Mar. 7, 1989; 54 FR 18785, May 2, 1989]

§ 124.2 Definitions.

(a) In addition to the definitions given in §§ 122.2 and 123.2 (NPDES), 501.2 (sludge management), 144.3 and 145.2 (UIC), 233.3 (404), and 270.2 and 271.2 (RCRA), the definitions below apply to this part, except for PSD permits which are governed by the definitions in § 124.41. Terms not defined in this section have the meaning given by the appropriate Act.

Administrator means the Administrator of the U.S. Environmental Protection Agency, or an authorized representative.

Applicable standards and limitations means all State, interstate, and federal standards and limitations to which a "discharge," a "sludge use or disposal practice" or a related activity is subject under the CWA, including "standards for sewage sludge use or disposal," "effluent limitations," water quality standards, standards of performance, toxic effluent standards or prohibitions, "best management practices," and pretreatment standards under sections 301, 302, 303, 304, 306, 307, 308, 403, and 405 of CWA.

Application means the EPA standard national forms for applying for a permit, including any additions, revisions or modifications to the forms; or forms approved by EPA for use in "approved States," including any approved modifications or revisions. For RCRA, application also includes the information required by the Director under §§ 270.14 through 270.29 [contents of Part B of the RCRA application].

Appropriate Act and regulations means the Clean Water Act (CWA); the Solid Waste Disposal Act, as amended by the Resource Conservation Recovery Act (RCRA); or Safe Drinking Water Act (SDWA), whichever is applicable; and applicable regulations promulgated under those statutes. In the case of an "approved State program" appropriate Act and regulations includes program requirements.

Consultation with the Regional Administrator (§ 124.62(a)(2)) means review by the Regional Administrator following evaluation by a panel of the technical merits of all 301(k) applications ap-

proved by the Director. The panel (to be appointed by the Director of the Office of Water Enforcement and Permits) will consist of Headquarters, Regional, and State personnel familiar with the industrial category in question.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act of Federal Pollution Control Act Amendments of 1972) Public Law 92–500, as amended by Public Law 95–217 and Public Law 95–576; 33 U.S.C. 1251 *et seq.*

Director means the Regional Administrator, the State director or the Tribal director as the context requires, or an authorized representative. When there is no approved State or Tribal program, and there is an EPA administered program, *Director* means the Regional Administrator. When there is an approved State or Tribal program, "Director" normally means the State or Tribal director. In some circumstances, however, EPA retains the authority to take certain actions even when there is an approved State or Tribal program. (For example, when EPA has issued an NPDES permit prior to the approval of a State program, EPA may retain jurisdiction over that permit after program approval; see § 123.1) In such cases, the term "Director" means the Regional Administrator and not the State or Tribal director.

Draft permit means a document prepared under § 124.6 indicating the Director's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a "permit." A notice of intent to terminate a permit and a notice of intent to deny a permit as discussed in § 124.5, are types of "draft permits." A denial of a request for modification, revocation and reissuance or termination, as discussed in § 124.5, is not a "draft permit." A "proposal permit" is not a "draft permit."

Environmental Appeals Board shall mean the Board within the Agency described in § 1.25(e) of this title. The Administrator delegates authority to the Environmental Appeals Board to issue final decisions in RCRA, PSD, UIC, or NPDES permit appeals filed under this subpart, including informal appeals of denials of requests for modification, revocation and reissuance, or termination of permits under Section 124.5(b). An appeal directed to the Administrator, rather than to the Environmental Appeals Board, will not be considered. This delegation does not preclude the Environmental Appeals Board from referring an appeal or a motion under this subpart to the Administrator when the Environmental Appeals Board, in its discretion, deems it appropriate to do so. When an appeal or motion is referred to the Administrator by the Environmental Appeals Board, all parties shall be so notified and the rules in this subpart referring to the Environmental Appeals Board shall be interpreted as referring to the Administrator.

EPA ("EPA") means the United States "Environmental Protection Agency."

Facility or activity means any "HWM facility," UIC "injection well," NPDES "point source" or "treatment works treating domestic sewage" or State 404 dredge or fill activity, or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the RCRA, UIC, NPDES, or 404 programs.

Federal Indian reservation (in the case of NPDES) means all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation.

General permit (NPDES and 404) means an NPDES or 404 "permit" authorizing a category of discharges or activities under the CWA within a geographical area. For NPDES, a general permit means a permit issued under § 122.28. For 404, a general permit means a permit issued under § 233.37.

Indian Tribe means (in the case of UIC) any Indian Tribe having a federally recognized governing body carrying out substantial governmental duties and powers over a defined area. For the NPDES program, the term "Indian Tribe" means any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian reservation.

Interstate agency means an agency of two or more States established by or under an agreement or compact approved by the Congress, or any other agency of two or more States having substantial powers or duties pertaining to the control of pollution as determined and approved by the Administrator under the "appropriate Act and regulations."

Major facility means any RCRA, UIC, NPDES, or 404 "facility or activity" classified as such by the Regional Administrator, or, in the case of "approved State programs," the Regional Administrator in conjunction with the State Director.

NPDES means National Pollutant Discharge Elimination System.

Owner or operator means owner or operator of any "facility or activity" subject to regulation under the RCRA, UIC, NPDES, or 404 programs.

Permit means an authorization, license, or equivalent control document issued by EPA or an "approved State" to implement the requirements of this part and parts 122, 123, 144, 145, 233, 270, and 271. "Permit" includes RCRA "permit by rule" (§ 270.60), UIC area permit (§ 144.33), NPDES or 404 "general permit" (§§ 270.61, 144.34, and 233.38). Permit does not include

RCRA interim status (§ 270.70), UIC authorization by rule (§ 144.21), or any permit which has not yet been the subject of final agency action, such as a "draft permit" or a "proposed permit."

Person means an individual, association, partnership, corporation, municipality, State, Federal, or Tribal agency, or an agency or employee thereof.

RCRA means the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 (Pub. L. 94–580, as amended by Pub. L. 95–609, 42 U.S.C. 6901 *et seq*).

Regional Administrator means the Regional Administrator of the appropriate Regional Office of the Environmental Protection Agency or the authorized representative of the Regional Administrator.

Schedule of compliance means a schedule of remedial measures included in a "permit," including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the "appropriate Act and regulations."

SDWA means the Safe Drinking Water Act (Pub. L. 95–523, as amended by Pub. L. 95–1900; 42 U.S.C. 300f *et seq*).

Section 404 program or State 404 program or 404 means an "approved State program" to regulate the "discharge of dredged material" and the "discharge of fill material" under section 404 of the Clean Water Act in "State regulated waters."

Site means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.

State means one of the States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands (except in the case of RCRA), the Commonwealth of the Northern Mariana Islands, or an Indian Tribe that meets the statutory criteria which authorize EPA to treat the Tribe in a manner similar to that in which it treats a State (except in the case of RCRA).

State Director means the chief administrative officer of any State, interstate, or Tribal agency operating an approved program, or the delegated representative of the State director. If the responsibility is divided among two or more States, interstate, or Tribal agencies, "State Director" means the chief administrative officer of the State, interstate, or Tribal agency authorized to perform the particular procedure or function to which reference is made.

State Director means the chief administrative officer of any State or interstate agency operating an "approved program," or the delegated representative of the state Director. If responsibility is divided among two or more State or interstate agencies, "State Director" means the chief administrative officer of the State or interstate agency authorized to perform the particular procedure or function to which reference is made.

UIC means the Underground Injection Control program under Part C of the Safe Drinking Water Act, including an "approved program."

Variance (NPDES) means any mechanism or provision under section 301 or 316 of CWA or under 40 CFR part 125, or in the applicable "effluent limitations guidelines" which allows modification to or waiver of the generally applicable effluent limitation requirements or time deadlines of CWA. This includes provisions which allow the establishment of alternative limitations based on fundamentally different factors or on sections 301(c), 301(g), 301(h), 301(i), or 316(a) of CWA.

(b) For the purposes of part 124, the term *Director* means the State Director or Regional Administrator and is used when the accompanying provision is required of EPA-administered programs and of State programs under §§ 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA). The term *Regional Administrator* is used when the accompanying provision applies exclusively to EPA-issued permits and is not applicable to State programs under these sections. While States are not required to implement these latter provisions, they are not precluded from doing so, notwithstanding use of the term "Regional Administrator."

(c) The term *formal hearing* means any evidentiary hearing under subpart E or any panel hearing under subpart F but does not mean a public hearing conducted under § 124.12.

[48 FR 14264, Apr. 1, 1983; 48 FR 30115, June 30, 1983, as amended at 49 FR 25981, June 25, 1984; 53 FR 37410, Sept. 26, 1988; 54 FR 18785, May 2, 1989; 57 FR 5335, Feb. 13, 1992; 57 FR 60129, Dec. 18, 1992; 58 FR 67983, Dec. 22, 1993; 59 FR 64343, Dec. 14, 1994]

§ 124.3 Application for a permit.

(a) *Applicable to State programs, see §§ 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA).* (1) Any person who requires a permit under the RCRA, UIC, NPDES, or PSD programs shall complete, sign, and submit to the Director an application for each permit required under §§ 270.1 (RCRA), 144.1 (UIC), 40 CFR 52.21 (PSD), and 122.1 (NPDES). Applications are not required for RCRA permits by rule (§ 270.60), underground injections authorized by rules (§§ 144.21 through 144.26), NPDES general permits (§ 122.28) and 404 general permits (§ 233.37).

(2) The Director shall not begin the processing of a permit until the applicant has fully complied

(2) Public notice of any comment period under this paragraph shall identify the issues to which the requirements of § 124.14(a) shall apply.

(3) On his own motion or on the request of any person, the Regional Administrator may direct that the requirements of paragraph (a)(1) of this section shall apply during the initial comment period where it reasonably appears that issuance of the permit will be contested and that applying the requirements of paragraph (a)(1) of this section will substantially expedite the decisionmaking process. The notice of the draft permit shall state whenever this has been done.

(4) A comment period of longer than 60 days will often be necessary in complicated proceedings to give commenters a reasonable opportunity to comply with the requirements of this section. Commenters may request longer comment periods and they shall be granted under § 124.10 to the extent they appear necessary.

(b) If any data information or arguments submitted during the public comment period, including information or arguments required under § 124.13, appear to raise substantial new questions concerning a permit, the Regional Administrator may take one or more of the following actions:

(1) Prepare a new draft permit, appropriately modified, under § 124.6;

(2) Prepare a revised statement of basis under § 124.7, a fact sheet or revised fact sheet under § 124.8 and reopen the comment period under § 124.14; or

(3) Reopen or extend the comment period under § 124.10 to give interested persons an opportunity to comment on the information or arguments submitted.

(c) Comments filed during the reopened comment period shall be limited to the substantial new questions that caused its reopening. The public notice under § 124.10 shall define the scope of the reopening.

(d) For RCRA, UIC, or NPDES permits, the Regional Administrator may also, in the circumstances described above, elect to hold further proceedings under subpart F. This decision may be combined with any of the actions enumerated in paragraph (b) of this section.

(e) Public notice of any of the above actions shall be issued under § 124.10.

[48 FR 14264, Apr. 1, 1983, as amended at 49 FR 38051, Sept. 26, 1984]

§ 124.15 Issuance and effective date of permit.

(a) After the close of the public comment period under § 124.10 on a draft permit, the Regional Administrator shall issue a final permit decision (or a decision to deny a permit for the active life of a RCRA hazardous waste management facility or unit under § 270.29). The Regional Administrator shall notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. This notice shall include reference to the procedures for appealing a decision on a RCRA, UIC, or PSD permit or for contesting a decision on an NPDES permit or a decision to terminate a RCRA permit. For the purposes of this section, a final permit decision means a final decision to issue, deny, modify, revoke and reissue, or terminate a permit.

(b) A final permit decision (or a decision to deny a permit for the active life of a RCRA hazardous waste management facility or unit under § 270.29) shall become effective 30 days after the service of notice of the decision unless:

(1) A later effective date is specified in the decision; or

(2) Review is requested under § 124.19 (RCRA, UIC, and PSD permits) or an evidentiary hearing is requested under § 124.74 (NPDES permit and RCRA permit terminations); or

(3) No comments requested a change in the draft permit, in which case the permit shall become effective immediately upon issuance.

[48 FR 14264, Apr. 1, 1983, as amended at 54 FR 9607, Mar. 7, 1989]

§ 124.16 Stays of contested permit conditions.

(a) *Stays.* (1) If a request for review of a RCRA or UIC permit under § 124.19 or an NPDES permit under § 124.74 or § 124.114 is granted or if conditions of a RCRA or UIC permit are consolidated for reconsideration in an evidentiary hearing on an NPDES permit under §§ 124.74, 124.82 or 124.114, the effect of the contested permit conditions shall be stayed and shall not be subject to judicial review pending final agency action. (No stay of a PSD permit is available under this section.) If the permit involves a new facility or new injection well, new source, new discharger or a recommencing discharger, the applicant shall be without a permit for the proposed new facility, injection well, source or discharger pending final agency action. See also § 124.60.

(2) Uncontested conditions which are not severable from those contested shall be stayed together with the contested conditions. Stayed provisions of permits for existing facilities, injection wells, and sources shall be identified by the Regional Administrator. All other provisions of the permit for the existing facility, injection well, or source shall remain fully effective and enforceable.

(b) *Stays based on cross effects.* (1) A stay may be granted based on the grounds that an appeal to the Administrator under § 124.19 of one permit may result in changes to another EPA-issued permit only when each of the permits involved has

been appealed to the Administrator and he or she has accepted each appeal.

(2) No stay of an EPA-issued RCRA, UIC, or NPDES permit shall be granted based on the staying of any State-issued permit except at the discretion of the Regional Administrator and only upon written request from the State Director.

(c) Any facility or activity holding an existing permit must:

(1) Comply with the conditions of that permit during any modification or revocation and reissuance proceeding under § 124.5; and

(2) To the extent conditions of any new permit are stayed under this section, comply with the conditions of the existing permit which correspond to the stayed conditions, unless compliance with the existing conditions would be technologically incompatible with compliance with other conditions of the new permit which have not been stayed.

§ 124.17 Response to comments.

(a) *(Applicable to State programs, see §§ 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA).)* At the time that any final permit decision is issued under § 124.15, the Director shall issue a response to comments. States are only required to issue a response to comments when a final permit is issued. This response shall:

(1) Specify which provisions, if any, of the draft permit have been changed in the final permit decision, and the reasons for the change; and

(2) Briefly describe and respond to all significant comments on the draft permit or the permit application (for section 404 permits only) raised during the public comment period, or during any hearing.

(b) For EPA-issued permits, any documents cited in the response to comments shall be included in the administrative record for the final permit decision as defined in § 124.18. If new points are raised or new material supplied during the public comment period, EPA may document its response to those matters by adding new materials to the administrative record.

(c) *(Applicable to State programs, see §§ 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA).)* The response to comments shall be available to the public.

§ 124.18 Administrative record for final permit when EPA is the permitting authority.

(a) The Regional Administrator shall base final permit decisions under § 124.15 on the administrative record defined in this section.

(b) The administrative record for any final permit shall consist of the administrative record for the draft permit and:

(1) All comments received during the public comment period provided under § 124.10 (including any extension or reopening under § 124.14);

(2) The tape or transcript of any hearing(s) held under § 124.12;

(3) Any written materials submitted at such a hearing;

(4) The response to comments required by § 124.17 and any new material placed in the record under that section;

(5) For NPDES new source permits only, final environmental impact statement and any supplement to the final EIS;

(6) Other documents contained in the supporting file for the permit; and

(7) The final permit.

(c) The additional documents required under paragraph (b) of this section should be added to the record as soon as possible after their receipt or publication by the Agency. The record shall be complete on the date the final permit is issued.

(d) This section applies to all final RCRA, UIC, PSD, and NPDES permits when the draft permit was subject to the administrative record requirements of § 124.9 and to all NPDES permits when the draft permit was included in a public notice after October 12, 1979.

(e) Material readily available at the issuing Regional Office, or published materials which are generally available and which are included in the administrative record under the standards of this section or of § 124.17 ("Response to comments"), need not be physically included in the same file as the rest of the record as long as it is specifically referred to in the statement of basis or fact sheet or in the response to comments.

§ 124.19 Appeal of RCRA, UIC, and PSD permits.

(a) Within 30 days after a RCRA, UIC, or PSD final permit decision (or a decision under § 270.29 to deny a permit for the active life of a RCRA hazardous waste management facility or unit) has been issued under § 124.15, any person who filed comments on that draft permit or participated in the public hearing may petition the Environmental Appeals Board to review any condition of the permit decision. Any person who failed to file comments or failed to participate in the public hearing on the draft permit may petition for administrative review only to the extent of the changes from the draft to the final permit decision. The 30-day period within which a person may request review under this section begins with the service of notice of the Regional Administrator's action unless a later date is specified in that notice. The petition shall include a statement of the reasons supporting that review, including a demonstration that any issues being raised were raised during the public

comment period (including any public hearing) to the extent required by these regulations and when appropriate, a showing that the condition in question is based on:

(1) A finding of fact or conclusion of law which is clearly erroneous, or

(2) An exercise of discretion or an important policy consideration which the Environmental Appeals Board should, in its discretion, review.

(b) The Environmental Appeals Board may also decide on its initiative to review any condition of any RCRA, UIC, or PSD permit issued under this part. The Environmental Appeals Board must act under this paragraph within 30 days of the service date of notice of the Regional Administrator's action.

(c) Within a reasonable time following the filing of the petition for review, the Environmental Appeals Board shall issue an order granting or denying the petition for review. To the extent review is denied, the conditions of the final permit decision become final agency action. Public notice of any grant of review by the Environmental Appeals Board under paragraph (a) or (b) of this section shall be given as provided in § 124.10. Public notice shall set forth a briefing schedule for the appeal and shall state that any interested person may file an amicus brief. Notice of denial of review shall be sent only to the person(s) requesting review.

(d) The Environmental Appeals Board may defer consideration of an appeal of a RCRA or UIC permit under this section until the completion of formal proceedings under subpart E or F relating to an NPDES permit issued to the same facility or activity upon concluding that:

(1) The NPDES permit is likely to raise issues relevant to a decision of the RCRA or UIC appeals;

(2) The NPDES permit is likely to be appealed; and

(3) *Either:* (i) The interests of both the facility or activity and the public are not likely to be materially adversely affected by the deferral; or

(ii) Any adverse effect is outweighed by the benefits likely to result from a consolidated decision on appeal.

(e) A petition to the Environmental Appeals Board under paragraph (a) of this section is, under 5 U.S.C. 704, a prerequisite to the seeking of judicial review of the final agency action.

(f)(1) For purposes of judicial review under the appropriate Act, final agency action occurs when a final RCRA, UIC, or PSD permit is issued or denied by EPA and agency review procedures are exhausted. A final permit decision shall be issued by the Regional Administrator:

(i) When the Environmental Appeals Board issues notice to the parties that review has been denied;

(ii) When the Environmental Appeals Board issues a decision on the merits of the appeal and the decision does not include a remand of the proceedings; or

(iii) Upon the completion of remand proceedings if the proceedings are remanded, unless the Environmental Appeals Board's remand order specifically provides that appeal of the remand decision will be required to exhaust administrative remedies.

(2) Notice of any final agency action regarding a PSD permit shall promptly be published in the FEDERAL REGISTER.

(g) Motions to reconsider a final order shall be filed within ten (10) days after service of the final order. Every such motion must set forth the matters claimed to have been erroneously decided and the nature of the alleged errors. Motions for reconsideration under this provision shall be directed to, and decided by, the Environmental Appeals Board. Motions for reconsideration directed to the administrator, rather than to the Environmental Appeals Board, will not be considered, except in cases that the Environmental Appeals Board has referred to the Administrator pursuant to § 124.2 and in which the Administrator has issued the final order. A motion for reconsideration shall not stay the effective date of the final order unless specifically so ordered by the Environmental Appeals Board.

[48 FR 14264, Apr. 1, 1983, as amended at 54 FR 9607, Mar. 7, 1989; 57 FR 5335, Feb. 13, 1992]

§ 124.20 Computation of time.

(a) Any time period scheduled to begin on the occurrence of an act or event shall begin on the day after the act or event.

(b) Any time period scheduled to begin before the occurrence of an act or event shall be computed so that the period ends on the day before the act or event.

(c) If the final day of any time period falls on a weekend or legal holiday, the time period shall be extended to the next working day.

(d) Whenever a party or interested person has the right or is required to act within a prescribed period after the service of notice or other paper upon him or her by mail, 3 days shall be added to the prescribed time.

§ 124.21 Effective date of part 124.

(a) Except for paragraphs (b) and (c) of this section, part 124 will become effective July 18, 1980. Because this effective date will precede the processing of any RCRA or UIC permits, part 124 will apply in its entirety to all RCRA and UIC permits.

SUPPLEMENT TO THE
FINAL DETERMINATION

City of Tallahassee

Permit No. PSD-FL-239
Purdom Generating Station

An Intent to Issue an Air Construction Permit for the City of Tallahassee Utilities Services, Purdom Generating Station located on the north end of the City of St. Marks on SR 363, Wakulla County, Florida, was distributed on July 1, 1997. The Public Notice of Intent to Issue Air Construction Permit was published in the Tallahassee Democrat on August 7, 1997. No Comments on the PSD permit were submitted in response to the public notice.

On October 30, 1997 a public meeting was held in the Crawfordville Elementary school. Interested parties asked about control options including selective catalytic reduction, dry low NO_X burners on the combustion turbine and mist eliminators on the cooling tower. There was also a concern about sulfuric acid emissions and other items discussed below. Department representatives at the meeting described the process by which the best available control technology (BACT) determination was made. The technical evaluation and preliminary determination (part of the Intent to Issue and Air Construction Permit package referenced above) explains in detail how the Department determined BACT for each pollutant regulated under the Prevention of Significant Deterioration (PSD) rule.

No written comments have been received from the public meeting. Transcripts of the meeting were completed on June 8, 1998. The transcripts were not available prior to June 8th. A summary of the substantive verbal questions/comments from the public meeting and answers to those questions were sent with the Final Determination and are provided below. Additional questions and responses based on the transcript of the public meeting are added to these verbal questions/comments and are printed in italics.

Question: Potential impacts of fugitive dust generated during construction on water quality in the St. Marks River.

Response: The PSD construction permit requires dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary to control fugitive dust (specific condition A7 of the permit).

Question: Would like cleaner air; standards may not be protective enough.

Response: The Ambient Air Quality Standards (AAQS) have been designed to protect public health and welfare with an adequate margin of safety. The primary standards are designed to protect public health and the secondary standards are designed to protect public welfare (effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility and

climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being). Florida's standards are as stringent as, or in one case, more stringent than the National standards, and are considered to be fully protective of the public health and welfare. Further, the PSD program is designed to keep areas with good air quality such as Wakulla County from having their air quality deteriorate significantly. The Purdom 8 Project will not cause exceedences of the AAQS and will not cause significant deterioration of the existing air quality conditions in Wakulla County.

Question: Why not use the "top" technology to control emissions; why not pay a little more for cleaner air?

Response: The Department considered several factors in it's Best Available Control Technology (BACT) determination and concluded that the use of dry low NO_x (DLN) combustion technology is BACT in this case. The Department considered the energy, environmental, and economic impacts of available control options in this case. The "top" control technology reference in the question, presumably selective catalytic reduction (SCR), has some adverse environmental impacts and increased costs associated with the use of ammonia injection and the oxidation catalyst. These factors were considered in the Department's BACT determination.

Question: How much fuel oil use would be expected?

Response: The Purdom 8 Project will use natural gas as its primary fuel. Low sulfur diesel will be used as an alternate fuel, most likely if there is a natural gas curtailment situation. The Project will use the existing 10,770 barrel tank for this diesel oil; this will supply Purdom Unit 8 with only one and a half days of capacity at full load. Also, because of the facility-wide caps on emission of SO_2 and NO_x, the amount of fuel oil firing must be limited as emissions of both pollutants are higher when firing fuel oil than when firing natural gas.

Question: Winds in Wakulla County are from SW to the NE; the plume may impact residents of a new housing development.

Response: The modeling of the air quality impacts of the Project was done using a data base of five years of actual hourly meteorological data from available sources. These computer simulations of plume impacts took into account all wind directions and all wind speeds observed during the entire five year period. Impacts were estimated for a large number of receptor points, including close to the plant site and at distances of up to six miles in all directions. Additional simulations evaluated impacts on the St. Marks and Bradwell Bay National Wilderness Areas, at distances ranging from less than half a mile to up to 25 miles from the Purdom Station. In summary, plume impacts were thoroughly evaluated in accordance with Department modeling procedures and will be in compliance with all standards.

Question: Does the Department have reasonable assurance that the GE Dry Low NO_x (DLN) combustor can achieve the required emission rates?

Response: Based on the operation of GE units in Clark County Washington and Fort St. Verain Colorado which have achieved single digit levels of NO_X concentrations, as well as laboratory test results, and a guaranteed NO_X emission rate from GE, the Department has reasonable assurance that 12 ppmvd NO_x by summer of 2000 is feasible for natural gas and 42 ppmvd for fuel oil, each on a 30 day rolling average basis. Other GE combustion turbines in Florida such as Kissimmee Utility Authority unit 2, a frame 7 EA unit rated at 120 MW combined cycle, currently operate at concentrations of less than 12 ppm NO_X according to operators at this plant.

Question: How often will the unit run at less than 50 percent load? What about emissions during start-up, shut down, and malfunction?

Response: The unit is not planned to run at less than 50 percent load at all except during periods of time when the unit is ramping up during start-up (including fuel switching), or ramping down during shutdown. Of course, if there is a malfunction, the unit could operate briefly at less than 50 percent load. These periods of start-up (including fuel switching), shut down and malfunction are strictly limited by the Department's rules. There is no incentive for the City to operate the unit at low load because the unit is most efficient at high load. Furthermore, as the unit is subject to the emission standards at all times except during these transient conditions (start-up(including fuel switching), shut down, and malfunction), there is a strong incentive to operate at greater than 50 percent load where the emission levels are guaranteed by the combustion turbine vendor. Excess emissions must be reported to the Department within one working day and excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up (including fuel switching), shut down, or malfunction are prohibited by the Department's rules.

Question: What assurance is there that the emissions will be properly recorded and reported? Are there logs kept?

Response: Continuous emissions monitoring systems (CEMS) will be used to continuously track the emissions from the plant for priority pollutants. The results of the monitoring are stored in computer data files which are available to the Department at any time. In accordance with the Department's rules, these monitors must be kept in good working order and the results must be reported quarterly (excess emission and Acid Rain Program operating reports) and annually (annual operating report).

Question: There will be an increase in CO emissions. Why not use a catalyst to reduce those emissions?

Response: The Department considered several factors in it's Best Available Control Technology (BACT) determination and concluded that the proper tuning of the dry low NO_x (DLN) burners and good operating practices is BACT in this case. The Department considered the energy, environmental, and economic impacts of the available control options in this case. An oxidation

catalyst was found to be too expensive compared to other similar projects. CO concentrations are generally problematic only in large cities with congested intersections and major traffic problems. Maximum off-site ambient impacts due to this Project will be about one tenth of one percent of the ambient air quality standard or less.

Question: There will be an increase in sulfuric acid mist from about 3 tpy to over 8 TPY; this seems like a large increase. Why will sulfuric acid mist emissions increase even if SCR is not used?

Response: Sulfuric acid mist emissions are minimized through the use of low sulfur fuels like natural gas or No. 2 fuel oil with a limit of 0.05% sulfur content. Little or no increase in sulfuric acid mist emissions is expected because the facility-wide cap on SO_2 emissions will limit the amount of sulfur in the fuels which in turn limits the emissions of both SO_2 and sulfuric acid mist. Sulfuric acid emissions from gas fired units are relatively low. Although sulfuric acid emissions have not been measured on the existing boilers, the emission factor estimated by EPA literature (AP-42) is lower than the emission factor estimated for the new combustion turbine. Sulfuric acid mist emissions are a small fraction (typically about 3%) of the sulfur dioxide emissions. *Although SCR and CO catalysts were not determined to constitute BACT in this case, these control systems, if employed, could cause a small increase in sulfuric acid mist emissions for this project.*

Question: The Class I PSD increments to protect the plants and animals seem more protective than the Class II PSD increments which protect humans.

Response: The Ambient Air Quality Standards(AAQS) are the standards designed to protect human health and welfare. Welfare protection includes the protection of plants and animals, some species of which are more sensitive to certain levels of certain pollutants than are humans. On the other hand, the PSD classifications and PSD increments were established to prevent air quality from deteriorating from baseline levels (the air quality levels which existed when the increments were promulgated). The increments allowed within each PSD classification are designed to keep air quality from deteriorating significantly while still allowing for some growth in the economy. In developing the PSD program Congress decided that certain areas should be designated as Class I areas in which only extremely small increases in pollutant concentrations should be allowed. These included certain large National Parks and National Wilderness Areas in and around which only very limited economic growth and associated growth in emissions would be allowed. The remainder of the country was designated as Class II, where moderate increases in pollutant concentrations would be allowed to accommodate some growth in the economy and associated emissions. Thus, it is the AAQS which are protective of human health as well as that of the animals and plants; these standards are the same regardless of the PSD classification. The PSD increments are designed to prevent deterioration in air quality in all areas, with certain areas (Class I) allowed even less deterioration than most (Class II). Because of its Class I areas, Wakulla County and its citizens are even better protected from air quality deterioration than persons located elsewhere.

Question: With the Outstanding Florida Waters (OFW) nearby and the sensitive sea grasses in the St. Marks River and Apalachee Bay, how will the Project be protective of them?

Response: The emissions from the Project were evaluated to determine whether there would be a negative impact on water quality in the St. Marks River and ultimately in Apalachee Bay. The analysis indicated that there would be no measurable changes in water quality parameters as a result of the Project except for two parameters, where the changes are improvements. Any chemical changes in the water due to the Project would be far too small compared to natural changes that occur from rainfall, from deposition, from fires, etc. to cause any negative impact on sea grasses. Similarly, there would be insufficient changes in salinity or turbidity of the water to affect the sea grasses.

Question: Is a higher or lower stack better?

Response: The proposed stack height for Unit 8 is the height calculated in accordance with the "Good Engineering Practice (GEP)" stack height regulations, and is an appropriate height for a source of this type. The GEP stack height calculations take into account nearby building heights so as to determine a height which is sufficient to avoid problems with aerodynamic downwash caused by these structures and yet is not so high as to be considered excessive.

Question: Emissions of mercury are projected to increase. With the fish consumption warnings, isn't this going to be a problem?

Response: Mercury emissions are typically a concern only with solid fuel projects where emissions are higher. For this Project actual emissions of mercury are only expected to increase by 0.0004 tons per year or less. This is less than one tenth of one percent of the value considered "significant" under the PSD rules. Maximum modeled ambient concentrations of mercury due to the Purdom Station will be well below the draft Florida Ambient Reference Concentrations (FARCs), which are conservative estimates of values below which there are not likely to be any health effects. Contrary to some statements which were made, the Florida Game and Fresh Water Fish Commission and the Florida Department of Health do not list the St. Marks or Wakulla Rivers among the rivers for which limited or no consumption of fish is recommended and, in fact, the St. Marks National Wildlife Refuge is listed among the wildlife refuges as having all species of fish being safe for unlimited consumption.

Question: Will there be an odor from the chlorine in the wastewater that gets put into the cooling tower?

Response: There will not be any noticeable odor from the cooling tower. There will be little or no emissions of chlorine gas from the water because: (1) chlorine concentrations in the water in the cooling tower will be very small, and (2) the water will not be sufficiently acid to allow significant emissions of free chlorine. Furthermore, the emissions of "drift" (small water droplets in the cooling tower that get carried out the top of the tower by the air stream) will be minimized

through the use of high efficiency drift eliminators. These drift eliminators will limit drift to 0.002 percent of the circulating water flow. The amount of reuse water from the City of St. Marks will be a small fraction of the total cooling tower makeup water. Most of the makeup water will come from the river.

Question: If an SCR were added to control NO_x emissions, would there be a noticeable odor from the ammonia?

Response: If an SCR were to be used, it would likely be designed to have an ammonia slip of less than 10 ppm. At this emission rate, an off-site ammonia odor would not be expected.

Question: Would the Purdom 8 Project rely on emission trading or purchasing emission credits from other plants?

Response: If the question is referring to Acid Rain Program emission allowances, then the answer is that the Purdom Station has sufficient acid rain emission allowances to operate the new unit without purchasing additional allowances from any other source. If the question is referring to emission reductions or emission credits from the shut down of other units, then the answer is that the Purdom 8 Project is relying on the permanent shut down of Units 5 and 6 at the Purdom Station and the facility-wide caps for SO_2 and NO_x to "make room" for the emissions from Unit 8, but that no emission trades, reductions, or credits from other plants are needed.

Question: Will the Purdom 8 Project use up the available PSD increment and possibly preclude other sources from locating in Wakulla County?

Response: The Purdom Unit 8 Project actually consumes very little PSD increment in the Class II area in which the plant is located and in the two Class I areas which are nearby - St. Marks NWA and Bradwell Bay NWA. This is because the emission reductions from the units which have been shut down or will be shut down at the Purdom Station more than make up for the emissions from Unit 8 for most pollutants. In fact, the available increment is expanded for SO_2 as a result of the Project. While it is true that much of the available increment for SO_2 for the Bradwell Bay NWA Class I area is used up, this does not preclude new sources from locating in Wakulla County. Depending upon their locations, the levels of their SO_2 emissions, and any emission reductions available from the shut down or clean up of existing sources, new sources could be located in the area. They would have to comply with the same kind of stringent emission control limitations (BACT) as was applied to the Purdom 8 Project and demonstrate through modeling that the total increment consumption from the proposed new source and all other increment consuming and increment expanding sources do not exceed the allowable values.

Question: *How is that (opacity) measured, on a one meter scale with a light that determines...?*

Response: *Opacity will be measured using EPA Reference Method 9. In Method 9 the levels of visible emissions from a smoke stack are recorded by a person certified to read opacity. A continuous opacity monitor is not required for combustion turbines.*

Question: *The Purdom Plant Station is classified as a major air pollution emitting facility... the statement up front says it is not?*

Response: *State and federal air pollution rules define a major facility as having the potential to emit 100 tons per year or more of any regulated air pollutant. The existing facility is a major facility and will continue to be a major facility with or without the addition of the new unit. Most if not all power plants are classified as major facilities.*

Question: *Are they going to shut down when they reach a certain level that they want to cap?*

Response: *The permit requires that the City report annual emissions on the Annual Operating Report. The condition is a federally-enforceable requirement in a PSD permit. The Department has reasonable assurance through project plans, emissions estimating procedures, control equipment characteristics and compliance/enforcement options that the City will operate the facility in accordance with the caps. In addition to this, the largest emissions units at the Purdom plant, Units 7 and 8, are subject to the acid rain reporting requirements including quarterly reports of actual NOx and SO_2 emissions.*

Question: *You're saying that with this new generating capacity that there was not going to be any significant increase in the emissions of air pollution?*

Response: *The term "significant net emissions increase" has a specific meaning in the PSD Rule 62-212.400 F.A.C. Emissions increases which are significant for a given pollutant are listed in Table 212.400 F.A.C. For the Purdom Project some pollutants, like CO, are projected to increase significantly while other pollutants are not projected to have a significant increase. However, see one of the previous responses explaining that BACT for CO is proper tuning of the DLN burners and that CO emissions, when problematic, are attributed to large cities with congested intersections and major traffic problems.*

Question: *The comparison... what is actually being dumped in the air... with this thing running infrequently, are we comparing apples to apples?*

Response: *The emission caps will limit future emissions to the actual emission levels from the recent past for SO2 and Nox and includes the infrequency of operation previously experienced. Those emissions are relatively low due to the infrequent operation and will not be increased with more frequent operation. Accordingly, the comparisons in tons/year are appropriate.*

The final action of the Department to issue the permit as proposed with minor revisions/ clarifications is hereby reaffirmed with these additional questions/comments.

The seasonal annual average mixing heights for the period 1960 to 1964 as observed at Jacksonville International Airport is presented in Table 2.3.7-4. The Jacksonville upper air station is the closest location analyzed and should be considered regionally representative of the area. Holzworth's (1972) comparison of morning and afternoon mixing heights based on data for 62 locations throughout the United States is shown on Figures 2.3.7-3 and 2.3.7-4. These data indicate that the site area experiences mixing heights that are typical of or higher than large areas of the eastern half of the United States. This information combined with wind speed was used by Holzworth (1974) to rank these 62 locations in order from lowest to highest dilutions (defined as mixing height times wind speed). For all episode lengths considered, Jacksonville ranked in the top 20 percent. It may be assumed that the site area experiences better than average dispersion conditions, especially since the Jacksonville station is also coastal.

TABLE 2.3.7-4
MEAN DIURNAL MIXING HEIGHTS
JACKSONVILLE, FLORIDA

Season	Morning	Afternoon
Winter	403	1,104
Spring	477	1,667
Summer	583	1,712
Fall	458	1,342
Annual Average	480	1,456

Note: Mixing heights are in meters
Period of Record: 1960-1964
Source: Holzworth, 1972

Precipitation

The average annual precipitation in Tallahassee is 64.6 inches based on the 1951 through 1980 period of record. July is the wettest month followed by August, June, and September. The driest months are October and November. Thunderstorms typically occur every other day during the summer. Snow may occur in the winter but it is very infrequent. The highest annual amount of precipitation recorded since 1894 was 104 inches in 1964. Measurable precipitation (24-hour precipitation exceeding 0.01 inch water equivalent) occurs approximately 116 days per year. Precipitation in Apalachicola is somewhat less than in Tallahassee, with an annual average of 55.0 inches based on the 1951 through 1980 period of record.

Temperature

The average annual temperature for Tallahassee is 67° F. Freezing temperatures at the airport average 38 occurrences each winter. Sub-zero temperatures are rarely recorded; however, the lowest recorded temperature for Florida is -2° F and occurred in Tallahassee on February 13, 1899. Although the Tallahassee Regional Airport may report anomalously cold temperatures on clear, calm nights (Elsner et al., 1996), its temperature data are considered reasonably representative of St. Marks. On average, temperatures in Apalachicola are about 1° F warmer than in Tallahassee; Tallahassee's highs are typically 3 to 4° F warmer and its lows typically 5° F lower than Apalachicola's. Occurrences of temperatures of 90° F or higher average 88 days per year. Temperatures occasionally reach 100° F. The highest temperature recorded in Tallahassee was 104° F in June 1933.

Florida Department of
Environmental Protection

Memorandum

TO: City of Tallahassee File

FROM: Kim Tober

DATE: June 15, 1998

SUBJ: Copies Delivered to Mr. Ronald Mowrey's Office
Final City of Tallahassee Permit, Purdom Unit 8, PSD-FL-239

On June 5, 1998, I delivered 3 copies of the City of Tallahassee final package to Mr. Don Mowrey's office before noon. I gave them to Mr. Mowrey's secretary in a manila envelope with a sticky note on the front. The note stated that there was 3 copies of the permit inside and to keep one copy and take the other two down to their Crawfordville office. It also said to call the Wakulla Co. Commissioners and tell them of the copies at Mr. Mowrey's office in Crawfordville. Mr. Mowrey's secretary took the package and told me that she would give the permit to Mr. Mowrey and have their runner take the other two permits to his office in Crawfordville. She also said that it might not get there until the following Monday. I said that it was okay and left.

/kt

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit

Ms. Jennette Curtis
Environmental Administrator
City of Tallahassee Utility Services
300 South Adams Street
Tallahassee, Florida 32301

DEP File No. 1290001
Permit Nos: PSD-FL-239 / PA97-36

Enclosed is the FINAL Permit Nos. PSD-FL-239 / PA97-36 for Purdom Unit 8, a new combined cycle combustion turbine. This permit is issued pursuant to Chapter 403, Florida Statutes and 62-4 through 297 F.A.C and 40 CFR 52.21-Prevention of Significant Deterioration (PSD).

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; 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 of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

C.H. Fancy, P.E., Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT (including the FINAL permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 5-29-98 to the person(s) listed:

Ms. Jennette Curtis *
Mr. Brian Beals, EPA
Mr. John Bunyak, NPS
Mr. Ed Middleswart, NWD

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.

Kim Tober 5-29-98
(Clerk) (Date)

FINAL DETERMINATION

City of Tallahassee

Permit No. PSD-FL-239 / PA97-36
Purdom Generating Station

An Intent to Issue an Air Construction Permit for the City of Tallahassee Utilities Services, Purdom Generating Station located on the north end of the City of St. Marks on SR 363, Wakulla County, Florida, was distributed on July 1, 1997. The Public Notice of Intent to Issue Air Construction Permit was published in the Tallahassee Democrat on September 29, 1997. No Comments on the PSD permit were submitted in response to the public notice.

On October 30, 1997 a public meeting was held in the Crawfordville Elementary school. Interested parties asked about control options including selective catalytic reduction, dry low NO_X burners on the combustion turbine and mist eliminators on the cooling tower. There was also a concern about sulfuric acid emissions. Department representatives at the meeting described the process by which the best available control technology (BACT) determination was made. The technical evaluation and preliminary determination (part of the Intent to Issue and Air Construction Permit package referenced above) explains in detail how the Department determined BACT for each pollutant regulated under the Prevention of Significant Deterioration (PSD) rule.

No written comments have been received from the public meeting. A summary of the substantive verbal questions/comments from the public meeting and answers to those questions are provided in the following paragraphs:

Question: Potential impacts of fugitive dust generated during construction on water quality in the St. Marks River.

Response: The PSD construction permit requires dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary to control fugitive dust (specific condition A7 of the permit).

Question: Would like cleaner air; standards may not be protective enough.

Response: The Ambient Air Quality Standards (AAQS) have been designed to protect public health and welfare with an adequate margin of safety. The primary standards are designed to protect public health and the secondary standards are designed to protect public welfare (effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being). Florida's standards are as stringent as, or in one case, more stringent than the National standards, and are considered to be fully protective of the public health and welfare. Further, the PSD program is designed to keep areas with good air

quality such as Wakulla County from having their air quality deteriorate significantly. The Purdom 8 Project will not cause exceedences of the AAQS and will not cause significant deterioration of the existing air quality conditions in Wakulla County.

Question: Why not use the "top" technology to control emissions; why not pay a little more for cleaner air?

Response: The Department considered several factors in it's Best Available Control Technology (BACT) determination and concluded that the use of dry low NO_x (DLN) combustion technology is BACT in this case. The Department considered the energy, environmental, and economic impacts of available control options in this case. The "top" control technology reference in the question, presumably selective catalytic reduction (SCR), has some adverse environmental impacts and increased costs associated with the use of ammonia injection and the oxidation catalyst. These factors were considered in the Department's BACT determination.

Question: How much fuel oil use would be expected?

Response: The Purdom 8 Project will use natural gas as its primary fuel. Low sulfur diesel will be used as an alternate fuel, most likely if there is a natural gas curtailment situation. The Project will use the existing 10,770 barrel tank for this diesel oil; this will supply Purdom Unit 8 with only one and a half days of capacity at full load. Also, because of the facility-wide caps on emission of SO_2 and NO_x, the amount of fuel oil firing must be limited as emissions of both pollutants are higher when firing fuel oil than when firing natural gas.

Question: Winds in Wakulla County are from SW to the NE; the plume may impact residents of a new housing development.

Response: The modeling of the air quality impacts of the Project was done using a data base of five years of actual hourly meteorological data from available sources. These computer simulations of plume impacts took into account all wind directions and all wind speeds observed during the entire five year period. Impacts were estimated for a large number of receptor points, including close to the plant site and at distances of up to six miles in all directions. Additional simulations evaluated impacts on the St. Marks and Bradwell Bay National Wilderness Areas, at distances ranging from less than half a mile to up to 25 miles from the Purdom Station. In summary, plume impacts were thoroughly evaluated in accordance with Department modeling procedures and will be in compliance with all standards.

Question: Does the Department have reasonable assurance that the GE Dry Low NO_x (DLN) combustor can achieve the required emission rates?

Response: Based on the operation of GE units in Clark County Washington and Fort St. Verain Colorado which have achieved single digit levels of NO_X concentrations, as well as laboratory test results, and a guaranteed NO_X emission rate from GE, the Department has reasonable assurance that 12 ppmvd NO_x by summer of 2000 is feasible for natural gas and 42 ppmvd for fuel oil, each

on a 30 day rolling average basis. Other GE combustion turbines in Florida such as Kissimmee Utility Authority unit 2, a frame 7 EA unit rated at 120 MW combined cycle, currently operate at concentrations of less than 12 ppm NO_X according to operators at this plant.

Question: How often will the unit run at less than 50 percent load? What about emissions during start-up, shut down, and malfunction?

Response: The unit is not planned to run at less than 50 percent load at all except during periods of time when the unit is ramping up during start-up (including fuel switching), or ramping down during shutdown. Of course, if there is a malfunction, the unit could operate briefly at less than 50 percent load. These periods of start-up (including fuel switching), shut down and malfunction are strictly limited by the Department's rules. There is no incentive for the City to operate the unit at low load because the unit is most efficient at high load. Furthermore, as the unit is subject to the emission standards at all times except during these transient conditions (start-up(including fuel switching), shut down, and malfunction), there is a strong incentive to operate at greater than 50 percent load where the emission levels are guaranteed by the combustion turbine vendor. Excess emissions must be reported to the Department within one working day and excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up (including fuel switching), shut down, or malfunction are prohibited by the Department's rules.

Question: What assurance is there that the emissions will be properly recorded and reported? Are there logs kept?

Response: Continuous emissions monitoring systems (CEMS) will be used to continuously track the emissions from the plant for priority pollutants. The results of the monitoring are stored in computer data files which are available to the Department at any time. In accordance with the Department's rules, these monitors must be kept in good working order and the results must be reported quarterly (excess emission and Acid Rain Program operating reports) and annually (annual operating report).

Question: There will be an increase in CO emissions. Why not use a catalyst to reduce those emissions?

Response: The Department considered several factors in it's Best Available Control Technology (BACT) determination and concluded that the proper tuning of the dry low NO_x (DLN) burners and good operating practices is BACT in this case. The Department considered the energy, environmental, and economic impacts of the available control options in this case. An oxidation catalyst was found to be too expensive compared to other similar projects. CO concentrations are generally problematic only in large cities with congested intersections and major traffic problems. Maximum off-site ambient impacts due to this Project will be about one tenth of one percent of the ambient air quality standard or less.

Question: There will be an increase in sulfuric acid mist from about 3 tpy to over 8 TPY; this seems like a large increase. Why will sulfuric acid mist emissions increase even if SCR is not used?

Response: Sulfuric acid mist emissions are minimized through the use of low sulfur fuels like natural gas or No. 2 fuel oil with a limit of 0.05% sulfur content. Little or no increase in sulfuric acid mist emissions is expected because the facility-wide cap on SO_2 emissions will limit the amount of sulfur in the fuels which in turn limits the emissions of both SO_2 and sulfuric acid mist. Sulfuric acid emissions from gas fired units are relatively low. Although sulfuric acid emissions have not been measured on the existing boilers, the emission factor estimated by EPA literature (AP-42) is lower than the emission factor estimated for the new combustion turbine. Sulfuric acid mist emissions are a small fraction (typically about 3%) of the sulfur dioxide emissions.

Question: The Class I PSD increments to protect the plants and animals seem more protective than the Class II PSD increments which protect humans.

Response: The Ambient Air Quality Standards(AAQS) are the standards designed to protect human health and welfare. Welfare protection includes the protection of plants and animals, some species of which are more sensitive to certain levels of certain pollutants than are humans. On the other hand, the PSD classifications and PSD increments were established to prevent air quality from deteriorating from baseline levels (the air quality levels which existed when the increments were promulgated). The increments allowed within each PSD classification are designed to keep air quality from deteriorating significantly while still allowing for some growth in the economy. In developing the PSD program Congress decided that certain areas should be designated as Class I areas in which only extremely small increases in pollutant concentrations should be allowed. These included certain large National Parks and National Wilderness Areas in and around which only very limited economic growth and associated growth in emissions would be allowed. The remainder of the country was designated as Class II, where moderate increases in pollutant concentrations would be allowed to accommodate some growth in the economy and associated emissions. Thus, it is the AAQS which are protective of human health as well as that of the animals and plants; these standards are the same regardless of the PSD classification. The PSD increments are designed to prevent deterioration in air quality in all areas, with certain areas (Class I) allowed even less deterioration than most (Class II). Because of its Class I areas, Wakulla County and its citizens are even better protected from air quality deterioration than persons located elsewhere.

Question: With the Outstanding Florida Waters (OFW) nearby and the sensitive sea grasses in the St. Marks River and Apalachee Bay, how will the Project be protective of them?

Response: The emissions from the Project were evaluated to determine whether there would be a negative impact on water quality in the St. Marks River and ultimately in Apalachee Bay. The analysis indicated that there would be no measurable changes in water quality parameters as a result of the Project except for two parameters, where the changes are improvements. Any chemical changes in the water due to the Project would be far too small compared to natural changes that occur from rainfall, from deposition, from fires, etc. to cause any negative impact on sea grasses.

Similarly, there would be insufficient changes in salinity or turbidity of the water to affect the sea grasses.

Question: Is a higher or lower stack better?

Response: The proposed stack height for Unit 8 is the height calculated in accordance with the "Good Engineering Practice (GEP)" stack height regulations, and is an appropriate height for a source of this type. The GEP stack height calculations take into account nearby building heights so as to determine a height which is sufficient to avoid problems with aerodynamic downwash caused by these structures and yet is not so high as to be considered excessive.

Question: Emissions of mercury are projected to increase. With the fish consumption warnings, isn't this going to be a problem?

Response: Mercury emissions are typically a concern only with solid fuel projects where emissions are higher. For this Project actual emissions of mercury are only expected to increase by 0.0004 tons per year or less. This is less than one tenth of one percent of the value considered "significant" under the PSD rules. Maximum modeled ambient concentrations of mercury due to the Purdom Station will be well below the draft Florida Ambient Reference Concentrations (FARCs), which are conservative estimates of values below which there are not likely to be any health effects. Contrary to some statements which were made, the Florida Game and Fresh Water Fish Commission and the Florida Department of Health do not list the St. Marks or Wakulla Rivers among the rivers for which limited or no consumption of fish is recommended and, in fact, the St. Marks National Wildlife Refuge is listed among the wildlife refuges as having all species of fish being safe for unlimited consumption.

Question: Will there be an odor from the chlorine in the wastewater that gets put into the cooling tower?

Response: There will not be any noticeable odor from the cooling tower. There will be little or no emissions of chlorine gas from the water because: (1) chlorine concentrations in the water in the cooling tower will be very small, and (2) the water will not be sufficiently acid to allow significant emissions of free chlorine. Furthermore, the emissions of "drift" (small water droplets in the cooling tower that get carried out the top of the tower by the air stream) will be minimized through the use of high efficiency drift eliminators. These drift eliminators will limit drift to 0.002 percent of the circulating water flow. The amount of reuse water from the City of St. Marks will be a small fraction of the total cooling tower makeup water. Most of the makeup water will come from the river.

Question: If an SCR were added to control NO_x emissions, would there be a noticeable odor from the ammonia?

Response: If an SCR were to be used, it would likely be designed to have an ammonia slip of less than 10 ppm. At this emission rate, an off-site ammonia odor would not be expected.

Question: Would the Purdom 8 Project rely on emission trading or purchasing emission credits from other plants?

Response: If the question is referring to Acid Rain Program emission allowances, then the answer is that the Purdom Station has sufficient acid rain emission allowances to operate the new unit without purchasing additional allowances from any other source. If the question is referring to emission reductions or emission credits from the shut down of other units, then the answer is that the Purdom 8 Project is relying on the permanent shut down of Units 5 and 6 at the Purdom Station and the facility-wide caps for SO_2 and NO_x to "make room" for the emissions from Unit 8, but that no emission trades, reductions, or credits from other plants are needed.

Question: Will the Purdom 8 Project use up the available PSD increment and possibly preclude other sources from locating in Wakulla County?

Response: The Purdom Unit 8 Project actually consumes very little PSD increment in the Class II area in which the plant is located and in the two Class I areas which are nearby - St. Marks NWA and Bradwell Bay NWA. This is because the emission reductions from the units which have been shut down or will be shut down at the Purdom Station more than make up for the emissions from Unit 8 for most pollutants. In fact, the available increment is expanded for SO_2 as a result of the Project. While it is true that much of the available increment for SO_2 for the Bradwell Bay NWA Class I area is used up, this does not preclude new sources from locating in Wakulla County. Depending upon their locations, the levels of their SO_2 emissions, and any emission reductions available from the shut down or clean up of existing sources, new sources could be located in the area. They would have to comply with the same kind of stringent emission control limitations (BACT) as was applied to the Purdom 8 Project and demonstrate through modeling that the total increment consumption from the proposed new source and all other increment consuming and increment expanding sources do not exceed the allowable values.

The final action of the Department will be to issue the permit as proposed with minor clarifications.

Department of Environmental Protection

Lawton Chiles
Governor

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PERMITTEE:

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FID No.	1290001
PSD No.	PSD-FL-239
SIC No.	4911
PPS No.	PA97-36
Expires:	May 15, 2003

Authorized Representative:
Jennette Curtis
Environmental Administrator

PROJECT AND LOCATION:

Permit for the construction of Unit 8, a combined cycle combustion turbine generating system at the Purdom Generating Station, located on the north end of the City of St. Marks on SR 363, Wakulla County, Florida.

UTM: Zone 16; 769.611 km E; 3339.767 km N

STATEMENT OF BASIS:

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, 62-297. The above named permittee is authorized to modify the facility 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).

Attached appendices and Tables made a part of this permit:

Appendix BD	BACT Determination
Appendix GC	Construction Permit General Conditions

Howard L. Rhodes, Director
Division of Air Resources
Management

SECTION I. FACILITY INFORMATION

SUBSECTION A. FACILITY DESCRIPTION

The City of Tallahassee is authorized to install a new combined cycle combustion turbine system, Unit 8, at the existing Purdom facility consisting of a 160 MW (nominal rating) GE Series MS7FA combustion turbine with DLN-2.6 (or later version) dry low NOx (gas) and water injection (diesel) burners and a nonfired heat recovery steam generator (HRSG) with a nominal 90 MW steam turbine. The compressor inlet air will be conditioned by an evaporative cooler when needed. The turbine will be started using the generator and a static start system. A new 200 foot stack and a cooling tower will be added to the facility for Unit 8.

Unit 8 will be located at the City's Sam O. Purdom Generating Station in St. Marks, Wakulla County. Existing steam generating Units 5 and 6 will be permanently shut down once Unit 8 has completed the initial performance test for natural gas firing. Other existing units at the plant consist of: Unit 7, a pre-NSPS boiler with a nominal rating of 44 MW fired by natural gas, residual fuel oil or distillate fuel oil; two pre-NSPS distillate fuel oil or natural gas fired combustion turbines with a nominal rating of 12.3 MWs each (GT1 and GT2); and a Subpart Dc auxiliary steam boiler fired by natural gas.

SUBSECTION B. REGULATORY CLASSIFICATION

The Purdom Generating Station is classified as a major air pollutant emitting facility. Air pollutant emissions are over 100 TPY for nitrogen oxides (NO_x) and carbon monoxide (CO).

This facility is on the list of the 28 Major Facility Categories in Table 62-212.400-1. This facility is also classified as a Title IV and Title V facility.

SUBSECTION C. RELEVANT DOCUMENTS:

The documents listed below are the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

Application (as revised 7/16/97, and 12/22/97)
Department's letter dated 5/1/97
Department of Interior's letter dated 1/21/97
EPA's letter dated October 14, 1997

SECTION II. EMISSION UNIT(S) GENERAL REQUIREMENTS

SUBSECTION A. ADMINISTRATIVE

1. Regulating Agencies: All documents related to applications for permits to operate, reports, tests, minor modifications and notifications or for permits to construct or modify an emission unit(s) *subject to the Prevention of Significant Deterioration (PSD) or to Nonattainment Areas (NA) Review requirements* should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP) located at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, Mail Station 5505, and phone number (850) 488-0114.

2. General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in *Appendix GC* of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.

4. Forms and Application Procedures: 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. [Rule 62-210.900, F.A.C.]

SECTION III. SPECIFIC CONDITIONS

SUBSECTION A. SPECIFIC CONDITIONS:

A. General Operation Requirements

1. Applicable Regulations: Unless otherwise indicated in this permit, the construction and operation of the subject emission unit(s) 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, 62-103, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, 62-297; and the applicable requirements of the Code of Federal Regulations Section 40, Part 60 including Subpart A and GG (1997 version), adopted by reference in the Florida Administrative Code regulation [Rule 62-204.800 F.A.C.]. 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.]
2. The maximum heat input rates, based on the lower heating value (LHV) of each fuel to Purdom Unit 8 at ambient conditions of 95°F temperature, 60% relative humidity, and 14.7 psi pressure shall not exceed 1,467.7 mmBtu/hr when firing natural gas, nor 1,659.5 mmBtu/hr when firing No. 2 fuel oil. These maximum heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Manufacturer's curves corrected for site conditions or equations for correction to other ambient conditions shall be provided to the Department of Environmental Protection (DEP) within 45 days of completing the initial compliance testing. These curves or equations shall be used to establish the maximum allowable heat inputs at other ambient conditions for compliance determinations.
3. Purdom Unit 8 may operate continuously (i.e., 8760 hours per year).
4. Only natural gas or No. 2 fuel oil with a maximum sulfur content of 0.05% by weight shall be fired in the combined cycle combustion turbine.
5. The permittee shall install duct module(s) suitable for possible future installation of SCR equipment on the combined cycle generating unit.
6. Dry low NO_X combustors shall be used on Unit 8 when firing natural gas and water injection shall be used when firing No. 2 fuel oil for control of NO_X emissions.
7. 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.
8. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the Permitting Authority as soon as possible, but at least within (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future 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 the conditions of this permit and the regulations. [Rule 62-4.130, F.A.C.]
9. Operating Procedures: Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C.]

10. The dry low NO_X burner system shall be tuned upon initial operation to optimize emissions reductions and shall be maintained to minimize NO_X emissions and CO emissions. While firing natural gas, operation of the unit when the dry low NO_X burner system is in the diffusion firing mode shall be minimized.

11. Circumvention: The owner or operator shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rules 62-210.650, F.A.C.]

B. Emission Limits and Standards

The following shall apply upon completion of the initial compliance tests:

1. Best Available Control Technology. The following is a summary of the BACT determinations by DEP:

Table 1. Emission Limits

Pollutant	Fuel	BACT Standard
NO_x	Gas Oil	12 ppmvd @ 15 % O_2 (a) (d) 42 ppmvd @ 15 % O_2 (a) (b) (d)
SO_2	Gas Oil	Good combustion Good combustion of low (0.05%) sulfur fuel oil
PM/PM_{10}	Gas Oil	Good combustion Good combustion of low (0.05%) sulfur fuel oil
Visible Emissions	Gas Oil	10 percent opacity 10 percent opacity
CO	Gas Oil	25 ppmvd (c) 90 ppmvd (c)

(a) 30-day rolling average excluding startup, shutdown, malfunction, and fuel switching.

(b) Plus an allowance for fuel bound nitrogen using the formula provided in Condition B4.

(c) By testing concurrent to RATA testing or by 3 one hour runs of Method 10.

(d) Not corrected to ISO conditions.

2. Visible Emissions. Visible emissions shall not exceed 10 percent opacity when firing either natural gas or No. 2 fuel oil. Drift eliminators shall be installed on the cooling tower to reduce PM/PM_{10} emissions.

3. Oxides of Nitrogen. Oxides of nitrogen emissions when firing natural gas shall not exceed 12 ppmvd at 15% O_2 on a 30-day rolling average basis (except during periods of startup, shutdown, malfunction or fuel switching) as measured by CEMS. When monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate the 30 day rolling average.

4. Oxides of Nitrogen. Oxides of nitrogen emissions when firing No. 2 fuel oil shall not exceed 42 ppmvd at 15% O_2 on a 30-day rolling average basis (except during periods of startup, shutdown, malfunction or fuel switching), as measured by CEMS, when fuel bound nitrogen(FBN) values are less than or equal to 0.015 percent. For fuel bound

nitrogen values up to 0.03 percent, the allowance (and the adjusted standard) shall be determined, recorded, and maintained for each fuel delivery by the following formula:

STD = 0.0042 + F where:

STD = allowable NO_X emissions (percent by volume at 15 percent O_2 and on a dry basis).

F = NO_X emission allowance for fuel-bound nitrogen defined by the following table:

Fuel-Bound Nitrogen (% by Weight)	F (NO_X % by Volume)
$0 < N \leq 0.015$	0
$0.015 < N \leq 0.03$	0.04 (N-0.015)

where: N = the nitrogen content of the fuel (% by weight) Note: 0.0042 percent = 42 ppm

Adjustments to the NO_X standard (either up or down) shall be calculated based on volume weighted averages of the nitrogen content for each fuel oil shipment and the nitrogen content of the existing fuel in the storage tank.

5. Oxides of Nitrogen. Beginning with the calendar year following successful completion of the initial performance test for Unit 8, annual emissions of NO_X shall not exceed 467 tons per year from the Purdom facility (Unit 8, Unit 7, GT1, GT2, and the auxiliary boiler) on a calendar year basis, as measured by applicable compliance methods. [Requested by the applicant]

6. Sulfur Dioxide. Beginning with the calendar year following successful completion of the initial performance test for Unit 8, annual emissions of SO_2 shall not exceed 80 tons per year from the Purdom facility (Unit 8, Unit 7, GT1, GT2, and the auxiliary boiler) on a calendar year basis, as measured by applicable compliance methods. [Requested by the applicant]

7. Carbon Monoxide. Carbon monoxide emissions when firing natural gas shall not exceed 25 ppmvd as measured by Method 10.

8. Carbon Monoxide. Carbon monoxide emissions when firing No. 2 fuel oil shall not exceed 90 ppmvd as measured by Method 10.

C. Excess Emissions

1. Excess emissions resulting from startup, shutdown, malfunction or fuel switching shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized but in no case exceed four hours in any 24-hour period for cold startup or two hours in any 24-hour period for other reasons unless specifically authorized by DEP for longer duration.

2. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited pursuant to Rule 62-210.700, F.A.C.

3. Excess Emissions Report: If excess emissions occur due to malfunction, the owner or operator shall notify DEP's Northwest District office within (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. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. [Rules 62-4.130 and 62-210.700(6), F.A.C.]

SECTION III. SPECIFIC CONDITIONS

D. Compliance Determination

1. Compliance with the allowable emission limiting standards shall be determined within 60 days after achieving the maximum production rate, for each fuel, but not later than 180 days from the initial operation date for each fuel, and annually thereafter as indicated in this permit, by using the following reference methods as described in 40 CFR 60, Appendix A (1997 version), and adopted by reference in Chapter 62-297, F.A.C.

   Initial (I) compliance tests shall be performed on Unit 8 while firing each fuel (gas, oil). Annual (A) compliance tests shall be performed during every federal fiscal year (October 1 - September 30) pursuant to Rule 62-297.340, F.A.C., on Unit 8 as indicated. The following reference methods shall be used:

   -Method 9 Visual Determination of the Opacity of Emissions from Stationary Sources (I, A); annual on oil if greater than 400 hours of oil firing; however, testing on gas is required only once every five years.

   -Method 10 Determination of Carbon Monoxide Emissions from Stationary Sources (I, A). Testing may be conducted at less than capacity when compliance testing is conducted concurrent with the RATA testing required pursuant to 40 CFR 75 (annual for gas firing and annual for oil only if greater than 400 hours of oil firing).

   -Method 20 Determination of Oxides of Nitrogen and diluent emissions from Stationary Gas Turbines (I only, for compliance with 40 CFR 60 Subpart GG)

   Determination of Oxides of Nitrogen emissions will be by a Continuous Emissions Monitoring System (CEMs). A CEMS operated and maintained in accordance with 40 CFR 75 may be used. Compliance with the NO_X emissions standards in Table 1 shall be demonstrated with this CEMS system based on a 30 day rolling average. Based on CEMS data at the end of each operating day, a new 30 day average emission rate is calculated from the arithmetic average of all valid hourly emission rates during the previous 30 operating days. Valid hourly emission rates shall not include periods of startup (including fuel switching), shutdown, or malfunction as defined in Rule 62-210.200 where emissions exceed the NO_X standard in Table 1. These excess emission periods shall be reported as required in Section C. A valid hourly emission rate shall be calculated for each hour in which at least two NO_X concentrations are obtained at least 15 minutes apart.

   Note: No other methods may be used for compliance testing unless prior DEP approval is received in writing. The DEP may request a special compliance test pursuant to Rule 62-297.340(2), F.A.C., when, after investigation (such as complaints, increased visible emissions, or questionable maintenance of control equipment), there is reason to believe that any applicable emission standard is being violated.

2. Notwithstanding the requirements of Rule 62-297.340, F.A.C., the exclusive use of fuel oil with a maximum sulfur content limit of 0.05% or less, by weight, or pipeline quality natural gas is the method for determining compliance for SO_2 and PM_{10}. For the purposes of demonstrating compliance with the 40 CFR 60.333 SO_2 standard and the 0.05% S limit, fuel oil analysis using ASTM D2880-71 or D4294 (or equivalent) for the sulfur content of liquid fuels and D1072-80, D3031-81, D4084-82 or D3246-81 (or equivalent) for sulfur content of gaseous fuel shall be utilized in accordance with the EPA approved custom fuel monitoring schedule in Condition F.3. However, the permittee is responsible for ensuring that the procedures above are used for determination of fuel sulfur content. 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) (1997 version). For the purposes of demonstrating compliance with the emissions caps (Conditions B5 and B6), natural gas and fuel oil supplier data for sulfur content may be submitted or the natural gas sulfur content referenced in 40 CFR 75 Appendix D may be utilized.

3. An initial test for CO, concurrent with the initial NO_X test, is required. The initial NO_X and CO test results shall be the average of three valid one-hour runs. The DEP's Northwest District office shall be notified, in writing, at least 30

days prior to the initial compliance tests and at least 15 days before annual compliance test(s). Testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 95-100 percent of the maximum heat input rate allowed by the permit, corrected for the average ambient air temperature during the test (with 100 percent represented by a curve depicting heat input vs. ambient temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. In this case, subsequent operation is limited by adjusting the entire heat input vs. ambient temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for ambient temperature) and 105 percent 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.

E. Notification, Reporting and Recordkeeping

1. All measurements, records, and other data required to be maintained by the City of Tallahassee shall be 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 DEP representatives upon request.

2. Compliance Test Reports: A test report indicating the results of the required compliance tests shall be filed with the DEP NW District Office as soon as practical, but no later than 45 days after the last sampling run is completed. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8), F.A.C.

F. Monitoring Requirements

1. The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxides emissions from Unit 8. Thirty day rolling average periods when NO_X emissions (ppmvd @ 15% oxygen) are above the BACT standards (12/42 ppmvd for gas/oil) shall be reported to the DEP Northwest District Office pursuant to Rule 62-4.160(8), F.A.C. The continuous emission monitoring systems must comply with the certification and quality assurance, and other applicable requirements from 40 CFR 75. Periods of startup, shutdown, malfunction, and fuel switching shall be monitored, recorded, and reported as excess emissions when emission levels exceed the standards in Table 1 following the format of 40 CFR 60.7 (1997 version). The NO_x CEMS shall be used in lieu of the water/fuel monitoring system and fuel bound nitrogen (FBN) monitoring required for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1997 version). The calibration of the water/fuel monitoring device required in 40 CFR 60.335 (c)(2) (1997 version) will be replaced by the 40 CFR 75 certification tests of the NO_X CEMS. Upon request from DEP, the CEMS emission rates for NO_X on Unit 8 shall be corrected to ISO conditions to demonstrate compliance with the NO_X standard established in 40 CFR 60.332.

2. The following monitoring schedule for No. 2 fuel oil shall be followed: For all bulk shipments of No. 2 fuel oil received at the Purdom Station, an analysis which reports the sulfur content and fuel bound nitrogen content of the fuel shall be provided by the fuel vendor or other sources which follow the appropriate fuel test methods listed in Specific Condition D2. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40 CFR 60.335(d).

3. The following custom monitoring schedule for natural gas is approved in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2):

   a. Monitoring of natural gas nitrogen content shall not be required.

b. Analysis of the sulfur content of natural gas shall be conducted using one of the EPA-approved ASTM reference methods in Condition D2 for the measurement of sulfur in gaseous fuels, or an approved alternative method. Once Unit 8 becomes operational, monitoring of the sulfur content of the natural gas shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then fuel sulfur monitoring shall be conducted once per quarter for six quarters and after that, semiannually.

c. Should any sulfur analysis indicate noncompliance with 40 CFR 60.333, the City shall notify DEP of such excess emissions and the customized fuel monitoring schedule shall be reexamined. The sulfur content of the natural gas will be monitored weekly during the interim period while the monitoring schedule is reexamined.

d. The City shall notify DEP of any change in natural gas supply for reexamination of this monitoring schedule. A substantial change in natural gas quality (i.e., sulfur content variation of greater than 1 grain per 100 cubic foot of natural gas) shall be considered as a change in the natural gas supply. Sulfur content of the natural gas will be monitored weekly by the natural gas supplier during the interim period when this monitoring schedule is being reexamined.

e. Records of sampling analysis and natural gas supply pertinent to this monitoring schedule shall be retained by the City for a period of five years, and shall be made available for inspection by the appropriate regulatory personnel.

f. The City may obtain the sulfur content of the natural gas from the fuel supplier provided the test methods listed in Specific Condition D2 are used.

4. Determination of Process Variables:

(a) The permittee shall operate and maintain equipment and/or instruments necessary to determine process variables, such as process weight input or heat input, when such data is needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) Equipment and/or instruments used to directly or indirectly determine such process variables, including devices such as belt scales, weigh hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value. [Rule 62-297.310(5), F.A.C]

5. Compliance with the annual facility-wide NO_X cap shall be reported as required in Condition G6 and shall be determined by adding the annual NO_X emissions in tons per year for Unit 8 and Unit 7 (determined by the CEMS as required by 40 CFR 75) to annual NO_X emissions calculated for units GT1, GT2 and the auxiliary boiler determined by the following formulas:

GT 1 & GT 2 NO_X(natural gas)= (Fuel Usage)X (Heating Value of Natural Gas) X (0.44 lb/mmBtu) X units conversion factors

Fuel Usage shall be measured by fuel meter, recorded daily when unit is operated
Heating Value of Natural Gas will be determined from fuel supplier data
0.44 lb/mmBtu = AP-42 emission factor

GT 1 & GT 2 NOx (fuel oil)= (Fuel Usage)X (Heating Value of Fuel Oil) X (0.698 lb/mmBtu) X units conversion factors

Fuel Usage shall be measured by fuel meter, recorded daily when unit is operated
Heating Value of Fuel Oil will be determined from fuel supplier data
0.698 lb/mmBtu = AP-42 emission factor

Aux. Boiler NO_X(natural gas)= (Fuel Usage)X (140 lb/mmCF) X units conversion factors

Fuel Usage shall be measured by flow meter, recorded daily when unit is operated
140 lb/mmCF = AP-42 emission factor

6. Compliance with the annual facility-wide SO_2 cap shall be reported as required in Condition G6 and shall be determined by adding the annual SO_2 emissions in tons per year for Unit 8 and Unit 7 (determined by the methods required by 40 CFR 75) to the annual SO_2 emissions calculated for units GT1, GT2 and the auxiliary boiler determined by the following formulas:

GT 1 & GT 2 SO2 Emissions (natural gas)= (Fuel Usage) X (Heating Value of Natural Gas) X (0.0006 lb/mmBtu) X units conversion factors

Fuel Usage shall be measured by fuel meter, recorded daily when unit is operated
Heating Value of Natural Gas from fuel supplier data
Sulfur Content default of NADB = 0.0006 lb-SO2/mmBtu

GT 1 & GT 2 SO2 Emissions (fuel oil) = (Fuel Usage) X (Fraction Sulfur in the fuel oil) X (Molecular weight SO2 / Molecular weight of S) X (Conversion factor) X units conversion factors

Fuel Usage shall be measured by fuel meter, recorded daily when unit is operated % Sulfur will be determined from fuel oil analysis each time fuel is delivered (i.e., 0.05% S = 0.0005 in the above formula).

Molecular weight of SO2 = 64
Molecular weight of S = 32
Conversion factor of 95% = 0.95

Aux. Boiler SO2 Emissions (natural gas)= (Fuel Usage) X (Heating Value of Natural Gas) X (0.0006 lb/mmBtu) X units conversion factors

Fuel Usage shall be measured by fuel meter, recorded daily when unit is operated
Heating Value of Natural Gas from fuel supplier data
Sulfur Content default of NADB = 0.0006 lb/mmBtu

G. Rule Requirements

1. The emission unit shall be operated in compliance with all applicable requirements of 40 CFR 60, Subpart A, Appendix A and Appendix B (1997 version), Subpart GG - Standards of Performance for Stationary Gas Turbines (1997 version), and Rule 62-204.800 (7) (b) 38, F.A.C., except as otherwise specified herein. The Subpart GG requirement to correct test data to ISO conditions applies. However, such correction is not used for compliance

determinations with the BACT standard(s). All notifications and reports specified in this section shall be submitted to the DEP's Northwest District office.

2. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements and regulations (Rule 62-210.300(1), F.A.C.).

3. Except as otherwise specified herein, the emission unit shall be operated in compliance with all applicable provisions of Rule 62-210.650, F.A.C.: Circumvention; Rule 62-210.700, F.A.C.: Excess Emissions; Rule 62-204.800 (7) (b) 38, F.A.C.: Standards of Performance for New Stationary Sources (NSPS); Chapter 62-297, F.A.C.: Stationary Sources - Emissions Monitoring; and, Rule 62-4.130, F.A.C.: Plant Operation - Problems.

4. Notification of the following dates shall be provided to the DEP Northwest District office: 1)anticipated date of the initial startup of Unit 8 shall be postmarked not more than 60 days nor less than 30 days prior to such date, 2) the actual date of the initial startup shall be postmarked within 15 days after such date, and 3) commencement of construction shall be postmarked no later than 30 days after such date pursuant to 40 CFR 60.7. If construction does not commence within 18 months of issuance of this permit, the permittee shall obtain from the DEP's Bureau of Air Regulation a review and, if necessary, a modification of the BACT determination and allowable emissions (40 CFR 52.21(r)(2) (1997 version)).

5. Quarterly excess emission reports, in accordance with 40 CFR 60.7 (7) (c) (1997 version), shall be submitted to the DEP's Northwest District office.

6. Pursuant to Rule 62-210.370(2), F.A.C., Annual Operation Reports, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. Annual operating reports shall be sent to the DEP's Northwest District office by March 1st of each year.

7. Stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C.

8. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (Rule 62-4.090, F.A.C.).

H. Modifications

1. The permittee shall give written notification to the Department when there is any modification to this facility. This notice shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such notice shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and the anticipated completion date of the change.

APPENDIX GC
GENERAL PERMIT CONDITIONS [F.A.C. 62-4.160]

G.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.

G.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.

G.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.

G.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.

G.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.

G.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.

G.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.

G.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.

G.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 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.

G.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.

G.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.

G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.

G.13 This permit also constitutes:

(a) Determination of Best Available Control Technology *(X)*
(b) Determination of Prevention of Significant Deterioration *(X)*; and
(c) Compliance with New Source Performance Standards *(X)*.

G.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.

G.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.

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

Purdom Generating Station/Unit 8
City of Tallahassee

Facility ID No. 1290001 - Unit No. 8
Wakulla County, Tallahassee, Florida

Air Construction Permit No. PSD-FL-239
Power Plant Siting No. PA 97-36

The City of Tallahassee plans to install a new combined cycle combustion turbine system, Unit 8, at the existing Purdom facility consisting of a 160 MW (nominal rating) GE Series MS7FA combustion turbine with DLN-2.6 (or later version) dry low NOx (gas) and water injection (diesel) burners and a nonfired heat recovery steam generator (HRSG) with a nominal 90 MW steam turbine. The compressor inlet air will be conditioned by an evaporative cooler when needed. The turbine will be started using the generator and a static start system. A new 200 foot stack and a cooling tower will be added to the facility for Unit 8.

Unit 8 will be located at the City's Sam O. Purdom Generating Station in St. Marks, Wakulla County. Existing steam generating Units 5 and 6 will be permanently shut down once Unit 8 has completed the initial performance test for natural gas firing. Other existing units at the plant consist of: Unit 7, a pre-NSPS boiler with a nominal rating of 44 MW fired by natural gas, residual fuel oil or distillate fuel oil; two pre-NSPS distillate fuel oil or natural gas fired combustion turbines with a nominal rating of 12.3 MWs each (GT1 and GT2); and a Subpart Dc auxiliary steam boiler fired by natural gas. A process description is included in the Technical Evaluation and Preliminary Determination.

BACT DETERMINATION REQUESTED BY THE APPLICANT:

See Table 4-8 (ATTACHMENT A) for the BACT requested by the applicant.

The Sam O. Purdom facility is among the major facilities listed in Florida Administrative Code (F.A.C.) Chapter 62-212, Prevention of Significant Deterioration (PSD), Table 62-212.400-1, "Major Facilities Categories." A BACT determination is required for each pollutant exceeding the significant emission rates in Table 62-212.400-2, "Regulated Air Pollutants Significant Emissions Rates," which in this case are particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), carbon monoxide (CO), and nitrogen oxides (NO_X),

This facility is also subject to:

- 40 CFR 60, Subpart GG
- 40 CFR 75

DATE OF RECEIPT OF A BACT APPLICATION:

03-17-97

REVIEW GROUP MEMBERS:

Martin Costello, P.E., of the New Source Review Section.

BACT DETERMINATION PROCEDURE:

In accordance with Chapter 62-212, F.A.C., this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department of Environmental Protection (Department), on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that, in making the BACT determination, the Department shall give consideration to:

(a) Any Environmental Protection Agency determination of BACT pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 - Standards of Performance for New Stationary Sources or 40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants.

(b) All scientific, engineering, and technical material and other information available to the Department.

(c) The emission limiting standards or BACT determination of any other state.

(d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine, for the emission unit in question, the most stringent control available for a similar or identical emission unit or emission unit category. If it is shown that this level of control is technically or economically infeasible for the emission unit in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

The air pollutant emissions from this facility can be grouped into categories based upon the control equipment and techniques that are available to control emissions from these emission units. Using this approach, the emissions can be classified as follows:

o ***Combustion Products*** (e.g. NO_x and SO_2)

Nitrogen Oxides (NO_X)

Oxides of nitrogen (NO_X) are generated during fuel combustion by oxidation of chemically bound nitrogen in the fuel (fuel NO_X) and by thermal fixation of nitrogen in the combustion air (thermal NO_X). As flame temperature increases, the amount of thermally generated NO_x increases. Fuel type affects the quantity and type of NO_X generated. Natural gas is very low in fuel bound nitrogen and therefore the dominant mechanism for NO_X formation is thermal NO_X. On combustion turbines, controls for NO_X include Selective Catalytic Reduction (SCR) systems, wet injection or dry low NO_X burner systems.

Sulfur Dioxide (SO_2)

In a combustion turbine (CT) sulfur dioxide emissions result from the oxidation of fuel bound sulfur. Natural gas has very low levels of sulfur and low sulfur distillate fuel oils have 0.05% sulfur by weight which is also low compared to heavy fuel oils or coal. Add on controls (e.g. wet scrubber or spray dryer absorber systems) are not feasible nor are they needed when low sulfur fuels are fired in combustion turbines. SO_2 emissions are minimized solely by firing low sulfur fuels. As discussed below, sulfur dioxide (and sulfuric acid mist) emissions will be controlled on unit 8 by firing low sulfur fuels.

o ***Products of Incomplete Combustion*** (e.g., PM_{10}, CO, VOC).

Particulate Matter less than 10 micrometers aerometric diameter (PM_{10})

Particulate Matter is generated by various physical and chemical processes during combustion. The particulate matter emitted from this combustion turbine will predominately be less than 10 micrometers in diameter (PM_{10}). Common control devices for stack gases include settling chambers, inertial separators, impingement separators, wet scrubbers, fabric filters, and electrostatic precipitators. These add on control devices have not been used on combustion turbines mainly due to the low particulate loadings and the increased back pressure. Filtering of the compressor inlet air and good combustion practices constitute the top control option for combustion turbines firing natural gas or low sulfur distillate fuel oil.

The cooling tower will emit PM/PM_{10} as particulate laden water is emitted and evaporated from the tower. A single BACT determination for a cooling tower was identified in the technology review. The BACT in this case specified drift eliminators to control PM/PM_{10} emissions from the cooling tower drift losses.

Carbon Monoxide (CO)

Carbon monoxide (CO) is a pollutant formed by the incomplete combustion (oxidation) of hydrocarbons in the turbine's combustors. The most stringent control technology for CO emissions is the use of an oxidation catalyst. This control option is not considered cost effective as discussed in the next section. The second most stringent control option, combustion controls and good combustion practices is considered BACT for this project.

o ***Other Pollutants:***

VOC is also a pollutant formed by the incomplete combustion of fuel. It will be controlled in the same manner as chosen for CO control. Other pollutants (sulfuric acid mist, heavy metals) will be minimized by the exclusive use of clean fuels and the same good combustion practices listed above.

Grouping the pollutants in this manner facilitates the BACT analysis because it enables the equipment available to control the type or group of pollutants emitted and the corresponding energy, economic, and environmental impacts to be examined on a common basis. Although all of the pollutants addressed in the BACT analysis may be subject to a specific emission limiting standard as a result of PSD review, the control of "non-regulated" air pollutants is considered in imposing a more stringent BACT limit on a "regulated" pollutant (i.e., PM_{10}, NO_X, SO_2, etc.), if a reduction in "non-regulated" air pollutants can be directly attributed to the control device selected as BACT for the abatement of the "regulated" pollutants.

BACT POLLUTANT ANALYSIS

NITROGEN OXIDES (NO_X)

A review of EPA's RACT/BACT/LAER Clearinghouse (RBLC) information indicates that NO_X emissions for most new combustion turbines in attainment areas for ozone and nitrogen dioxides are controlled by either wet injection or dry low NO_X burner technology. The applicant has proposed dry low NO_X burner technology for gas firing and water injection for fuel oil firing. It is compared below with previous determinations documented by the BACT Clearinghouse.

BACT Clearinghouse Determinations

BASIS:	*Limit*	*Technology*	*Facility ID*
LAER- gas fired	*3.5 ppm*	*SCR*	*NY-0044*
LAER- oil fired	*10 ppm*	*SCR*	*NY-0044*
BACT-gas	*9ppm*	*DLNB*	*NY-0047*
BACT-oil	*42ppm*	*water injection*	*NY-0047*

The most stringent or top control option for controlling NO_X emissions from a combustion turbine is the above listed facility (NY-0044) from EPA's RACT/BACT/LAER Clearinghouse Information System (RBLC). The Brooklyn Navy Yard Cogeneration Partnership L.P. facility consists of two CTs which are gas/oil fired cogeneration units rated at 240 MW total (160 MW simple cycle) and is located in a nonattainment area for ozone. In addition to SCR add on controls for NO_X emissions, offsets (reductions in NO_X emissions at a nearby facility) were purchased when this unit was permitted.

The city analyzed the feasibility of installing a SCR system for Purdom unit 8. The initial capital cost based on a vendor quote was $1,676,000 based on a design which would meet 3.5 ppm on gas and 10 ppm on fuel oil. The total levelized annual cost was estimated to be $1.5 million per year for 20 years resulting in an incremental cost effectiveness of *$7,225* per ton of NO_X removed. This incremental cost effectiveness value is considerably higher than those determined to constitute BACT for other projects in Florida of similar nature. Therefore SCR is deemed too expensive in this application.

The most stringent emission limit for a large industrial combustion turbine with dry low NO_X burners is listed in the table above (NY-0047). This unit is located in Holtsville New York at the PASNY Holtsville Combined Cycle Plant. This unit is a Siemens model V84.2 rated at 150 MW simple cycle. This unit uses a single vertical silo combustor in contrast to the GE frame 7FA unit which uses a can annular combustor. The silo design allows for longer residence time in the combustor and may operate at lower peak flame temperatures (which reduces thermal NOx). It was permitted in 1992 and has recently demonstrated emissions less than 9 ppmvd except during startup (up to 3 hours) /shutdown/malfunction and is required to demonstrate compliance using the NO_X CEMS. The firing temperature and the reliability of this unit are not known as this time. The majority of the 9 ppm units listed in EPA's database employ both SCR and dry low NOx burners.

The current level of dry low NO_X burner technology which can be reliably achieved over a long time period appears to be approximately 15 ppm of NO_X at full load firing natural gas. This standard is shown on at least 10 units listed in EPA's RACT/BACT/LAER Clearinghouse.. The actual emissions level achieved from dry low NO_X burner technology is dependent on firing temperature, size of the unit and type of combustor (silo vs. annular combustor designs). In general the smaller aeroderivative designs have not been able to achieve 15 ppm without having problems with reliability. Several units in Florida have been granted extensions for the deadline to attain 15 ppm. Some of the smaller industrial turbines (frame units) are able to achieve less than 15 ppm today. For instance, Unit 2 at the Kissimmee Utility Authority's Cane Island plant has actual emissions of 6 to 12 ppm at full load on this GE frame 7 EA unit. It is rated at 80 MW and has a firing temperature of about 2025 F. Because the city requested compliance to be demonstrated on a continuous basis (by CEMS) using a 30 day rolling average, the Department considered a BACT limit below 15 ppm to compensate for the longer averaging time. An additional consideration in determining BACT for NO_X was the fact that the technology for this dry low NO_X system is still under development, even though it has been demonstrated on a lower firing temperature unit.

Dry low NO_X technology is a combustion staging technology which reduces the formation of thermal NO_X by keeping peak flame temperatures as low as possible. But higher firing temperatures enable higher thermal efficiencies because these hotter exhaust gases have more energy to turn the turbine blades. Because thermal NO_X can be higher for the higher firing temperature units (e.g. the unit proposed by the City of Tallahassee) it is more difficult to achieve low NO_X emissions on these units with firing temperatures of 2400 F. Compensating for this is the higher electrical power output for a given heat input, therefore on a (lbs of NO_X emissions) / (KW-hr) basis, the more efficient units may not be at a disadvantage to the lower firing temperature units.

Dry low NO_X burner technology is the next most stringent control technology (after SCR) for combustion turbines. The applicant proposes to use GE's DLN-2.6 (or later version) controls which is a third generation dry low NO_X burner technology that was first demonstrated in commercial operation in 1996. Emissions from this unit were less than 9 ppm. This application was a Frame 7FA unit with a firing temperature of 2350 F. The first application of a Frame 7FA with a 2400 F firing temperature is scheduled for operation this summer and has a contract for less than 15 ppm. Although not currently demonstrated on the higher firing temperature unit which the city of Tallahassee will purchase, the contractor has guaranteed an emission rate of less than 9 ppm for Purdom Unit 8. This guarantee is based on operation above the 50-55% load range since emissions (ppm) will be higher at loads below this.

Nitrogen Oxides (NO_X) emissions will be controlled by using GE's DLN-2.6 (or later version) with a BACT standard of 12 ppmvd corrected to 15% oxygen, compliance by CEMS and using a 30 day rolling average. The firing temperature on this Frame 7FA combustion turbine is 2400 F. When firing natural gas, the combustor operates in a diffusion mode at low loads (less than about 50% of capacity) and in a premixed mode at high loads. When firing fuel oil, the combustors are operated in a diffusion mode at all loads and diluent injection (water) is used to control NO_X formation. The DLN-2.6 control system regulates fuel distribution to the primary, secondary, tertiary and quaternary fuel systems for each of the five combustors. As the combustion turbine is started and operated through the full range, the diffusion, piloted premix, and premix flames are established by changing the distribution of fuel flow in the combustors. Fuel and air flow to the combustors are controlled by GE's Speedtronic control system. GE's Mark V control system will be used to continuously maintain the NO_X concentration in the exhaust at the specified level throughout a range of loads and ambient conditions. This system receives inputs from a compressor inlet temperature and humidity sensor, load sensors, speed sensors, and ambient pressure sensors.

SULFUR DIOXIDE (SO_2)

SO_2 control processes can be classified into five categories: fuel/material sulfur content limitations, absorption by a solution, adsorption on a solid bed, direct conversion to sulfur, or direct conversion to sulfuric acid.

A review of the BACT determinations for combustion turbines as contained in EPA's Clearinghouse shows that the exclusive use of low sulfur fuels constitutes the top control option for SO_2. The applicant has proposed the exclusive use of natural gas or distillate fuel oil with sulfur content limited to 0.05% by weight. This is considered BACT for this project.

PARTICULATE MATTER (PM/PM_{10})

A technology review indicated that the top control option for PM_{10} is a combination of good combustion practices, fuel quality, and filtration of inlet air. The applicant has proposed this top control option. In addition, GE indicates that the PM_{10} emissions will not exceed 9 lb/hr (0.0058 lb/mmBtu) for natural gas and 17 lb/hr (0.0096 lb/mmBtu) for low sulfur distillate fuel oil exclusive of background dust loadings. Because these low emission levels are difficult to reliably measure by EPA reference methods over a one hour test period, BACT is not an emission limit but is based on good combustion practices and the exclusive use of clean, low sulfur fuels. The emission control technology for PM_{10} will be good combustion practices and the use of only low sulfur, and low ash content fuels including natural gas and distillate fuel oil containing no more than 0.05% sulfur by weight. The inlet air for the combustion turbine will be filtered to protect the internal components from wear. This filtration may also reduce PM_{10} emissions. Good combustion practices shall be implemented by using computer monitored and controlled systems with appropriate alarms for improper operating parameters. Proper tuning and operation of the dry low NO_X burner system shall be employed to minimize products of incomplete combustion (PM_{10}, VOC, and CO) while meeting the NO_X emission limit.

BACT for the cooling tower is the use of drift eliminators to control PM/PM_{10} emissions from the cooling tower drift losses.

CARBON MONOXIDE(CO)

The most stringent control technology for CO emissions is the use of an oxidation catalyst. The city evaluated the use of an oxidation catalyst designed for 90 percent reduction and having a two year catalyst life. The oxidation catalyst control system is estimated to increase the capital cost of the project by $1.5 million and results in an incremental cost effectiveness of $7,720 per ton of CO reduced. In addition, there will be a reduction in the unit's output by as much as 0.5% or 1.25 MW due to the increased pressure drop across the catalyst. The catalyst may also result in an increase in the oxidation of SO_2 to SO_3 which combines with moisture in the exhaust to form sulfuric acid mist. This impact is not considered significant. The catalyst life is limited and may result in an additional solid waste load to the local landfill if the catalyst can not be rejuvenated by the manufacturer. This control option is not considered cost effective. The second most stringent control option, combustion controls and good combustion practices is considered BACT for this project. Carbon monoxide (CO) will be controlled by proper tuning of the dry low NO_X burner system and good combustion practices. Operation of the dry low NO_X burner system shall be optimized in order to

minimize CO emissions while keeping NO_X emissions below the emission limit. Low load operation will result in the highest levels of CO emissions (ppm and lb/hr). The BACT emission limit for CO, 25 ppm for gas and 90 ppm for fuel oil, was set at the level which could be achieved for worst case operation i.e., low load operation (50% load) so that the full range of operation of this unit could be employed. It may be cost effective to conduct annual CO emission tests concurrent with the annual relative accuracy test audits (RATA) which are conducted at 50 % load or higher. According to GE's data, operation at higher loads should result in CO emissions which are at or below 10 ppmvd when firing natural gas.

BACT DETERMINATION RATIONALE:

The BACT emission level chosen for NO_X, 12 ppm and compliance by CEM, is similar to the basis for the 165 MW units (simple cycle rating) at for FPC's Hines Energy Center and is the lowest NO_X limit (ppm level) to date in Florida. In contrast to Unit 8, the Hines Energy Center units are not required to demonstrate compliance on a continuous basis but EPA Method 20 is required once per year. Selective Catalytic Reduction (SCR) was not considered cost effective for the city of Tallahassee. SCR is an add on NO_X control technology which requires ammonia injection and the installation of a catalyst bed downstream of the combustion turbine. Because combustion turbines pump large volumes of exhaust gases, the pressure drop introduced by the catalyst causes energy losses on these large industrial combustion turbines. Water usage associated with an SCR system would increase by 136,000 gallons per year.

BACT for SO_2 emissions from the combustion turbine was based on the top control option which is the exclusive use of low sulfur distillate fuel oil and pipeline quality natural gas. These fuels are among the lowest sulfur fuels available. This BACT will also insure that ambient SO_2 impacts on the nearby St. Marks Class I area are minimized to the greatest extent possible.

BACT for PM_{10} was determined to be good combustion practices, inlet air filtering, and clean, low ash and low sulfur fuels which is currently the only feasible PM_{10} control technology for combustion turbines. Particulate matter is generated by various physical and chemical processes during combustion and will be affected by the design and operation of the NO_X controls. The particulate matter emitted from this unit will mainly be less than 10 micrometers in diameter (PM_{10}). Common control devices for stack gases include settling chambers, inertial separators, impingement separators, wet scrubbers, fabric filters, and electrostatic precipitators. Fabric filters (baghouses) and electrostatic precipitator (ESPs) have not been used on combustion turbines mainly due to the low particulate loadings and the increased back pressure. Filtering of the compressor inlet air and good combustion practices constitute the top control option for combustion turbines firing natural gas or low sulfur distillate fuel oil. The applicant has proposed this top control option. This is considered BACT for this project.

The city evaluated the use of an oxidation catalyst designed for 90 percent reduction of CO and a two year catalyst life. The oxidation catalyst control system is estimated to increase the capital cost

of the project by $1.5 million and results in an incremental cost effectiveness of $7,720 per ton of CO reduced. In addition, there will be a reduction in the unit's output by as much as 0.5% or 1.25 MW due to the increased pressure drop across the catalyst. The catalyst may also result in an increase in the oxidation of SO_2 to SO_3 which combines with moisture in the exhaust to form sulfuric acid mist. This impact is not considered significant. The catalyst life is limited and may result in an additional solid waste load to the local landfill if the catalyst can not be rejuvenated by the manufacturer. This control option is not considered cost effective. The second most stringent control option, combustion controls and good combustion practices is considered BACT for this project. The BACT emission limit for CO, 25 ppm for gas and 90 ppm for fuel oil, was set at the level which could be achieved for worst case operation i.e., low load operation (50% load) so that the full range of operation of this unit could be employed. It may be cost effective to conduct annual CO emission tests concurrent with the annual relative accuracy test audits (RATA) which are conducted at 50 % load or higher. According to GE's data, operation at higher loads should result in CO emissions which are at or below 10 ppmvd when firing natural gas.

BACT DETERMINATION BY DEP:

Based on the information provided by the applicant and the information searches conducted by the Department, lower emissions limits can be obtained employing the top-down BACT approach for SO_2 , NO_X , PM_{10} , and CO.

PM_{10} DETERMINATION

Filtering of the compressor inlet air and good combustion practices while firing low sulfur fuels (natural gas or distillate fuel oil with no more than 0.05% sulfur content).

BACT for the cooling tower is the use of drift eliminators to control PM/PM_{10} emissions from the cooling tower drift.

SO_2 DETERMINATION

The exclusive use of pipeline quality natural gas or distillate fuel oil with sulfur content limited to 0.05% by weight is considered BACT for this project.

NO_x DETERMINATION

An emission limit of 12 ppmvd corrected to 15% oxygen firing natural gas and 42 ppmvd corrected to 15% oxygen firing fuel oil is considered BACT. The NO_X standard for firing fuel oil shall be adjusted from 42 ppm up to 48 ppm based on fuel bound nitrogen (FBN) levels above 0.015 percent according to the equation submitted by the applicant and incorporated into the draft PSD permit (Section III Condition B4). This adjustment, upward or downward between 42 and 48 ppm, shall be made only at the time of each new fuel shipment. Compliance shall be demonstrated on a

30 day rolling average basis using the NO_X CEMS system. Emissions during startup (including fuel switching), shutdown and malfunction shall be excluded from the calculation of these 30 day rolling averages provided the operator minimizes the occurrence, magnitude, and duration of excess emissions pursuant to 62-210.700 Florida Administrative Code (version dated 10/15/96). Excess Emissions during these transient periods shall be reported quarterly to the Department pursuant to 40 CFR 60.7. Excess emissions shall be reported based on the NO_X CEMS data in lieu of the water/fuel monitoring specified in 40 CFR 60.334. When monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate of the 30 day rolling average.

CO DETERMINATION

Carbon monoxide (CO) will be controlled by proper tuning of the dry low NO_X burner system and good combustion practices. Operation of the dry low NO_X burner system shall be optimized during the initial compliance test and at other times as needed in order to minimize CO emissions while keeping NO_X emissions below the emission limit. The BACT emission limit for CO, 25 ppm for gas and 90 ppm for fuel oil, was set at the level which could be achieved for worst case operation i.e., low load operation (50% load) so that the full range of operation of this unit could be employed. It may be cost effective to conduct annual CO emission tests concurrent with the annual relative accuracy test audits (RATA) which are conducted at 50 % load or higher.

OTHER POLLUTANTS

Visible Emissions shall be limited to 10 % opacity as a secondary and ongoing indicator of PM_{10} emissions.

The BACT emission levels established by the Department are as follows:

Table 1-1: Air Pollutant Standards and Terms

POLLUTANT	EMISSION LIMIT
	Natural Gas / Fuel Oil
Particulate Matter (PM_{10})	good combustion of clean, low sulfur fuels
	drift eliminators for the cooling tower
Visible Emissions	10% opacity / 10 % opacity
Carbon Monoxide	25ppm / 90 ppm
NO_X (30 day rolling average)	12 ppm @ 15 % O_2 / 42 ppm @ 15% O_2 and adjusted for FBN
SO_2	natural gas / limit of 0.05% sulfur by weight

Table 1-2: Compliance Procedures

POLLUTANT	COMPLIANCE DETERMINED BY
Visible Emissions	Method 9
Carbon Monoxide	Method 10 (can conduct concurrent with RATA testing)
NO_X (30 day rolling average)	NO_X CEMS and O_2 or CO_2 diluent monitor
SO_2	ASTM D 3246 gas / ASTM D 4294 fuel oil, or other gas and fuel oil test methods in 40 CFR 60

DETAILS OF THE ANALYSIS MAY BE OBTAINED BY CONTACTING:

Martin Costello, PE II
New Source Review Section
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended By:

C. H. Fancy, P.E., Chief
Bureau of Air Regulation

Date: 5/28/98

Approved By:

Howard L. Rhodes, Director
Division of Air Resources Management

Date:

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)
ATTACHMENT A

BACT DETERMINATION REQUESTED BY THE CITY OF TALLAHASSEE

TABLE 4-8
SUMMARY OF PROPOSED BEST AVAILABLE CONTROL TECHNOLOGY

Pollutant	Proposed BACT
Carbon Monoxide (CO)	Good Combustion Practices
Particulate Matter (TSP)	Fuel Quality (Clean Pipeline Quality natural gas and No. 2 (0.05% S) diesel fuel oil, Good Combustion Practices, and Combustion Inlet Air Filtration
PM_{10}	Fuel Quality (Clean Pipeline Quality natural gas and No. 2 (0.05% S) diesel fuel oil, Good Combustion Practices, and Combustion Inlet Air Filtration
Sulfur Dioxide (SO_2)	Fuel Quality (Clean Pipeline Quality natural gas and No. 2 (0.05% S) diesel fuel oil.
Sulfuric Acid Mist (H_2SO_4)	Fuel Quality (Clean Pipeline Quality natural gas and No. 2 (0.05% S) diesel fuel oil.
Nitrogen Oxides (NO_x)	Fuel Quality (Clean Pipeline Quality natural gas and No. 2 (0.05% S) diesel fuel oil and Good Combustion Practices including Dry-Low NOx Combustors and Water Injection
Volatile Organic Compounds (Including Benzene)	Good Combustion Practices
Trace Metals Lead (Pb) Beryllium (Be) Mercury (Hg) Arsenic (As)	Fuel Quality (Clean Pipeline Quality natural gas and No. 2 (0.05% S) diesel fuel oil and Combustion Inlet Air Filtration
Total Fluorides (Fl)	Fuel Quality (Clean Pipeline Quality natural gas and No. 2 (0.05% S) diesel fuel oil.
Cooling Tower (TSP & PM_{10})	Drift Eliminators (0.002 percent - Recirculation Water)

Note: Pollutants presented in bold and italics are subject to BACT by rule.

Source: Foster Wheeler Environmental, 1997

Table 1-2: Compliance Procedures

POLLUTANT	COMPLIANCE DETERMINED BY
Visible Emissions	Method 9
Carbon Monoxide	Method 10 (can conduct concurrent with RATA testing)
NO_X (30 day rolling average)	NO_X CEMS and O_2 or CO_2 diluent monitor
SO_2	ASTM D 3246 gas / ASTM D 4294 fuel oil, or other gas and fuel oil test methods in 40 CFR 60

DETAILS OF THE ANALYSIS MAY BE OBTAINED BY CONTACTING:

Martin Costello, PE II
New Source Review Section
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended By:

C. H. Fancy, P.E., Chief
Bureau of Air Regulation

Date: 5/28/98

Approved By:

Howard L. Rhodes, Director
Division of Air Resources Management

Date: 5/28/98

Memorandum

Florida Department of
Environmental Protection

TO: Howard L. Rhodes

THRU: Clair Fancy
Al Linero

FROM: Martin Costello mc

DATE: May 27, 1998

SUBJECT: City of Tallahassee - Utilities Services
Permit No. PSD-FL-239 / PA97-36
Purdom Generating Station

1. Attached for approval and signature is a letter that will amend the above referenced construction permit.

2. No written comments were received since the public notice. The Siting Board approved the Conditions of Certification earlier this month.

3. I recommend your approval and signature.

Attachments

AAL/mc

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

IN RE: CITY OF TALLAHASSEE PURDOM UNIT 8 POWER PLANT SITING APPLICATION PA 97-35,

Case No. 97-1350EPP

WAKULLA COUNTY, FLORIDA'S EXCEPTIONS TO CORRECTED RECOMMENDED ORDER

Wakulla County, Florida, by and through undersigned counsel, hereby files its exceptions to the Recommended Order filed March 9, 1998, and the Corrected Recommended Order filed March 19, 1998, as follows:

1. The hearing officer failed to adequately address the BACT for NOx . Paragraph 56 of the Findings of Fact states that BACT (Best Available Control Technology) for NOx is the use of dry low NOx combustors capable of achieving emissions of 12 ppm by volume when burning natural gas and 42 ppm when burning diesel fuel oil. In fact, this technology is unproven. This will be the first dual fuel system combustor in operation. (T.482) The only commercially operating unit uses natural gas (T. 467), and the dual system is more complicated (T. 482). Accordingly, the expectations of 12 ppm and 42 ppm are based on a results from a unit that only uses natural gas. The unit Purdom will employ has not been commercially demonstrated to control emissions to the levels predicted.

2. The hearing officer further determined in paragraph 56 that Selective Catalytic Reduction (SCR), the most stringent control technology for NOx emissions, was too costly in terms of environmental, economic, and energy costs to be determined BACT. However, the BACT

technology process was entirely subjective and the main consideration in determining what technology to use was economics. (T. 528). The hearing officer did not take into account the fact that SCR greatly reduces NOx emission rates when used with low dry burner technology (T. 471), and that SCR has been proven commercially to work (T. 476), while the new GE low dry burner technology used in a dual fuel system has not been demonstrated commercially to achieve the levels predicted.

3. Cost was also the only factor considered in selecting good combustion practices as BACT for controlling carbon monoxide emissions, rather than the more stringent emission control called an oxidation catalyst. (REM 16)

4. The hearing officer failed to consider the fact that once a plant is certified, it is rarely shut down or taken offline for failure to comply with emission standards. (T. 527) Accordingly, if the most stringent technology is not used, Wakulla County and its resources are without protection from dangerous emissions of toxins.

5. The Purdom Plant will not comply with all state air quality standards, as set forth in Paragraph 63 of the Findings of Fact. The State Comprehensive Plant states that a policy of the State is to "reduce sulfur emissions and nitrogen oxide emissions and mitigate their effects on the natural and human environment." § 187.201(11)(b)(3). Purdom Unit 8 will not reduce emissions from the plant. Only allowable emissions will be reduced. Actual emissions from the plant will not be reduced. (T. 901) Accordingly, this state policy, which is embodied in the state comprehensive plan, will not be met.

6. The hearing officer failed to address the fact that selection of the Hopkins site over the Purdom site would have prevented the production of 50,000 pounds of solid waste per day because Purdom will use salt water. (T. 146, 705)

7. Studies have been conducted that link magnetic field intensity with adverse health effects. (T. 301) The Florida Legislature has taken such studies into account by giving DEP the power to adopt regulations on electromagnetic fields produced by power lines. (T.869) Accordingly, the potential for harm due to electromagnetic fields should be taken into effect in determining whether power lines should be buried.

8. The hearing officer failed to adequately consider the effect of flooding due to hurricanes on the functioning of the Purdom Plant. The City of Tallahassee only provided evidence of flood proofing of the oil storage tanks. The entire Purdom facility is located below the base flood elevation. No evidence was provided at the certification hearing that the entire facility would be flood-proofed, as is required for compliance with FEMA regulations and local ordinances.

9. The hearing officer also ignored the fact that the City of Tallahassee could not reasonably estimate the time necessary to repair the facility in the event of flooding. GE could only estimate that repair of the combustion system would take two to three weeks. (T. 469). The City did not take into account the time necessary to repair equipment, such as the turbine compressor. There is no evidence in the record to suggest that all equipment could be repaired within three weeks.

10. Contrary to the findings of fact and conclusions of law, state funds will be used in the construction of the facility. Municipal money is derived from the state through taxes, revenue sharing, and grants. Based on the high costs of constructing the Purdom facility, some of these funds will be used in constructing the Purdom facility.

11. The hearing officer incorrectly determined in his conclusions of law that the expenditure of state funds to subsidize development in a high hazard coastal area applies only to structures that will attract additional development. This policy sets forth a straightforward limitation

on all development in coastal high-hazard areas which utilize state funds.

12. Furthermore, all public funds spent by Wakulla County within the coastal high-hazard area have been strictly consistent with the coastal management element of its comprehensive plan and the state comprehensive plan.

13. While a power plant may be a "water-dependent use", other locations, such as the Hopkins site, which is not located within a coastal high-hazard area were available for Purdom Unit 8. Furthermore, were this a new site, it would be inappropriate for other reasons, as well, such as its proximity to the Class I area (national forest).

DATED this 24th day of March, 1998.

RONALD A. MOWREY
Fla. Bar No. 0122006
DONNA J. SHAW
Fla. Bar No. 0117196

MOWREY, BARRETT & MINACCI, P.A.
515 North Adams Street
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Tele: (850) 222-9482
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Attorneys for Wakulla County, Florida

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CERTIFICATE OF SERVICE

I hereby certify that true and correct copies of Wakulla County, Florida's Exceptions to the Corrected Recommended Order have been furnished by U.S. mail to the following this 24th day of March, 1998:

SCOTT GOORLAND, ESQ.
Dept. of Environmental Protection
Douglas Building, Mail Station 35
3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000

GARY P. SAMS, ESQ.
Hopping Green Sams & Smith, P.A.
Post Office Box 6526
Tallahassee, FL 32314

MOWREY, BARRETT & MINACCI, P.A.

Ronald A. Mowrey
Donna J. Shaw
515 North Adams Street
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(850) 222-9482

Attorneys for
Wakulla County, Florida

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

IN RE: CITY OF TALLAHASSEE PURDOM UNIT 8 POWER PLANT SITING APPLICATION PA 97-35

Case No. 97-1350EPP

CORRECTED RECOMMENDED ORDER

Pursuant to notice, this cause came on for formal hearing before P. Michael Ruff, duly designated Administrative Law Judge of the Division of Administrative Hearings, in St. Marks, Florida on November 18-21, 1997. The appearances were as follows:

APPEARANCES

For City of Tallahassee:
Gary P. Sams, Esquire
Hopping, Green, Sams, and Smith
Post Office Box 6526
Tallahassee, Florida 32314

For Department of Environmental Protection:
Charles T. Collette, Esquire
Scott Gorland
2600 Blair Stone Road
Mail Station 35
Tallahassee, Florida 32399

For Department of Transportation:
Mary S. Miller, Esquire
Haydon Burns Building
605 Suwannee Street
Tallahassee, Florida 32399

For Department of Community Affairs:
Andrew S. Grayson, Esquire
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399

For Wakulla County:
Ronald A. Mowrey, Esquire
Mowrey, Barrett and Minacci
515 North Adams Street
Tallahassee, Florida 32302

STATEMENT OF THE ISSUE

The issue to be resolved in this proceeding concerns whether certification should be issued to the City of Tallahassee for approval to construct and operate a two hundred fifty (250) megawatt combined-cycle generating unit to be located at the city's Samuel O. Purdom Generating Station in St. Marks, Florida, in accordance with the pertinent provisions of Sections 403.501 through 403.518, Florida Statutes.

PRELIMINARY STATEMENT

This proceeding arose on the application by the City of Tallahassee ("City") for a power plant site certification for its Purdom Generating Station, including the new Purdom Unit 8 and associated facilities attendant to retirement of certain units and facilities and the conversion and use of other facilities in support of Unit 8 (the Purdom Unit 8 project). The project and the application include related so-called "linear facility modifications," including the proposed re-conductoring of two (2) existing transmission lines and modifications to an existing natural gas pipeline lateral, the construction and operation of a re-claimed water pipeline from the City of St. Marks wastewater treatment plant to the Purdom Generating Station and the retirement and removal from service of an existing water well field and waterline in conjunction with the project.

The Florida Public Service Commission issued a determination of need for Unit 8 on June 9, 1997, in accordance with Section 403.519, Florida Statutes. Thereafter, a land-use hearing was conducted before the undersigned on June 25, 1997, in accordance

with Sub-Sections 403.508(1)(2) and 403.5175(3), Florida Statutes. A Recommended Order was entered and that Recommended Order was adopted by the Governor and Cabinet on October 28, 1997.

The subject certification hearing came on as noticed on November 18 through November 21, 1997, in accordance with Section 403.508(3), Florida Statutes. The hearing was conducted for the purpose of receiving evidence concerning whether there is compliance with criteria contained in Section 403.5175, Florida Statutes; 403.502, Florida Statutes; and Section 403.519, Florida Statutes.

The city presented the testimony of sixteen (16) witnesses, and ninety-seven (97) of its exhibits were admitted into evidence. The witnesses and exhibits are more particularly described in the record in this proceeding, a transcript of which has been filed.

The Department of Environmental Protection presented the testimony of Hamilton S. Oven, Jr., Administrator of the Siting Coordination Office of the Department of Environmental Protection ("DEP") and a professional engineer. He was admitted as an expert in siting, permitting, regulation of electric power plants and associated facilities in Florida, as well as environmental engineering, water and wastewater treatment, and water and air pollution control. The Department had three (3) exhibits admitted into evidence. One witness testified on behalf of Wakulla County; George Edward Mills, IV, the planning Director for Wakulla County. He was accepted as an expert witness in

land-use planning and comprehensive planning. His resume was admitted into evidence. Additionally Exhibits S-1 through S-12, were stipulated into evidence and Exhibits JN-1 through JN-10, were officially recognized or "judicially noticed." One member of the general public, Eugene Danaher, a Leon County resident, appeared, testified, and offered his Exhibits 1 through 5, which were received into evidence.

Upon concluding the taking of evidence the parties elected to order a transcript of the proceedings and requested an extended briefing schedule. Accordingly, proposed recommended orders were timely submitted and have been considered in the rendition of this Recommended Order.

FINDINGS OF FACT

1. The City of Tallahassee is a unit of local government in Leon County which owns and operates the Samuel O. Purdom Power Station located on approximately sixty-three (63) acres lying within the City of St. Marks and Wakulla County, Florida. The proposed Unit 8 will be constructed on approximately four (4) acres of that sixty-three (63) acre existing power station site. The Department of Environmental Protection ("DEP, Department") is an agency of the State of Florida charged, in pertinent part, with jurisdiction over and regulation of the certification of power plant siting and operation, in accordance with the various provisions of Chapter 403, Florida Statutes, and related rules cited and discussed elsewhere herein.

2. Notice of the certification hearing was accorded to all parties entitled thereto as well as to the general public.

Notice of the proposed Prevention of Significant Deterioration ("PSD") air construction permit for the Unit 8 project and the draft Title V air operation permit amendment for the Purdom Power Station, including the Unit 8 project, was provided to all persons entitled thereto as well as the general public.

3. The Tallahassee Purdom Power Station is located in the City of St. Marks, Wakulla County, Florida. Unit 8 of that facility will be constructed on approximately four (4) acres contained within the present sixty-three (63) acre site. The site is approximately seven (7) miles north of the Gulf of Mexico on upland immediately adjacent to the St. Marks River, approximately one and one-half miles north of the confluence of the St. Marks and Wakulla rivers, and twenty (20) miles southeast of the City of Tallahassee. The station is bounded on the north by the St. Marks Petroleum Storage Facility and Asphalt Refinery. Murphy Oil Company also operates a petroleum storage and distribution facility slightly further north. The power station site and property is bounded on the east by the St. Marks River. It is bounded on the west by State Road 363. Immediately across the St. Marks River from the site is the Aucilla Wildlife Management area, managed by the Florida Game and Fresh Water Fish Commission. There are some business establishments and residences to the west of the power station, generally along State Road 363, and the property is bounded on the south by property of McKenzie Tank Lines, a petroleum storage and distribution operation. The City of St. Marks residential and

business areas are primarily located to the south of the power station.

4. The existing power station began operation in 1952. It currently consists of three (3) steam generation units known as Units 5, 6, and 7, and two (2) combustion turbines; an auxiliary boiler; a barge oil unloading facility; a 115KV switch yard; a 69KV switch yard; two (2) wastewater storage ponds; an industrial wastewater treatment facility; an elevated water tank; two (2) surface water intake structures, including one surface water intake canal; two (2) surface water discharge canals; a diesel fuel storage tank; three (3) number 6 fuel oil storage tanks; a de-mineralizer; as well as maintenance shops and a warehouse. The on-site facilities of the Purdom Unit 8 project consist of a new combined-cycle electric generating unit, which includes a gas turbine generator, a heat recovery steam generator, a steam turbine generator, a condenser, an exhaust stack, a cooling tower, a zero discharge wastewater treatment facility, and associated facilities. Additionally, as part of the project, steam-electric generating Units 5 and 6 presently operating at the Purdom Station will be permanently de-activated. The existing wastewater storage pond and industrial wastewater treatment facility will be removed from service. One surface water intake structure will be re-used for Unit 8, and one surface water discharge canal will be removed from service. The elevated water tank will be made available for use by the City of St. Marks and one of the three (3) existing fuel oil storage tanks will be converted to a wastewater storage tank.

SITE DETERMINATION

5. The City of Tallahassee has attempted to use existing facilities before having to build on a new site. It began the site selection process by considering both the Purdom Station at St. Marks and the Arvah B. Hopkins Generating Station West of Tallahassee in Leon County. The selection process included a review of technical and environmental assessments of both sites in consideration of Tallahassee's electrical system capacity expansion needs for the future. Based on this analysis the Purdom site was selected because no new transmission capability was needed, compared to the Hopkins Station where additional transmission lines and transmission line corridors would have to be installed and acquired. No additional personnel will be needed at the Purdom Station and the city has the ability to make certain environmental improvements at the Purdom Station by combining the addition of the new Unit 8 with the early retirement of existing Units 5 and 6.

PSC NEED DETERMINATION

6. On June 9, 1997, the Public Service Commission issued Order No. PSC-97-0659-FOF-EM, determining the need for an additional two hundred fifty (250) megawatts (MW) of generating capacity at the Purdom Generating Station.

CAPITAL COSTS AND SCHEDULING

7. The city will invest approximately $111,000,000.00 in Unit 8 and its related facilities. That number will include the initial capital cost of a zero discharge wastewater system at approximately $6,000,000.00, with annual operating costs of

approximately $1,000,000.00, as well as the capital cost of the dry low NO_x (Oxides of Nitrogen) burner control technology system at a cost of approximately $1,000,000.00. No state funds will be used to defray these capital costs.

8. Contractual release of Unit 8 for engineering purposes is expected to occur in the spring of 1998,and procurement and construction to commence in July 1998. Mobilization and physical construction of the Unit are scheduled to begin January 1999, and continue through the late spring of the year 2000 with operation commencing in May of 2000.

GENERATING UNITS

9. A combined-cycle electric generating Unit, like Unit 8, is a highly efficient system that consists of two (2) sequential electrical generating stages. In the first stage the natural gas or diesel fuel is burned to operate the combustion turbine generator. A combustion turbine connected to a generator will produce electricity in its own right and the combustion turbine of Unit 8 would produce approximately 160MW of electricity. When the hot exhaust gas exits from its function of turning the combustion turbine, it is then routed to the heat recovery steam generator (HRSG) to produce steam by heating boiler tubes so as to operate the steam turbine generator. The steam turbine generator will produce approximately 90MW to 95MW of electricity.

10. The nominal 250MW electrical generating capacity represented by proposed Unit 8 will equal approximately one half of Tallahassee's presently owned generating capacity of 490MW,

and approximately one half of Tallahassee's prior all-time peak demand of 533MW.

11. Unit 8 will be approximately 30% more efficient than the Arvah Hopkins Unit 2, Tallahassee's newest Unit. It will be approximately 40% more efficient than Tallahassee's existing generating capacity on an average basis, with efficiency measured as fuel used per MW or Unit of output.

12. The existing steam generating Units 5 and 6 are nominal 22MW units each and are fired by natural gas or fuel oil. Existing steam generating Unit 7 is a nominal 44MW Unit and is fired with natural gas or number 6 fuel oil. The existing combustion turbines are nominal 12.5MW units and are fired with natural gas or diesel oil. The existing auxiliary boiler is fired with natural gas and is used to provide supplemental steam at the Purdom Station. With the addition of Purdom Unit 8 and the retirement of Units 5 and 6, the generating capacity at the Purdom Station will almost triple from 120MW to approximately 320MW. All facilities at the current Purdom Station are in compliance with existing and effective permits.

TRANSMISSION FACILITIES

13. There are three 115KV transmission lines connecting the Purdom Station with the city's electrical distribution network in Tallahassee. The addition of Unit 8 will not require the construction of any new transmission lines. However, two of the three existing transmission lines will be re-conductored (new wires) as part of the Unit 8 project. A re-conductoring will not require the addition or expansion of existing rights-of-way,

which are typically 100 feet wide, nor will it require new structures. Lines 1-A and 2-A will have their existing wire replaced with a different type and size wire. The voltage will remain at 115KV, however.

14. Both lines 1-A and 2-A run from the Purdom Station northward to Tallahassee through lightly populated areas. The existing shield wires, which provide lightning protection on the transmission lines, will also be replaced in conjunction with the re-conductoring of those lines. The re-conductoring may include fiber optic cable which can be used for communication between the Purdom Station and the City of Tallahassee in lieu of the existing microwave tower that will be removed to accommodate the construction of Unit 8.

15. The city plans to re-conductor one of the existing transmission lines in the spring of 1998 and the second one in the fall of 1998, so as to reduce on-site construction conflict and provide for communication between the Tallahassee Control Center and the Purdom Station.

16. Crews and vehicles will access the transmission lines rights-of-way from public roads and travel down the rights-of-way to the various work locations. No clearing of mature trees will be required and no wetlands will be impacted by the re-conductoring operation.

17. Both the electric and magnetic fields for lines 1A and 2A are currently and subsequent to the re-conduction will continue to be well within compliance with all applicable standards of Chapter 62-814, Florida Administrative Code. There

has been shown no conclusive scientific proof of adverse health effects from exposure to electromagnetic fields from power lines. There has been no demonstration by competent evidence that the transmission lines, as they presently exist, nor as they will exist after the re-conductoring work will cause any hazardous magnetic field exposure nor increase magnetic field exposure.

18. The two (2) transmission lines to be re-conducted are depicted on the future land-use maps of both Wakulla County and Tallahassee and Leon Counties comprehensive plans. They are not otherwise regulated by those plans. The Leon County land development regulations at Section 10-172(c) provide that utility work such as re-conductoring shall be permitted if the work is performed in a manner consistent with the requirements of the Leon County Environmental Management Act. Because the re-conductoring will only require the use of wire pulling equipment within the existing rights-of-way, will not require work in wetlands, will not require clearing, and will not result in alteration to topography, Leon County's Environmental Management Ordinances do not apply.

NATURAL GAS PIPELINE LATERAL

19. An existing Florida gas transmission (FGT) natural gas pipeline lateral provides natural gas to the Purdom Station presently. It runs along State Road 363 from a gate station in Leon County. The pipeline lateral enters the Purdom Station along the entrance road and proceeds along that road to a gas metering station. The gas metering station will be upgraded and re-located nearer to the Purdom Station entrance as part of the

Unit 8 project. At the northern end of the pipeline in Leon County, the St. Marks pipeline lateral is currently connected to a thirty-inch (30") main gas transmission pipeline. To support the Purdom Unit 8 project, FGT will connect its existing St. Marks pipeline lateral to a thirty-six-inch (36") main gas transmission pipeline that operates at higher pressure and will add new regulator valves. Once the new connection is made, the entire length of the pipeline lateral from the connection in Leon County to the Purdom Station will be hydrostatically tested by FGT for the increased pressure. FGT may install additional twelve-inch (12") piping called a "loop" parallel to a portion of the pipeline lateral. If a loop is added it will be separately permitted, owned, and operated by FGT.

RE-CLAIMED WATER PIPELINE

20. A re-claimed water pipeline will be constructed from the existing St. Marks Wastewater Treatment Plant to the Purdom Station for reuse of treated wastewater effluent. Currently, the City of St. Marks discharges treated wastewater effluent to the St. Marks River in the vicinity of the public park and beach. The re-claimed water pipeline from the city's wastewater treatment plant to the Purdom Station will eliminate a present discharge of pollutants to the St. Marks River; relieve the City of St. Marks of the costs of establishing alternate disposal methods, such as discharge to a spray field in accordance with a permit issued by the trustees of the Internal Improvement Trust Fund; and will reduce the amount of surface water required for cooling at the Purdom Station. Use by the City of Tallahassee of

re-claimed water transported by the proposed pipeline will relieve the City of St. Marks of permitting burdens and a potentially burdensome economic impact on its citizens.

21. The re-claimed water pipeline will consist of a lift station to be installed at the St. Marks Wastewater Treatment Plant and a six-inch (6") pvc pipe that will be buried and run from the treatment plant to the Purdom Station.

22. The re-claimed water pipeline corridor will be approximately forty-six hundred (4,600) feet in length. Existing utility and road rights-of-way will be used. The roadways affected will be restored to pre-construction condition, including the use of sod or seed where necessary. The pipeline will not impact wetlands nor any archeological sites of any significance. Construction of the water pipeline will include mechanical trenching or digging to a depth of between 30 and 54 inches and standard siltation and erosion control measures will be implemented for stormwater runoff in those areas. Where the pipeline crosses State Road 363 and the "St. Marks to Tallahassee Rail Trail," the pipeline will be installed by using the jacking and boring methods. No surface waters, wetlands or ecological resources will be affected by construction of the re-claimed water pipeline.

23. Construction of the re-claimed water pipeline is estimated to cost approximately $250,000.00. The City of Tallahassee will perform preventive maintenance on the lift station at the St. Marks Wastewater Treatment Plant and on the re-claimed water pipeline. It will perform any needed repairs.

No measurable changes to populations of important species are expected as a result of right-of-way maintenance. By agreement between the City of St. Marks and Tallahassee, the City of St. Marks will provide up to 100,000 gallons per day of treated effluent to Tallahassee and the Purdom Station. The re-claimed water pipeline is consistent with the St. Marks Comprehensive Plan and Land Development Code.

WELL FIELD

24. The existing deep wells that currently serve the Purdom plant are permitted by the Northwest Florida Water Management District. When the Purdom Unit 8 commences operation, these wells will be abandoned in accordance with applicable requirements and the associated groundwater use eliminated. On occasion the city will require up to 77 gallons per minute of potable water from the City of St. Marks for the control of NO_x emissions when it burns diesel fuel oil in Unit 8. However, that condition is expected to occur only a few days at a time due to the limited availability of low sulfur diesel fuel in the vicinity of the Purdom Station, the facility-wide limits on NO_x and sulfur dioxide emissions (SO_2) as well as by the higher cost of diesel fuel.

FUEL SUPPLY AND STORAGE

25. Fuel for the Purdom Station consists of number 6 fuel oil, natural gas and diesel fuel. Fuel for Unit 8 will consist primarily of natural gas with some use of low sulfur diesel fuel as a secondary fuel. Natural gas will continue to be delivered to the Purdom Station by the FGT pipeline lateral. Diesel fuel

will be delivered to the Purdom Station by tanker truck and enough diesel fuel will be stored for approximately 24 to 30 hours of full-load operation of Unit 8. Additional low sulfur diesel fuel is available in the local market area for another 2 to 3 days of full load operation.

26. Number 6 fuel oil is delivered to the Purdom Station by barge where it is stored in tanks for use by the Purdom Station as well as by Tallahassee's Hopkins Generating Station. The Purdom Station's three (3) existing number 6 fuel oil tanks have a combined capacity of 155,000 barrels. These three (3) tanks are enclosed within an earthenberm designed to retain the volume of the largest of the three (3) tanks with sufficient free board for rainfall. As a part of the Unit 8 project one of these tanks with a 55,000-barrel capacity will be converted into a wastewater storage tank.

27. The existing diesel fuel storage tank at the Purdom Station has a capacity of 10,000 barrels. This tank currently stores diesel fuel for use in the existing gas turbines. As part of the Unit 8 project, this tank will also be used to store diesel fuel for use in Unit 8 and at that time the sulfur content of the fuel will not exceed 0.05%. The diesel storage tank has a concrete retention area that is capable of containing 110% of the tank's volume. All four (4) of the fuel oil storage tanks at the Purdom Station have leak detection or overflow detection systems as well as cathodic protection systems. The tanks all comply with Florida's above-ground storage tank rules, including those that will become effective in 1999.

28. The fuel storage tanks meet the American Petroleum Institute Standard 650 for above-ground storage tanks in terms of withstanding a 100 mile-per-hour sustained wind. As part of the Unit 8 project, Tallahassee will install wind girders on the two number 6 fuel oil tanks that will continue to be used for fuel oil storage and will maintain minimum oil levels in one of those tanks and the diesel fuel storage tank.

29. In the last five (5) years Tallahassee has taken nine (9) barge deliveries of fuel oil at the Purdom Station. Tallahassee has in place and will continue to use a spill prevention control and counter-measures plan, as well as specific unloading procedures for the handling of fuel oils. It maintains a spill-response boat with necessary supplies. Prior to unloading a barge, a floating boom is placed around the barge to prevent spreading of any spill that might occur. Tallahassee is also an active participant in the St. Marks Oil Spill Cooperative, a consortium of local industries that work together to share resources and minimize the impacts of any spill.

FOUNDATION STABILITY

30. The sub-strates below the Purdom Station are primarily limestone with intermittent layers of sand, clay, and marl for a depth of more than 2,000 feet below the surface. Foundations for Unit 8 will require either spread footings or argured cast in place concrete pilings. The probability for sink-hole development at the Purdom Station is low. If sub-surface voids are encountered during construction they can be mitigated by using argured cast-in-place concrete piling and if necessary, by

extending the length of the piling to reach an area with adequate sub-strate support.

ARCHEOLOGICAL AND HISTORIC SITES

31. There is no visible or public record evidence that construction of the re-claimed water pipeline from the City of St. Marks Wastewater Treatment Plant or the construction of Unit 8 itself at the Purdom Station will impact archeological or historic sites. The pipeline will be constructed within the right-of-way of existing City of St. Marks roadways where fielding, ditching, and grading have already disturbed the upper, potentially artifact-bearing strata of the soil. At the Purdom Station's site there will be some excavation below existing field deposits; however, there was extensive disturbance of the site prior to the placement of the field many years ago. Accordingly, there is virtually no likelihood that archeological or historic artifacts will be encountered.

32. Due to the existence of a previously recorded, but insignificant archeological or historic site near the City of St. Marks Wastewater Treatment Plant, and the possibility that excavation of the wet-well of Tallahassee's proposed pumping station for the re-claimed water pipeline could extend beneath existing field deposits at that location, Tallahassee has agreed to have a professional archeologist monitor any such excavation, to notify the Florida Division of Historic Resources and follow its instructions in the event a historic or archeological find occurs at that location. Tallahassee has agreed that if archeological or historic remains are encountered at any time

during construction of Unit 8 or operation of the Purdom Station, activity will be halted in the vicinity, the Division of Historic Resources will be contacted, and its recommendations will be followed.

LAND-USE COMPATIBILITY

33. The City of St. Marks historically developed as a port community. That is why it has several petroleum storage and distribution facilities, and once had a rail connection with Tallahassee. The Purdom Station, which has been in use since 1952, relies on the St. Marks River for fuel deliveries for both the Purdom and the Arvah Hopkins power stations and as a source of cooling water. It is a water-dependent use; therefore, according to state policy, it has priority over other uses in marine development.

34. Adjacent land uses north and south of the Purdom Plant are petroleum storage and distribution businesses with their own barge unloading facilities, established in 1954. West of the Purdom Station and along State Road 363 is a mixture of business and residential uses. The developed portion of the City of St. Marks is located south of the Purdom Station. The four (4) acre construction area for Unit 8 is located in the interior of the sixty-three (63) acre Purdom site, approximately five hundred (500) yards from the nearest residence.

35. The future land use map (FLUM) of the Wakulla County Comprehensive Plan designates for agricultural use the property in un-incorporated Wakulla County which is immediately across the St. Marks River from the Purdom Station. Electrical power plants

are considered compatible with agricultural uses and are often found in agricultural areas. The Wakulla County Comprehensive Plan allows processing plants, such as sawmills, to be located in agricultural areas.

36. The largest area in Wakulla County designated for industrial use by the Wakulla County FLUM is located just north of the City of St. Marks. It comprises about 2.2 square miles, which is larger than the entire City of St. Marks and is about ten (10) times the size of the area within St. Marks and has been designated for industrial use. The industrial designation of this 2.2 square-mile area shows that Wakulla County has made a land-use decision similar to those of the City of St. Marks.

37. Primex Technologies operates a manufacturing facility on a portion of the 2.2 square-mile area designated as industrial. Portions of that area are within the coastal high hazard area, as designated by Wakulla County and portions are considered flood prone. Similar to the Purdom Station, the 2.2 square-mile industrially-designated area has highway access on State Road 363 and surrounding lands are designated by Wakulla County as "Agricultural, Rural 1, and Rural 2." The area does not have direct shipping access to the St. Marks River, but Primex Technologies does discharge treated wastewater via overland flow to the Wakulla River, which lies to the west.

38. Wakulla County has not, for at least 12 or 13 years prior to this case, notified the City of St. Marks that it considers Tallahassee's Purdom Station or any other industrial facility on the St. Marks River in the vicinity of the Purdom

Station to be an inappropriate land-use. The Purdom Station is compatible with surrounding uses. From a land-use standpoint it is an appropriate site for the location of Unit 8.

SOCIOECONOMIC IMPACTS

39. The construction of Unit 8 will have a positive impact on the local economy, providing directly approximately 240 jobs at the peak of construction and 160 jobs, on the average, during the 15-month construction period. About half of the construction work force is expected to commute daily from homes to the construction site, while the other half is expected to commute daily from temporary housing in Leon or Wakulla counties, to which they will travel weekly from their homes. Direct construction payroll will be approximately $9.8 million dollars. Additionally, construction of Unit 8 will have a cumulative, multiplier effect in Leon and Wakulla counties, resulting indirectly in approximately 118 additional jobs with wages of approximately $7 million dollars.

40. Operation of Unit 8 will benefit the local, regional, and state economies in the retention of relatively high-paying jobs. Due to the retirement of Units 5 and 6, and the operational efficiency of Unit 8 there will be a staffing reduction by attrition at the Purdom Station from 50 to 37 employees. However, that is 12 more positions than would result if Units 5 and 6 were retired without construction of Unit 8. There will be no long-term increase in demand by the Purdom Station for public services, either directly or indirectly, through any increase in population attributable to increased

staffing. The retirement of Units 5 and 6 and the design of Unit 8 will improve the environment as an economic asset of the City of St. Marks, Wakulla County, and the State of Florida.

AIR QUALITY

41. Wakulla County has been designated by the U. S. Environmental Protection Agency (EPA) and DEP as an "attainment area" in compliance with all Federal and Florida ambient air quality standards. Regulatory Prevention of Significant Deterioration (PSD) program requirements apply to the Unit 8 project. This program requires a demonstration that Unit 8 project emissions will not cause or contribute to any violations of State or Federal Ambient Air Quality Standards or PSD increments. The program further requires an analysis to demonstrate that the Purdom Unit 8 project's impacts on visibility, soils and vegetation, as well as impacts induced by residential, commercial, and industrial growth, are acceptable. The PSD program also generally requires that the new emission units associated with the project (the combustion turbine and cooling tower) comply with all applicable State and Federal Emission Limiting Standards, including New Source Performance Standards (NSPS) and that Best Available Control Technology (BACT) be applied to control emissions of PSD pollutants being increased above applicable PSD significant emission rates.

42. Facility-wide caps will limit Oxides of Nitrogen and sulfur dioxide emissions to ensure that there will be no increase above recent actual annual emissions for those pollutants. They will indirectly limit emissions of other regulated pollutants.

The facility-wide caps will apply to Unit 7 and 8, the existing gas turbines (GT-1 and GT-2), and the auxiliary boiler.

43. The Unit 8 project required PSD review only for particulate matter (total suspended particulates, or TSP), and particulate matter of 10 microns or less (PM_{10}), and carbon monoxide. A PSD review was nevertheless conducted for all PSD-regulated pollutants that may be emitted by the Purdom Unit 8 project, including not only particulate matter (TSP and PM_{10}) and carbon monoxide, but NO_x, volatile organic compounds, sulfur dioxide, sulfuric acid mist, fluorides, lead, mercury, and beryllium as well.

44. Air emission from the Unit 8 project must not cause or contribute to a violation of Federal and State Ambient Air Quality Standards and PSD increments. Most of Wakulla County is classified as a Class II area for PSD purposes. However, portions of the county are classified as Class I areas. The nearest Class I area to the Purdom Station is the St. Marks National Wilderness area, located approximately 0.4 miles to the south and southeast of the Purdom Station and the Bradwell Bay National Wilderness area, located approximately 18 miles to the west of the Purdom Station.

45. An air quality analysis undertaken in accordance with computer modeling procedures approved in advance by DEP, the U.S. Fish and Wildlife Service, and the U.S. Forest Service, demonstrated that the Purdom Unit 8 project would not cause or contribute to an exceedence of State and Federal Ambient Air Quality Standards for nitrogen dioxide (NO_2), sulfur dioxide,

PM_{10}, carbon monoxide, and lead, as well as PSD Class I and Class II increments for NO_2, sulfur dioxide and PM_{10}. Consistent with Federal guidance, Ambient Air Quality Impact modeling for PM_{10} was considered for purposes of emissions of particulate matter with a diameter of less than 2.5 microns because PSD permitting requirements, including Ambient Air Quality Impact and PSD increment analysis, are not currently required for $PM_{2.5}$ and EPA has not yet developed PSD increments or an approved modeling technology for $PM_{2.5}$.

46. The air quality modeling for Ambient Air Quality Standard purposes was based on conservative assumptions, including background ambient concentrations based upon regional monitors generally located in urban areas or near large point sources, existing major sources in the area at their maximum potential emissions and potential emissions from the Purdom Station. They include emissions from the new Unit 8 combustion turbine and the cooling tower which produced the worst case or highest air quality impact.

47. The two hundred (200) foot stack's height for Unit 8 represents "good engineering practice" (GEP) calculated in accordance with DEP and EPA rules. The Purdom Unit 8 project is not expected to cause an increase in ozone concentrations in the area because NO_x emissions, one of the precursors to the formation of ozone, will be held constant and volatile organic compound emissions, the other ozone precursor, will only increase negligibly. In addition, BACT was applied to both NO_x and

volatile organic compound emissions from the Unit 8 combustion turbine.

48. Impacts of the estimated hazardous air pollutant emissions from the Purdom Station, including the new Unit 8 combustion turbine and cooling tower, were compared to the draft Florida Ambient Reference Concentrations (FARCS). All pollutants are projected to be below the corresponding draft FARCS. Because of the conservatism of DEP's draft FARCS, impacts from hazardous air pollutant emissions from the Purdom Station, including Unit 8, will not pose a significant health risk to the population in the surrounding area.

49. The Purdom Unit 8 project's air emissions are not expected to cause any adverse impacts on vegetation, soil, or wildlife in the Purdom Station vicinity or in the St. Marks and Bradwell Bay National Wilderness areas, the nearest PSD Class I areas. Visibility in the vicinity of the St. Marks and Bradwell Bay National Wilderness areas will not be impaired. Only temporary and very small residential and commercial growth and no significant industrial growth is expected from the construction phase of Unit 8. Any resulting emissions will be very small, well distributed, and will have no measurable impact on ambient air quality. Air emission impacts of the Purdom Unit 8 project on the St. Marks River will be non-detectable for all but two (2) constituents. Detectable changes in those two (2) constituents will cause the water quality of the river to be improved.

50. Because sewage effluent from the St. Marks Wastewater Treatment Plant will have a chlorine contact time in excess of

one hour while traveling from the treatment plant to the Purdom Station and because the treated effluent represents only 1.5% of the water going into the cooling tower, the Unit 8 cooling tower emissions will pose no danger of transmission of infectious agents.

51. The operation of Unit 8 will not cause any odor impacts and will have no effect on acid rain because the primary precursors of acid rain, sulfur dioxide and NO_x emissions will not be increased. No significant air emission impacts are expected to result from the construction of Unit 8.

BACT AND EMISSION RATES

52. A BACT analysis is intended to ensure that the air emissions control system selected for a new project reflect the latest in control technologies used in a particular industry, based on a cost-benefit approach, taking into account technical, economic, energy, and environmental considerations. One purpose of BACT is to minimize consumption of PSD increments and thereby increase the potential for future economic growth without significantly degrading air quality.

53. Regardless of regulatory applicability, BACT review for the Unit 8 combustion turbine was conducted for particulate matter, carbon monoxide, NO_x, volatile organic compounds, sulfur dioxide, sulfuric acid mist, fluorides, lead, mercury, and beryllium. BACT was required for particulate matter (TSP and PM_{10}) emissions for the Unit 8 cooling tower.

54. BACT for the Unit 8 combustion turbine for particulate matter (TSP and PM_{10}) emissions is the fuel quality of natural

gas and the low sulfur diesel fuel oil, good combustion practices, combustion inlet air filtration, and a 10% opacity limitation, which is the most stringent form of control technology available for the control of particulate matter emissions from combustion turbines.

55. For the Unit 8 combustion turbine BACT for carbon monoxide and volatile organic compounds emissions consists of good combustion practices. The proposed emission limits for carbon monoxide emissions are 25 and 90 parts per million (PPM) while firing natural gas and diesel fuel oil, respectively. The cost per ton of controlling carbon monoxide and volatile organic compound emissions through the use of an add-on emissions control device known as an oxidation catalyst is over seventy-five hundred dollars ($7,500.00) per ton. In addition, the use of an oxidation catalyst would result in a decrease in the generating units electrical output capacity, increase sulfuric acid mist and particulate matter emissions and additional waste generation and disposal. The economic, energy, and environmental impacts associated with an oxidation catalyst were too great based on other recent BACT determinations by DEP for similar units; therefore, BACT is good operating practice.

56. For the Unit 8 combustion turbine, BACT for NO_x emissions is the use of advanced, dry, low NO_x combustors capable of achieving emissions of 12PPM by volume; dry at 15% oxygen, when burning natural gas and the use of water injection to achieve 42PPM volume; dry at 15% oxygen, when burning diesel fuel oil, based on a thirty (30) day "rolling average," with a

fuel-bound nitrogen allowance when burning diesel; and excluding periods of startup, shutdown, malfunction, and fuel switches, up to two (2) hours in twenty-four (24) hours, except during cold start-ups where up to four (4) hours in twenty-four (24) hours are allowed. The economic cost associated with the most stringent technology to control NO_x emissions, a selective catalytic reduction (SCR) system combined with combustion controls, was in excess of fifty two hundred dollars ($5,200.00) per ton removed. The use of an SCR system also results in a reduced electrical output and environmental impacts such as ammonia emissions; increased sulfur dioxide and particulate matter emissions; transportation, storage and handling of ammonia; and additional solid waste generation. These environmental, economic, and energy costs associated with an SRC system were too great; therefore, consistent with the recent BACT determinations by DEP, BACT is the use of dry, low NO_x burner technology when firing natural gas and water injection when firing diesel fuel oil. DEP has historically used a four thousand dollar ($4,000.00) cost per ton threshold for removal of NO_x emissions in determining BACT (i.e., not requiring additional control technology if it would cost more than that amount to reduce emissions further); EPA has recommended a threshold as low as two thousand dollars ($2,000.00) per ton.

57. Manufacturer guarantees, performance data from commercially operating units and laboratory tests, along with professional engineering judgments, provide reasonable assurance

that the proposed NO_x emission limits are appropriate and achievable.

58. NO_x emissions from the Unit 8 combustion turbine while firing natural gas have been guaranteed at 9 parts per million volume, dry ranging from 55% to 100% of full-load operation. This guarantee will provide for reasonable utilization of the other generating units at the Purdom Station that are also subject to the facility-wide cap on annual NO_x emissions; will allow Unit 8 to be operated over a range of load conditions; and will provide Tallahassee with a reasonable operating margin for compliance in the event of degradation or if minor problems are encountered with the combustion control equipment or controls.

59. For the Unit 8 combustion turbine, BACT for sulfur dioxide, sulfuric acid mist, fluorides, lead, mercury, and beryllium emissions is the use of natural gas and low sulfur diesel fuel oil (0.05%). Because "back-end technology" is not applied to further control these emissions from combustion turbines, the use of clean fuels such as natural gas and low-sulfur diesel oil is considered the most stringent form of control technology available.

60. While PSD permitting review, including BACT, is not required for $PM_{2.5}$, BACT was applied to the Unit 8 combustion turbines emissions of two (2) of the primary precursors of $PM_{2.5}$, NO_x, and sulfur dioxide.

61. For the new cooling tower that is part of the Unit 8 project, BACT for particulate matter (TSP and PM_{10}) emissions is the use of drift eliminators. This control technology is

considered the most stringent technology available to control particulate matter emissions from a cooling tower.

62. The Unit 8 combustion turbine will have emission limits considerably below NSPS requirements and no NSPS requirements apply to cooling towers.

COMPLIANCE

63. The Purdom Station air emissions units and activities, both new and existing, will comply with all applicable federal, state, and local air quality standards, including the conditions contained in the proposed PSD permit for Unit 8 and the draft Title V permit amendment for the Purdom Station that includes the Purdom Unit 8 project, both as entered into the record of the certification hearing and the recommended conditions of certification. Demonstrations of compliance with the facility-wide caps for NO_x and sulfur dioxide, as well as the unit-specific emission limiting standards for the Purdom Station are required under the recommended conditions of certification, the proposed PSD permit and the draft Title V permit amendment.

INDUSTRIAL WASTEWATER

64. The Purdom Station currently uses once-through cooling. It removes water from the St. Marks River, uses it to cool the condensers of the existing units, and discharges it back to the river at a slightly elevated temperature. The Purdom Station also currently discharges treated wastewater to the St. Marks River from its low-volume waste and metal cleaning waste ponds.

65. Following the construction of Unit 8 with a closed-cycle evaporative cooling system (considered BACT by EPA) and

zero discharge wastewater treatment system and the associated early retirement of Purdom Units 5 and 6, the potential thermal discharge from the Purdom Station will decrease by approximately 50%, and the discharge of treated wastewater from the low volume and metal cleaning waste ponds will cease entirely.

66. The zero discharge wastewater treatment facility installed as part of Unit 8 will produce distilled water that can be used, first, to produce steam and, second, for cooling so as to reduce the amount of water required for cooling from the river. The zero discharge wastewater treatment facility will produce up to 25 tons per day of a solid filter cake, comprised principally of salt from the St. Marks River, which Tallahassee intends to market as a by-product for uses such as cattle feed supplement or dispose of at an off-site, properly licensed landfill. This amount of filter cake will comprise approximately one and one half dump truck loads per day.

WASTE DISPOSAL

67. Various types of solid waste, consisting mainly of waste oils from oil/water separators in place to protect surface water and debris from the surface water intake screen (primarily grass), are currently and will continue to be generated by the operation of the Purdom Station and Unit 8 and will continue to be disposed of off-site in accordance with all applicable Federal and State laws. The only new solid waste to be generated from Unit 8 is used inlet air filter elements, which will also be disposed of in accordance with all applicable federal and state laws.

68. Relatively small amounts of hazardous waste, comprised primarily of paints and solvents in amounts of less than 200 pounds per year during recent years, are currently generated at the station and will continue to be generated as a result of Unit 8. Tallahassee will minimize production of hazardous waste and intends to maintain its status as a conditionally exempt, small-quantity generator. Hazardous waste generated at the Purdom Station are stored on-site in a hazardous waste storage facility that includes a secondary containment structure until they are taken off-site for disposal or to be recycled. As a conditionally exempt, small-quantity generator, Tallahassee is not required to use such a storage facility but intends to continue to use the storage facility during the operation of Unit 8. During construction, a safety and environmental program will be implemented to minimize and ensure the proper handling and disposal of all materials such as paints, solvents, and lubricants.

SURFACE WATER HYDROLOGY AND WATER QUALITY IMPACTS

69. The Purdom Station is located on a stretch of the St. Marks River classified as a Class III water body. The nearest down-stream outstanding Florida water is approximately 1.5 miles away, at the confluence of the St. Marks and Wakulla Rivers.

70. Localized, limited-duration "de-watering" of excavations will be required during construction in a small percentage of the overall construction site area. The de-watering effluent will be discharged in accordance with a DEP generic permit. It will be tested and discharged onto the ground

as surface runoff only if it meets the requirements of the generic permit. Until it has been tested and meets those requirements, it will be stored in either portable tanks or the Number 6 fuel oil tank being converted to a wastewater storage tank and then either retained for use in the cooling tower of Unit 8 or sent to an appropriate off-site wastewater treatment facility. Accordingly, there will be no discharge of de-watering effluent off-site unless it meets all applicable standards.

71. Existing discharges of the Purdom Station and the City of St. Marks Wastewater Treatment Plant are fully permitted by EPA and DEP and meet all of the water quality requirements for Class III water bodies.

72. The St. Marks River in the vicinity of the Purdom Station and upstream as far as Newport approximately 2.5 miles North, is tidally-influenced, with both an upper freshwater layer and a lower brackish layer or "salt wedge." The maximum amount of freshwater withdrawn by Unit 8 from the St. Marks River that is evaporated by the cooling tower and not returned to the river would not result in a measurable change in the ratio of fresh to saltwater in the river.

73. Water quality in the river will improve as a result of the operation of Unit 8 by eliminating the thermal discharge of existing Units 5 and 6, eliminating two (2) existing permitted waste sreams at the Purdom Station, and eliminating the existing permitted discharge from the City of St. Marks Wastewater Treatment Plant to the river. Because Unit 7 and the existing gas turbines (GT1 and GT2) will continue to operate, the

permitted once-through thermal discharges from these units will also continue.

74. The construction and operational stormwater runoff from Unit 8 will be controlled through the use of Best Management Practices. In addition, operational stormwater runoff from Unit 8 will be treated by a new detention pond designed to retain the first 3/4 inch of runoff and release it through a sand filter within thirty-six (36) hours. By maintaining construction and post-construction stormwater runoff equal to pre-construction flow rates, volumes, water quality and timing of release, the Purdom Station, including Unit 8, will meet all applicable stormwater requirements, which are found in the Purdom Station's stormwater NPDES (National Pollutant Discharge Elimination System) general permit; Chapter 62-25, Florida Administrative Code, and Sections 4.03 to .04, 5.0205, and 6.05.00 of the St. Marks Land Development Code.

GROUNDWATER HYDROLOGY AND IMPACTS FROM WATER WITHDRAWAL

75. There will be no effect off-site or in the St. Marks River from the limited amount and duration of construction de-watering that will occur. Only one on-site wetland could potentially be affected by a temporary drawdown of the water table at the Purdom Station. However, the potentially affected area is only a marginal wetland and has a clayish component near the surface that could help hold rainwater. Finally, de-watering effluent could be used for recharge to the affected wetland if it is needed and the effluent meets generic permit requirements for discharge.

76. A limited, slightly reduced quantity of potable water from the City of St. Marks will be needed to supply drinking water and other potable water needs for Purdom Station employees.

77. The Purdom Station currently uses groundwater from four (4) wells pursuant to a permit from the Northwest Florida Water Management District. These wells are those that will be shutdown and properly abandoned upon the successful commencement of commercial operation of Unit 8. The cessation of this use will result in an approximate 50% reduction in the potential cone of depression in the area currently affected by the City of Tallahassee's well field and wells of others, thereby lessening the potential for saltwater intrusion into the Florida aquifer.

78. By ceasing the use of potable groundwater for industrial purposes under normal operating conditions and obtaining make-up water from the City of St. Marks Wastewater Treatment Plant and the river, both of which are sources of non-potable water, Unit 8 will maximize its use of the lowest quality water and help to conserve higher quality, potable groundwater.

79. For occasional short periods of time when potable water might be needed for control of NO_x emissions in order to burn diesel fuel in Unit 8, the City of Tallahassee has the right to take up to 77 gallons of potable water per minute from the City of St. Marks water system. However, the short duration of that use makes it unlikely to have any significant effect on groundwater resources.

ECOLOGICAL RESOURCES

80. The Purdom Station includes approximately 34 acres of land that is developed (including mowed areas) and under regular maintenance. Approximately 29 acres are relatively undisturbed, consisting of upland and wetland forested components; herbaceous non-forested wetlands, including sawgrass and scrub wetlands; and open-water areas.

81. Unit 8 will be constructed primarily on a portion of the site that has already been disturbed by earlier development. A total of up to approximately four (4) acres will be affected by construction. The U.S. Army Corps of Engineers and DEP have conducted wetland jurisdictional boundary reviews. No construction is planned in such wetland areas and a thirty-five (35) foot boundary zone will be maintained between construction areas and wetlands, unless there is an existing topographic feature, such as a berm or dike which would preclude construction runoff from entering wetlands. Barriers and other soil erosion and siltation control measures will be used to prevent erosion and siltation that would affect wetlands. Tree clearing on-site for the Unit 8 project would total less than an acre.

82. The primary aquatic resource associated with the Purdom Station is the St. Marks River, which is in compliance with Class III water quality standards. The Unit 8 and the retirement of Units 5 and 6 will have an overall long-term positive impact on the aquatic resources of the river and adjacent Apalachee Bay by reducing impingement and entrainment of aquatic organisms in the Purdom Station's cooling systems, by reducing thermal impacts and by eliminating two (2) discharges of treated industrial

wastewater by the Purdom Station and eliminating the discharge of treated effluent by the City of St. Marks Wastewater Treatment Plant. Aquatic resources will not be affected by the construction of Unit 8 except positively.

83. Because the river is tidally influenced and has naturally varying salt concentrations in the vicinity of the Purdom Station, there is a naturally lower biological diversity in that area. Any reduction in the freshwater-to-saltwater ratio of the river as a result of the operation of Unit 8 will be too small to have a significant adverse impact, if any, on the aquatic resources of the river and will have even less of an impact downstream in Apalachee Bay. There will be no adverse impact on seagrass from changes in salinity, turbidity or air emissions.

84. A review of threatened and endangered species was conducted based on habitat types that might occur at the Purdom Station, by reviewing lists of threatened and endangered species from the U.S. Fish and Wildlife Service and from the Department of Agriculture and Consumer Services, discussions with representatives from the St. Marks Wildlife Refuge and by contacting the Florida Natural Areas Inventory. No plant species listed as threatened or endangered were found at the site. Listed animal species that could occur at or near the Purdom Station include the alligator, osprey, eagle, little blue heron, snowy egret, tri-colored heron, and Louisiana heron. None of these species will be adversely affected by the Purdom Unit 8 project.

85. The effects of the project on the Manatee should be negligible or positive due to the reduced thermal output to the river resulting from the shutdown of Units 5 and 6. Manatee summering in the St. Marks area will be encouraged to return to their normal southerly migration pattern during the winter. Any members of the species that do winter in the area will be protected from thermal distress when Unit 7 is not operating by being able to migrate to the naturally warmer waters of the nearby Wakulla River.

86. No adverse wetland or upland ecological impacts will result from construction of the proposed re-claimed water pipeline. Positive impacts on wetlands will result from the operation of the water pipeline because it will eliminate the existing discharge by the St. Marks Wastewater Treatment Plant to the St. Marks River. Overall impacts to the existing terrestrial and aquatic ecological resources from the construction and operation of Unit 8 will either be negligible or, in some respects, positive.

IMPACTS FROM FLOODING AND HURRICANES

87. The 100-year flood elevation in the City of St. Marks is 12.4 feet above mean sea level, as established by the Federal Emergency Management Agency (FEMA) and made applicable through the St. Marks Flood Damage Prevention Ordinance. The highest recorded flood level at St. Marks identified by FEMA in a 100-year period of record was 11.3 feet, in effect leaving a 1.1-foot safety factor in the 12.4 foot level. Unit 8 and other facilities at the Purdom Station required for its operation will

be constructed at or above that elevation or flood-proofed to that elevation. Additionally, the Purdom Station is not in the floodway of the St. Marks River that is reserved for the passing of the 100-year flood. The construction of Unit 8 will not result in any significant loss of floodplain storage.

88. The staff of the Department of Community Affairs (DCA) investigated at length concerning the station site and whether it appears vulnerable to storm-induced flooding. They concluded that there was a small risk of such an event. The Station has never been inundated by major flooding and, in the past 50 years, the highest level of flooding at the Shields Marina in nearby St. Marks has been approximately 7'8" above mean sea level.

89. The Purdom Station is located at least 2 miles inland from the nearest FEMA designated "V" zone which would be exposed to flood and high velocity wave action in the event of a hurricane. In addition, Unit 8 will be designed to withstand three (3) second wind gusts up to 120 miles per hour, which is a more stringent requirement than the 100-mile-per-hour sustained-wind criteria of the presently applicable building code. These wind criteria are substantially higher and more protective than recorded wind speed at Tallahassee and Apalachicola for periods of record provided in the Site Certification Application.

90. There is no historical record of a Class 4 or Class 5 hurricane striking Northwest Florida. Only 30 hurricanes of any classification have struck all of North Florida in a 93-year period from 1899 to 1992. Consistent with data from historical FEMA studies, the recurrence interval of a maximum Class 2

hurricane surge at St. Marks, as hypothesized by the National Hurricane Center at a height of 17.3 feet above mean sea level, would be 900 years. The recurrence interval of a maximum Class 3 hurricane surge at St. Marks, as hypothesized by the National Hurricane Center at a height of 22.7 feet above mean sea level, would be 7,000 years.

91. Even if the Purdom Station were inundated by a hurricane surge, it could be rendered operational again in a period of three (3) weeks, which would be adequate in light of the expected time required to repair Tallahassee's electrical transmission and distribution system following such an event.

92. No state funds will be used in the construction of Unit 8. During the construction period the contractor will be required to ensure the facility with builder's risk insurance. During operation, the facility will be covered by Tallahassee's risk management program, which includes private commercial property insurance that is not obtained through FEMA.

NOISE IMPACTS

93. Section 9.01.03(f), of the City of St. Marks Land Development Code exempts from its noise limits construction, maintenance, and testing noise which occurs between the hours of 7:00 a.m., and 10:00 p.m. Steam blowing that will occur near the end of construction of Unit 8 in order to clean scale and debris from the boiler tubes and steam lines for protection of the steam turbine will be the loudest construction-related noise. Each blow will last from 1 to 15 minutes and there could be two-to-three of them per day for a period of several weeks. The noise

level would be approximately 82 decibels at the nearest residence, which is not loud enough to harm anyone's hearing but requires persons engaged in outdoor conversation to raise their voices.

94. Despite the exemption for daytime construction, maintenance, and testing noise within the St. Marks Land Development Code, Tallahassee has committed to publicly notify residents of St. Marks prior to commencement of the steam blowing phase of construction to alleviate any concerns. Tallahassee has also committed to direct the steam blowing noise to the East or Northeast away from the St. Marks community.

95. The expected 17% increase in truck traffic associated with construction of Unit 8 will not increase roadway noise in any significant amount.

96. The operation of the station since 1952 has produced low-level noise which is hardly noticeable within St. Marks except for limited periods when the two (2) existing combustion turbines are operating. In addition to silencers which have been installed on steam vents at the Purdom Station and the removal of some public address speakers, Tallahassee is in the process of procuring silencers for the exhaust stacks of the two (2) existing combustion turbines to reduce their noise level.

97. During normal operation of the station following construction of Unit 8 and retirement of Units 5 and 6, the highest predicted continuous noise level will be approximately 45 decibels at the nearest existing residence. That is similar to the present operational noise level and is below the EPA noise

guideline, which is the most protective extant agency criterion. Noise from operation of the station after commencement of operation of Unit 8 will comply with the noise limits of the St. Marks Land Development Code and will not adversely affect wildlife or pose a nuisance.

TRAFFIC

98. All roadways serving the construction and operational traffic of Purdom Unit 8 have adequate capacity presently. No section of roadway will be impacted adversely. Tallahassee has arranged additional temporary access for construction workers to the station site via a St. Marks Refinery entrance road to the north. Additionally, the construction contractor may rent an open, off-site area at the southwestern side of the Purdom Station site for storage and parking. It would be connected during construction by a temporary foot bridge across an existing ditch.

99. Afternoon peak-hour traffic during construction of Unit 8 will tend to move north opposite the heavy traffic flow south from Leon County, thus avoiding an adverse impact. Based on the volume of truck traffic expected during construction and taking into account the existing low traffic volume in the vicinity of the station, it is unlikely that traffic safety will be adversely affected.

100. Due to the reduction in staff at the Purdom Station expected from retirement of Units 5 and 6, there will be a net long-term reduction in operational traffic to and from the station. The addition of one and one-half truck trips per day

for transport of filter cake from the zero discharge wastewater treatment system of Unit 8 will have insignificant traffic impacts. During construction and operation of Unit 8 the existing roadway network will operate at acceptable levels of service as established in the comprehensive plans of St. Marks, Wakulla County, and Leon County.

CONSISTENCY AND COMPLIANCE WITH LOCAL COMPREHENSIVE PLANS AND LAND DEVELOPMENT CODES

101. Purdom Unit 8 is consistent with the City of St. Marks Comprehensive Plan. Goals, objectives, and policies from the following elements are applicable to the project: future land use; traffic circulation; sanitary sewer, solid waste, potable water, drainage, and natural ground water aquifer recharge; conservation; coastal management; recreation and open space; and capital improvements. The project complies with all those applicable goals, objectives, and policies.

102. Unit 8 will comply with the applicable standards in the St. Marks Land Development Code. The applicable standards include those related to concurrency, resource protection (including tree protection, wetland protection, and shoreline protection), floodplain and stormwater management, development design and improvement standards (including, for example, lot coverage, setbacks and landscaping standards), and operational performance standards relating to, for example, noise and air quality.

103. Wakulla County does not supervise land use in the City of St. Marks. The Wakulla County Land Development Code does not apply within the City of St. Marks.

104. Unit 8 is consistent with and in compliance with the Wakulla County Comprehensive Plan, taking into account five (5) areas of potential applicability beyond the boundaries of the City of St. Marks:

a. As to land use compatibility along the border between the City of St. Marks and unincorporated Wakulla County, findings 33 through 38, above, show compatibility.

b. As to protection of natural resources, Unit 8 will not adversely impact wetlands, significant wildlife habitat or threatened or endangered species. Water quality in the St. Marks River will be improved. The existing well field will be closed, providing a beneficial effect on groundwater quantity and quality.

c. As to the availability of public services, the City of St. Marks provides water and sewer services to the Purdom Station. There is adequate solid-waste capacity in the Wakulla County landfill for disposal of construction debris. There is adequate solid-waste capacity for the disposal of other types of solid-waste at the Panama City waste-to-energy facility. There is adequate existing roadway capacity to service the project construction and operating traffic. Drainage facilities will be constructed on the site to manage stormwater in compliance with local, state and federal requirements. Other public services such as police, fire, and emergency medical services are available and sufficient to meet the needs at Purdom Station. The estimated impact fee due to Wakulla County for the Unit 8 project is $7,350.00.

d. Concerning coastal management, although the station is located within a coastal high-hazard area designated by Wakulla County, it will meet the requirements of the St. Marks Flood Damage Prevention Ordinance. The project is designed to be elevated or flood-proofed to the 100-year floor elevation. Tallahassee has agreed to a condition of certification requiring it to prepare a hurricane evacuation, preparedness, and recovery plan for the Purdom Station. Under the terms of that condition, preparation of the plan will be coordinated with the Wakulla County Emergency Management Office. Power plants are water-dependent uses, so the Purdom Station location in the coastal area is appropriate. The City of St. Marks historically developed as a port community and there are other port-related uses in and around the Purdom Station. The station will not encourage other development to locate within the coastal high-hazard area, so it is not the type of infrastructure for which public expenditures are meant to be limited in the coastal high-hazard area.

e. Unit 8 will further the goals, objectives, and policies of Wakulla County's economic development element of its comprehensive plan. It allows an existing industry to expand and relatively high-paying jobs at the station will be retained. The environment, which is an important economic asset to Wakulla County, will be protected and improved through the use of clean fuel, clean burning technology and other advance technologies, such as the combined cycle generating equipment itself and the zero discharge wastewater treatment system provision.

CONSISTENCY WITH REGIONAL POLICY PLAN

105. Unit 8 is consistent with the Apalachee Regional Planning Counsel's Strategic Regional Policy Plan for the following reasons:

a. It will have an economic benefit in terms of temporary construction job creation and long-term job retention that supports the goal and policies for the economic development section of the plan. The jobs will be relatively high-paying jobs compared with the jobs in the predominant government sector in the Wakulla County economy.

b. Tallahassee's commitment to prepare a comprehensive hurricane evacuation, preparedness, and recovery plan supports the Strategic Policy Plan's goals and policies dealing with emergency management.

c. Unit 8 will not have an adverse impact on the regionally significant resources listed in the plan, including the river, the Aucilla Wildlife Management area, the St. Marks National Wildlife Refuge, wetlands and wildlife.

d. The project will not adversely affect the highway system, so it is consistent with the regional transportation goals and policies of the Strategic Policy Plan.

CONSISTENCY WITH THE STATE COMPREHENSIVE PLAN

106. Unit 8 is consistent with the applicable goals and policies of the State of Florida Comprehensive Plan, Section 187.201, Florida Statutes, as shown by the following:

a. Concerning the Goal, Section 187.201(7)(a), Florida Statutes, and Policies 24 and 25 related to public safety, Tallahassee has agreed to prepare a hurricane evacuation preparedness and recovery plan for the Purdom Station.

b. Concerning the Goal, Section 187.201(8)(a), Florida Statutes, and Policies 5, 8, 9, 10, 11, 12, 13, and 14, related to water resources, Unit 8 will have adequate supplies of water; it will comply with the Flood Damage Prevention Ordinance of the City of St. Marks; no wetlands will be impacted; withdrawal for once-through cooling will be reduced; and the consumptive use of water from the river would be less than 1% of the seven (7) day, ten (10) year low flow in the river. This is consistent with state policy to use water so that navigation, recreation, and fish and wildlife resources will not be adversely affected. Water quality in the river will be improved. There will be a reduction in existing thermal discharges at the Purdom Station. Existing permitted wastewater discharges to the river will be eliminated with the installation of the zero discharge, wastewater treatment system. Treated wastewater from the City of St. Marks and Purdom Station's own permitted waste streams will be re-used as make-up water to the Unit 8 cooling tower instead of being discharged to the river as it is currently permitted to

do. This feature of the project is consistent with state policy that promotes water conservation, re-use of water and the use of water of lowest acceptable quality. As a result of Unit 8's installation, groundwater withdrawals will be eliminated and the existing well field will be closed.

c. Concerning the Goal, Section 187.201(9)(a), Florida Statutes, and Policies 4, 6, 7, and 10, related to coastal and marine resources, there will be no adverse impact to the aquatic and marine environment. Water quality in the river will be improved as a result of Unit 8, which will benefit the aquatic and marine environment. The Purdom Station is a water-dependent use and, therefore, according to state policy, has priority over other uses in marine development.

d. Concerning the Goal, Section 187.201(10)(a), Florida Statutes and Policies, 1, 3, and 7 related to Natural Systems and Recreational Lands, wetlands and wildlife will be conserved and water quality will be improved as a result of Unit 8 being installed and operated. There will be no adverse impact on endangered species. The reduction in thermal discharges will benefit the West Indian manatee by reducing the attraction of artificially warmed waters, encouraging that species to return to its historic migration pattern. Aesthetics for recreational users of the river have already been improved with the removal of old boilers from Units 1 through 4. Tallahassee will install landscaping near the north boundary of the station, and a nearly continuous buffer will be placed along the shoreline, in

compliance with landscaping standards of the City of St. Marks Land Development Code.

e. Concerning the Goal, Section 187.201(11)(a), Florida Statutes, and Policies 1, 2, and 3 related air quality, annual emissions of NO_x and sulfur dioxide will not increase as a result of Unit 8, even though generating capacity at the site will increase by nearly 200%. Tallahassee has agreed to air permit limits that are considerably lower than current permit limits at the Purdom Station, so the potential emissions of air pollutants will be reduced. Air quality standards will be met. BACT has been applied; this ensures that air pollution is minimized through the installation of the best technology available, considering environmental, energy and cost factors.

f. Concerning the Goal, Section 187.201(12)(a), Florida Statutes, and Policies 5, 6, 7, and 9 related to Energy, Unit 8 has been reviewed by the Public Service Commission, which determined that there were no conservation measures reasonably available to Tallahassee that would have mitigated the need for Unit 8. That agency also found that the city has adequately explored alternatives to Unit 8 and that Unit 8 is the most cost-effective alternative. During the need determination proceeding for Unit 8, Tallahassee entered into a settlement agreement with the Legal Environmental Assistance Foundation that will result in enhancements to Tallahassee's Solar Energy and Energy Conservation Program.

g. Concerning the Goal, Section 187.201(13)(a), Florida Statutes, and Policies 8, 9, and 11 related to hazardous and

nonhazardous materials and waste, Tallahassee has adopted an environmentally sound method of wastewater treatment and disposal, the zero discharge wastewater treatment system. The zero discharge wastewater treatment system benefits the environment in two (2) ways: first, by treating, re-using and not discharging to the environment treated wastewater from the City of St. Marks and second, by treating, re-using and not discharging to the environment Purdom Station's own industrial waste streams. Tallahassee has committed to pursue re-cycling of the filter cake by-product of the zero discharge, wastewater treatment system. Tallahassee has a plan in place for the proper handling, storage, and disposal of hazardous waste. It has agreed to a condition of certification requiring it to continue implementation of the current plan. It also uses practices that minimize the production of hazardous wastes.

h. Concerning the Goal, Section 1897.201(16)(a), Florida Statutes, and Policies 1, 3, and 6 related to Land Use, Unit 8 constitutes the re-development of an existing power plant site. There are adequate land, water resources, and service capacity available to support the new development at the Purdom Station site. Unit 8 will enhance the livability of St. Marks by preserving opportunities to work in the community.

i. Concerning the Goal, Section 187.201(18)(a), Florida Statutes, and Policies 1, 2, 3, and 4 related to Public Facilities, Unit 8 will efficiently use and reuse existing structures, buildings, and facilities at the Purdom Station. Potable water and domestic wastewater services will be provided

by the City of St. Marks. The project will use the existing transmission network, the existing underground natural gas pipeline infrastructure, the existing highway network, and existing fuel and water storage facility at the Purdom Station.

j. Concerning the Goal, Section 187.201(19)(a), Florida Statutes, and Policy 6 related to Cultural and Historical Resources, the project is not expected to have an adverse impact on historic or archaeological resources. As a precautionary measure, Tallahassee has agreed that construction of the wet well at the City of St. Marks wastewater treatment plant will be monitored by a professional archaeologist if excavation extends below existing field.

k. Concerning the Goal, Section 187.201(22), Florida Statutes, and Policies 1, 3, and 12 related to the Economy, Unit 8 will allow a job-producing industry to remain in the state; and in addition, its design will protect and improve the environment as an economic asset of the state, the county and the City of St. Marks.

l. Concerning the Goal, Section 187.201(26)(a), Florida Statutes, and Policy 6 related to Plan Implementation, citizen participation has been encouraged and sought throughout the planning and permitting of Unit 8, with special emphasis on communication with individual citizens, interest groups, and government agencies.

107. The Purdom Unit 8 project is on balance and with certain conditions agreed to by the City of Tallahassee, consistent with the State Comprehensive Plan.

VARIANCES

108. Tallahassee requires no variances for the operation of the Purdom Station or the construction or operation of Unit 8 and its associated facilities.

AGENCY POSITIONS AND STIPULATIONS

109. The DEP, DOT, DCA, the NWFWMD, and the ARPC have recommended certification of the station and the Unit 8 project, including construction and operation of Unit 8 and its associated facilities subject to recommended conditions of certification which have been accepted by the City of Tallahassee. Those conditions or certifications are attached hereto and incorporated by reference herein as Appendix One. The Florida Game and Freshwater Fish Commission determined that Unit 8 would have no significant impact to fish and wildlife resources under its jurisdiction and the Department of Health found that the Unit 8 project would be an improvement over existing conditions. Aside from Wakulla County, no state, regional or local agency has recommended denial of certification. Wakulla County neither requested nor recommended any conditions of certification before or during the certification hearing.

110. The City of St. Marks adopted a resolution supporting the Purdom Unit 8 project and strongly supporting the continued location and operation of the existing Purdom power station.

111. Wakulla County's witness asserted that the county does not expend public funds to establish new infrastructure that would subsidize development in high-hazard coastal areas and that Tallahassee should not be permitted to expend public funds on the

Purdom Unit 8 project. Wakulla County, however, has expended state funds during the past two (2) years to construct a fishing pier in the high-hazard coastal area. The purpose of that pier is to make beaches and shores in the area, and recreation, more accessible to the public. The county has also expended public funds to install central sewer lines and a waste treatment facility in a high-hazard coastal area. Additionally, the county expends public funds to maintain roads and utilities built by developers in high-hazard coastal areas.

CONCLUSIONS OF LAW

The Division of Administrative Hearings has jurisdiction of the parties to and the subject matter of this proceeding. The proceeding was conducted in accordance with Chapter 403, Part II, Florida Statutes, the "Florida Electrical Power Plant Siting Act."

112. In accordance with Chapters 120 and 403, Florida Statutes, and Chapter 62-17, Florida Administrative Code, proper notice was accorded all persons, entities and parties entitled thereto as well as notice being provided to the general public. All necessary and required governmental agencies participated in the certification process; and reports and studies were issued by the DEP, the DCA, the NWFWMD, the Apalachee Regional Planning Counsel, Wakulla County, the Florida Game and Freshwater Fish Commission and the Florida Department of Health, in accordance with their various statutory charges.

113. The PSC has certified the need for the electrical generating capacity, nominally 250MW, to be supplied by Unit 8 as required by Sections 403.508(3) and .519, Florida Statutes.

114. The Governor and Cabinet sitting as the Siting Board have determined that the Unit 8 project is consistent with and in compliance with the exiting land use plans and zoning ordinances as required by Section 403.5175(3), and Section 403.508(2), Florida Statutes.

115. Rule 9J-5.003(144), Florida Administrative Code, a part of the DCA rules governing local government comprehensive planning defines "water-dependent uses" to include specifically "electrical generating facilities." Section 187.201(9)(b)(10), Florida Statutes, which is part of the State Comprehensive Plan, requires the state to "[g]ive priority in marine development to water-dependent uses over other uses."

116. Preponderant evidence produced by the City of Tallahassee at the certification hearing demonstrates that it has met its burden of proving that the Purdom Station, including Unit 8 and its associated facilities, is entitled to the certification as described more particularly below.

117. Preponderant evidence produced at hearing demonstrates that the construction and operational safeguards for the station are technically sufficient for the welfare and protection of citizens and are reasonable and available methods to achieve that protection. The Purdom Station, the new Unit 8 and associated facilities, if constructed, maintained and operated in accordance with the conditions and parameters recommended and found herein

and in the attached conditions of certification, will result in environmental and other benefits compared to current utilization of the Purdom Station. They will minimize adverse effects on human health, the environment, the ecology of the land and its wildlife, and the ecology of state waters and their aquatic wildlife through the use of reasonable and available methods. Certification for the construction and operation of Unit 8 is consistent with the goal of abundant, low cost energy, and will effect a reasonable balance between minimal environmental impacts and an already determined need for the new 250MW combined cycle unit at the Purdom Station.

118. The existing Purdom Station, Unit 8 and its associated facilities, if constructed and operated in accordance with the findings and conclusions herein and in the attached recommended conditions of certification, will be consistent and in compliance with the State Comprehensive Plan, the ARPC Comprehensive Regional Policy Plan, the Tallahassee Leon County Comprehensive Plan, the Wakulla County Comprehensive Plan and the City of St. Marks Comprehensive Plan.

119. The Purdom Station, Unit 8 and associated facilities, if constructed and operated in accordance with the findings and conclusions herein and in the attached recommended conditions of certification, will comply with the applicable, non-procedural requirements of all agencies, including the land development codes of local governments with jurisdiction. Certification of the Purdom Station and Unit 8 and associated facilities will serve and protect the broad interests of the public.

120. Certification of the Purdom Station, Unit 8 and associated facilities should include permission for Tallahassee to use, connect to and cross properties of the Department of Transportation, concerning which there is no dispute, subject to the attached conditions of certification.

121. The sole argument against certification advanced by Wakulla County at the certification hearing is that the Unit 8 project should not be certified because the state comprehensive plan has as one of its policies to:

> Avoid the expenditure of state funds that subsidize development in high-hazard coastal areas.

Subsection 187.201(9)(b)(3), Florida Statutes. The evidence demonstrates, however, that the construction of Unit 8 will not require the expenditure of state funds and will not subsidize other development in high-hazard coastal areas. The evidence also establishes that Wakulla County itself expends public funds including state funds to construct infrastructure and to maintain infrastructure built by developers in high-hazard coastal areas.

122. Regardless of the facts concerning Unit 8 and the consistency of Wakulla County's argument with its own practices, there is a more fundamental set of reasons found in the applicable statute which renders the county's argument unpersuasive:

> 187.101 Description of plan; legislative intent; construction and application of plan
>
> (1) The State Comprehensive Plan shall provide long-range policy guidance for the orderly social, economic, and physical growth of the state. It shall be reviewed biennially by the Legislature, and

> implementation of its policies shall require legislative action unless otherwise specifically authorized by the constitution or law.
>
> (2) The State Comprehensive Plan is intended to be a direction-setting document. Its policies may be implemented only to the extent that financial resources are provided pursuant to legislative appropriation or grants or appropriations of nay other public or private entities. The plan does not create regulatory authority or authorize the adoption of agency rules, criteria, or standards not otherwise authorized by law.
>
> (3) The goals and policies contained in the State Comprehensive Plan shall be reasonably applied where they are economically and environmentally feasible, not contrary to the public interest, and consistent with the protection of private property rights. The plan shall be construed and applied as a whole, and no specific goal or policy in the plan shall be construed or applied in isolation from the other goals and policies in the plan.

Thus, even if Wakulla County's argument was consistent with the evidence, the single state plan policy on which it is based is not a legally enforceable standard and cannot be applied in isolation to the Unit 8 project. Similarly, the Florida Electrical Power Plant Siting Act requires only that a proposal "not unduly conflict with the goals established by local comprehensive plan." See Section 403.502, Florida Statutes., (emphasis added). Indeed the DCA, which is required by the Florida Electrical Power Plant Siting Act to "address the impact upon the public of the proposed electrical power plant, based on the degree to which the electrical power plant is consistent with the applicable portions of the State Comprehensive Plan . . .", Subsection 403.507(2)(1)1., Florida Statute (emphasis supplied),

has recommended certification subject to conditions of certification which it deems appropriate. Thus, even if Wakulla County's argument was established by the evidence, the preponderant evidence, when considered in its totality, measured against the above statutory charge, establishes that the Unit 8 project is consistent with and in compliance with the State Comprehensive Plan as a whole.

RECOMMENDATION

Having considered the foregoing findings of fact, conclusions of law, the evidence of record, the candor and demeanor of the witnesses and the pleadings and arguments of the parties, it is, therefore,

RECOMMENDED: That the City of Tallahassee Florida, be granted certification, pursuant to Chapter 403, Part II, Florida Statutes, for the operation of the existing Purdom Station, including the location, construction, and operation of proposed Unit 8 and its associated facilities, as proposed in the Site Certification Application as modified by the preponderant evidence of record supportive of the above findings of fact and conclusions of law, and in accordance with the attached conditions of certification, which are incorporated herein and made a part hereof by reference. It is further recommended that the City of Tallahassee, Florida, be authorized to use, connect to and cross properties of the Florida Department of Transportation, subject to the above-referenced and attached conditions of certification.

DONE AND ENTERED this 19th day of March, 1998, in Tallahassee, Leon County, Florida.

R. MICHAEL RUFF
Administrative Law Judge
Division of Administrative Hearings
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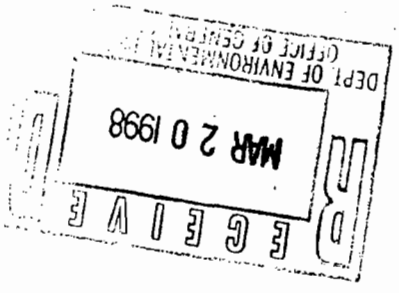
Tallahassee, Florida 32399-3000

NOTICE OF RIGHT TO SUBMIT EXCEPTIONS

All parties have the right to submit written exception within 15 days from the date of this Recommended Order. Any exceptions to this Recommended Order should be filed with the agency that will issue the Final Order in this case.



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

July 29, 1997

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Jennette Curtis
Environmental Administrator
City of Tallahassee Utility Services
300 South Adams Street
Tallahassee, Florida 32301

Re: Purdom Unit 8, Combustion Turbine and
Heat Recovery Steam Generator
DRAFT Permit No. PSD-FL-239/PA97-36

Dear Ms. Curtis

Enclosed is a revised copy of the "PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT". This replaces the earlier version which was sent on July 1, 1997.

The "PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT" must be published within 30 (thirty) days of receipt of this letter. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication within the allotted time 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, P.E., Administrator, New Source Review Section at the above letterhead address. If you have any other questions, please contact Martin Costello or Mr. Linero at 904/488-1344.

Sincerely,

C. H. Fancy, P.E., Chief,
Bureau of Air Regulation

CHF/mc

Enclosures

PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DRAFT Permit No.: PSD-FL-239
Power Plant Siting No. PA97-36

City of Tallahassee Utility Services
Purdom Generating Station Unit 8
Wakulla County

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit for the Prevention of Significant Deterioration (PSD permit) to the City of Tallahassee for the Purdom Generating Station proposed Unit 8 located in the City of St. Marks, Wakulla County. A Best Available Control Technology (BACT) determination was conducted for particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), nitrogen oxides (NO_x) and carbon monoxide (CO) pursuant to Rule 62-212.400, F.A.C. and 40 CFR 52.21. The applicant's name and address are City of Tallahassee Utility Services, 300 South Adams Street, Tallahassee, FL 32301

The City of Tallahassee has applied to construct Unit 8, a nominal 250 megawatt (MW) combined cycle combustion turbine and heat recovery steam generator to meet its system needs and replace existing conventional steam generating Units 5 and 6. Emissions control will be accomplished by dry low NO_X burners (gas) and water injection (diesel) and primary use of natural gas, an inherently clean fuel. A new 200 foot stack and a cooling tower will be added to the facility for Unit 8.

Other existing units at the plant consist of Unit 7, a nominal 44 MW steam boiler fired by natural gas and/or fuel oil, two older combustion turbines with a nominal rating of 12.3 MW each and a small auxiliary steam boiler fired by natural gas. The City has requested a facility-wide emissions cap for nitrogen oxides (NO_X) and sulfur dioxide (SO_2) to ensure that no increase in these emissions will occur once Unit 8 is constructed. Therefore in the future, NO_X and SO_2 emissions from the facility, including Unit 8, will be less than or equal to these emissions before the addition of Unit 8. Electrical output from this facility will be about three times higher than the current level with the addition of Unit 8.

Total facility-wide annual emissions including those from the project are summarized below:

Pollutants	Current Actual ton/yr	Future Estimated Emissions ton/yr	Net Increase ton/yr
PM_{10}	10.7	59.0	48.3
SO_2	80.0	80.0	0
NO_X	467.0	467.0	0
CO	66.0	193.0	127.0

An air quality impact analysis was conducted. Emissions from the facility will not significantly contribute to or cause a violation of any state or federal ambient air quality standards. The maximum predicted PSD Class II increments of NO_2, SO_2, and PM_{10} consumed by all sources in the area, including this project, will be as follows:

PSD Class II Increment Consumed (mg/m^3)		Allowable Increment (mg/m^3)	Percent Increment Consumed
PM_{10}			
24-hour	3.3	30	11
Annual	0.3	17	2
SO_2			
3-hour	14.4	512	3
24-hour	2.4	91	3
Annual	0.0	20	0
NO_2			
Annual	6.2	25	25

The maximum predicted PSD Class I increments of NO_2, SO_2, and PM_{10} in the St. Marks National Wilderness Area and the Bradwell Bay National Wilderness Area consumed by all sources in the area, including this project, will be as follows:

PSD Class I Increment Consumed (mg/m^3)		Allowable Increment (mg/m^3)	Percent Increment Consumed
PM_{10}			
24-hour	0.73	8	9
Annual	0.16	4	4
SO_2			
3-hour	16.9	25	68
24-hour	4.9	5	98
Annual	0.0	2	0
NO_2			
Annual	0.91	2.5	36

The Department will issue the FINAL Permit, in accordance with the conditions of the DRAFT Permit 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 and requests for public meetings concerning the proposed DRAFT Permit issuance action for a period of 30 (thirty) days from the date of publication of this Notice. Written comments and requests for public meetings should be provided to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit, the Department shall issue a Revised DRAFT Permit and require, if applicable, another Public Notice.

The issuance of this PSD permit is being coordinated with a certification under the Power Plant Siting Act (Sections 403.501.519, Florida Statutes). If a petition for an administrative hearing on the preliminary determination and proposed PSD permit is filed by a substantially affected person, that hearing shall be consolidated with the certification hearing, as provided under Section 403.507(3), Florida Statutes.

The Department will issue FINAL Permit with the conditions of the DRAFT Permit unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 F.S. Mediation under Section 120.573 is not available for this Draft Permit.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative hearing in accordance with 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, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, telephone: 904/488-9370, fax: 904/487-4938. Petitions must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. A petitioner must 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 28-5.207 of the Florida Administrative Code.

A petition must contain the following information: (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the Department's action or proposed action addressed in this notice of intent.

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 of intent. 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
Tallahassee, Florida, 32301
Telephone: 850/488-1344
Fax: 850/922-6979

Department of Environmental Protection
NW District Office
160 Government Center
Pensacola, Florida 32501
Telephone:(850) 444-8300
Fax: :(850) 444-8417

The complete project file includes the application, technical evaluations, 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 Administrator, New Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 904/488-1344, for additional information.

In the Matter of an
Application for Permit by:

City of Tallahassee Utility Services
300 South Adams Street
Tallahassee, FL 32301

DRAFT Permit No.: PSD-FL-239
Power Plant Siting: PA97-36
Purdom Generating Station
Wakulla County

INTENT TO ISSUE PSD PERMIT

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit for the Prevention of Significant Deterioration (copy of DRAFT PSD Permit attached) for the proposed project, detailed in the application specified above and the attached Technical Evaluation and Preliminary Determination, for the reasons stated below.

The applicant, the City of Tallahassee, applied on March 17, 1997 to the Department for a PSD permit and Siting Certification to construct and operate a 250 megawatt combustion turbine and heat recovery steam generator for its Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla, County.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above actions are not exempt from permitting procedures. The Department has determined that a PSD permit is required for the proposed work.

The Department intends to issue this PSD permit based on the belief that reasonable assurances have been provided 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 62-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed "PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT". The notice shall be published one time only within 30 (thirty) days in the legal advertisement section of a newspaper of general circulation in the area affected. 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. Where there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit. 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 (Telephone: 904/488-1344; Fax 904/ 922-6979) within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit pursuant to Rule 62-103.150 (6), F.A.C.

The Department will issue the FINAL Permit, in accordance with the conditions of the enclosed DRAFT Permit 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 and requests for public meetings concerning the proposed DRAFT Permit issuance action for a period of 30 (thirty) days from the date of publication of "PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT." Written comments and requests for public meetings should be provided to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in this DRAFT Permit, the Department shall issue a Revised DRAFT 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., or a party requests mediation as an alternative remedy under Section 120.573 F.S. before the deadline for filing a petition. Choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement. The procedures for petitioning for a hearing are set forth below, followed by the procedures for requesting mediation.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative hearing in accordance with 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, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, telephone: 904/488-9730, fax: 904/487-4938. Petitions must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. A petitioner must 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 (or a request for mediation, as discussed below) 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 28-5.207 of the Florida Administrative Code.

A petition must contain the following information: (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the action or proposed action addressed in this notice of intent.

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 of intent. 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 person whose substantial interests are affected by the Department's proposed permitting decision, may elect to pursue mediation by asking all parties to the proceeding to agree to such mediation and by filing with the Department a request for mediation and the written agreement of all such parties to mediate the dispute. The request and agreement must be filed in (received by) the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, by the same deadline as set forth above for the filing of a petition.

A request for mediation must contain the following information: (a) The name, address, and telephone number of the person requesting mediation and that person's representative, if any; (b) A statement of the preliminary agency action; (c) A statement of the relief sought; and (d) Either an explanation of how the requester's substantial interests will be affected by the action or proposed action addressed in this notice of intent or a statement clearly identifying the petition for hearing that the requester has already filed, and incorporating it by reference.

The agreement to mediate must include the following: (a) The names, addresses, and telephone numbers of any persons who may attend the mediation; (b) The name, address, and telephone number of the mediator selected by the parties, or a provision for selecting a mediator within a specified time; (c) The agreed allocation of the costs and fees associated with the mediation; (d) The agreement of the parties on the confidentiality of discussions and documents introduced during mediation; (e) The date, time, and place of the first mediation session, or a deadline

for holding the first session, if no mediator has yet been chosen; (f) The name of each party's representative who shall have authority to settle or recommend settlement; and (g) The signatures of all parties or their authorized representatives.

As provided in Section 120.573 F.S., the timely agreement of all parties to mediate will toll the time limitations imposed by Sections 120.569 and 120.57 F.S. for requesting and holding an administrative hearing. Unless otherwise agreed by the parties, the mediation must be concluded within sixty days of the execution of the agreement. If mediation results in settlement of the administrative dispute, the Department must enter a final order incorporating the agreement of the parties. Persons whose substantial interests will be affected by such modified final decision of the Department have a right to petition for a hearing only in accordance with the requirements for such petitions set forth above. If mediation terminates without settlement of the dispute, the Department shall notify all parties in writing that the administrative hearing processes under Sections 120.569 and 120.57 F.S. remain available for disposition of the dispute, and the notice will specify the deadlines that then will apply for challenging the agency action and electing remedies under those two statutes.

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. 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.

A A Linero, P.E. 7/1

for C. H. Fancy, P.E., Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this INTENT TO ISSUE PSD PERMIT (including the PUBLIC NOTICE, Technical Evaluation and Preliminary Determination, Draft BACT Determination, and the DRAFT permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 7-1-97 to the person(s) listed:

Ms. Jennette Curtis, City of Tallahassee *
Mr. Darrel Graziani, P.E.
Mr. Brian Beals, EPA
Mr. John Bunyak, NPS
Mr. Ed Middleswart, NWD
Mr. Buck Oven, DEP

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Kuri Aden 7-1-97
(Clerk) (Date)

TECHNICAL EVALUATION

AND

PRELIMINARY DETERMINATION

City of Tallahassee Utility Services

Purdom Generating Station Unit 8
250 Megawatt Combustion Turbine and
Heat Recovery Steam Generator
Wakulla County

Permit No. PSD-FL-239 / PA 97-36

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation

July 1, 1997

1. APPLICATION INFORMATION

1.1 Applicant Name and Address

City of Tallahassee Utility Services
300 South Adams Street
Tallahassee, FL 32301

Authorized Representative

Ms. Jennette Curtis, Environmental Administrator

1.2 Reviewing and Process Schedule

03-17-97	Date of Receipt of Application
04-21-97	Bureau of Air Regulation Preliminary Sufficiency Review
05-01-97	Department's Sufficiency Review
05-07-97	COT letter response to Bureau's Sufficiency Review
07-01-97	Intent Issued

2. FACILITY INFORMATION

2.1 Facility Location:

The Sam O. Purdom Generating Station is located on the north side of St. Marks, in Wakulla county. This site is approximately 0.7 kilometers Northeast of the Saint Marks Wilderness Area, a Class 1 PSD Area. The UTM: coordinates of this facility (the stack for Unit 8) are Zone 16 ; 769.611 km E ; 3339.767 km N.

2.2 Standard Industrial Classification Code (SIC)

Major Group No.	49
Group No.	11

2.3 Facility Category

The Purdom Generating Station is classified as a major air pollutant emitting facility. Air pollutant emissions are over 100 TPY for nitrogen oxides (NO_x) and carbon monoxide (CO).

This facility is on the list of the 28 Major Facility Categories, Table 62-212.400-1. This facility is also classified as a Title V facility.

3. PROJECT DESCRIPTION

The City of Tallahassee plans to install a new combined cycle combustion turbine system, Unit 8, at the existing Purdom facility consisting of a 160 MW (nominal rating) GE MS7231FA with DLN-2 dry low NO_X burners (Unit 8) and a nonfired heat recovery steam generator (HRSG) with a nominal 90 MW steam turbine. The compressor inlet air will be conditioned by an evaporative cooler when needed. The turbine will be started using an electric motor. A new 200 foot stack and a cooling tower will be added to the facility for Unit 8.

Unit 8 will be located at the city's Sam O. Purdom Generating Station in St. Marks, Wakulla County. Existing steam generating units 5 and 6 will be permanently shut down once Unit 8 has completed the initial performance test. Other existing units at the plant consist of Unit 7, a pre-NSPS boiler with a nominal rating of 44 MW fired by natural gas, and residual fuel oil or distillate fuel oil, two pre-NSPS distillate fuel oil or natural gas fired combustion turbines with a nominal rating of 12.5 MWs each (GT1 and GT2), and a Subpart Dc auxiliary steam boiler fired by natural gas.

4. PROCESS DESCRIPTION

Unit 8 is a combined cycle combustion turbine which will primarily fire natural gas to power an electrical generator rated at 160 MWs. Steam generated in the HRSG will power a steam turbine which will drive a second electrical generator rated at 90 MWs (see attached figure 2-1).

5. RULE APPLICABILITY

The proposed project is subject to preconstruction review requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.).

This facility is located in Wakulla county, an area designated as attainment for all criteria pollutants in accordance with Rule 62-204.360, F.A.C. The proposed project is subject to review under Rule 62-212.400., F.A.C., Prevention of Significant Deterioration (PSD), because the potential emission increases for PM/PM_{10}, NO_X, SO_2, and CO exceed the significance emission rates given in Chapter 62-212, Table 62-212.400-2, F.A.C.

This PSD review consists of a determination of Best Available Control Technology (BACT) for PM/PM_{10}, CO, NO_X, and SO_2 and an analysis of the air quality impact of the proposed project's impacts on soils, vegetation and visibility; along with air quality impacts resulting from associated commercial, residential and industrial growth. This project will also be reviewed and regulated pursuant to the Power Plant Siting Act requirements.

The emission units affected by this PSD permit shall comply with all applicable provisions of the Florida Administrative Code (including applicable portions of the Code of Federal Regulations incorporated therein) and, specifically, the following Chapters and Rules:

Chapter 62-4	Permits.
Rule 62-204.220	Ambient Air Quality Protection
Rule 62-204.240	Ambient Air Quality Standards
Rule 62-204.260	Prevention of Significant Deterioration Increments
Rule 62-204.360	Designation of Prevention of Significant Deterioration Areas
Rule 62-204.800	Federal Regulations Adopted by Reference
Rule 62-210.300	Permits Required
Rule 62-210.350	Public Notice and Comments
Rule 62-210.370	Reports
Rule 62-210.550	Stack Height Policy
Rule 62-210.650	Circumvention
Rule 62-210.700	Excess Emissions
Rule 62-210.900	Forms and Instructions
Rule 62-212.300	General Preconstruction Review Requirements
Rule 62-212.400	Prevention of Significant Deterioration
Rule 62-213	Operation Permits for Major Sources of Air Pollution
Rule 62-214	Requirements For Sources Subject To The Federal Acid Rain Program
Rule 62-296.320	General Pollutant Emission Limiting Standards
Rule 62-297.310	General Test Requirements
Rule 62-297.401	Compliance Test Methods
Rule 62-297.520	EPA Continuous Monitor Performance Specifications

6. SOURCE IMPACT ANALYSIS

6.1 Emission Limitations

The proposed Purdom Unit 8 will emit the following PSD pollutants (Table 212.400-2): particulate matter, sulfur dioxide, nitrogen oxides, volatile organic compounds, carbon monoxide, sulfuric acid mist, and negligible quantities of fluorides, beryllium, mercury and lead. The permitted allowable emissions for this Purdom Unit 8 are summarized in the BACT (Tables 1-1, Air Pollutant Standards and Terms and the compliance procedures are summarized in Table 1-2 Compliance Requirements).

6.2 *Emission Summary*

Table 1 PSD Applicability Summary

Pollutants	Current Actual ton/yr	Future Estimated Emissions ton/yr	Net Increase ton/yr	PSD Significant Level ton/yr
PM	10.7	59.0	48.3	25
PM10	**10.7**	**59.0**	**48.3**	**15**
SO_2	**80.0**	**80.0**	**0****	**0***
NO_X	**467.0**	**467.0**	**0****	**0***
CO	**66.0**	**193.0**	**127.0**	**0***
Ozone(VOC)	2.8	14.7	11.9	40
Sulfuric Acid Mist	3.0	8.6	5.6	7
Fluorides	0.08	1.64	1.56	3
Total Reduced Sulfur	N/A	N/A	N/A	10
Mercury	0.0020	0.0024	0.0004	0.1
Beryllium	0.00052	0.00030	0.00022	0.0004
Lead	0.091	0.011	0.080	0.6

Footnotes:
Several modeling scenarios were evaluated and the above table represents the worst case emission rates while maintaining emissions within the emissions cap for NO_X and SO_2.

N/A - means no emissions expected or no emissions information available.

*Due to the proximity to the St. Marks Class I Area, lower criteria apply for those pollutants with a maximum projected 24-hour average impact of 1.0 microgram per cubic meter or more on the Class I Area.

**Net emissions increase will be limited to zero by the annual emissions cap for these pollutants. The netting procedure in 62-212.400(2)(d) F.A.C. results in a net emissions increase which exceeds the levels in Table 212.400-2 and therefore PSD requirements apply for these pollutants.

6.3 *Control Technology Review*

The emission control technology for Unit 8 will consist of a water injection system/dry low NO_X burner system to control NO_X emissions when firing fuel oil and natural gas respectively. Computer controlled and monitored systems on the combustion turbine will assist in maintaining good combustion practices to minimize products of incomplete combustion (CO, PM/PM_{10}, VOC). Low sulfur fuels will be used to keep SO_2 and sulfuric acid mist emissions at low levels. Particulate matter from the cooling tower will be minimized using drift eliminators.

The BACT document is included as a separate document (see Appendix BD)

6.3.1 *Nitrogen Oxides (NO_x)*

The city evaluated the use of Selective Catalytic Reduction (SCR) control technology as the top control option. SCR was rejected as BACT due to several factors including cost, energy impacts, and environmental considerations. Nitrogen Oxides (NO_X) emissions will be controlled by using GE's DLN-2 which is a second generation dry low NO_X burner technology for the high firing temperature frame units. The firing temperature on the Frame 7FA combustion turbine is 2400 F. When firing natural gas, the combustor operates in a diffusion mode at low loads (less than 50% of capacity) and in a premixed mode at high loads. When firing fuel oil, the combustors operate in a diffusion mode at all loads and diluent injection (water) is used to control NO_X formation. The DLN-2 control system regulates fuel distribution to the primary, secondary, tertiary and quaternary fuel systems for each of the five combustors. As the combustion turbine is started and operated through the full range, the diffusion, piloted premix, and premix flames are established by changing the distribution of fuel flow in the combustors. Fuel and air flow to the combustors are controlled by GE's Speedtronic control system. GE's Mark IV control system will be used to continuously maintain the NO_X concentration in the exhaust at the specified level throughout the range of loads and ambient conditions. This system receives inputs from a compressor inlet temperature and humidity sensor, load sensors, speed sensors, and ambient pressure sensors.

6.3.2 NO_X Averaging Time

Section 403.0872(13), Florida Statutes was enacted in 1994 and states that for emission units that are subject to continuous monitoring requirements under 42 U.S.C. sections 7661-7661f or 40 CFR Part 75, compliance with nitrogen oxides emission limits shall be demonstrated based on a 30-day rolling average, except as specifically provided by 40 CFR Parts 60 or 76. The Department amended the following rule to clarify the applicability of this statute for pre-NSPS boilers:

62-296.405 Fossil Fuel Steam Generators with more than 250 million Btu per Hour Heat Input.
(1) Existing Emissions Units....

(e) Test Methods and Procedures...

4. For emission units not subject to nitrogen oxides continuous monitoring requirements, the test methods for nitrogen oxides emissions shall be EPA Methods 7, 7A, or 7E, incorporated and adopted by reference in Chapter 62-297, F.A.C. Four grab samples at 15 minute intervals (±2 min.) per run shall be required for EPA Methods 7 and 7A. For emission units that are subject to continuous monitoring requirements under 42 U.S.C. sections 7661-7661f or 40 CFR Part 75, compliance with nitrogen oxides emission limits shall be demonstrated based on a 30-day rolling average, except as specifically provided by 40 CFR Parts 60 or 76.

No other rules have been changed to incorporate this statute. The applicability of that statute to Unit 8 is uncertain because this unit has a NO_X emission limit under 40 CFR part 60 (NSPS). Unit 8 is an NSPS unit subject to the continuous monitoring requirements under the Acid Rain Program. It is also not clear at this time whether this statute was intended to apply more broadly than to the pre-NSPS boilers regulated under Rule 62-296.405 F.A.C.

The Department agreed to allow the city to determine compliance with nitrogen oxide emission limits based on a 30-day rolling average in this case due to three other factors: 1) the city has committed that there would be no increase in emissions over past actual levels using a facility wide NO_X cap; 2) the emission rate on a 30-day basis is so low that there is reasonable assurance that there will be no extended periods during which emissions will be high on a short term basis; and 3) the facility is located over one hundred miles from the nearest ozone maintenance area and therefore shorter averaging times are less important to avoid aggravating ozone formation from NO_X and other precursors.

6.3.3 Sulfur Dioxide (SO_2)

Sulfur dioxide (and sulfuric acid mist) will be controlled by firing low sulfur fuels. Only natural gas or distillate fuel oil with a maximum sulfur content of 0.05% by weight will be fired. These fuels have the lowest sulfur levels of any commercially available fuels.

6.3.4 Carbon Monoxide (CO)

An oxidation catalyst was evaluated as the top control option but was rejected as BACT due to several considerations including cost and energy impacts. Carbon monoxide (CO) will be controlled by proper tuning of the dry low NO_X burner system and good combustion practices. Operation of the dry low NO_X burner system will be optimized in order to minimize CO emissions while keeping NO_X emissions as low as practicable. Low load operation will result in the highest levels of CO emissions. The BACT emission limit for CO was set at the level which could be achieved for worst case operation i.e., low load operation. According to GE's data, operation at higher loads should result in CO emissions which are at or below 10 ppmvd when firing natural gas.

6.3.5 Particulate Matter (PM/PM10)

The emission control technology for PM/PM_{10} will be good combustion practices and use of only low sulfur, and low ash content fuels including natural gas and distillate fuel oil containing no more than 0.05% sulfur by weight.

6.4 Air Quality Analysis

6.4.1 Introduction

The proposed project will increase emissions of four pollutants at levels in excess of PSD significant amounts: SO_2, PM/PM_{10}, CO and NO_X. The air quality impact analyses required by the PSD regulations for these pollutants include:

* An analysis of existing air quality;

* A significant impact analysis;

* A PSD increment analysis for SO_2, PM_{10} and NO_X;

* An Ambient Air Quality Standards (AAQS) analysis, and

* An analysis of impacts on soils, vegetation, and visibility and of growth-related air quality modeling impacts.

The analysis of existing air quality generally relies on preconstruction monitoring data collected with EPA-approved methods. The significant impact, PSD increment, and AAQS analyses depend on air quality dispersion modeling carried out in accordance with EPA guidelines.

Based on the required analyses, the Department has reasonable assurance that the proposed project, as described in this report and subject to the conditions of approval proposed herein, will not cause or significantly contribute to a violation of any AAQS or PSD increment. However, the following EPA-directed stack height language is included: "In approving this permit, the Department has determined that the application complies with the applicable provisions of the stack height regulations as revised by EPA on July 8, 1985 (50 FR 27892). Portions of the regulations have been remanded by a panel of the U.S. Court of Appeals for the D.C. Circuit in NRDC v. Thomas, 838 F. 2d 1224 (D.C. Cir. 1988). Consequently, this permit may be subject to modification if and when EPA revises the regulation in response to the court decision. This may result in revised emission limitations or may affect other actions taken by the source owners or operators." A discussion of the required analyses follows.

6.4.2 Analysis of Existing Air Quality and Determination of Background Concentrations

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review unless otherwise exempted or satisfied. This monitoring requirement may be satisfied by using previously existing representative monitoring data, if available. An exemption to the monitoring requirement may be obtained if the maximum air quality impact resulting from the projected emissions increase, as determined by air quality modeling, is less than a pollutant-specific deminimus concentration. In addition, if an acceptable monitoring method for the specific pollutant has not been established by EPA, monitoring may not be required.

If preconstruction ambient monitoring is exempted, determination of background concentrations for PSD significant pollutants with established AAQS may still be necessary for use in any required AAQS analysis. These concentrations may be established from the required preconstruction ambient air quality monitoring analysis or from previously existing representative monitoring data. These background ambient air quality concentrations are added to pollutant impacts predicted by modeling and represent the air quality impacts of sources not included in the modeling.

The table below shows that SO_2, PM_{10}, NO_2 and CO impacts from the project are predicted to be less than the de minimus levels; therefore, preconstruction ambient air quality monitoring is not required for these pollutants.

Maximum Project Air Quality Impacts for Comparison to the De Minimus Ambient Levels.

Pollutant	Averaging Time	Maximum Predicted Impact (ug/m^3)	Impact Greater Than De Minimus?	De Minimus Level(ug/m^3)
SO_2	24-hour	0.02	NO	13
PM_{10}	24-hour	6.5	NO	10
CO	8-hour	5.4	NO	575
NO_2	Annual	6.1	NO	14

However, previously existing representative monitoring data from SO_2, PM_{10}, NO_2 and CO monitors in North Florida were used to establish background concentrations for use in the AAQS analysis. These values are shown in the following table.

Background Concentrations for Use in AAQS Analysis

Pollutant	Averaging Time	Background Concentration (ug/m^3)
SO_2	Annual	9
	24-hour	71
	3-hour	183
PM_{10}	Annual	22.4
	24-hour	47
CO	8-hour	5290
	1-hour	8050
NO_X	Annual	14

6.4.3 Models and Meteorological Data Used in Significant Impact, PSD Increment and AAQS Analyses

The EPA-approved Industrial Source Complex Short-Term (ISCST3) dispersion model was used to evaluate the pollutant emissions from the proposed project and other existing major facilities. The model determines ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, area, and volume sources. The model incorporates elements for plume rise, transport by the mean wind, Gaussian dispersion, and pollutant removal mechanisms such as deposition. The ISCST3 model allows for the separation of sources, building wake downwash, and various other input and output features. A series of specific model features, recommended by the EPA, are referred to as the regulatory options. The applicant used the EPA recommended regulatory options in each modeling scenario. Direction-specific downwash parameters were used for all sources for which downwash was considered. The stacks associated with this project all satisfy the good engineering practice (GEP) stack height criteria.

Initially, the applicant conducted preliminary modeling for the purpose of determining the worst case fuel/load/temperature scenarios for each applicable averaging time. Preliminary modeling runs were conducted using one year of meteorological data at three ambient temperatures (95°F, 59°F and 20°F) and three combustion turbine loads (100%, 75% and 50%) for both natural gas and Number 2 (0.05% sulfur content) diesel fuel oil. Thus, there were a total of 18 preliminary modeling runs conducted. As a result of these runs, the applicant determined that the 20°F at 50% load fuel oil combinations produced the "worst case" predicted ground-level ambient air quality impacts for the short-term averaging periods (1-hour, 3-hour, 8-hour and 24-hour) for all pollutants. The annual average "worst case" predicted ground-level ambient air quality impacts were determined to occur with the 59°F and 100% load fuel oil/natural gas mixed combination (1735 hours per year fuel oil/7025 hours per year natural gas).

Meteorological data used in the ISCST3 model for all other but the preliminary "worst case" determination modeling consisted of a concurrent 5-year period of hourly surface weather observations and twice-daily upper air soundings from the National Weather Service (NWS) stations at Tallahassee, Florida (surface data) and Apalachicola, Florida (upper air data). The 5-year period of meteorological data was from 1985 through 1989. These NWS stations were selected for use in the study because they are the closest primary weather stations to the study area and are most representative of the project site. The surface observations included wind direction, wind speed, temperature, cloud cover, and cloud ceiling.

Since five years of data were used in ISCST3, the highest-second-high (HSH) short-term predicted concentrations were compared with the appropriate AAQS or PSD increments. For the annual averages, the highest predicted yearly average was compared with the standards. For determining the project's significant impact area in the vicinity of the facility and if there are significant impacts from the project on any PSD Class I area, both the highest short-term predicted concentrations and the highest predicted yearly averages were compared to their respective significant impact levels.

6.4.4 Significant Impact Analysis

Initially, the applicant conducted modeling using only the proposed project's worst case emission scenario for each pollutant and applicable averaging time. A total of 632 receptors were placed along the site boundary and within 10 km of the facility, which is located in a PSD Class II area. A total of 68 receptors were placed in and along the boundary of the St. Marks National Wilderness Area (NWA) and a total of 18 receptors were placed in and along the boundary of the Bradwell Bay National Wilderness Area (NWA). Both of these areas are PSD Class I areas. They are located approximately 0.7 km and 28 km, respectively, from the project at their closest points. For each pollutant subject to PSD and also subject to PSD increment and/or AAQS analyses, this modeling compared maximum predicted impacts due to the project with PSD significant impact levels to determine whether significant impacts due to the project were predicted in the vicinity of the facility or in the two Class I areas. The tables below show the results of this modeling. The radius of significant impact, if any, for each pollutant and applicable pollutant averaging time is also shown in the tables below.

Maximum Project Air Quality Impacts for Comparison to the PSD Class II Significant Impact Levels in the Vicinity of the Facility.

Pollutant	Averaging Time	Maximum Predicted Impact (ug/m^3)	Significant Impact Level (ug/m^3)	Significant Impact?	Radius of Significant Impact (km)
SO_2	Annual	0.024	1	NO	NONE
	24-hour	0.023	5	NO	NONE
	3-hour	0.051	25	NO	NONE
PM_{10}	Annual	0.35	1	NO	NONE
	24-hour	6.5	5	YES	0.3
CO	8-hour	5.1	500	NO	NONE
	1-hour	21.9	2000	NO	NONE
NO_X	Annual	6.1	1	YES	0.3

Maximum Project Air Quality Impacts in the St. Marks and Bradwell Bay NWA for Comparison to the PSD Class I Significant Impact Levels

Pollutant	Averaging Time	Maximum Predicted Impact (ug/m^3)		Significant Impact?		National Park Service (NPS) Significant Impact Level (ug/m^3)
		St. Marks	Bradwell Bay	St. Marks	Bradwell Bay	
SO_2	Annual	0.0	0.0	NO	NO	0.03
	24-hour	0.0	0.0	NO	NO	0.07
	3-hour	0.0043	0.0	NO	NO	0.48
PM_{10}	Annual	0.0	0.0	NO	NO	0.08
	24-hour	0.14	0.0	NO	NO	0.27
NO_2	Annual	0.86	0.038	YES	YES	0.03

As shown in the tables the maximum predicted air quality impacts due to PM_{10} and NO_X emissions from the proposed project are greater than the significant impact levels in the vicinity of the facility for the 24-hour and annual averaging times, respectively. The maximum predicted air quality impacts due to NO_X emissions are greater than the significant impact level in the Class I areas. Therefore, the applicant was required to do further PM_{10} and NO_2 modeling in the vicinity of the facility, within the applicable significant impact area, to determine the impacts of the project along with all other sources in the vicinity of the facility. The significant impact area is based upon the predicted radius of significant impact. Further modeling for Class I impacts was also required for NO_2. No further modeling of any other pollutants were required. However, the applicant performed full impact modeling in the vicinity of the project and in the Class I areas for SO_2, PM_{10}, NO_2 and CO to provide further reasonable assurance that the proposed project would not violate any AAQS or PSD increments. Full impact modeling is modeling that considers not only the impact of the project but the impacts of the existing facility and other major sources, including background concentrations, located within the vicinity of the project and the Class I areas.

6.4.5 Receptor Networks For PSD Increment And AAQS Analyses

For the AAQS and PSD Class II analyses, receptor grids normally are based on the size of the significant impact area for each pollutant. The size of the significant impact areas for the required PM_{10} and NO_2 analyses were based on only a 0.3 km radius of significant impact as discussed in the significant impact analysis section above. However, the receptor grids used in AAQS and PSD Class II analyses were the same and were as extensive (receptors out to 10 km) as those used in the original analyses to determine the extent of significant impact for each pollutant.

Both preliminary and refined modeling runs were performed for these analyses. In the refined runs additional receptors (11X11, 121 point receptor grid) spaced 100 m apart were placed over critical receptors identified during preliminary AAQS and PSD increment modeling. The results of these analyses are discussed below.

6.4.6 PSD Increment Analysis

The PSD increment represents the amount that new sources in an area may increase ambient ground level concentrations of a pollutant. The results of the PSD Class II increment analysis presented in the table below show that all of the maximum predicted impacts are less than the allowable Class II increments.

PSD Class II Increment Analysis

Pollutant	Averaging Time	Maximum Predicted Impact (ug/m^3)	Impact Greater Than Allowable Increment?	Allowable Increment (ug/m^3)
SO_2	Annual	0.0	NO	20
	24-hour	2.4	NO	91
	3-hour	14.4	NO	512
PM_{10}	Annual	0.32	NO	17
	24-hour	3.3	NO	31
NO_2	Annual	6.2	NO	25

The results of the PSD Class I increment analysis presented in the tables below show that all of the maximum predicted impacts are less than the allowable increments.

PSD Class I Increment Analysis for St. Marks NWA and Bradwell Bay NWA

Pollutant	Averaging Time	Maximum Predicted Impact (ug/m^3)		Impacts Greater Than Allowable Increment?		Allowable Increment (ug/m^3)
		St. Marks	Bradwell Bay	St. Marks	Bradwell Bay	
SO_2	Annual	0.0	0.0	NO	NO	2
	24-hour	2.7	4.9	NO	NO	5
	3-hour	10.7	16.9	NO	NO	25
	Annual	0.11	0.16	NO	NO	4

PM_{10}	24-hour	0.73	0.0023	NO	NO	8
NO_2	Annual	0.91	0.57	NO	NO	2.5

6.4.7 AAQS Analysis

For pollutants subject to an AAQS review, the total impact on ambient air quality is obtained by adding a "background" concentration to the maximum modeled concentration. This "background" concentration takes into account all sources of a particular pollutant that are not explicitly modeled. The results of the AAQS analysis are summarized in the table below. As shown in this table, emissions from the proposed facility are not expected to cause or significantly contribute to a violation of any AAQS.

Ambient Air Quality Impacts

Pollutant	Averaging Time	Major Sources Impact (ug/m^3)	Background Concentration (ug/m^3)	Total Impact (ug/m^3)	Total Impact Greater Than AAQS	Florida AAQS (ug/m^3)
SO_2	Annual	26	9	36	NO	60
	24-hour	137	71	208	NO	260
	3-hour	402	183	585	NO	1300
PM_{10}	Annual	19	22	41	NO	50
	24-hour	84	47	131	NO	150
NO_2	Annual	21	14	35	NO	100
CO	8-hour	16	5290	5306	NO	10,000
	1-hour	103	8050	8153	NO	40,000

6.5 Additional Impacts Analysis

6.5.1 Impacts On Soils, Vegetation, Wildlife, and Visibility

The maximum ground-level concentrations predicted to occur for PM_{10}, NO_X, SO_2 and CO as a result of the proposed project, including background concentrations and all other nearby sources, will be below the associated AAQS. The AAQS are designed to protect both the public health and welfare. As such, this project is not expected to have a harmful impact on soils and vegetation in the PSD Class II area. An air quality related values (AQRV) analysis was done by the applicant for the Class I area. No significant impacts on this area are expected.

6.5.2 Growth-Related Air Quality Impacts

There may be some temporary residential growth associated with this project, but there is little potential for new industrial development nearby as a result of it. Although it is not possible to reliably quantify the emissions and impacts resulting from this project, they are expected to be small and well-distributed throughout the area.

6.5.3 Air Toxics Air Quality Impacts

The maximum predicted impacts of regulated and non-regulated toxic air pollutants that are proposed to be emitted by the project are all less than the Department's draft annual Ambient Reference Concentrations (ARC).

7. CONCLUSION

Based on the foregoing technical evaluation of the application and additional information submitted by the city, the Department has made a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations provided the Department's Best Available Control Technology Determination is implemented and certain conditions are met. The General and Specific Conditions are listed in the attached draft conditions of approval .

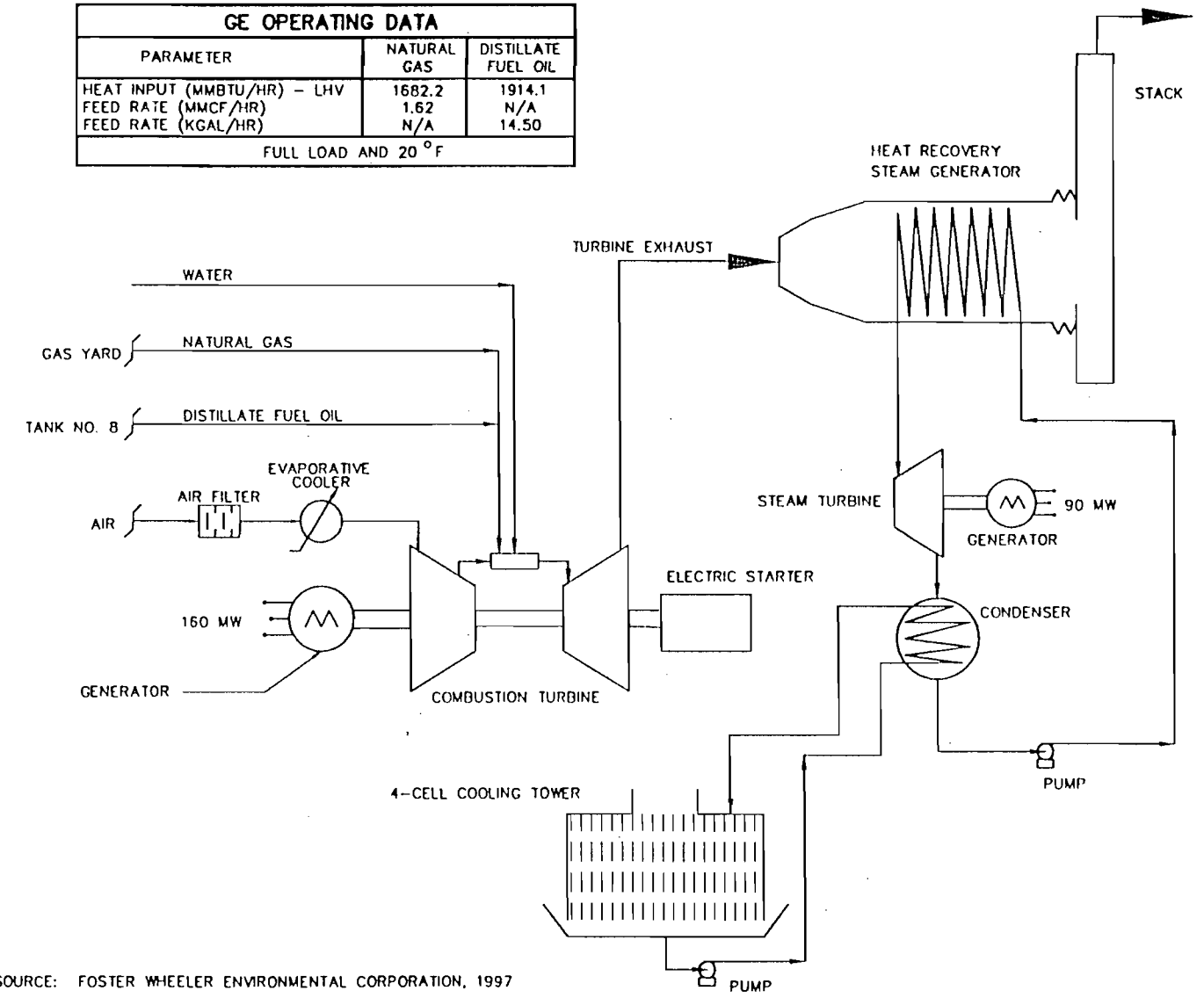
Permit Engineer: Martin Costello, P.E.
Meteorologist: Cleve Holladay

Reviewed and Approved by A. A Linero, P.E.
Administrator, New Source Review Section

PLOT DATE MAR 1 G:\DARREL\PUNIT8.DWG

GE OPERATING DATA		
PARAMETER	NATURAL GAS	DISTILLATE FUEL OIL
HEAT INPUT (MMBTU/HR) – LHV	1682.2	1914.1
FEED RATE (MMCF/HR)	1.62	N/A
FEED RATE (KGAL/HR)	N/A	14.50
FULL LOAD AND 20 °F		

EU13 – EXHAUST PARAMETERS
EXHAUST TEMP. – 171 TO 203 °F
STACK HEIGHT – 200'
SO2 EMISSIONS – 80 TPY
NOx EMISSIONS – 467 TPY
OPACITY – 20% EXCEPT AS ALLOWED



SOURCE: FOSTER WHEELER ENVIRONMENTAL CORPORATION, 1997

CITY OF TALLAHASSEE

SIMPLIFIED PROCESS FLOW DIAGRAM

PURDOM UNIT 8 PROJECT - ST MARKS, FLORIDA

Figure 2-1

Department of Environmental Protection

DRAFT

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

PERMITTEE:

City of Tallahassee
Purdom Generating Station
300 South Adams Street
Tallahassee, FL 32301

Authorized Representative:
Jennette Curtis
Environmental Administrator

FID No.	1290001
PSD No.	PSD-FL-239
PPS No.	PA97-36
Expires:	N/A

LOCATED AT:

City of Tallahassee
Purdom Generating Station
Project: Purdom Unit 8
Standard Industrial Classification Code (SIC): 4911
Wakulla County, Florida

UTM: Zone 16 ; 769.611 km E ; 3339.767 km N
Directions: *On the north end of the City of St. Marks on SR 363, Wakulla County*

STATEMENT OF BASIS:

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, 62-297. The above named permittee is authorized to modify the facility 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).

Attached appendices and Tables made a part of this permit:

Appendix BD	BACT Determination
Appendix GC	Construction Permit General Conditions

Howard L. Rhodes, Director
Division of Air Resources
Management

SECTION I. FACILITY INFORMATION

SUBSECTION A. FACILITY DESCRIPTION

The City of Tallahassee (COT) plans to install a new combined cycle combustion turbine system, Unit 8, at the existing Purdom facility consisting of a 160 MW (nominal rating) GE MS7231FA with DLN-2 dry low NO_x burners (Unit 8) and a nonfired heat recovery steam generator (HRSG) with a nominal 90 MW steam turbine. The compressor inlet air will be conditioned by an evaporative cooler when needed. The turbine will be started using an electric motor. A new 200 foot stack and a cooling tower will be added to the facility for Unit 8.

Unit 8 will be located at the cities' Sam O. Purdom Generating Station near St. Marks, in Wakulla county. Existing steam generating Units 5 and 6 will be permanently shut down once Unit 8 has completed the initial compliance test. Other existing units at the plant consist of Unit 7, pre-NSPS boiler with a nominal rating of 44 MW fired by natural gas, and cofired or fired alone with residual fuel oil or distillate fuel oil, two pre-NSPS distillate fuel oil or natural gas fired combustion turbines with a nominal rating of 12.5 MWs each (GT1 and GT2), and a Subpart Dc auxiliary steam boiler fired by natural gas.

SUBSECTION B. REGULATORY CLASSIFICATION

The Purdom Generating Station is classified as a major air pollutant emitting facility. Air pollutant emissions are over 100 TPY for nitrogen oxides (NO_x) and carbon monoxide (CO).

This facility is on the list of the 28 Major Facility Categories, Table 62-212.400-1. This facility is also classified as a Title V facility.

SUBSECTION C. PERMIT SCHEDULE:

- 03-17-97: Date of Receipt of Application
- 04-21-97: Department's Preliminary Incompleteness Letter
- 05-01-97: PPS Department's Incompleteness Letter sent
- 05-07-97: Company's Response to Department's letter
- 05-07-97: Application deemed complete
- 07-01-97: Intent Issued

SUBSECTION D. RELEVANT DOCUMENTS:

The documents listed below are the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

1. Application
2. Department's letters dated 4/21/97
3. Company letters dated 5/7/97
4. Department of Interior's letters dated 1/21/97
5. [EPA's letter dated ...]
6. [Third party's letters dated ...]

DRAFT

SECTION II. EMISSION UNIT(S) GENERAL REQUIREMENTS

SUBSECTION A. ADMINISTRATIVE

1 Regulating Agencies: All documents related to applications for permits to operate, reports, tests, minor modifications and notifications or for permits to construct or modify an emission unit(s) *subject to the Prevention of Significant Deterioration (PSD) or to Nonattainment Areas (NA) Review requirements* should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP) located at 2600 Blairstone Road, Tallahassee, Florida 32399-2400 and phone number (850) 488-1344.

2 General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in *Appendix GC* of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. **[Rule 62-4.160, F.A.C.]**

3 Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.

4 Forms and Application Procedures: 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. **[Rule 62-210.900, F.A.C.]**

5 Expiration: This air construction permit shall not expire.

SECTION III. SPECIFIC CONDITIONS

SUBSECTION A. SPECIFIC CONDITIONS:

A. General Operation Requirements

Applicable Regulations: Unless otherwise indicated in this permit, the construction and operation of the subject emission unit(s) 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, 62-103, 62-204, 62-210, 62-212, 62-213,62-214, 62-296, 62-297; and the applicable requirements of the Code of Federal Regulations Section 40, Part 60 including Subpart A and GG (1997 version), adopted by reference in the Florida Administrative Code regulation [Rule 62-204.800 F.A.C.]. 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.]

1. The maximum heat input rates, based on the lower heating value (LHV) of each fuel to Purdom Unit 8 at ambient conditions of 95°F temperature, 60% relative humidity, and 14.7 psi pressure shall not exceed 1,467.7 mmBtu/hr when firing natural gas, nor 1,659.5 mmBtu/hr when firing No. 2 fuel oil. These maximum heat input rates will vary depending upon ambient conditions and the combustion turbine characteristics. Manufacturer's curves or equations for correction to other ambient conditions shall be provided to the Department of Environmental Protection (DEP) at least 90 days prior to initial compliance testing. These curves or equations shall be used to establish the maximum allowable heat inputs at other ambient conditions for compliance determinations.
2. Purdom Unit 8 may operate continuously (i.e., 8760 hours per year).
3. Only natural gas or No. 2 fuel oil with a maximum sulfur content of 0.05% by weight shall be fired in the combined cycle combustion turbine.
4. The permittee shall install duct module(s) suitable for possible future installation of an oxidation catalyst and/or SCR equipment on the combined cycle generating unit.
5. Dry low NO_X combustors shall be used on Unit 8 when firing natural gas and water injection shall be used when firing No. 2 fuel oil for control of NO_X emissions.
6. 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.
7. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the Permitting Authority as soon as possible, but at least within (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future 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 the conditions of this permit and the regulations. [Rule 62-4.130, F.A.C.]
8. Operating Procedures: Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C.]
9. The dry low NO_X burner system shall be tuned upon initial operation to optimize emissions reductions and shall be maintained to minimize NO_X emissions and CO emissions. Operation of the unit when the dry low NO_X burner system is in the diffusion firing mode shall be minimized.

10. Circumvention: The owner or operator shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rules 62-210.650, F.A.C.]

B. Emission Limits and Standards

The following shall apply upon completion of the initial compliance tests:

1. Best Available Control Technology. The following is a summary of the BACT determinations by DEP:

Table 1. Emission Limits

Pollutant	Fuel	BACT Standard
NO_x	Gas Oil	12 ppmvd @ 15 % O_2 (a) (d) 42 ppmvd @ 15 % O_2 (a) (b) (d)
SO_2	Gas Oil	Good combustion Good combustion of low (0.05%) sulfur fuel oil
PM/PM_{10}	Gas Oil	Good combustion Good combustion of low (0.05%) sulfur fuel oil
Visible Emissions	Gas Oil	10 percent opacity 10 percent opacity
CO	Gas Oil	25 ppmvd (c) 90 ppmvd (c)

(a) 30-day rolling average.

(b) Plus an allowance for fuel bound nitrogen using the formula provided in Condition B4.

(c) By testing concurrent to RATA testing or by 3 one hour runs of Method 10.

(d) Not corrected to ISO conditions.

2. Visible Emissions. Visible emissions shall not exceed 10 percent opacity when firing either natural gas or No. 2 fuel oil. Drift eliminators shall be installed on the cooling tower to reduce PM/PM_{10} emissions.

3. Oxides of Nitrogen. Oxides of nitrogen emissions when firing natural gas shall not exceed 12 ppmvd at 15% O_2 on a 30-day rolling average basis (except during periods of startup, shutdown, malfunction or fuel switching), as measured by CEMS. When monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate of the 30 day rolling average.

4. Oxides of Nitrogen. Oxides of nitrogen emissions when firing No. 2 fuel oil shall not exceed 42 ppmvd at 15% O_2 on a 30-day rolling average basis (except during periods of startup, shutdown, malfunction or fuel switching), as measured by applicable compliance measures, when fuel bound nitrogen values are less than or equal to 0.015 percent. For higher fuel bound nitrogen values (up to 0.03 percent), oxides of nitrogen shall be limited by the following formula:

$$STD = 0.0042 + F \text{ where:}$$

STD = allowable NO_X emissions (percent by volume at 15 percent O_2 and on a dry basis).

F = NO_X emission allowance for fuel-bound nitrogen defined by the following table:

Fuel-Bound Nitrogen (% by Weight)	F (NO_X % by Volume)
$0 < N \leq 0.015$	0
$0.015 < N \leq 0.03$	0.04 (N-0.015)

where: N = the nitrogen content of the fuel (% by weight).

5. Oxides of Nitrogen. Annual emissions of NO_X shall not exceed 467 tons per year from the Purdom facility (Unit 8, Unit 7, GT1, GT2, and the auxiliary boiler) on a calendar year basis, as measured by applicable compliance methods. [Requested by the applicant]

6. Sulfur Dioxide. Annual emissions of SO_2 shall not exceed 80 tons per year from the Purdom facility (Unit 8, Unit 7, GT1, GT2, and the auxiliary boiler) on a calendar year basis, as measured by applicable compliance methods. [Requested by the applicant]

7. Carbon Monoxide. Carbon monoxide emissions when firing natural gas shall not exceed 25 ppmvd as measured by# Method 10.

8. Carbon Monoxide. Carbon monoxide emissions when firing No. 2 fuel oil shall not exceed 90 ppmvd as measured by Method 10.

C. Excess Emissions

1. Excess emissions resulting from startup, shutdown, malfunction or fuel switching shall be permitted provided that best operational practices are adhered to and the duration of excess emissions shall be minimized but in no case exceed four hours in any 24-hour period for cold startup or two hours in any 24-hour period for other reasons unless specifically authorized by DEP for longer duration.

2. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited pursuant to Rule 62-210.700, F.A.C. In case of excess emissions resulting from malfunctions, the owner or operator shall notify Permitting Authority within one (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the problem; and the corrective actions being taken to prevent recurrence. [Rule 62-210.700(6), F.A.C.]

3. Excess Emissions Report: If excess emissions occur due to malfunction, the owner or operator shall notify the Permitting Authority within (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. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. [Rules 62-4.130 and 62-210.700(6), F.A.C.]

D. Compliance Determination

1. Compliance with the allowable emission limiting standards shall be determined within 60 days after achieving the maximum production rate at which this unit will be operated, but not later than 180 days of initial operation of the

unit and annually thereafter as indicated in this permit, by using the following reference methods as described in 40 CFR 60, Appendix A (1997 version), and adopted by reference in Chapter 62-297, F.A.C.

Initial (I) compliance tests shall be performed on Unit 8 while firing each fuel (gas, oil). Annual (A) compliance tests shall be performed during every federal fiscal year (October 1 - September 30) pursuant to Rule 62-297.340, F.A.C., on Unit 8 as indicated. The following reference methods shall be used:

- Method 9 Visual Determination of the Opacity of Emissions from Stationary Sources (I, A); annual on oil if greater than 400 hours of oil firing; however, testing on gas is required only once every five years.

- Method 10 Determination of Carbon Monoxide Emissions from Stationary

Sources (I, A). Testing may be conducted at less than capacity. Annual compliance testing may be conducted concurrent with the annual RATA testing required pursuant to 40 CFR 75.

- Method 20 Determination of Oxides of Nitrogen and diluent emissions from Stationary Gas Turbines (I only, for compliance with 40 CFR 60 Subpart GG)

- 40 CFR 75 Determination of Oxides of Nitrogen emissions will be by a Continuous Emissions Monitoring System (CEMs). Compliance with the NO_X emissions standards in Table 1 shall be demonstrated with this CEMS system based on a 30 day rolling average. Based on CEMS data a separate compliance test is conducted at the end of each operating day and a new 30 day average emission rate is calculated from the arithmetic average of all valid hourly emission rates during the previous 30 operating days.

Note: No other methods may be used for compliance testing unless prior DEP approval is received in writing. The DEP may request a special compliance test pursuant to Rule 62-297.340(2), F.A.C., when, after investigation (such as complaints, increased visible emissions, or questionable maintenance of control equipment), there is reason to believe that any applicable emission standard is being violated.

2. Notwithstanding the requirements of Rule 62-297.340, F.A.C., the exclusive use of fuel oil with a maximum sulfur content limit of 0.05% or less, by weight, is the method for determining compliance for SO_2 and PM_{10}. For the purposes of demonstrating compliance with 40 CFR 60.333 SO_2 emission limit and the 0.05% S limit, fuel oil analysis using ASTM D2880-71 or D4294 (or equivalent) for the sulfur content of liquid fuels and D1072-80, D3031-81, D4084-82 or D3246-81 (or equivalent) for sulfur content of gaseous fuel shall be utilized in accordance with an EPA approved custom fuel monitoring schedule. For the purposes of demonstrating compliance with the emissions caps (Conditions B5 and B6) and for acid rain compliance purposes, natural gas and fuel oil supplier data for sulfur content may be submitted or the natural gas sulfur content referenced in 40 CFR 75 Appendix D may be utilized. However, the applicant is responsible for ensuring that the procedures above are used for determination of fuel sulfur content. 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) (1997 version).

3. An initial test for CO, concurrent with the initial NO_X test, is required. The initial NO_X and CO test results shall be the average of three valid one-hour runs. The DEP's Northwest District office shall be notified, in writing, at least 30 days prior to the initial compliance tests and at least 15 days before annual compliance test(s). Testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 95-100 percent of the maximum heat input rate allowed by the permit, corrected for the average ambient air temperature during the test (with 100 percent represented by a curve depicting heat input vs. ambient temperature). If it is impracticable to test at permitted capacity, the source may be tested at less than permitted capacity. In this case, subsequent operation is limited by adjusting the entire heat input vs. ambient temperature curve downward by an increment equal to the difference between the maximum permitted heat input (corrected for ambient temperature) and

105 percent 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. Compliance test results shall be submitted to the DEP's Northwest District office no later than 45 days after completion of the last test run.

E. Notification, Reporting and Recordkeeping

1. All measurements, records, and other data required to be maintained by the City of Tallahassee shall be retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These data shall be made available to the DEP representatives.

2. Emission Compliance Stack Test Reports: A test report indicating the results of the required compliance tests shall be filed with the Permitting Authority as soon as practical, but no later than 45 days after the last sampling run is completed. [Rule 62-297.310(8), F.A.C.]. The test report shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in Rule 62-297.310(8), F.A.C.

F. Monitoring Requirements

1. The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxides emissions from this source. Thirty day rolling average periods when NO_X emissions (ppmvd @ 15% oxygen) are above the BACT standards (12/42 ppmvd for gas/oil) shall be reported to the DEP Northwest District Office pursuant to General Condition #8. The continuous emission monitoring systems must comply with the certification and quality assurance, and other applicable requirements from 40 CFR 75. Periods of startup, shutdown, malfunction, and fuel switching shall be monitored, recorded, and reported as excess emissions following the format of 40 CFR 60.7 (1997 version). Subject to EPA approval, the NO_x CEMS will be used in lieu of the water/fuel monitoring system and fuel bound nitrogen (FBN) monitoring, which are required in accordance with 40 CFR 60, Subpart GG (1997 version). Subject to EPA approval, the calibration of the water/fuel monitoring device required in 40 CFR 60.335 (c)(2) (1997 version) will be replaced by the 40 CFR 75 certification tests of the NO_X CEMS.

2. The following custom monitoring schedule for No. 2 fuel oil is approved (pending EPA concurrence). For all bulk shipments of No. 2 fuel oil received at the Purdom Station, an analysis which reports the sulfur content and the fuel bound nitrogen content of the fuel shall be provided by the fuel vendor. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40 CFR 60.335(d).

3. The following custom monitoring schedule for natural gas is approved (pending EPA concurrence) in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2).

   a. Monitoring of natural gas nitrogen content shall not be required.

   b. Analysis of the sulfur content of natural gas shall be conducted using one of the EPA-approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. Once Unit 8 becomes operational, monitoring of the sulfur content of the natural gas shall be conducted semiannually.

   c. Should any sulfur analysis indicate noncompliance with 40 CFR 60.333, the City shall notify DEP of such excess emissions and the customized fuel monitoring schedule shall be reexamined. The sulfur content of the natural gas will be monitored weekly during the interim period while the monitoring schedule is reexamined.

d. The City shall notify DEP of any change in natural gas supply for reexamination of this monitoring schedule. A substantial change in natural gas quality (i.e., sulfur content variation of greater than 1 grain per 100 cubic foot of natural gas) shall be considered as a change in the natural gas supply. Sulfur content of the natural gas will be monitored weekly by the natural gas supplier during the interim period when this monitoring schedule is being reexamined.

e. Records of sampling analysis and natural gas supply pertinent to this monitoring schedule shall be retained by the City for a period of five years, and shall be made available for inspection by the appropriate regulatory personnel.

f. The City shall obtain the sulfur content of the natural gas form the fuel supplier (Florida Gas Transmission Company) provided the test methods listed in Specific Condition D2 are used.

4. Determination of Process Variables:

(a) The permittee shall operate and maintain equipment and/or instruments necessary to determine process variables, such as process weight input or heat input, when such data is needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) Equipment and/or instruments used to directly or indirectly determine such process variables, including devices such as belt scales, weigh hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value. [Rule 62-297.310(5), F.A.C]

5. Compliance with the annual facility-wide NO_X cap shall be determined by adding the annual NO_X emissions in tons per year determined by the CEMS required by 40 CFR 75 for Unit 8 along with existing Unit 7 to annual NO_X emissions calculated for existing GT1, GT2 and the auxiliary boiler determined by the following formulas:

GT 1 & GT 2 NO_X(natural gas)= (Fuel Usage)X (Heating Value of Natural Gas) X (0.44 lb/mmBtu) X conversion factors

Fuel usage shall be measured by fuel meter, recorded daily when unit is operated
Heating value of natural gas will be determined from fuel supplier data
0.44 lb/mmBtu = AP-42 emission factor

GT 1 & GT 2 NOx (fuel oil)= (Fuel Usage)X (Heating Value of Fuel Oil) X (0.698 lb/mmBtu)

Fuel usage shall be measured by fuel meter, recorded daily when unit is operated
Heating Value of fuel oil will be determined from fuel supplier data
0.698 lb/mmBtu = AP-42 emission factor

Aux. Boiler NO_X(natural gas)= (Fuel Usage)X (140 lb/mmCF)

Fuel usage shall be measured by flow meter, recorded daily when unit is operated
140 lb/mmCF = AP-42 emission factor

6. Compliance with the annual facility-wide SO_2 cap shall be determined by adding the annual SO_2 emissions in tons per year determined by the CEMS required by 40 CFR 75 for Unit 8 along with existing Unit 7 to annual SO_2 emissions calculated for existing GT1, GT2 and the auxiliary boiler determined by the following formulas:

GT 1 & GT 2 SO2 Emissions (natural gas)= (Fuel Usage) X (Heating Value of Natural Gas) X (0.0006 lb/mmBtu)

Fuel usage shall be measured by fuel meter, recorded daily when unit is operated
Heating Value of natural gas from fuel supplier data
Sulfur Content default of NADB = 0.0006 lb-SO2/mmBtu

GT 1 & GT 2 SO2 Emissions (fuel oil) = (Fuel Usage) X (% Sulfur Content of oil) X (Molecular weight SO2 / Molecular weight of S) X (Conversion factor)

Fuel usage shall be measured by fuel meter, recorded daily when unit is operated
% Sulfur will be determined from fuel oil analysis each time fuel is delivered
Molecular weight of SO2 = 64
Molecular weight of S = 32
Conversion factor of 95% = 0.95

Aux. Boiler SO2 Emissions (natural gas)= (Fuel Usage) X (Heat Rate of Natural Gas) X (0.0006 lb/mmBtu)

Fuel usage shall be measured by Fuel Meter, Recorded Daily when unit is operated
Heating Value of Natural Gas from fuel supplier data
Sulfur Content default of NADB = 0.0006 lb/mmBtu

G. Rule Requirements

1. The emission unit shall be in compliance with all applicable provisions of Chapter 403, F.S., and Chapters 62-4, 210, 212, 275, 296 and 297, F.A.C., except as otherwise specified herein.

2 The emission unit shall be in compliance with all applicable requirements of 40 CFR 60, Subpart A, Appendix A and Appendix B (1997 version), Subpart GG - Standards of Performance for Stationary Gas Turbines (1997 version), and Rule 62-204.800 (7) (b) 38, F.A.C., except as otherwise specified herein. The Subpart GG requirement to correct test data to ISO conditions applies. However, such correction is not used for compliance determinations with the BACT standard(s). All notifications and reports required by this specific condition shall be submitted to the DEP's Northwest District office.

3. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements and regulations (Rule 62-210.300(1), F.A.C.).

4. Except as otherwise specified herein, the emission unit shall be in compliance with all applicable provisions of Rule 62-210.650, F.A.C.: Circumvention; Rule 62-210.700, F.A.C.: Excess Emissions; Rule 62-204.800 (7) (b) 38, F.A.C.: Standards of Performance for New Stationary Sources (NSPS); Chapter 62-297, F.A.C.: Stationary Sources - Emissions Monitoring; and, Rule 62-4.130, F.A.C.: Plant Operation - Problems.

5. If construction does not commence within 18 months of issuance of this permit, the permittee shall obtain from the DEP's Bureau of Air Regulation a review and, if necessary a modification of the BACT determination and allowable emissions (40 CFR 52.21(r)(2) (1997 version)).

6. Quarterly excess emission reports, in accordance with 4 CFR 60.7 (7) (c) (1997 version), shall be submitted to the DEP's Northwest District office.

7. Pursuant to Rule 62-210.370(2), F.A.C., Annual Operation Reports, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. Annual operating reports shall be sent to the DEP's Northwest District office by March 1st of each calendar year.

8. Stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C.

9. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (Rule 62-4.090, F.A.C.).

H. Modifications

1. The permittee shall give written notification to the Department when there is any modification to this facility. This notice shall be submitted sufficiently in advance of any critical date involved to allow sufficient time for review, discussion, and revision of plans, if necessary. Such notice shall include, but not be limited to, information describing the precise nature of the change; modifications to any emission control system; production capacity of the facility before and after the change; and the anticipated completion date of the change.

APPENDIX GC
GENERAL PERMIT CONDITIONS [F.A.C. 62-4.160]

G.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.

G.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.

G.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.

G.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.

G.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.

G.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.

G.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.

G.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.

G.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 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.

G.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.

G.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.

G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.

G.13 This permit also constitutes:

(a) Determination of Best Available Control Technology *( )*
(b) Determination of Prevention of Significant Deterioration *( )*; and
(c) Compliance with New Source Performance Standards *( )*.

G.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.

G.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.

DRAFT

Purdom Generating Station/ Unit 8
City of Tallahassee

Facility ID No. :1290001
Unit No. 8
Tallahassee, FL
Wakulla County

Air Construction Permit No. PSD-FL-239
Power Plant Siting No. PA97-36

The applicant, the City of Tallahassee plans to construct Unit 8, a new combined cycle combustion turbine system at the existing Purdom facility consisting of a 160 MW (nominal rating) GE MS7231FA combustion turbine with DLN-2 dry low NO_X burners and a nonfired heat recovery steam generator (HRSG) with a nominal 90 MW steam turbine. The compressor inlet air will be conditioned by an evaporative cooler when needed. The turbine will be started using an electric motor. A new 200 foot stack and a cooling tower will be added to the facility for Unit 8.

Unit 8 will be located at the city's Sam O. Purdom Generating Station near St. Marks, in Wakulla county. Existing steam generating units 5 and 6 will be permanently shut down once Unit 8 is fully operational. Other existing units at the plant consist of Unit 7, a pre-NSPS boiler with a nominal rating of 44 MW fired by natural gas, and cofired or fired alone with residual fuel oil or distillate fuel oil, two pre-NSPS distillate fuel oil or natural gas fired combustion turbines with a nominal rating of 12.5 MWs each (GT1 and GT2), and a Subpart Dc auxiliary steam boiler fired by natural gas.

A process description is included in the Technical Evaluation and Preliminary Determination.

BACT DETERMINATION REQUESTED BY THE APPLICANT:

See the attached Table 4-8 (from the application) for the BACT requested by the applicant.

The Sam O. Purdom facility is among the major facilities listed in Florida Administrative Code (F.A.C.) Chapter 62-212, Prevention of Significant Deterioration (PSD), Table 62-212.400-1, "Major Facilities Categories." A BACT determination is required for each pollutant exceeding the significant emission rates in Table 62-212.400-2, "Regulated Air Pollutants Significant Emissions Rates," which in this case are particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), carbon monoxide (CO), and nitrogen oxides (NO_X),

This facility is also subject to:

- 40 CFR 60, Subpart GG
- 40 CFR 75

DATE OF RECEIPT OF A BACT APPLICATION:

03-17-97

REVIEW GROUP MEMBERS:

Martin Costello, P.E., A. A. Linero, P.E., Administrator of the New Source Review Section.

BACT DETERMINATION PROCEDURE:

In accordance with Chapter 62-212, F.A.C., this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department of Environmental Protection (Department), on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that, in making the BACT determination, the Department shall give consideration to:

(a) Any Environmental Protection Agency determination of BACT pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 - Standards of Performance for New Stationary Sources or 40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants.

(b) All scientific, engineering, and technical material and other information available to the Department.

(c) The emission limiting standards or BACT determination of any other state.

(d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine, for the emission unit in question, the most stringent control available for a similar or identical emission unit or emission unit category. If it is shown that this level of control is technically or economically infeasible for the emission unit in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

The air pollutant emissions from this facility can be grouped into categories based upon the control equipment and techniques that are available to control emissions from these emission units. Using this approach, the emissions can be classified as follows:

o ***Combustion Products*** (e.g. NO_X and SO_2)

Nitrogen Oxides (NO_X)

Oxides of nitrogen (NO_X) are generated during fuel combustion by oxidation of chemically bound nitrogen in the fuel (fuel NO_X) and by thermal fixation of nitrogen in the combustion air (thermal NO_X). As flame temperature increases, the amount of thermally generated NO_x increases. Fuel type affects the quantity and type of NO_X generated. Natural gas is very low in fuel bound nitrogen and therefore the dominant mechanism for NO_X formation is thermal NO_X. On combustion turbines, controls for NO_X include Selective Catalytic Reduction (SCR) systems, wet injection or dry low NO_X burner systems. NO_X emissions represent a significant portion of the total emissions generated by this project, and must be minimized using BACT.

Sulfur Dioxide (SO_2)

In a combustion turbine (CT) sulfur dioxide emissions result from the oxidation of fuel bound sulfur. Natural gas has very low levels of sulfur and low sulfur distillate fuel oils have 0.05% sulfur by weight which is also low compared to heavy fuel oils or coal. Add on controls (e.g. wet scrubber or spray dryer absorber systems) are not feasible nor are they needed when low sulfur fuels are fired in combustion turbines. SO_2 emissions are minimized solely by firing low sulfur fuels. As discussed below, sulfur dioxide (and sulfuric acid mist) emissions will be controlled on unit 8 by firing low sulfur fuels.

o ***Products of Incomplete Combustion*** (e.g., PM_{10}, CO, VOC).

Particulate Matter less than 10 micrometers aerometric diameter (PM_{10})

Particulate Matter is generated by various physical and chemical processes during combustion. The particulate matter emitted from this combustion turbine will predominately be less than 10 micrometers in diameter (PM_{10}). Common control devices for stack gases include settling chambers, inertial separators, impingement separators, wet scrubbers, fabric filters, and electrostatic precipitators. Fabric filters (baghouses) and electrostatic precipitator (ESPs) have not been used/needed on combustion turbines mainly due to the low particulate loadings and the increased back pressure. Filtering of the compressor inlet air and good combustion practices constitute the top control option for combustion turbines firing natural gas or low sulfur distillate fuel oil.

The cooling tower will emit PM/PM_{10} as particulate laden water is emitted and evaporated from the tower. A single BACT determination for a cooling tower was identified in the technology review. The BACT in this case specified drift eliminators to control PM/PM_{10} emissions from the cooling tower drift losses.

Carbon Monoxide (CO)

Carbon monoxide (CO) is a pollutant formed by the incomplete combustion (oxidation) of hydrocarbons in the turbine's combustors. The most stringent control technology for CO emissions is the use of an oxidation catalyst. This control option is not considered cost effective as discussed in the next section. The second most stringent control option, combustion controls and good combustion practices is considered BACT for this project.

o *Other Pollutants:*

VOC is also a pollutant formed by the incomplete combustion of fuel. It will be controlled in the same manner as chosen for CO control. Other pollutants (sulfuric acid mist, heavy metals) will be minimized by the exclusive use of clean fuels and the same good combustion practices listed above.

Grouping the pollutants in this manner facilitates the BACT analysis because it enables the equipment available to control the type or group of pollutants emitted and the corresponding energy, economic, and environmental impacts to be examined on a common basis. Although all of the pollutants addressed in the BACT analysis may be subject to a specific emission limiting standard as a result of PSD review, the control of "non-regulated" air pollutants is considered in imposing a more stringent BACT limit on a "regulated" pollutant (i.e., PM_{10}, NO_X, SO_2, etc.), if a reduction in "non-regulated" air pollutants can be directly attributed to the control device selected as BACT for the abatement of the "regulated" pollutants.

BACT POLLUTANT ANALYSIS

NITROGEN OXIDES (NO_X)

A review of EPA BACT/LAER Clearinghouse (BACT Clearinghouse) information indicates that NO_X emissions for most new combustion turbines in attainment areas for ozone and nitrogen dioxides are controlled by either wet injection or dry low NO_X burner technology. The applicant has proposed dry low NO_X burner technology for gas firing and water injection for fuel oil firing. It is compared below with previous determinations documented by the BACT Clearinghouse.

BACT Clearinghouse Determinations

BASIS:	*Limit*	*Technology*	*Facility ID*
LAER- gas fired	*3.5 ppm*	*SCR*	*NY-0044*
LAER- oil fired	*10 ppm*	*SCR*	*NY-0044*
BACT-gas	*9ppm*	*DLNB*	*NY-0047*
BACT-oil	*42ppm*	*water injection*	*NY-0047*

The most stringent or top control option for controlling NO_X emissions from a combustion turbine is the above listed facility (NY-0044) from EPA's RACT/BACT/LAER Clearinghouse Information System (RBLC). The Brooklin Navy Yard Cogeneration Partnership L.P. facility consists of two CTs which are gas/oil fired cogeneration units rated at 240 MW total (160 MW simple cycle) and is located in a nonattainment area for ozone. In addition to SCR add on controls for NO_X emissions, offsets (reductions in NO_X emissions at a nearby facility) were purchased when this unit was permitted.

The city analyzed the feasibility of installing a SCR system for Purdom unit 8. The initial capital cost based on a vendor quote was $1,676,000 based on a design which would meet 3.5 ppm on gas and 10 ppm on fuel oil. The total levelized annual cost was estimated to be $1.5 million per year for 20 years resulting in an incremental cost effectiveness of ***$7,225*** per ton of NO_X removed. This incremental cost effectiveness value is considerably higher than those determined to constitute BACT for other projects in Florida of similar nature. Therefore SCR is deemed too expensive in this application.

Dry low NO_X burner technology is the next most stringent control technology for combustion turbines. The applicant proposes to use GE's DLN-2 controls which is a second generation dry low NO_X burner technology that was first demonstrated in commercial operation in 1996. Emissions from this unit were less than 9 ppm. This application was a Frame 7FA unit with a firing temperature of 2350 F. The first application of a Frame 7FA with a 2400 F firing temperature is scheduled for operation this summer and has a contract for less than 15 ppm. Although not currently demonstrated on the higher firing temperature unit which the city of Tallahassee will purchase, GE has guaranteed an emission rate of less than 9 ppm for Purdom Unit 8. This guarantee is based on operation above the 50% load range since emissions will be higher at low loads. Because the city requested compliance to be demonstrated on a continuous basis (by CEMS), which would involve a limited amount of low load operation when emissions of NO_X will be more than the guaranteed 9 ppm, the Department considered a BACT limit above 9 ppm to compensate for low load operation. An additional consideration in determining BACT for NO_X was the fact that the technology for this dry low NO_X system is still under development, even though it has been demonstrated on a lower firing temperature unit.

The current level of dry low NO_X burner technology which can be reliably be achieved over a long time period appears to be approximately 15 ppm of NO_X at full load firing natural gas. This standard is shown on at least 10 units listed in EPA's RACT/BACT/LAER Clearinghouse. The actual emissions level achieved from dry low NO_X burner technology is dependent on firing temperature and size of the unit. In general the smaller aeroderivative designs have not been able to achieve 15 ppm without having problems with reliability. At least 4 units in Florida have been granted extensions for the time limit to attain 15 ppm. Some of the smaller industrial turbines (frame units) are able to achieve less than 15 ppm today. For instance, Unit 2 at the Kissimmee Utility Authority's Cane Island plant has actual emissions of 6 to 12 ppm at full load on this GE frame 7 EA unit. It is rated at 80 MW and has a firing temperature of about 2025 F.

The most stringent emission limit for a large industrial combustion turbine with dry low NO_X burners is listed in the table above (NY-0047). This unit is located in Holtsville New York at the PASNY Holtsville Combined Cycle Plant. This unit is a Siemens model V84.2 rated at 150 MW simple cycle. It was

permitted in 1992 and has recently demonstrated emissions less than 9ppmvd except during startup (up to 3 hours) /shutdown/malfunction and is required to demonstrate compliance using the NO_X CEMS. The firing temperature and the reliability of this unit are not known as this time.

Dry low NO_X technology is a combustion staging technology which reduces the formation of thermal NO_X by keeping peak flame temperatures as low as possible. But higher firing temperatures enable higher thermal efficiencies because these hotter exhaust gases have more energy to turn the turbine blades. Because thermal NO_X can be higher for the higher firing temperature units (e.g. the unit proposed by the City of Tallahassee) it is more difficult to achieve low NO_X emissions on these units with firing temperatures of 2400 F. Compensating for this is the higher electrical power output for a given heat input, therefore on a (lbs of NO_X emissions) / (KW-hr) basis, the more efficient units may not be at a disadvantage to the lower firing temperature units.

Nitrogen Oxides (NO_X) emissions will be controlled by using GE's DLN-2 which is a second generation dry low NO_X burner technology for the high firing temperature frame units. The firing temperature on the Frame 7FA combustion turbine is 2400 F. When firing natural gas, the combustor operates in a diffusion mode at low loads (less than 50% of capacity) and in a premixed mode at high loads. When firing fuel oil, the combustors are operated in a diffusion mode at all loads and diluent injection (water) is used to control NO_X formation. The DLN-2 control system regulates fuel distribution to the primary, secondary, tertiary and quaternary fuel systems for each of the five combustors. As the combustion turbine is started and operated through the full range, the diffusion, piloted premix, and premix flames are established by changing the distribution of fuel flow in the combustors. Fuel and air flow to the combustors are controlled by GE's Speedtronic control system. GE's Mark IV control system will be used to continuously maintain the NO_X concentration in the exhaust at the specified level throughout the range of loads and ambient conditions. This system receives inputs from a compressor inlet temperature and humidity sensor, load sensors, speed sensors, and ambient pressure sensors.

SULFUR DIOXIDE (SO_2)

SO_2 control processes can be classified into five categories: fuel/material sulfur content limitations, absorption by a solution, adsorption on a solid bed, direct conversion to sulfur, or direct conversion to sulfuric acid.

A review of the BACT determinations for combustion turbines as contained in the BACT Clearinghouse shows that the exclusive use of low sulfur fuels constitutes the top control option for SO_2. The applicant has proposed the exclusive use of natural gas or distillate fuel oil with sulfur content limited to 0.05% by weight. This is considered BACT for this project.

PARTICULATE MATTER (PM/PM_{10})

A technology review indicated that the top control option for PM_{10} is a combination of good combustion practices, fuel quality, and filtration of inlet air. The applicant has proposed this top control option. In

addition, GE indicates that the PM_{10} emissions will not exceed 9 lb/hr (0.0058 lb/mmBtu) for natural gas and 17 lb/hr (0.0096 lb/mmBtu) for low sulfur distillate fuel oil exclusive of background dust loadings. Because these low emission levels are difficult to reliably measure by EPA reference methods over a one hour test period, BACT is not an emission limit but is based on good combustion practices and the exclusive use of clean, low sulfur fuels. The emission control technology for PM_{10} will be good combustion practices and the use of only low sulfur, and low ash content fuels including natural gas and distillate fuel oil containing no more than 0.05% sulfur by weight. The inlet air for the combustion turbine will be filtered to protect the internal components from wear. This filtration may also reduce PM_{10} emissions. Good combustion practices shall be implemented by using computer monitored and controlled systems with appropriate alarms for improper operating parameters. Proper tuning and operation of the dry low NO_X burner system shall be employed to minimize products of incomplete combustion (PM_{10}, VOC, and CO) while meeting the NO_X emission limit.

BACT for the cooling tower is the use of drift eliminators to control PM/PM_{10} emissions from the cooling tower drift losses.

CARBON MONOXIDE(CO)

The most stringent control technology for CO emissions is the use of an oxidation catalyst. The city evaluated the use of an oxidation catalyst designed for 90 percent reduction and having a two year catalyst life. The oxidation catalyst control system is estimated to increase the capital cost of the project by $1.5 million and results in an incremental cost effectiveness of $7,720 per ton of CO reduced. In addition, there will be a reduction in the unit's output by as much as 0.5% or 1.25 MW due to the increased pressure drop across the catalyst. The catalyst may also result in an increase in the oxidation of SO_2 to SO_3 which combines with moisture in the exhaust to form sulfuric acid mist. This impact is not considered significant. The catalyst life is limited and may result in an additional solid waste load to the local landfill if the catalyst can not be rejuvenated by the manufacturer. This control option is not considered cost effective. The second most stringent control option, combustion controls and good combustion practices is considered BACT for this project. Carbon monoxide (CO) will be controlled by proper tuning of the dry low NO_X burner system and good combustion practices. Operation of the dry low NO_X burner system shall be optimized in order to minimize CO emissions while keeping NO_X emissions below the emission limit. Low load operation will result in the highest levels of CO emissions (ppm and lb/hr). The BACT emission limit for CO, 25 ppm for gas and 90 ppm for fuel oil, was set at the level which could be achieved for worst case operation i.e., low load operation (50% load) so that the full range of operation of this unit could be employed. It may be cost effective to conduct annual CO emission tests concurrent with the annual relative accuracy test audits (RATA) which are conducted at 50 % load or higher. According to GE's data, operation at higher loads should result in CO emissions which are at or below 10 ppmvd when firing natural gas.

BACT DETERMINATION RATIONALE:

The BACT emission level chosen for NO_X, 12 ppm and compliance by CEM, is equal to the basis for the 165 MW units (simple cycle rating) at for FPC's Hines Energy Center and is the lowest NO_X limit to date in Florida. In contrast to unit 8, the Hines Energy Center units are not required to demonstrate compliance on a continuous basis but EPA Method 20 is required once per year. Selective Catalytic Reduction (SCR) was not considered cost effective for the city of Tallahassee. SCR is an add on NO_X control technology which requires ammonia injection and the installation of a catalyst bed downstream of the combustion turbine. Because combustion turbines pump large volumes of exhaust gases, the pressure drop introduced by the catalyst causes significant energy losses on these large industrial combustion turbines. Water usage associated with an SCR system would increase by 136,000 gallons per year.

BACT for SO_2 emissions from the combustion turbine was based on the top control option which is the exclusive use of low sulfur distillate fuel oil and pipeline quality natural gas. These fuels are the lowest sulfur fuels available anywhere. This BACT will also insure that ambient SO_2 impacts on the nearby St. Marks Class I area are minimized to the greatest extent possible.

BACT for PM_{10} was determined to be good combustion practices, inlet air filtering, and clean, low ash and low sulfur fuels which is the only feasible PM_{10} control technology for combustion turbines. Particulate matter is generated by various physical and chemical processes during combustion and will be affected by the design and operation of the NO_X controls. The particulate matter emitted from this unit will all be less than 10 micrometers in diameter (PM_{10}). Common control devices for stack gases include settling chambers, inertial separators, impingement separators, wet scrubbers, fabric filters, and electrostatic precipitators. Fabric filters (baghouses) and electrostatic precipitator (ESPs) have not been used on combustion turbines mainly due to the low particulate loadings and the increased back pressure. Filtering of the compressor inlet air and good combustion practices constitute the top control option for combustion turbines firing natural gas or low sulfur distillate fuel oil. The applicant has proposed this top control option. This is considered BACT for this project.

The city evaluated the use of an oxidation catalyst designed for 90 percent reduction of CO and would have a two year guaranteed catalyst life. The oxidation catalyst control system is estimated to increase the capital cost of the project by $1.5 million and results in an incremental cost effectiveness of $7,720 per ton of CO reduced. In addition, there will be a reduction in the unit's output by as much as 0.5% or 1.25 MW due to the increased pressure drop across the catalyst. The catalyst may also result in an increase in the oxidation of SO_2 to SO_3 which combines with moisture in the exhaust to form sulfuric acid mist. This impact is not considered significant. The catalyst life is limited and may result in an additional solid waste load to the local landfill if the catalyst can not be rejuvenated by the manufacturer. This control option is not considered cost effective. The second most stringent control option, combustion controls and good combustion practices is considered BACT for this project. The BACT emission limit for CO, 25 ppm for gas and 90 ppm for fuel oil, was set at the level which could be achieved for worst case operation i.e., low load operation (50% load) so that the full range of operation of this unit could be employed. It may be cost effective to conduct annual CO emission tests concurrent with the annual relative accuracy test audits

(RATA) which are conducted at 50 % load or higher. According to GE's data, operation at higher loads should result in CO emissions which are at or below 10 ppmvd when firing natural gas.

BACT DETERMINATION BY DEP:

Based on the information provided by the applicant and the information searches conducted by the Department, lower emissions limits can be obtained employing the top-down BACT approach for SO_2, NO_X, PM_{10}, and CO.

PM_{10} DETERMINATION

Filtering of the compressor inlet air and good combustion practices while firing low sulfur fuels (natural gas or distillate fuel oil with no more than 0.05% sulfur content).

BACT for the cooling tower is the use of drift eliminators to control PM/PM_{10} emissions from the cooling tower drift.

SO_2 DETERMINATION

The exclusive use of pipeline quality natural gas or distillate fuel oil with sulfur content limited to 0.05% by weight is considered BACT for this project.

NO_x DETERMINATION

An emission limit of 12 ppmvd corrected to 15% oxygen is considered BACT. Compliance shall be demonstrated on a 30 day rolling average basis using the NO_X CEMS system. Emissions during startup (including fuel switching), shutdown and malfunction shall be excluded from the calculation of these 30 day rolling averages provided the operator minimizes the occurrence, magnitude, and duration of excess emissions pursuant to 62-210.700 Florida Administrative Code (version dated 10/15/96). Excess Emissions during these transient periods shall be reported semiannually to the Department pursuant to 40 CFR 60.7. Subject to EPA approval, excess emissions shall be reported based on the NO_X CEMS data in lieu of the water/fuel monitoring specified in 40 CFR 60.334. When monitoring data is not available, substitution for missing data shall be handled as required by Title IV (40 CFR 75) to calculate of the 30 day rolling average.

CO DETERMINATION

Carbon monoxide (CO) will be controlled by proper tuning of the dry low NO_X burner system and good combustion practices. Operation of the dry low NO_X burner system shall be optimized during the initial compliance test and as at other times as needed in order to minimize CO emissions while keeping NO_X emissions below the emission limit. The BACT emission limit for CO, 25 ppm for gas and 90 ppm for fuel oil, was set at the level which could be achieved for worst case operation i.e., low load operation (50%

load) so that the full range of operation of this unit could be employed. It may be cost effective to conduct annual CO emission tests concurrent with the annual relative accuracy test audits (RATA) which are conducted at 50 % load or higher.

OTHER POLLUTANTS

Visible Emissions shall be limited to 10 % opacity as a secondary and ongoing indicator of PM_{10} emissions.

The BACT emission levels established by the Department are as follows:

Table 1-1: Air Pollutant Standards and Terms

POLLUTANT	EMISSION LIMIT
	Natural Gas / Fuel Oil
Particulate Matter (PM_{10})	good combustion of clean, low sulfur fuels
	drift eliminators for the cooling tower
Visible Emissions	10% opacity / 10 % opacity
Carbon Monoxide	25ppm / 90 ppm
NO_X (30 day rolling average)	12 ppm @ 15 % O_2 / 42 ppm @ 15% O_2
SO_2	natural gas / limit of 0.05% sulfur by weight

Table 1-2: Compliance Procedures

POLLUTANT	COMPLIANCE DETERMINED BY
Visible Emissions	Method 9
Carbon Monoxide	Method 10 (can conduct concurrent with RATA testing)
NO_X (30 day rolling average)	NO_X and O_2 CEMS
SO_2	ASTM D 3246 gas / ASTM D 4294 fuel oil or other gas and fuel oil test methods in 40 CFR 60

DRAFT

DETAILS OF THE ANALYSIS MAY BE OBTAINED BY CONTACTING:

Martin Costello, PE II or
A. A. Linero, Administrator, New Source Review Section
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended By:

C. H. Fancy, P.E., Chief
Bureau of Air Regulation

Date:

Approved By:

Howard L. Rhodes, Director
Division of Air Resources Management

Date:

BACT DETERMINATION REQUESTED BY THE CITY OF TALLAHASSEE

TABLE 4-8
SUMMARY OF PROPOSED BEST AVAILABLE CONTROL TECHNOLOGY

Pollutant	Proposed BACT
Carbon Monoxide (CO)	Good Combustion Practices
Particulate Matter (TSP)	Fuel Quality (Clean Pipeline Quality natural gas and No. 2 (0.05% S) diesel fuel oil, Good Combustion Practices, and Combustion Inlet Air Filtration
PM_{10}	Fuel Quality (Clean Pipeline Quality natural gas and No. 2 (0.05% S) diesel fuel oil, Good Combustion Practices, and Combustion Inlet Air Filtration
Sulfur Dioxide (SO_2)	Fuel Quality (Clean Pipeline Quality natural gas and No. 2 (0.05% S) diesel fuel oil.
Sulfuric Acid Mist (H_2SO_4)	Fuel Quality (Clean Pipeline Quality natural gas and No. 2 (0.05% S) diesel fuel oil.
Nitrogen Oxides (NO_x)	Fuel Quality (Clean Pipeline Quality natural gas and No. 2 (0.05% S) diesel fuel oil and Good Combustion Practices including Dry-Low NOx Combustors and Water Injection
Volatile Organic Compounds (Including Benzene)	Good Combustion Practices
Trace Metals Lead (Pb) Beryllium (Be) Mercury (Hg) Arsenic (As)	Fuel Quality (Clean Pipeline Quality natural gas and No. 2 (0.05% S) diesel fuel oil and Combustion Inlet Air Filtration
Total Fluorides (Fl)	Fuel Quality (Clean Pipeline Quality natural gas and No. 2 (0.05% S) diesel fuel oil.
Cooling Tower (TSP & PM_{10})	Drift Eliminators (0.002 percent - Recirculation Water)

Source: Foster Wheeler Environmental, 1997

AGENDA
CITY OF TALLAHASSEE PURDOM UNIT 8
OCTOBER 30, 1997

CRAWFORDVILLE ELEMENTARY SCHOOL
CAFETERIA

7:00 p.m.	Introduction (Howard Rhodes, Director, Division of Air Resources Management)
	Introduce all DEP staff; explain purpose of meeting.
7:05 p.m.	Public Participation Process (Jeff Brown)
	Discuss the legal process and rule provisions for public interaction in the permitting process.
7:15 p.m.	Construction Permit Process (Al Linero)
	Summarize the permitting events that have occurred to date in the Purdom Unit 8 construction permit application process
7:25 p.m.	Air Permit Details (Marty Costello)
	Best Available Control Technology (BACT) required on Purdom Unit 8
7:40 p.m.	Ambient Air Impact/Modeling (Cleve Holladay)
	Summarize Air Impacts and Modeling Results
7:50 p.m.	Public Comments
10:00 p.m.	Adjourn

Note: Department and City of Tallahassee staff will also be available from 4:00 to 7:00 p.m to discuss and explain the project on an informal basis

permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

1. ☐ Addressee's Address
2. ☐ Restricted Delivery
Consult postmaster for fee.

3. Article Addressed to:
Ms. Jennette Curtis, EA
City of Tallahassee
300 S. Adams St.
Tallahassee, Fl
32301

4a. Article Number
P 265 659 353

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
JUN 01 1998

5. Received By: (Print Name)

8. Addressee's Address (Only if requested and fee is paid)

6. S

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Thank you for using Return Receipt Servi

Receipt

P 265 659 353

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail (See reverse)

Sent to	Jennette Curtis
Street & Number	City of Tall.
Post Office, State, & ZIP Code	Tall. Fl
Postage	$
Certified Fee	
Special Delivery Fee	
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Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	5-29-98

1290001
PSD-FI-239

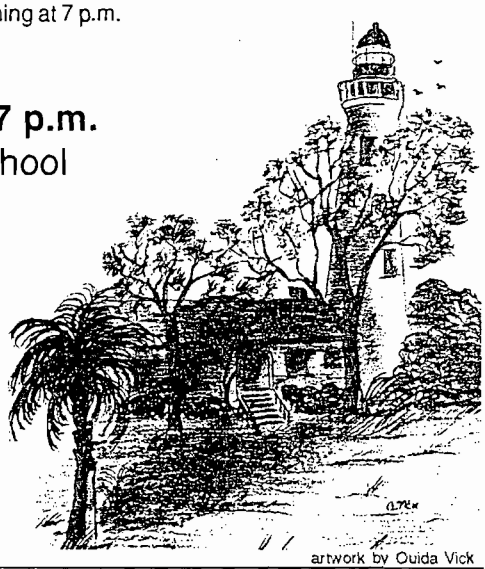
PS Form 3800, April 1995

Open House on the Purdom Unit 8 Project

The city of Tallahassee's Electric Utility and the Florida Department of Environmental Protection (DEP) invite you to attend an open house on the proposed electric generating unit at the existing Purdom Generating Station in St. Marks, Florida. City and DEP personnel will be present to receive comments, discuss the project, and answer questions. DEP will also conduct a public meeting about Unit 8's air quality permit beginning at 7 p.m.

Thursday, October 30, 4 - 7 p.m.
Crawfordville Elementary School
69 Arran Road
Crawfordville, Florida

For more information, call the Electric Utility at 891-5585, e-mail *purdom8@sc.ci.tlh.fl.us* or visit the Purdom Unit 8 site on the World Wide Web at *http://www.state.fl.us/citytlh/purdom8/*. If you have a disability requiring special accommodations, contact the Electric Utility at 891-5585 or Florida Relay Services TDD at 1-800-955-8771.



artwork by Ouida Vick

Our 102nd Year, 43rd Issue Thursday, Oct. 23, 1997
Serving Wakulla County For More Than A Century

Purdom Meeting To Be Held Oct. 30

The Florida Department of Environmental Protection (DEP) and officials from the City of Tallahassee will be in Crawfordville Thursday, Oct. 30 at the request of the Wakulla County Commission.

State and city officials will discuss the Sam O. Purdom Power Plant in St. Marks and the city's plan to expand the operation. Wakulla officials requested the meeting to get more information about the plant. County commissioners are uphappy with City of Tallahassee officials' lack of desire to compensate the county in lieu of taxes.

The meeting will be held at the Crawfordville Elementary School cafeteria from 7 p.m. until 10 p.m.

Howard Rhodes, director of the Division of Air Resources Management, will introduce DEP staff and will be followed by Jeff Brown

Please turn to Page 14

Purdom

Continued from Page 1

discussing the legal process and the rule provisions for public interaction in the permitting process.

At 7:15 p.m., Al Linero will discuss the construction permitting events that have occurred in the Purdom process. Mary Costello will discuss air permit details and the Best Available Control Technology required on Purdom Unit 8.

At 7:40 p.m., Cleve Holliday will summarize air impacts and the modeling of the plant.

Public comment will be taken at 7:50 p.m. and the meeting will adjourn at 10 p.m. DEP and the City of Tallahassee staff will also be available from 4 p.m. until 7 p.m. to discuss and explain the project on an informal basis.

Wakulla County Commissioners have expressed environmental and monetary concerns over the Purdom project but have not filed a lawsuit against the City of Tallahassee.

A lawsuit filed by a citizens group challenging the project was recently dropped after the city announced plans to do a market survey of other possible energy sources. The plant was originally built in 1952.

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CORRECTION

An incorrect date for an open house on the Purdom Unit 8 power project was given in Tuesday's *Democrat*.

The City of Tallahassee and the state Department of Environmental Protection are holding an open house on the project Oct. 30 at Crawfordville Elementary School, 69 Arran Road, Crawfordville.

The open house will begin at 4 p.m. City utilities and DEP personnel will be available to answer questions about the project. From 7 to 8 p.m., DEP will take questions specifically on the project's effect on local air quality.

— *Democrat staff reports*

LEON

First o
kiosks

The fir
computer k
today at the Leon County Courthouse.

The multi-media computers will be on display on the first floor of the courthouse, with a demonstration beginning at 10 a.m.

The interactive kiosk will provide information on Leon County government and services, Florida's state parks, tourist opportunities, and area maps — all at the touch of a finger.

Internet-based, these computers are equipped with the latest technology, allowing easy access and update.

Leon County commissioners Gary Yordon and Rudy Maloy, Wayne Stevens of the Florida Parks and Recreation and Charles Wright of the Leon County Tourist Development Council will be on hand for this morning's opening.

LOTTERY

Tallahassee ticket one of 10 big winners

Ten tickets, including one purchased in Tallahassee, matched all five numbers in

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FICATION

Tallahassee Democrat report did not include the name of Saxton Randall Jones in a list of Tallahassee law-enforcement officers whose names are on the wall of the National Law Enforcement Officers Memorial in Washington, D.C. Jones was a Florida Highway Patrol captain who died May 1, 1995, while cleaning his gun at home. His name was added to the national memorial in May 1997.

CORRECTION

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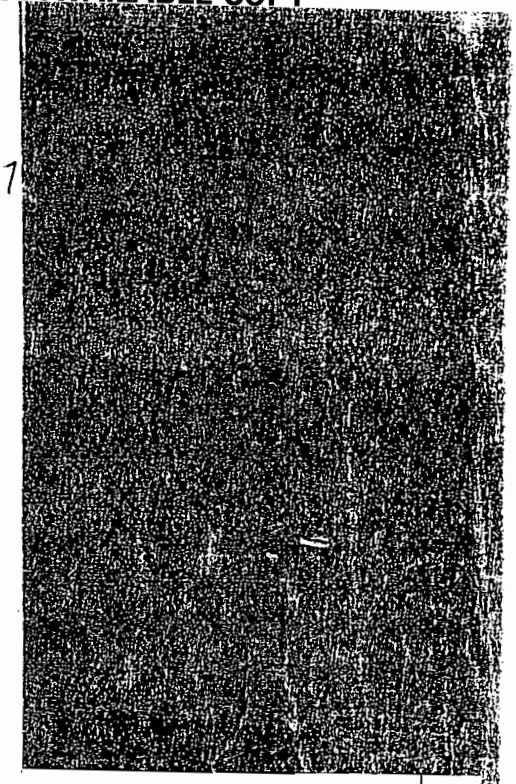
— *Democrat staff reports*



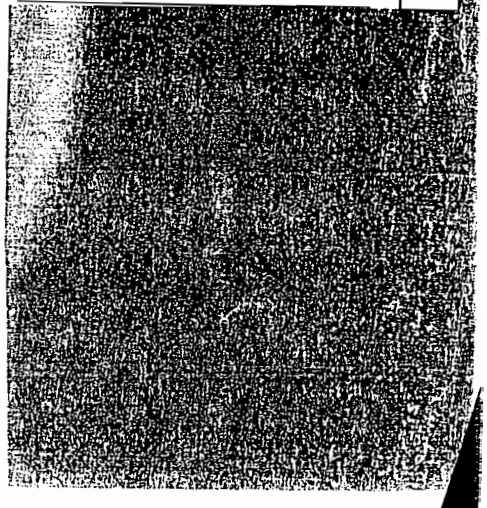
POWER PLANT

Hearing is set on Purdom expansion

At the request of Wakulla County, the city of Tallahassee and the Department of Environmental Protection are having an open house on the Purdom Unit 8 project today at Crawfordville Elementary School, 69 Arran Rd., Crawfordville.

The open house will begin at 4 p.m. City utilities and DEP personnel will be available to answer questions about the project. Between 7 and 8 p.m., DEP will take questions specifically on the project's effect on local air quality.

The proposed generator will be built at the Sam O. Purdom Power Plant in St. Marks. It is a 250-megawatt natural gas burning combined cycle unit. DEP recommended approval of Unit 8 last week.



LEON COUNTY COMMISSION

Scott Maddox

Traffic calculations: Commissioners also delayed a decision on whether to change how the county calculates whether a roadway is congested or not. Several citizens spoke against the proposed change, which proponents say would make it easier for developers to move ahead on their projects. Commissioners wanted the Tallahassee-Leon County planning commission to first weigh

the county's human services budget to supplement the salary for a physician and to pay for medical supplies. The sum is in addition to the $150,000 in state funds the county already funneled to the clinic this year. Commissioner Bruce Host voted against the measure, saying county health officials had not been consulted about the expenditure.

Commission meetings are tele-

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL PROTECTION
NOTICE OF PUBLIC MEETING

The Department of Environmental Protection gives notice that a public meeting will be held regarding the Department's intent to issue a Prevention of Significant Deterioration of Air Quality Permit (PSD Permit) to the City of Tallahassee for construction of a nominal 250 megawatt (MW) natural gas-fired combustion turbine and heat recovery steam generator at the Purdom Generating Station in St. Marks, Wakulla County.

The meeting will be held at 7:00 p.m. on Thursday, October 30, 1997 at Crawfordville Elementary School, 69 Arran Road, Crawfordville. Department and City of Tallahassee staff will also be available from 4:00 to 7:00 p.m. to discuss and explain the project on an informal basis. The Department will then formally receive oral or written comments on issues related to the proposed PSD permit which was publicly noticed on August 7 in the Tallahassee Democrat.

The Public Notice, Intent to Issue, Technical Evaluation and Preliminary Determination, draft Best Available Control Technology (BACT) determination, and the draft PSD permit are available for review at the Office of the Wakulla County Board of County Commissioners. The same materials and the complete application and official file are available for review during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays at the Bureau of Air Regulation, 111 S. Magnolia Drive, Tallahassee. For additional details contact Marty Costello, P.E. or Cleve Holladay, Meteorologist at (850/488-1344).

A formal Site Certification Hearing covering all environmental disciplines will commence on November 18, 1997 in St. Marks and will be noticed separately.

SEPTEMBER 29, 1997

044604

CITY OF TALLAHASSEE

NEWS RELEASE

FOR IMMEDIATE RELEASE:
September 25, 1997

CONTACT:
Melanie Mowry, Dept. of Comm.
891-8533 or
J. Sam Bell, asst. city manager-Utilities
891-8200

30 Purdom

Purdom Unit 8
Open House Scheduled

The city of Tallahassee will be on hand at the Department of Environmental Protection's (DEP) open house on the Purdom Unit 8 project which will take place on **October 30**, at Crawfordville Elementary School. The school's address is *69 Arran Road*. The open house will begin at **4 p.m.** with city electric and DEP personnel on hand to answer questions about the project. Between 7-8 p.m., DEP will take questions and comments specifically on the project's air quality.

The proposed generator will be built at the city's Sam O. Purdom Power Plant in St. Marks. It is a 250 megawatt natural gas burning combined cycle unit, which is considered to be extremely friendly to the environment. Unit 8 will not increase emissions of air pollutants which contribute to acid rain.

"The city of Tallahassee has been working hard over the past year to inform the public about this environmentally responsible project, Purdom Unit 8. We are excited about the opportunity to continue to inform the people of Wakulla and Leon Counties about Unit 8's benefits," said J. Sam Bell, assistant city manager-Utility Services. "We know this project is environmentally sensitive while remaining the least cost alternative for our customers."

Last week, DEP recommended approval of Unit 8. This open house is being held at the request of Wakulla County.

The formal site certification hearing for Purdom Unit 8 will be held November 18-21 at the St. Marks Community Center. The governor and Cabinet are expected to make the final decision on this project in the spring of 1998.

Department of Communications • Public Information Office • City Hall • Tallahassee, FL 32301-1731
Phone: 850/891-8533 ###x: 850/891-8777

CONSTRUCTION AND OPERATION

DATE: November 18, 1997
TIME: 9:00 a.m. (Public comments commencing at 7:00 p.m.)
PLACE: St. Marks Community Center
46 Shell Island Road
St. Marks, Florida

1. Application No. 97-35 for certification to authorize construction and operation of an electrical power plant in the City of St. Marks, Wakulla County, Florida, is now pending before the State of Florida, Department of Environmental Protection ("Department"), pursuant to the Florida Electrical Power Plant Siting Act, Part II, Chapter 403, Florida Statutes. The application was filed by the City of Tallahassee on March 7, 1997.

2. The City of Tallahassee proposes to construct and operate a new 250 (nominal) megawatt primarily natural gas-fired (with low sulfur oil as the secondary fuel) combined cycle generating unit, to be known as Purdom Unit 8, at its existing Sam O. Purdom Generating Station site in the City of St. Marks, Wakulla County, Florida. The existing Sam O. Purdom Generating Station site is located on 63 acres within the City of St. Marks approximately two miles south of U.S. Highway 98. It is bounded on the west by State Road 363 and on the east by the St. Marks River. Certification also is requested for the existing Sam O. Purdom Generating Station site, existing natural gas and oil-fired generating units at that site, supporting onsite equipment and facilities, offsite reconductoring of two existing transmission lines within Wakulla and Leon Counties, Florida, and a new 0.9-mile reclaimed water pipeline to be constructed from the City of St. Marks Wastewater Treatment Facility to the Purdom Station. Purdom Unit 8 will consist of a combustion turbine/generator, a heat recovery steam generator, and a reheat steam turbine/generator. Other principal features of the new facility will include a mechanical draft cooling tower, a zero discharge wastewater treatment facility, a 200-foot stack, a stormwater retention pond, relocation and upgrading of onsite natural gas facilities, and transfer of the connection of the north end of the existing natural gas lateral pipeline from an existing 30-inch main pipeline to an existing 36-inch main pipeline in the same vicinity.

3. Pursuant to Section 403.508, Florida Statutes, the certification hearing will be held by the Division of Administrative Hearings beginning at 9:00 a.m. on November 18, 1997, at the St. Marks Community Center, 46 Shell Island Road, St. Marks, Florida. This hearing is being held in order to take written and oral testimony and other evidence on the effects of the proposed project and any other matter appropriate to the consideration of the site. Need for the facility has been predetermined by the Public Service Commission at a separate hearing. Pursuant to Sections 403.5055(1), 403.507(3), and 403.508(6), Florida Statutes, any petition for an administrative hearing on a permit to be issued by the Department pursuant to a federally-delegated or approved program will be consolidated with the certification hearing. Members of the public may offer comments on the project on Tuesday, November 18, 1997, commencing at 7:00 p.m.

4. The Department and other state, regional and local agencies have evaluated and prepared reports on the project. The Department has prepared a report on the project, pursuant to Section 403.507(4), Florida Statutes. That report is available for public review at the locations listed below. Certification of the project would allow construction and operation of a new source of air pollution which would consume an increment of air quality resources. The Department's review has resulted in an assessment of the prevention of significant deterioration increment and ambient air quality impacts and a determination of the Best Available Control Technology necessary to control the emission of air pollutants from Purdom Unit 8. Certification of the project by the Governor and Cabinet, sitting as the Power Plant Siting Board, would allow construction and operation subject to the conditions of certification set forth in the final certification order. The application for certification which more specifically depicts the facilities is available for public inspection at the addresses listed below:

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
Office of Siting Coordination
2720 Blair Stone Road
Suite H
Tallahassee, Florida 32399
(904) 487-0472

CITY OF TALLAHASSEE
Office of the Treasurer Clerk
Second Floor - City Hall
300 South Adams Street
Tallahassee, Florida 32301

LEROY COLLINS LEON
COUNTY PUBLIC LIBRARY
Reference Desk
200 West Park Avenue
Tallahassee, Florida 32301

CITY OF ST. MARKS
City Hall
788 Port Leon Drive
St. Marks, Florida 32355

WAKULLA COUNTY
PUBLIC LIBRARY
Reference Section
4330 Crawfordville Highway
Crawfordville, Florida 32326

The business address of the applicant for the project is:

CITY OF TALLAHASSEE
c/o Jennette Curtis, Environmental Administrator
Utility Services, Third Floor, City Hall
300 South Adams Street
Tallahassee, Florida 32301
(850) 891-8850
Fax No. (850) 891-8277

5. Pursuant to Section 403.509(4), Florida Statutes, the City of Tallahassee intends for the proposed reclaimed water pipeline to use or cross over works of the following agencies: City of St. Marks, Florida (wastewater treatment plant site and street rights-of-way); and State of Florida, Department of Transportation (Tallahassee-St. Marks Historic Railroad State Trail and State Road 363). The administrative law judge will receive comments and testimony from the parties, the public and the affected agencies at the certification hearing.

6. Pursuant to Section 403.508(4), Florida Statutes:

(a) Parties to the proceeding shall include: the City of Tallahassee; the Public Service Commission; the Department of Community Affairs; the Game and Fresh Water Fish Commission; the Northwest Florida Water Management District; the Department of Environmental Protection; the Apalachee Regional Planning Council; the local government; and those who timely intervene in the proceeding.

(b) Any party listed in paragraph (a) other than the Department or the applicant may waive its right to participate in these proceedings. If such listed party fails to file a notice of its intent to be a party on or before the 90th day prior to the certification hearing, such party shall be deemed to have waived its right to be a party.

(c) Upon the filing with the administrative law judge of a notice of intent to be a party by June 10, 1997, the following shall also be parties to the proceedings:

1. Any agency not listed in paragraph (a) as to matters within its jurisdiction.

2. Any domestic non-profit corporation or association formed in whole or in part to promote conservation or natural beauty; to protect the environment, personal health, or other biological values; to preserve historical sites; to promote consumer interests; to represent labor, commercial, or industrial groups; or to promote comprehensive planning or orderly development in the area in which the proposed electrical power plant is to be located.

(d) Notwithstanding paragraph (e), failure of an agency described in subparagraph (c)1. to file a notice of intent to be a party within the time provided herein shall constitute a waiver of the right of the agency to participate as a party in the proceeding.

(e) Other parties may include any person, including those persons enumerated in paragraph (c) who have failed to timely file a notice of intent to be a party, whose substantial interests are being affected and being determined by the proceeding and who timely file a motion to intervene pursuant to Chapter 120, Florida Statutes, and applicable rules. Intervention pursuant to this paragraph may be granted at the discretion of the designated administrative law judge and upon such conditions as he may prescribe any time prior to 30 days before the commencement of the certification hearing.

(f) Any agency, including those whose properties or works are being affected pursuant to Section 403.509(4), Florida Statutes, shall be made a party upon the request of the Department or the applicant.

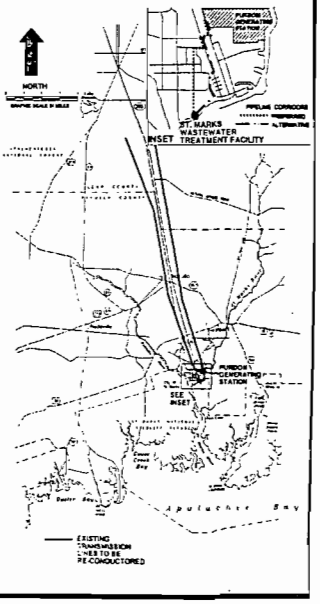
7. When appropriate, any person may be given an opportunity to present oral or written communications to the designated administrative law judge. If the designated administrative law judge proposes to consider such communications, then all parties shall be given an opportunity to cross-examine or challenge or rebut such communications. Written comments by non-parties may be sent to the designated administrative law judge and must be furnished to all parties on or before November 13, 1997. Any prefiled written testimony of the parties must be available for public inspection at the locations listed in paragraph 4, above, and furnished to all parties on or before November 13, 1997.

8. Notices, comments or petitions made prior to the hearing should be made in writing to:

Honorable P. Michael Ruff
Administrative Law Judge
Division of Administrative Hearings
The DeSoto Building
1230 Apalachee Parkway
Tallahassee, Florida 32399-3060
Fax No. (850) 921-6847

Copies of such submittals should be forwarded by mail or telephone facsimile to existing parties, including the Department of Environmental Protection and the City of Tallahassee. The Division of Administrative Hearings case number is 97-001350EPP.

9. Those wishing to intervene in these proceedings, unless appearing on their own behalf, must be represented by an attorney or other person who can be determined to be qualified to appear in administrative hearings pursuant to Chapter 120, Florida Statutes, and applicable rules.



L6/S2/6

CCAIR

CITY OF TALLAHASSEE

CITY HALL
300 S. ADAMS ST.
TALLAHASSEE, FL
32301-1731
904/891-0010
TDD 1-800/955-8771

SCOTT MADDOX
Mayor
STEVE MEISBURG
Mayor Pro Tem

JOHN PAUL BAILEY
Commissioner
DEBBIE LIGHTSEY
Commissioner
RON WEAVER
Commissioner

ANITA R. FAVORS
City Manager
ROBERT B. INZER
City Treasurer-Clerk

JAMES R. ENGLISH
City Attorney
RICARDO FERNANDEZ
City Auditor

CERTIFIED MAIL NO. P483 230 315

December 15, 1997

Mr. Howard Rhodes, Director
Division of Air Resources Management
Florida Department of Environmental Protection
2600 Blair Stone Road, Mail Stop 5500
Tallahassee, Florida 32399-2400

Re: Initial Performance Test Report and Professional Engineer Conformity Certification
Auxiliary Boiler - Construction Permit No. 1290001-002-AC
Sam O. Purdom Generating Station

Dear Mr. Rhodes:

This report is submitted to the Department presenting results of initial performance testing of an auxiliary boiler located at the Sam O. Purdom Generating Station located at 667 Port Leon Drive, St. Marks, Wakulla County, Florida. The results show compliance with the permitted visible emissions standard of 20 percent opacity. In addition, in accordance with Specific Condition No. 12 of the above-referenced permit, the emission unit has been inspected for conformity by a Professional Engineer, registered in the State of Florida. Attached is a statement, sealed by the engineer, certifying the conformity.

If you have any questions regarding the performance testing results or the conformity certification, please feel free to contact either myself at (850) 891-5534 or Jennette Curtis at (850) 891-8850.

Yours Truly,

Robert McGarrah, Superintendent
Electric Production Division
Responsible Official

cc: Ben Cowart, COT
Gordon King, COT
Jennette Curtis, COT
Karl Bauer, COT
Hal Avery, COT

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EPA

VISIBLE EMISSION OBSERVATION FORM 1

Form Number	PABO1	Page	1	Of	2
Continued on VEO Form Number	PABO2				

Method Used (Circle One): (Method 9) 203A 203B Other: _____

Company Name: City of Tallahassee		
Facility Name: Sam O. Purdom Generating Station		
Street Address: 667 Port Leon Drive		
City: St. Marks	State: FL	Zip: 32355

Process: Aux. Steam Boiler	Unit #: 12	Operating Mode: 15.97 mcfh
Control Equipment: NONE		Operating Mode: N/A

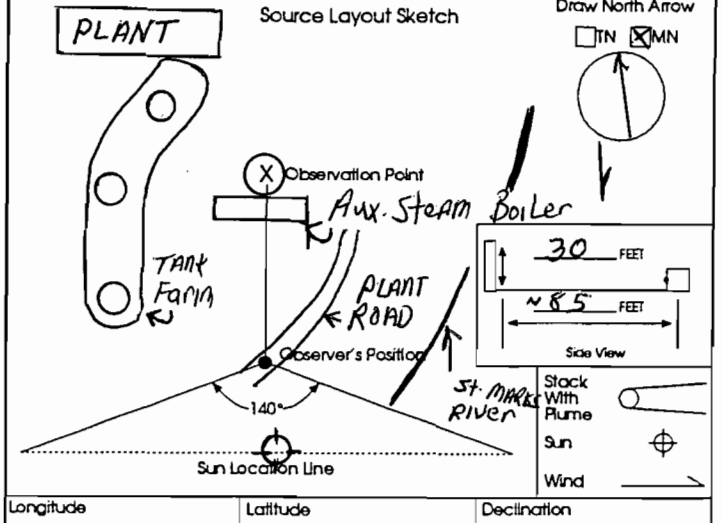
Describe Emission Point: 24" dia. Metal Stack

Height of Emiss. Pt. Start 30' End 30'	Height of Emiss. Pt. Rel. to Observer Start 25' End 25'
Distance to Emiss. Pt. Start ~85' End ~85'	Direction to Emiss. Pt. (Degrees) Start ~21° End ✓
Vertical Angle to Obs. Pt. Start 17° End 17°	Direction to Obs. Pt. (Degrees) Start ~291°56' End ✓
Distance and Direction to Observation Point from Emission Point Start 1'; 0°	End 1'; 0°

Describe Emissions Start NONE	End N/A
Emission Color Start N/A End N/A	Water Droplet Plume Attached ☐ Detached ☐ None ☒

Describe Plume Background Start SKY		End SKY	
Background Color Start BLUE End BLUE		Sky Conditions Start Clear End Clear	
Wind Speed Start 1-3 End 3-5		Wind Direction Start SE End SE	
Ambient Temp. Start 67 End 68	Wet Bulb Temp. 57	RH Percent 52	

Source Layout Sketch



Longitude	Latitude	Declination

Additional Information: Unit Operating ON 100% Natural GAS
Permit No. 1290001-002-AC

Observation Date	Time Zone	Start Time	End Time
11-15-97	Eastern	12:20 PM	1:19 PM

Sec / Min	0	15	30	45	Comments
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
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27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

Observer's Name (Print): Hal AVERY	
Observer's Signature: Hal Avery	Date: 11-15-97
Organization: City of Tallahassee	
Certified By: ETA	Date: 5-97

VISIBLE EMISSIONS EVALUATOR

This is to certify that

Hal Avery

met the specifications of Federal Reference Method 9 and qualified as a visible emissions evaluator. Maximum deviation on white and black smoke did not exceed 7.5% opacity and no single error exceeding 15% opacity was incurred during the certification test conducted by Eastern Technical Associates of Raleigh, North Carolina. This certificate is valid for six months from date of issue.

President

259390
Certificate Number

Vice President

Pensacola, Florida
Location

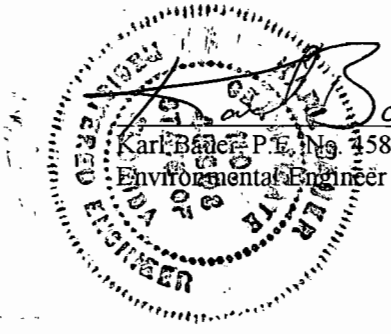
David B. Savage, Jr.
Program Manager

May 14, 1997
Date of Issue

LITHO. IN U.S.A.

PROFESSIONAL ENGINEER CERTIFICATION STATEMENT

I, the undersigned, hereby certify, that the auxiliary boiler (Emission Unit No. 11) at the Sam O. Purdom Generating Station (Facility ID No. 1290001) has been constructed in substantial accordance with the information submitted in the corresponding application for air construction permit and with all provisions contained in Permit No. 1290001-002-AC and when properly 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.



Karl Bauer, P.E. No. 45808
Environmental Engineer

DECEMBER 12, 1997
Date

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW
ATLANTA, GEORGIA 30303-8909

DEC 0 1 1997

RECEIVED
DEC 12 1997
BUREAU OF
AIR REGULATION

4APT-ARB

Mr. Martin Costello
Air Resources Management Division
Florida Department of Environmental
Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SUBJ: Comments Regarding Revisions to Monitoring Requirements in the Prevention of Significant Deterioration (PSD) Permit for Unit 8 at the City of Tallahassee Purdom Generating Station

Dear Mr. Costello:

This letter is in response to your October 23 request for comments regarding changes that your agency made in the draft PSD permit for the referenced unit. These changes were made in order to address concerns that an October 14, 1997, Region 4 letter raised regarding monitoring provisions in an earlier draft of the permit. After reviewing the October 23, 1997, draft permit, we have determined that our earlier concerns have been adequately resolved. Details regarding the issues addressed in our October 14 letter and their resolution are provided in this letter.

Alternative NO_x Monitoring

One concern that we raised regarding the original draft permit for Purdom Unit 8 involved the excess emission monitoring method for NO_x. The turbine in question is subject to 40 C.F.R. Part 60, Subpart GG (Standards of Performance for Stationary Gas Turbines), and Subpart GG requires that the amount of water injected to control NO_x be monitored and used as an indicator of excess emissions. As an alternative to these procedures, the City of Tallahassee will be using a NO_x continuous emission monitoring system (CEMS) to identify periods of excess emissions. The concern our previous letter expressed regarding this approach is that the original permit did not require that CEMS results be corrected to ISO standard day conditions (288 degrees Kelvin, 60 percent relative humidity, and 101.3 kilopascals) so that they could be directly compared to the format of the standard in Subpart GG.

In order to address our concerns regarding the reporting format for CEMS results, Condition F1 in the October 23, 1997, draft permit was revised to require that the City of Tallahassee correct results to ISO standard conditions upon request by the Florida Department of Environmental Protection (DEP). Since the NO_x emission rates imposed under the PSD permit (12 ppm for operation on gas and 42 ppm for operation on oil, 30-day rolling average) are more stringent than the corresponding limit in Subpart GG (150 ppm, 1-hour average), we have concluded that this change adequately addresses our previous concerns regarding the reporting format specified for NO_x CEMS results in the original draft permit. Because the PSD permit limits are more stringent than the Subpart GG limit, it is not necessary to convert the CEMS results to ISO standard conditions to verify compliance with the Subpart GG limit if compliance with the PSD limits is maintained. The revision incorporated in Condition F1 in the October 23, 1997, draft permit, however, will make it possible for the DEP to obtain the information necessary to determine compliance with Subpart GG limit in the event that the permit limits are ever exceeded.

Custom Fuel Monitoring Schedule

The other concern that we expressed regarding the original draft permit involved a proposed custom fuel monitoring schedule for determining the sulfur content of the natural gas burned in the turbine. On August 14, 1987, the U.S. Environmental Protection Agency (EPA) issued a policy regarding custom fuel monitoring schedules for determining the sulfur content of pipeline quality natural gas, and under this policy, companies can obtain approval to monitor the sulfur content of pipeline quality natural gas on a semiannual basis. In order to obtain this approval, the sulfur content of the gas must first be monitored twice a month for six months. If this monitoring verifies compliance and shows little variability in the sulfur content of the gas, the sulfur monitoring frequency can be reduced to a quarterly basis. If six quarters of monitoring data verify compliance and show little variability in the sulfur content of the gas, approval to monitor the sulfur content of the gas on a semiannual basis can be granted.

Our primary concern regarding the custom fuel monitoring schedule in the original draft permit was that it did not require conducting bi-monthly and quarterly monitoring as a prerequisite to approval of semiannual monitoring. Since the custom fuel monitoring schedule incorporated in the October 23, 1997, draft of the permit is identical to that outlined in the guidance issued by EPA in 1987, our previous concerns regarding the custom fuel monitoring provisions in the permit for Purdom Unit 8 have been adequately resolved.

If you have any comments regarding the determinations provided in this letter, please contact Mr. David McNeal of my staff at 404/562-9102.

Sincerely yours,

David H. McNeal
for

Brian L. Beals
Chief
Preconstruction/HAP Section
Air and Radiation Technology
Branch

cc: J. Curtis, C & T