

Florida Department of
Environmental Protection

Memorandum

TO: Howard L. Rhodes
THRU: ~~Clair Fancy~~ *copy for CHF*
Al Linero *copy*
FROM: Mike Halpin *MH*
DATE: July 26, 2000
SUBJECT: Gulf Power Lansing Smith New Combined Cycle Unit 3 PSD Permit

Attached for approval and signature is an air construction permit for the subject (new) facility. The Public Notice requirements have been met on November 10, 1999 by publishing in the Panama City News Herald.

Comments were received by the US EPA as well as the applicant and are addressed within the Final Determination.

I recommend your approval and signature.

This project is being permitted through the Power Plant Site Certification process.

Attachments

/mph

7/20 MIKE -
THIS LOOKS GOOD
AL CAN SIGN AFTER
YOU GET FINAL ORDER
& THEN HOWARD CAN SIGN
BACT'S PERMIT.
Clair

(CONTRACT, TRANSMITTER & BACT)



Gulf Power generating unit gets final go-ahead

Tuesday, July 25, 2000

Contact: John Hutchinson, (850) 444-6750

jlhutchi@southernco.com

Florida Governor Jeb Bush and his Cabinet today gave final approval for Gulf Power Company to construct its largest generator ever to meet the growing electricity needs of Northwest Florida.

The 574-megawatt unit will be built at the company's Plant Lansing Smith in Bay County, but will provide electricity for customers from Pensacola to Panama City. Construction will begin July 31 with the unit expected on-line by June 2002.

The gas-fired, "combined-cycle" unit is actually three generators in one and will more than double the output of the two existing generators at Plant Smith. The project will create more than 1,500 construction jobs and about 30 high-skilled, permanent jobs to operate the generator.

"The good customer growth in our area and the tremendous demand we have had on our system this summer demonstrate the need for this new unit," John Hutchinson, Gulf Power spokesman, said. "Our customers have set records for the amount of electricity they bought three times this month. And we've added more than 43,000 customers since 1995. And new customers need electricity."

In addition to adding a new low-cost, reliable source of electricity, Hutchinson said the new unit will also be an economic boost to the Bay County area. Besides the new jobs, the project cost is estimated at about \$250 million.

"Having this unit in Bay County should help economic development as well," Hutchinson said. "Gulf Power's rates are the lowest among Florida's investor-owned utilities and among the lowest in the country. And while other utilities have had trouble meeting their customers' needs, we have planned wisely for the future and can provide the electricity at lower costs. That's a big attraction to a prospective employer -- adequate energy supplies at low costs."

Gulf Power serves more than 365,000 customers in Northwest Florida and is part of Southern Company, which also owns Alabama Power, Georgia Power, Mississippi Power and Savannah Electric. Southern Company is the largest generator of electricity in the United States.

#####

Tuesday 7/25
(1:20 PM)

FIVE -

Buck told me

that this was

OK'd by the SIGNING BOARD

AS PROPOSED; so, it

SHOULD BE GOOD TO SIGN.

Mike



Environmental Consulting & Technology, Inc.

RECEIVED

JUL 10 2000

July 7, 2000

BUREAU OF AIR REGULATION

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

Re: DEP File No. PA 99-40 (PSD-FL-269)
Gulf Power Smith Unit 3

Dear Mr. Linero:

In response to your recent request, please find enclosed revised estimates of hazardous air pollutant (HAP) emission rates for the Gulf Power Smith Unit 3 project.

The enclosed estimates were developed based on the April 2000 revisions to AP-42, Section 3.1 (Stationary Gas Turbines). The revised AP-42 factors are based primarily on stack test results for small (< 40 MW) combustion turbines (CTs) and show considerable variability. The revised AP-42 HAP emission factors were analyzed to develop emission factors which are considered to better represent HAP emissions from large "F" class CTs such as those proposed for Smith Unit 3. A discussion of the emission factor analysis, and the estimated HAP emission rates for Smith Unit 3, are provided in Attachment I to this letter.

The analysis of HAP emission rates for Smith Unit 3 demonstrates that the proposed modification project will not qualify as a major HAP source and therefore is not subject to case-by-case MACT review under 112(g) of the 1990 Clean Air Act Amendments.

Please contact me at (352) 332-6230, Ext. 351 if there are any questions regarding the enclosed material.

Sincerely,

Thomas W. Davis, P.E.
Principal Engineer

Attachment

cc: Mr. Dwain Waters
Gulf Power

Ms. Angela Morrison
Hopping, Green, Sams & Smith

M. Halpin
C. Halladay
NWD
EDA
NPS
B. Omm

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ATTACHMENT I

NATURAL GAS-FIRING HAZARDOUS AIR POLLUTANT EMISSION FACTORS

Section 3.1 of AP-42, Stationary Gas Turbines, was revised in April 2000 to include natural gas-fired combustion turbine (CT) emission factors for eleven hazardous air pollutants (HAPs), including formaldehyde and toluene. The April 2000 AP-42 formaldehyde and toluene emission factors for natural gas-fired CTs are 7.1×10^{-4} and 1.3×10^{-4} lb/10⁶ Btu, respectively.

As stated in the introduction to AP-42, the emission factors in AP-42 are “simply averages of all available data of acceptable quality, and are generally assumed to be representative of long-term averages for all facilities in the source category (i.e., a population average)”. Accordingly, the emission factors in AP-42 are generally appropriate for use in making areawide emission inventories. Because the AP-42 emission factors represent a source category population average, the factors do not necessarily reflect the emission rates for any particular member of that source category population.

In the case of the formaldehyde emission factor for natural gas-fired CTs, the April 2000 AP-42 emission factor is based on the average of 22 CT source tests. The CTs in the 22 source test database include small CTs (9 of the 22 CTs tested, or 40% of all units tested, had a rating of less than 15 MW), aircraft-derivative CTs (5 of the 22 CTs, or 23% of all units tested, were GE LM series aircraft-derivative CTs), and larger frame-type CTs. The largest CT of the 22 units tested was a GE Frame 7E unit with a rating of 87.8 MW. The average rating of the 22 CTs tested is 30.2 MW. The majority of the CTs tested were equipped with wet (water or steam) injection to control NO_x emissions.

The AP-42 CT test database shows considerable variability in formaldehyde emission factors. The maximum formaldehyde emission factor (5.61×10^{-3} lb/10⁶ Btu) is 2,538

times higher than the minimum factor (2.21×10^{-6} lb/10⁶ Btu). Six of the 22 test series include runs for which there were no detectable emissions of formaldehyde.

The CTs proposed for Smith Unit 3 are GE Frame 7FA units each rated at a nominal 170 MW and will be fired exclusively with natural gas. Dry low-NO_x (DLN) combustor technology will be employed to control NO_x emissions. Accordingly, the average April 2000 AP-42 formaldehyde emission factor for natural gas-fired CTs is not considered applicable to the GE 7FA CT. The GE 7FA CT is 5.6 times larger (i.e., has a rating of 170 vs. 30.6 MW) than the CTs included in the AP-42 CT database and is equipped with DLN control technology.

Evaluation of the AP-42 CT formaldehyde source test database shows that six of the units tested were large, GE frame-type CTs. Emission factors for these six CTs were averaged to develop a formaldehyde emission factor which is considered to be more representative of the GE Frame 7FA units. This average factor for GE frame-type CTs, 1.14×10^{-4} lb/10⁶ Btu, was used to estimate emissions of formaldehyde for Smith Unit 3.

A similar analysis was conducted with respect to the April 2000 AP-42 toluene emission factor for natural gas-fired CTs. The April 2000 AP-42 toluene emission factor is based on the average of 7 CT source tests. The CTs in the 7 source test database include small CTs (3 of the 7 CTs tested, or 43% of all units tested, had a rating of less than 15 MW), aircraft-derivative CTs (2 of the 7 CTs, or 29% of all units tested, were GE LM series aircraft-derivative CTs), and frame-type CTs. The largest CT of the 7 units tested was a GE Frame 7 unit with a rating of 75 MW. The average rating of the 7 CTs tested is 26.6 MW. The majority of the CTs tested were equipped with wet (water or steam) injection to control NO_x emissions.

The AP-42 CT test database also shows variability in toluene emission factors. The maximum toluene emission factor (7.10×10^{-4} lb/10⁶ Btu) is 67.6 times higher than the minimum factor (1.05×10^{-5} lb/10⁶ Btu). Two of the 7 test series include runs for which there were no detectable emissions of toluene.

Evaluation of the AP-42 CT toluene source test database shows that two of the units tested were large, GE frame-type CTs. Emission factors for these two CTs were averaged to develop a toluene emission factor which is considered to be more representative of the GE Frame 7FA units. This average factor for GE frame-type CTs, 6.80×10^{-5} lb/10⁶ Btu, was used to estimate emissions of toluene for Smith Unit 3.

Analyses of the natural gas-fired CT AP-42 emission factors for the remaining listed HAPs were conducted using the methodology described above for formaldehyde and toluene. The results of these analyses are summarized in Table 1. Estimated Smith Unit 3 HAP emission rates using these factors are provided in Table 2.

**Table 1. Analysis of AP-42 Emission Factors
 Hazardous Air Pollutants (HAPs)
 Section 3.1, Stationary Gas Turbines, April 2000
 Natural Gas-Fired Turbines > 80% Load**

HAP	No. of Tests	No. of Test Runs	% of Runs Having Having No Detectable Emissions	Emission Factor Range		No. of Tests On Frame CTs > 40 MW	Average Emission Factor for CTs > 40 MW (lb/MMBtu)	AP-42 Emission Factor (lb/MMBtu)
				Minimum (lb/MMBtu)	Maximum (lb/MMBtu)			
1,3-Butadiene	2	6	100.0	6.05E-08	7.97E-07	1	6.05E-08	4.30E-07
Acetaldehyde	8	24	20.8	9.90E-06	8.60E-05	2	4.31E-05	4.00E-05
Acrolein	6	18	72.2	2.98E-06	1.20E-05	2	5.60E-06	6.40E-06
Benzene	17	51	31.4	6.87E-07	5.76E-05	2	1.83E-05	1.20E-05
Ethylbenzene	4	12	75.0	4.20E-06	7.82E-05	2	2.28E-05	3.20E-05
Formaldehyde	22	64	12.5	2.21E-06	5.61E-03	6	1.14E-04	7.10E-04
Napthalene	4	12	25.0	5.03E-07	3.31E-06	2	6.33E-07	1.30E-06
PAH	4	12	0.0	1.44E-07	7.32E-06	2	4.71E-07	2.20E-06
Propylene Oxide	1	3	100.0	2.86E-05	2.86E-05	1	2.86E-05	2.90E-05
Toluene	7	21	14.3	1.05E-05	7.10E-04	2	6.80E-05	1.30E-04
Xylenes	6	18	27.8	1.01E-05	1.20E-04	2	6.51E-05	6.40E-05

Sources: ECT, 2000.
 EPA, 2000.

**Table 2. Gulf Power Plant Smith Unit 3
CTG Hazardous Air Pollutant Emission Rates**

Parameter	Units	Case		
		Case 1 - 0 °F	Case 5 - 65 °F	Case 10 - 95 °F
Maximum Hourly Fuel Flow:	10 ⁶ Btu/hr (HHV)	1,937.1	1,777.6	1,774.5
Maximum Annual Hours:	hrs/yr	N/A	7,760	1,000

Pollutant	Emission Factor ^(a) (lb/10 ⁶ Btu)	Emission Rates (Per CTG)				CTG 1,2 Annual (ton/yr)
		Case 1 - 0 °F	Case 5 - 65 °F	Case 10 - 95 °F	Annual	
		(lb/hr)	(lb/hr)	(lb/hr)	(ton/yr)	
1,3-Butadiene	6.05E-08	0.00012	0.00011	0.00011	0.00047	0.00094
Acetaldehyde	4.31E-05	0.083	0.077	0.076	0.336	0.671
Acrolein	5.60E-06	0.011	0.010	0.010	0.044	0.087
Arsenic	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	1.83E-05	0.035	0.033	0.032	0.142	0.285
Beryllium	N/A	N/A	N/A	N/A	N/A	N/A
Cadmium	N/A	N/A	N/A	N/A	N/A	N/A
Chromium	N/A	N/A	N/A	N/A	N/A	N/A
Ethylbenzene	2.28E-05	0.044	0.041	0.040	0.177	0.355
Formaldehyde	1.14E-04	0.221	0.203	0.202	0.887	1.775
Lead	N/A	N/A	N/A	N/A	N/A	N/A
Manganese	N/A	N/A	N/A	N/A	N/A	N/A
Mercury	N/A	N/A	N/A	N/A	N/A	N/A
Naphthalene	6.33E-07	0.0012	0.0011	0.0011	0.0049	0.010
Nickel	N/A	N/A	N/A	N/A	N/A	N/A
Polycyclic Aromatic Hydrocarbons	4.71E-07	0.00091	0.00084	0.00084	0.0037	0.0073
Propylene Oxide	2.86E-05	0.055	0.051	0.051	0.223	0.445
Selenium	N/A	N/A	N/A	N/A	N/A	N/A
Toluene	6.80E-05	0.132	0.121	0.121	0.529	1.059
Xylene	6.51E-05	0.126	0.116	0.116	0.507	1.014
Maximum Individual HAP		0.221	0.203	0.202	0.887	1.775
Total HAPs		0.710	0.652	0.651	2.854	5.709

^(a) - Frame Type CTs >40 MW from EPA AP-42, Section 3.1 Database, April 2000.

Source: ECT, 2000.

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Department of Environmental Protection

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Department of Environmental Protection
 Division of Air Resources Management
 Bureau of Air Regulation, NSRS
 2600 Blair Stone Road, MS 5505
 Tallahassee, Florida 32399-2400

JUN 26 ENT'D

OK to pay
[Signature]

Thank you,
 Kim Tober

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HOPPING GREEN SAMS & SMITH

PROFESSIONAL ASSOCIATION

ATTORNEYS AND COUNSELORS

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OF COUNSEL
ELIZABETH C. BOWMAN

MEMORANDUM

TO: Buck Oven
Scott Goorland

FROM: Doug Roberts

RE: Gulf Power Lansing Smith Unit 3
Comments on Agency Report and Conditions

DATE: March 23, 2000

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MAR 24 2000

BUREAU OF AIR REGULATION

Enclosed are Gulf Power's comments on the FDEP Staff Analysis Report and proposed Conditions of Certification for the Gulf Power Smith Unit 3. Most of the comments are minor and represent editorial or typographical corrections. Several items are substantive and discussed here.

Agency Report

- At page 13 of the agency report, the deleted sentence beginning "Boiler blowdown from..." reflects the recent change to divert boiler blowdown to the ash ponds and avoid this direct discharge. A similar change is shown on page 28. This has been discussed and approved by the Department's permitting staff.
- At page 17 of the agency report, the change from "253 TPY" to "184 TPY" conforms to the PM emissions from the generating unit and backs out the PM emissions from the cooling tower which are addressed separately in the following sentence of the report.
- On the same page, the change from "0.07 pounds" to "0.096 pounds" conforms to the number used in Gulf's permit application.
- On page 18, the cells of the table force the numbers out of line.
- On page 22, for purposes of clarity, we are suggesting inclusion of the three footnotes for the similar table within the Conditions of Certification, found at page 18 of the Conditions.

March 23, 2000

Page 2

- On page 26, the corrections to the table conform to the impacts as calculated by ECT's Air Quality Impact Analysis and submitted to the Department.

Conditions of Certification

- On page 6 of the Conditions, we suggest inserting the reference to the PPSA rule on transfers of certification.
- On page 15, we propose that the Condition regarding use of herbicides to clear transmission rights-of-way be revised to reflect Gulf's current practices and requirements for non-certified transmission facilities.
- On pages 17, 20 and 21, corrections to the appropriate cross-referenced Conditions are identified.
- On page 18, the change to reflect "Concentration values" conforms to the fact that only concentrations are corrected to 15% O₂ while mass emissions (in lb/hr) are not corrected.
- On page 49, the deletion of the sentence is necessary to reflect that this project is not located near the City of Port Orange.

Should you wish to discuss these please give me a call. We are still reviewing the revised Industrial Waste Water conditions and should have those to you shortly.

cc: Mike Halpin, BAR (w/encls.)

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
GULF POWER COMPANY
SMITH UNIT 3
PA 99-40

CONDITIONS OF CERTIFICATION

I. GENERAL

The following general and specific conditions shall apply to the construction and operation of the Lansing Smith Plant Unit 3.

A. Definitions

The meaning of the terms used herein shall be governed by the definitions contained in Chapters 403, 378, 373, 372, and 253, Florida Statutes (F.S.), and any regulation adopted pursuant thereto and the statutes and regulations of any agency. In the event of any dispute over the meaning of a term used in these conditions which is not defined in such statutes or regulations, such dispute shall be resolved by reference to the most relevant definitions contained in any other state or federal statute or regulation or, in the alternative, by the use of the commonly accepted meaning as determined by the Department. As used herein:

1. "Application" shall mean the Site Certification Application (SCA) for the Gulf Power Company Smith Unit 3, as supplemented.
2. "DEP" or Department shall mean the Florida Department of Environmental Protection.
3. "DHR" shall mean the Florida Department of State, Division of Historical Resources.
4. "Emergency conditions" shall mean urgent circumstances involving potential adverse consequences to human life or property as a result of weather conditions or other calamity, and necessitating new or replacement gas pipeline, transmission lines, or access facilities.
5. "Feasible" or "practicable" shall mean reasonably achievable considering a balance of land use impacts, environmental impacts, engineering constraints, and costs.
6. "FFWCC" shall mean the Florida Fish and Wildlife Conservation Commission.
7. "Permittee" shall mean the Gulf Power Company (Gulf).

8. "Power plant" shall mean the electric power generating plant and appurtenances to be modified or constructed on the Smith Station site in Bay County, as generally depicted in the Application.

9. "Project" shall mean the Smith Unit 3 and all associated facilities, including but not limited to: the combined cycle unit, fuel and water storage tanks, natural gas delivery metering station and onsite appurtenances, air pollution control equipment, storm water control facilities, the cooling tower and related facilities.

10. "NFWFMD" shall mean the Northwest Florida Water Management District.

B. Applicable Rules

The construction and operation of the Smith Unit 3 shall be in accordance with all applicable provisions of at least the following regulations of DEP: Chapters 62-4, 62-17, 62-814, 62-256, 62-296, 62-297, 62-301, 62-302, 62-531, 62-532, 62-550, 62-555, 62-560, 62-600, 62-601, 62-604, 62-610, 62-620, 62-621, 62-650, 62-699, 62-660, 62-701, 62-762, 62-767, 62-769, 62-770, and 62-25, Florida Administrative Code (F.A.C.), or their successors as they are renumbered.

II. CHANGE IN DISCHARGE

All discharges or emissions authorized herein shall be consistent with the terms and conditions of this certification. The discharge of any regulated pollutant not identified in the application, or more frequent than, or at a level in excess of that authorized herein, shall constitute a violation of the certification. Any anticipated facility expansions beyond the certified initial generating capacities of the existing units or Unit 3, production increases, or process modifications which may result in new, different, or increased discharges of pollutants, or expansion in steam generation capacity shall be reported by submission of an application for modification pursuant to Chapter 403, F.S.

III. GENERAL CONDITIONS

A. Facilities Operation

1. Gulf shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by Gulf to achieve compliance with the conditions of this certification, and are 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 approval and when required by Department rules.

2. In the event of a prolonged [thirty (30) days or more] equipment malfunction or shutdown of air pollution control equipment, operation may be allowed to resume and continue to take place under an appropriate Department order, provided that the Permittee demonstrates that such operation will be in compliance with all applicable ambient air quality standards and PSD increments, solid waste rules, domestic wastewater rules and industrial wastewater rules. During such malfunction or shutdown, the operation of the Smith Station shall comply with all other requirements of this certification and all applicable state and federal emission and effluent standards not affected by the malfunction or shutdown which is the subject of the Department's order.

3. Gulf shall comply with the terms and conditions contained in Industrial Wastewater Facility Permit FL0002267 and Permit No. PSD-FL- 269 and any revisions, modifications or reissuances thereof.

B. Non-Compliance Notification

If, for any reason, the permittee (defined as the applicant or its successors and or assigns) does not comply with or will be unable to comply with any limitation specified in this certification, the permittee shall notify the Northwest District office of the DEP by telephone at (850)444-8300 or the Northwest District Branch Office at (850) 872-4375. After normal business hours, report any condition that poses a public health threat to the State Warning Point under telephone number (850)413-9911 or (850)413-9912. Gulf shall confirm this non-compliance in writing at 160 Government Center, Suite 308, Pensacola, Florida 32501-5794 within seventy-two (72) hours of becoming aware of such conditions, and shall supply the following information:

1. A description of the discharge and cause of noncompliance; and,
2. The period of non-compliance, including exact 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 noncomplying event.

3. Spill Notification

Gulf shall report all critical (having potential to significantly pollute surface or ground waters) spills of liquid or liquid-solid materials, not confined to a building or similar containment structure, to the Department by telephone immediately after discovery and submit a written report within forty-eight hours, excluding weekends, from the original notification. The telephonic report shall be submitted by calling the Northwest District Industrial Wastewater Compliance/Enforcement Section under telephone number (850)444-8300. After normal business hours, contact the State Warning Point by calling (850)413-9911 or (850)413-9912. The written report shall include, but not be limited to, a detailed description of how the spill occurred, the name and chemical make-up (include any MSDS sheets) of the substance, the amount spilled, the time and date of the spill, the name and title of the person who first reported the spill, the areal size of the spill and surface types (impervious, ground, water bodies, etc.) it impacted, the cleanup procedures used and status of completion, and include a map or aerial photograph showing the extent and paths of the material flow. Any deviation from this requirement must receive prior approval from the Department.

C. Safety

1. The overall design, layout, and operation of the facilities shall be such as to minimize hazards to humans and the environment. Security control measures shall be utilized to prevent exposure of the public to hazardous conditions. The Federal Occupational Safety and Health Standards will be complied with during construction. The Safety Standards specified under Section 442.20, F.S., by the Division of Safety of the Florida Department of Labor and Employment Security shall also be complied with.

2. The Permittee shall not discharge to surface waters wastes which are acutely toxic, or present in concentrations which are carcinogenic, mutagenic, or teratogenic to human beings or to significant locally occurring wildlife or aquatic species. The Permittee shall not discharge to ground waters wastes in concentrations which, alone or in combination with other substances, or components of discharges (whether thermal or non-thermal) are carcinogenic, mutagenic, teratogenic, or toxic to human beings (unless specific criteria are established for such components in Section 62-520.420, F.A.C.) or are acutely toxic to indigenous species of significance to the aquatic community within surface waters affected by the ground water at the point of contact with surface waters.

D. Enforcement

The Department may take any and all lawful actions as it deems appropriate to enforce any condition of this certification.

E. Design and Performance Criteria

The power plant may be operated at up to the maximum electrical output projected from design information without the need for modifying these conditions. Treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this certification are not to be bypassed without prior DEP approval. Moreover, the Permittee shall take all reasonable steps to minimize any adverse impacts resulting from noncompliance with any limitation specified in this certification, including, but not limited to, such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying event.

F. Certification - General Conditions

1. The terms, conditions, requirements, limitations and restrictions set forth in these conditions of certification are the same as "Permit Conditions" and are binding and enforceable pursuant to Sections 403.141, 403.161, 403.514, 403.727, and 403.859 through 403.861, F.S. Any noncompliance with a condition of certification or condition of a federally delegated or approved permit constitutes a violation of chapter 403, F.S., and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. Gulf is placed on notice that the Department will review this approval periodically and may initiate enforcement action for any violation of these conditions.

2. This approval 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, exhibits, specifications, or conditions of this approval may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6), 403.511, and 403.722(5), F.S., the issuance of this approval does not convey any 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 approval is not a waiver of or approval of any other Department approval that may be required for other aspects of the total project under federally delegated programs which are not addressed in this certification.

4. This certification does not relieve Gulf Power 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 approved source, or from penalties therefore; nor does it allow Gulf to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of these Conditions which has a reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with these Conditions.

5. In accepting this certification, Gulf Power Company understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this approved source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the approved source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

17. 211(3) <PPSA RULE>

6. This certification is transferable only upon Department approval in accordance with Section 403.516, F.S., Rules 62-4.120 and 62-~~730.300~~, F.A.C., as applicable. Gulf shall be liable for any noncompliance of the approved activity until the transfer is approved by the Department.

7. These conditions of certification or a copy thereof shall be kept at the work site of the approved activity.

8. Gulf shall comply with the following:

a) Upon request, Gulf 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) Gulf shall hold at the facility or other location designated by this approval records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the approval, copies of all reports required by this approval, and records of all data used to complete the application for this approval. These materials shall be retained at least three (3) years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule. Data utilized to prepare the application may be maintained at the following locations:

Gulf Power

Smith Facility: 4300 CR 2300

Southport, Florida 32409

Pensacola:

One Energy Place*

Pensacola, Florida 32520-0328

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;
6. the results of such analyses.

9. These Conditions may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

10. The permittee, by accepting these Conditions, specifically agrees to allow authorized Department personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to

(a) Enter upon the permittee's premises where a regulated facility, system, or activity is located or conducted, or where records shall be kept under these Conditions;

(b) Have access to and copy any records that shall be kept under the conditions of these Conditions;

(c) Inspect the facilities, equipment, practices, or operations regulated or required under these Conditions; and

(d) Sample or monitor any substances or parameters at any location necessary to assure compliance with these Conditions or Department rules.

11. In accepting these Conditions, 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 as such use is proscribed by section 403.111, Florida Statutes, or Rule 62-620.302, Florida Administrative Code. Such evidence shall only be used to

the extent that it is consistent with the Florida Rules of Civil Procedure and applicable evidentiary rules.

12. When requested by the Department, the permittee shall within a reasonable time provide any information required by law which is needed to determine whether there is cause for revising, revoking and reissuing, or terminating these Conditions, or to determine compliance with the permit. The permittee shall also provide to the Department upon request copies of records required by these Conditions to be kept. If the permittee becomes aware of relevant facts that were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be promptly submitted or corrections promptly reported to the Department.

13. Unless specifically stated otherwise in Department rules, the permittee, in accepting these Conditions, 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. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.

14. The permittee, in accepting these Conditions, agrees to pay the applicable regulatory program and surveillance fee in accordance with Rule 62-4.052, F.A.C.

15. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment.

16. The permittee shall apply for a revision to any Department issued PSD, Title V, or Industrial Wastewater permit in accordance with Department Rules in Chapter 62, Florida Administrative Code, at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with applicable rules for minor modifications to the permitted facility. A revised permit shall be obtained before construction begins except as provided in the applicable portions of Chapter 62, F.A.C.

17. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The permittee shall be responsible for any and all damages which may result from the changes and may be subject to enforcement action by the Department for penalties or revocation of these Conditions. The notice shall include the following information:

- (a) A description of the anticipated noncompliance;
- (b) The period of the anticipated noncompliance, including dates and times; and
- (c) Steps being taken to prevent future occurrence of the noncompliance.

18. Water quality sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246, chapters 62-160 and 62-601, F.A.C., and 40 CFR 136, as appropriate.

(a) Monitoring results shall be reported at the intervals specified elsewhere in these Conditions and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10).

(b) If the permittee monitors any contaminant more frequently than required by the permit, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(c) Calculations for all limitations which require averaging of measurements shall use an arithmetic mean unless otherwise specified in these Conditions.

(d) Under chapter 62-160, F.A.C., sample collection shall be performed by following the protocols outlined in "DER Standard Operating Procedures for Laboratory Operations and Sample Collection Activities" (DEP-QA-001/92). Alternatively, sample collection may be performed by an organization who has an approved Comprehensive Quality Assurance Plan (CompQAP) on file with the Department. This CompQAP shall be approved for collection of samples from the required matrices and for the required tests.

19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in these Conditions shall be submitted no later than 14 days following each schedule date.

When requested by the Department, Gulf shall within a reasonable time furnish any information required by law which is needed to determine compliance with the certification. If Gulf 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.

G. Laboratories and Quality Assurance

1. The Permittee shall ensure that all laboratory analytical data submitted to the Department, as required by this certification, must be 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 Chapter 62-160, F.A.C.

2. When a contract laboratory is used to analyze samples required pursuant to this certification, the Permittee is required to have the samples taken by qualified personnel

following EPA and Department approved sampling procedures and chain-of-custody requirements in accordance with Rule 62-160, F.A.C.

3. When an in-house laboratory is used to analyze samples required pursuant to this permit, the Permittee is required to have the samples taken by a qualified technician following EPA and Department approved sampling procedures and chain-of-custody requirements. All chain-of-custody records must be retained on-site for at least three (3) years and made available to the Department immediately upon request.

H. Procedures for Post-Certification Submittals

1. Purpose of Submittals - Conditions of certification which provide for the post-certification submittal of information to DEP by Gulf are for the purpose of facilitating DEP's monitoring of the effects arising from plant construction, the mitigation of wetlands lost or impacted due to project construction, or changes in plant design after site certification. This monitoring is for DEP to assure, in consultation with other agencies with applicable regulatory jurisdiction, continued compliance with the conditions of certification, without any further agency action.

2. Filings - All post-certification submittals of information by Gulf are to be filed with DEP. Copies of each submittal shall be simultaneously submitted to any other agency indicated in the specific conditions requiring the post-certification submittals.

3. Completeness

The DEP shall promptly review each post-certification submittal for completeness. This review shall include consultation with the other agencies receiving the post-certification submittal. For the purposes of this condition, completeness shall mean that the information submitted is both complete and sufficient. If found to be incomplete, Gulf shall be so notified. Failure to issue such a notice within forty-five (45) days after filing of the submittal shall constitute a finding of completeness.

4. Interagency Meetings

Within sixty (60) days of the filing of a complete post-certification submittal, DEP may conduct an interagency meeting with other agencies which received copies of the submittal. The purpose of such an interagency meeting shall be for the agencies with regulatory jurisdiction over the matters addressed in the post-certification submittal to discuss whether reasonable assurance of compliance with the conditions of certification has been provided. Failure of any agency to attend an interagency meeting shall not be grounds for DEP to withhold a determination of compliance with these conditions nor to delay the time frames for review established by these conditions.

5. Reasonable Assurance of Compliance

Within ninety (90) days of the filing of a complete post-certification submittal, or 45 days after a submittal is made by the applicant, or unless another date is specified herein, DEP shall give written notification to Gulf and the agencies to which the post-certification information was submitted of its determination whether there is reasonable assurance of compliance with the conditions of certification. If it is determined that reasonable assurance has not been provided, Gulf shall be notified with particularity and possible corrective measures suggested. Failure to notify Gulf in writing within ninety (90) days of receipt of a complete post-certification submittal shall constitute a compliance determination.

6. Commencement of Construction

If DEP does not object within the time period specified in Condition III.H.5. above, Gulf may begin construction pursuant to the terms of the conditions of certification and the subsequently submitted construction details.

IV. 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.

V. RIGHT OF ENTRY

The Permittee shall allow during normal business hours the Secretary of the Florida Department of Environmental Protection and/or authorized representatives, including representatives of the NFWFMD upon the presentation of credentials:

1. To enter upon the Permittee's premises where an emission or effluent source is located or in which records are required to be kept under the terms and conditions of this certification;
2. To have access during normal business hours (Monday-Friday, 7:00 a.m. to 3:30 p.m.) to any records required to be kept under the conditions of this certification for examination and copying;
3. To inspect and test any monitoring equipment or monitoring method required in this certification and to sample any discharge or pollutants, or monitor any substances or parameters at any location reasonably necessary to assure compliance with this certification or Department rules; and,
4. To assess any damage to the environment or violation of ambient standards.

VI. REVOCATION OR SUSPENSION

This certification may be suspended or revoked for violations of any of its conditions pursuant to Section 403.512, F.S.

VII. CIVIL AND CRIMINAL LIABILITY

This certification does not relieve the Permittee from civil or criminal penalties for noncompliance with any conditions of this certification, applicable rules or regulations of the Department or Chapter 403, F.S., or regulations thereunder.

Subject to Section 403.511, F.S., this certification shall not preclude the institution of any legal action or relieve the Permittee from any responsibilities or penalties established pursuant to any other applicable state statutes or regulations.

VIII. PROPERTY RIGHTS

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

IX. 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 provisions to other circumstances and the remainder of the certification shall not be affected thereby.

X. REVIEW OF SITE CERTIFICATION

The certification shall be final unless revised, revoked, or suspended pursuant to law. At least every five (5) years from the date of issuance of certification the Department may review these conditions of certification and propose any needed changes.

XI. MODIFICATION OF CONDITIONS

A. Pursuant to Subsection 403.516(1), F.S., the Siting Board hereby delegates the authority to the Secretary to modify any condition of this certification.

B. Subject to the notice requirements of 403.516(1), F.S., the certification shall be automatically modified to conform to subsequent DEP-issued amendments, modifications or renewals of any separately-issued Prevention of Significant Deterioration (PSD) permit, Title V Air Operation permit, or Industrial Wastewater permit issued pursuant to the National Pollutant Discharge Elimination System (NPDES) permit program for the project and the conditions of such permits shall be controlling over these Conditions of Certification.

XII. CONSTRUCTION

A. Standards and Review of Plans

1. The facility shall be constructed pursuant to the design standards presented in the application and the standards or plans and drawings submitted and signed by an engineer registered in the state of Florida. Specific Northwest District office acceptance of plans will be required based upon a determination of consistency with approved design concepts, regulations and these conditions prior to initiation of construction of any: industrial waste treatment facilities; domestic waste treatment facilities; potable water treatment and supply systems; ground water monitoring systems and storm water runoff systems; solid waste disposal areas; and hazardous or toxic handling facilities or areas. The Applicant shall present specific facility plans for these facilities for review by the Northwest District office at least ninety (90) days prior to construction of those portions of the facility for which the plans are then being submitted, unless other time limits are specified in the following conditions herein. Review and approval or disapproval shall be accomplished in accordance with Chapter 120, F.S., or these conditions of certification as applicable.

2. The Department must be notified in writing and prior written approval obtained for any changes, modification, or revision to be made to the project during construction which is in conflict with these conditions of certification. If there are any changes, modification, or revision made to a project approved by the Department without this prior written approval, the project will be considered to have been constructed without departmental approval, the construction will not be cleared for service, and the construction will be considered a violation of the conditions of certification.

3. Ninety (90) days prior to the anticipated date of first operation, Gulf shall provide the Department with an itemized list of any changes made to the facility design and operation plans that would affect a change in discharge as referenced in Condition II. since the time of the approval of these conditions. This pre-operational review of the final design and operation shall demonstrate continued compliance with Department rules and standards.

B. Control Measures

1. Storm Water Runoff

To control runoff during construction which may reach and thereby pollute waters of the state, necessary measures shall be utilized to settle, filter, treat or absorb silt-containing or pollutant-laden storm water to ensure against spillage or discharge of excavated material that may cause turbidity in excess of 29 Nephelometric Turbidity Units above background in waters of the state. Control measures may consist of sediment traps, barriers, berms, and vegetation plantings. Exposed or disturbed soil shall be protected and stabilized as soon as possible to minimize silt and sediment-laden runoff. The pH of the runoff shall be kept within the range of 6.0 to 8.5. The Permittee shall comply with Chapter 62-25, F.A.C.

2. Open Burning

Any open burning in connection with initial land clearing shall be in accordance with Chapter 62-256, F.A.C., Chapter 5I-2, F.A.C., Uniform Fire Code Section 33.101 Addendum, and any other applicable county regulation. Any burning of construction-generated material, after initial land clearing that is allowed to be burned in accordance with Chapter 62-256, F.A.C., shall be approved by the Northwest District office in conjunction with the Division of Forestry and any other county regulations that may apply. Burning shall not occur unless approved by the appropriate agency or if the Department or the Division of Forestry has issued a ban on burning due to fire safety conditions or due to air pollution conditions.

3. Sanitary Wastes

Disposal of sanitary wastes from construction toilet facilities shall be in accordance with applicable regulations of the appropriate local health agency.

4. Solid Wastes

Solid wastes resulting from construction shall be disposed of in accordance with the applicable regulations of Chapter 62-701, F.A.C.

5. Noise

Construction noise shall not exceed noise requirements of the Bay County Land Development Code where applicable.

6. Dust and Odors

The Permittee shall employ proper odor and dust control techniques to minimize odor and fugitive dust emissions. The applicant shall employ control techniques sufficient to prevent nuisance conditions on adjoining property.

In order to insure electric service reliability. If herbicides are used for the control of vegetation, Gulf Power shall use only properly approved products (by USEPA)

7. Transmission Lines

The directly associated transmission lines from the Smith Station electric switchyard to the existing Gulf Power Company transmission lines shall be maintained ~~in accordance with the application and the appropriate state and federal regulations concerning use of herbicides. Gulf shall notify the Department of the type of herbicides to be used at least 60 days prior to its first use.~~

8. Protection of Vegetation

The Permittee shall develop the site so as protect by buffering or transplanting any rare, endangered or threatened species of vegetation as identified in the wetlands mitigation plan.

9. Dewatering Operations

The dewatering operations during construction shall be carried out in accordance with Rule 62-621.300(2), F.A.C.

10. Historical or Archaeological Finds

If historical or archaeological artifacts, such as Indian canoes, are discovered at any time within the project site, the Permittee shall notify the DEP Northwest District office and the Bureau of Historic Preservation, Division of Historical Resources, R.A. Gray Building, Tallahassee, Florida 32399, telephone number (850) 487-2073.

C. Environmental Control Program

An environmental control program shall be established under the supervision of a Florida registered professional engineer or other qualified person to assure that all construction activities conform to applicable environmental regulations and the applicable conditions of certification. If a violation of standards, harmful effects or irreversible environmental damage not anticipated by the application or the evidence presented at the certification hearing are detected during construction, the Permittee shall notify the Northwest District office as required by Condition III.B.

D. Reporting

Notice of commencement of construction shall be submitted to the Siting Coordination Office and the Northwest District office within fifteen (15) days of initiation. Starting three (3) months after construction commences, a quarterly construction status report shall be submitted to the Northwest District office. The report shall be a short narrative describing the progress of construction.

XIII. AIR

A. Unit 3 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 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.]

2. The maximum heat input rates, based on the lower heating value (LHV) of the fuel to Smith Unit 3 at ambient conditions of ^{70°F}~~65°F~~ temperature, 100% load, and 14.7 psi pressure shall not exceed 1,751 mmBtu/hr when firing natural gas. The 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. {Permitting note: The heat input limitations have been placed in the PSD permit to identify the capacity of each emissions unit for purposes of confirming that emissions testing is conducted within 90-100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability} [Design, Rule 62-210.200, F.A.C.]

3. Construction and operation of Smith Unit 3 shall be in accordance with the General and Administrative Requirements of Permit PSD-FL-269.

4. Only pipeline natural gas shall be fired in the unit.

5. Maximum allowable hours of operation for Smith Unit 3 are 8760 hours per year while firing natural gas. [Rule 62-210.200, F.A.C.]

6. The maximum heat input rate of each natural gas fired duct burner shall not exceed 275 mmBTU/hour (LHV). {Permitting note: The heat input limitations have been placed in the permit to identify the capacity of each emissions unit for purposes of confirming that emissions testing is conducted within 90-100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability} [Design, Rule 62-210.200, F.A.C.]

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. 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.]

11. Dry Low NO_x (DLN) burners shall be installed on the stationary combustion turbine and Low NO_x burners shall be installed in the duct burner arrangement to comply with NO_x emission limits specified in Conditions XIII.B.1. and ~~B.2~~ ^{B.4} [Rules 62-4.070 and 62-204.800(7), F.A.C. to avoid PSD review]

12. The permittee shall design these units to accommodate adequate testing and sampling locations for compliance with the applicable emission limits (per each unit) listed in Specific conditions XIII.B.1. through B.9. [Rule 62-4.070, Rule 62-204.800, F.A.C.]

13. DLN systems shall be installed as per the manufacturer's recommendation. [Rule 62-4.070 and 62-204.800(7), , F.A.C., to avoid PSD review]

14. Drift eliminators shall be installed on the cooling tower to reduce PM/PM₁₀ emissions.

B. Unit 3 - Emission Limits and Standards

Note: The following emission limits and standards shall apply upon completion of the initial compliance tests, certification tests and performance specification tests as applicable, for each unit.

1. ARMS Emissions Units 004 and 005. Power Generation, each consisting of a nominal 170 megawatt combustion turbine-electrical generator and a supplementally fired (275 MMBtu/hr) heat recovery steam generator equipped with a natural gas fired duct burner. The CT's will include provisions for the optional use of evaporative coolers

and steam power augmentation. The emissions units shall comply with all applicable provisions of 40 CFR 60, Subpart Da, Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978, adopted by reference in Rule 62-204.800(7), F.A.C.; and 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C. except as noted herein. The Subpart GG requirement to correct NSPS test data to ISO conditions applies.

2. ARMS Emission Unit 006. Cooling Tower is a regulated emission unit. The Cooling Tower is not subject to a NESHAP because Chromium-based chemical treatment is not used.

3. BACT Limits The following table is a summary of the BACT determination and is followed by the applicable specific conditions. ^{CONCENTRATION} Values for are corrected to 15 % O₂ on a dry basis. These limits or their equivalent in terms of lb/hr or NSPS units, as well as the applicable averaging times, are followed by the applicable specific conditions. Each Unit shall be initially tested to comply with the applicable NSPS and with the BACT limits as indicated below: [Rules 62-212.400, 62-204.800(7)(b) (Subpart GG and Da), 62-210.200 (Definitions-Potential Emissions) F.A.C.]

Emission Unit	NO _x ⁽¹⁾	CO BACT	SO ₂ /SAM BACT	VOC BACT	PM/Visibility (% Opacity)	Technology and Comments
C.T.'s : With Duct Burners	82.9 lb/hr	16 ppm @15% O ₂	2 gr/100 scf natural gas ⁽³⁾	4 ppm @15% O ₂	10 - gas	Dry Low NO _x Combustors Natural Gas, Good Combustion
Steam power Augmentation	113.2 lb/hr	23 ppm @15% O ₂	2 gr/100 scf natural gas ⁽³⁾	6 ppm @15% O ₂	10 - gas	Unit limited to 1000 hours per year of operation
Cooling Tower					18.2 lb/hr ⁽²⁾	Drift Eliminators

(1) NO_x limits not determined by BACT. (2) Listed for informational purposes only. (3) See Fuel Mon. Sch. in Specific Condition F.6. below.

4. Nitrogen Oxides (NO_x) Emissions:

a. Emissions of NO_x in the stack exhaust gas, with the combustion turbine operating and the duct burner on shall not exceed 82.9 lb/hr (30 day rolling average). Emissions of NO_x in the stack exhaust gas, with the combustion turbine operating with steam augmentation and the duct burner on shall not exceed 113.3 lb/hr (30 day rolling average). Compliance will be determined by the continuous emission monitor system (CEMS) and prorated daily as necessary based upon hours of operation per operating mode. Emissions of NO_x in the stack exhaust gas with the combustion turbine operating with the duct burner on shall not exceed 82.9 lb/hr and 113.3 lb/hr with steam augmentation to be demonstrated by initial stack test. [Rule 62-4.070 and 62-204.800(7), F.A.C. to avoid PSD Review]

b. Emissions of NO_x from the duct burner shall not exceed 0.1 lb/MMBtu, which is more stringent than the NSPS (see Specific Condition 46). [Rule 62-4.070 and 62-204.800(7), F.A.C. to avoid PSD Review]

c. When NO_x monitoring data is not available, substitution for missing CEMS data shall be handled as required by Title IV (40 CFR 75) to calculate any specified average time. Heat input for these periods shall be determined by fuel sampling and measurement.

5. Facility-wide NO_x emissions cap: In addition to individual (point source) emission limits and NO_x averaging plan requirements, the Lansing Smith facility shall be required to comply with a facility-wide NO_x emissions cap of 6666 TPY. CEMS shall be the method of compliance.

6. Carbon Monoxide (CO) Emissions: Emissions of CO in the stack exhaust gas with the combustion turbine operating and duct burner on shall exceed neither 16 ppm nor 23 ppm (@15% O_2) with steam augmentation to be demonstrated annually by stack test using EPA Method 10. {For informational purposes, this equates to 78.7 lb/hr and 116.6 lb/hr respectively} [Rule 62-212.400, F.A.C.]

7. Volatile Organic Compounds (VOC) Emissions: Emissions of VOC in the stack exhaust gas with the combustion turbine operating and duct burner on shall exceed neither 4 ppm nor 6 ppm (@15% O_2) with steam augmentation to be demonstrated by initial stack test using EPA Method 18, 25 or 25A. {For informational purposes, this equates to 10.2 lb/hr and 16.8 lb/hr respectively} [Rule 62-212.400, F.A.C.]

8. Sulfur Dioxide (SO_2) emissions: SO_2 emissions shall be limited by firing pipeline natural gas (sulfur content less than 20 grains per 100 standard cubic foot). Compliance with this requirement in conjunction with implementation of the Custom Fuel Monitoring Schedule in Specific Condition 44 will demonstrate compliance with the applicable NSPS SO_2 emissions limitations from the duct burner or the combustion turbine. {For informational purposes, annual SO_2 emissions will be up to 105 TPY} [40CFR60 Subpart GG and Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.]

9. Visible emissions (VE): VE emissions shall serve as a surrogate for PM/PM_{10} emissions from the combustion turbine operating with or without steam augmentation and/or the duct burner and shall not exceed 10 percent opacity from the stack in use. PM/PM_{10} emissions (for information only) are up to ~~43~~ lb/hr. [Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.]

21.5 L per CT/HRSG

C. Unit 3 Excess Emissions

1. Excess emissions 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. These emissions shall be

included in the 30 day rolling average for NOx.

2. 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. Following this format, 40 CFR 60.7, periods of startup, shutdown, malfunction, shall be monitored, recorded, and reported as excess emissions when emission levels (in terms of applicable averaging periods) exceed the permitted standards listed in Specific Condition ~~No. 19 through 24~~. [Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7 (1998 version)].

XIII B. 3 through B. 9

D. Unit 3 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 (1998 version), and adopted by reference in Chapter 62-204.800, F.A.C.

2. Initial (I) performance tests shall be performed by the deadlines in Specific Condition 28. Initial tests shall also be conducted after any substantial modifications (and shake down period not to exceed 100 days after re-starting the CT) of air pollution control equipment such as installation of SCR or change of combustors. Annual (A) compliance tests shall be performed during every federal fiscal year (October 1 - September 30) pursuant to Rule 62-297.310(7), F.A.C., on these units as indicated. The following reference methods shall be used. No other test methods may be used for compliance testing unless prior DEP approval is received in writing.

a.. EPA Reference Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources" (I, A).

b. Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources (I, A).

c. EPA Reference Method 20, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines." Initial test only for compliance with 40CFR60 Subpart GG, Da. Initial (only) NO_x compliance test for the duct burners (Specific Condition 20) shall be accomplished via testing with duct burners "on" as compared to "off" and computing the difference.

d. EPA Reference Method 18, 25 and/or 25A, "Determination of Volatile Organic Concentrations." Initial test only.

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3. Continuous compliance with the NO_x emission limits: Continuous compliance with the NO_x emission limits shall be demonstrated with the CEM system based on the applicable averaging time of 30 day rolling average (DLN). Based on CEMS data, a separate compliance determination is conducted at the end of each operating day and a new average emission rate is calculated from the arithmetic average of all valid hourly emission rates from the previous operating day. 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. A valid operating day shall consist of at least one valid operating hour. These excess emissions periods shall be reported as required in Condition 41. Continuous compliance with the 0.1 lb/MMBtu limit for the duct burners will be demonstrated through continuous compliance with the combined duct burner and CT emission limits (see Specific Condition 46). [Rule 62-4.070 and 62-204.800(7), F.A.C. to avoid PSD Review]

XIII B. 4. a

4. Compliance with the SO₂ and PM/PM₁₀ emission limits: Notwithstanding the requirements of Rule 62-297.340, F.A.C., the use of pipeline natural gas, is the method for determining compliance for SO₂ and PM₁₀. For the purposes of demonstrating compliance with the 40 CFR 60.333 SO₂ standard, ASTM methods 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 or natural gas supplier data 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 in 40 CFR 60.335 or 40 CFR 75 are used when determination of fuel sulfur content is made. 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) (1998 version). A certification following installation (and prior to startup) shall be submitted that the drift eliminators were installed and that the installation is capable of meeting 0.001 gallons/100 gallons recirculation water flowrate.

5. Compliance with CO emission limit: 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. Annual compliance testing for CO may be conducted at less than capacity when compliance testing is conducted concurrent with the annual RATA testing for the NO_x CEMS required pursuant to 40 CFR 75. Alternatively to annual testing in a given year, periodic tuning data may be provided to demonstrate compliance in the year the tuning is conducted.

6. Compliance with the VOC emission limit: An initial test is required to demonstrate compliance with the VOC emission limit. Thereafter, the CO emission limit and periodic tuning data will be employed as surrogate and no annual testing is required.

7. Testing procedures: 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. Procedures for these tests shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapters 62-204 and 62-297, F.A.C.

8. Test Notification: The DEP's Northwest District office shall be notified, in writing, at least 30 days prior to the initial performance tests and at least 15 days before annual compliance test(s).

9. Special Compliance Tests: The DEP may request a special compliance test pursuant to Rule 62-297.310(7), 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.

10. Test Results: 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. [Rule 62-297.310(8), F.A.C.].

E. Unit 3 Notification, Reporting and Recordkeeping

1. All measurements, records, and other data required to be maintained by the Gulf Power 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: 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 3 Monitoring Requirements

1. Continuous Monitoring System: The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxides emissions from these units. Periods when NO_x emissions are above the standards, listed in ~~the~~ ^{specific} Conditions XIII.B.3. and B.4, shall be reported to the DEP Northwest District Office within one

working day (verbally) followed up by a written explanation postmarked not later than three (3) working days (alternatively by facsimile within one working day). [Rules 62-204.800, 62-210.700, 62-4.130, 62-4.160(8), F.A.C and 40 CFR 60.7 (1998 version)].

2. CEMS for reporting excess emissions: Subject to EPA approval, the NO_x CEMS shall be used in lieu of the requirement for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1998 version). Upon request from DEP, the CEMS emission rates for NO_x on the CT's shall be corrected to ISO conditions to demonstrate compliance with the NO_x standard established in 40 CFR 60.332.

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

4. CEMS for reporting facility-wide NO_x emissions: The NO_x CEMS shall be used for ensuring compliance with the facility-wide cap. For the oil-fired peaking turbine (Emissions Unit EU-003) emissions shall be determined using fuel sampling and AP-42 emission factors. Monthly records shall be maintained of the facility-wide NO_x emissions and the owner/operator shall calculate the facility-wide cap on a monthly basis for each prior consecutive 12-month period. These records shall be made available to inspectors as necessary. Additionally, a summary shall be filed with each quarterly report as a means of demonstrating compliance with the facility-wide cap for each consecutive 12-month period. The monthly calculations for the coal-fired units shall consist of use of the monthly NO_x emission rate per MMBtu (as determined by CEMS using the appropriate fuel F factor) multiplied by the monthly fuel (MMBtu) usage as specified in the Lansing Smith Title V permit and converted as appropriate to tons of NO_x for each unit. The sum of the monthly NO_x emissions from the coal units and the oil-fired peaking turbine shall then be added to the monthly NO_x emissions from the combined cycle unit, which will be calculated based upon the monthly average NO_x emission rate (lb/hr) multiplied by the number of valid operating hours for the same period. This annual emissions cap shall become effective on the first day of the month following completion of the initial performance testing of Unit 3, and compliance shall begin based upon the first twelve months of operation thereafter. [Rule 62-4.070 and 62-204.800(7), F.A.C. to avoid PSD Review]

5. Natural Gas Monitoring Schedule: A custom fuel monitoring schedule pursuant to 40 CFR 75 Appendix D for natural gas may be used in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2) provided the following requirements are met (monitoring of nitrogen content is not required):

a. The permittee shall apply for an Acid Rain permit within the deadlines specified in

40 CFR 72.30.

b. The permittee shall submit a monitoring plan, certified by signature of the Designated Representative, that commits to using a primary fuel of pipeline supplied natural gas pursuant to 40 CFR 75.11(d)(2).

c. Each unit shall be monitored for SO₂ emissions using methods consistent with the requirements of 40 CFR 75 and certified by the USEPA.

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

e. Gulf 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.

6. 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.]

7. Subpart Da Monitoring and Record Keeping Requirements: The permittee shall comply with all applicable requirements of this Subpart [40CFR60, Subpart Da]. The requirements under 40 CFR 60.46a, 60.47a, 60.48a, and 60.49a regarding continuous monitoring systems for emissions of nitrogen oxides and for electrical output are inapplicable (due to impracticability) and therefore waived.

G. Smith Station Conditions

For Smith Station air operating conditions see the Title V Air Operation Permit, to be attached as Appendix I (Reserved).

XIV. Stormwater Discharge

New construction on the Smith 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 new stormwater facilities associated with Smith Unit 3 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). Gulf Power is required to continue to update the Smith Station's Storm Water Pollution Prevention Plan (SWPPP) annually, as required and to implement the annual revisions to the SWPPP.

B. This certification is predicated on the Gulf Power's submitted information to FDEP which reasonably demonstrates that adverse off-site water resource related impacts will not be caused by the authorized activities.

C. FDEP representatives shall be allowed reasonable escorted access to the power plant site to inspect and observe any activities associated with the Smith Unit 3 Project construction and/or the operation and/or maintenance of the surface water management system in order to determine compliance with the conditions of this certification. ~~The~~ Gulf Power shall not refuse immediate entry or access, upon reasonable notice, to any FDEP representative who requests entry for the above noted inspection and presents appropriate credentials.

D. ~~The~~ Gulf Power shall hold and save FDEP harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, operation, maintenance and/or use of any facility authorized by this certification, to the extent allowed under Florida law.

XV. Domestic Wastewater

Gulf is authorized to dispose of domestic wastewater from Unit 3 in the existing Lansing Smith sewage treatment system. Any future request for expansion in onsite treatment capacity may require approval to construct and operate any such new facility and would be subject to the non-procedural provisions of Chapter 403, F.S., and F.A.C. Chapter 62-4, and pertinent chapters within the 62-300, 62-500 and 62-600 Series.

XVI. Drinking Water Facilities

A. Use of Existing Facilities

The approval to operate and expand the distribution system for the existing potable water distribution system is subject to the non-procedural provisions of Chapter 403, F.S., and pertinent Chapters within the F.A.C. Rules in Chapter 62-500 Series and Chapter 62-699. Gulf is approved to continue to operate the existing, permitted potable water system as shown on any previously-submitted and approved drawings, plans, and other documents attached thereto or on file with the DEP or Department of Health and made a part thereof. Gulf will submit a copy of any revisions to current plans to the DEP NW District Office.

Pursuant to Rule 62-555.540, F.A.C., any proposed extension of the potable water system to serve the expanded plant facilities may be undertaken following the filing with the DEP a completed copy of DEP Form 62-555.910(1), F.A.C. Such form shall be submitted no later than 90 days prior to beginning work on the extension of the distribution system to serve the new connections. This activity shall be subject to the requirements of Rule 62-555.540, F.A.C.

The conditions set forth on conditions XV.B. and C. below shall apply to any future construction or expansion of any potable water system on the site.

B. Prior Approval

1. No portion of a new potable water supply system or any portion of a water supply system that will be or is intended to be converted to potable water use at a later date may be constructed without prior written approval from the Department. Construction of any portion of a new potable water supply system without the prior written approval of the Department will be considered a violation of the conditions of certification.

2. In order to obtain approval to construct a new onsite water supply system where the potable water is to be supplied by an off-site water supply system, the following information must be submitted to the Department no earlier than eighteen (18) months prior to nor later than six months prior to the date that the water supply system is proposed for construction:

a. A completed and fully executed application form which complies with the nonprocedural requirements of the rules and regulations of the Department in effect as of the date that the request for approval to construct the system is made to the Department; however, the Department will not accept "An Intent to Use a General Permit" for such a project. Reference: F.A.C. Rules 62-4.050, 62-555.500, .520, and .530.

b. Complete specifications for the material and workmanship covering the entire new potable water supply system for which the request for approval to construct is being made. The specification must be signed and sealed by an engineer registered in the state of Florida and must provide documentation that the material and workmanship will comply with all applicable nonprocedural rules of the Department in effect as of the date that the request for approval to construct is made to the Department. Reference: F.A.C. Rules 62-4.050, Rules 62-2.555.520, 62-555.530, and 21H-23.

c. Complete engineering drawings of the entire proposed potable water supply system for which approval to construct is being made. The drawings must demonstrate full compliance with all applicable nonprocedural rules and regulations of the Department in effect as of date that the request for approval to construct is made to the Department. The drawing must be signed and sealed by an engineer registered in the state of Florida. Reference: F.A.C. Rules 62 and 4.050, 62-555.520, 62-555.530, and 21H-23.

d. Signed and sealed comprehensive engineering report on the new potable water supply system which fully describes that project and basis of design. The report must include design data and such pertinent data to give an accurate understanding of the work to be undertaken and must provide supporting documentation that the new potable water system as proposed will comply with all applicable nonprocedural rules and regulations of the Department

in effect as of the date that the request for approval to construct the water supply system is made to the Department. Reference: F.A.C. Rules 62-4.050, 62-555.520, 62-555.530, and 21H-23.

e. Documentation that the public water supply system supplying the water has the capacity in its water treatment system to serve the project and that the existing water transmission line from that system's water treatment plant to the point of connection with water supply system Gulf is proposing to construct has been designed and sized to provide sufficient water to meet the demand of Gulf project. Reference: F.A.C. Rules 62-4.050, 62-555.350, 62-555.520, and 62-555.530.

3. Should Gulf request approval to construct a potable water treatment system which produces a waste stream (e.g., softening, electro dialysis, reverse osmosis, etc.) other than as described in the original SCA, Gulf must submit as part of its request for approval to construct that water supply system documentation that the disposal of that waste stream has been approved by the appropriate agency or section of the Department.

C. Construction

1. Gulf must retain the services of a project engineer registered in the state of Florida to observe that the construction of any changes in the water supply system is in accordance with the plans and specifications approved by the Department. The project engineer will be responsible for certifying to the Department that he/she observed the construction and that the construction conformed to the plans and specifications approved by the Department.

2. The approval to construct a new or modify the existing potable water supply system will be in effect for two (2) years from the date of issuance. All construction of the potable water supply system must be completed within this two (2) year period unless a written request for an extension of this date is made to the Department at least sixty (60) days prior to the expiration of the construction approval, and written approval for an extension of the expiration date is issued by the Department. The expiration date of the construction approval may be extended on a year-by-year basis. The maximum length of time that the approval or each subsequent approval for the construction of the potable water system may be in effect is five (5) years from the date of the original approval or for subsequent approvals from the date of issuance of each approval. Should the construction of the water supply system not be completed within that five (5) year period, should Gulf have failed to request a timely extension of the approval expiration date, or should any water quality analysis submitted with the request for an extension of the expiration date demonstrate the presence of a contaminant for which the water treatment plant was not originally designed to handle, or as additional wells are installed on-site and proposed for connection to the potable water system, Gulf will have to make a new request to the Department for approval to construct the potable water system. That request must meet the submittal and approval requirements of the rules of the Department in effect as of the date that the request for approval is submitted and will be subject to the same review schedule as the original request.

3. No future, modified portion of the potable water supply system may be placed into service without the prior written approval of the Department except as authorized herein for extension of the potable water distribution system. Placing any portion of a modified potable water supply system into service prior to receipt of this written approval will be considered as a violation of the conditions of certification.

4. The Department will not issue approval to place the modified or new potable water supply system or any portion of that system into service unless the construction of the system or portion thereof had been approved for construction by the Department prior to the commencement of that construction.

5. In order to obtain approval to place a new portion of the potable water supply system into service, Gulf must make a written request for clearance to the Department. The request must be in the form and/or manner stipulated in the letter authorizing construction of the potable water supply system and must include all information stipulated in that letter as being required to be submitted with the request for clearance, as well as any information required for clearance of a potable water supply system contained in applicable rules and regulations of the Department in effect as of the date that the request for clearance is made.

6. The Department will issue a letter of clearance to place the new or modified potable water supply system into service within thirty (30) days of receipt of a written request for clearance, provided that the request is accompanied by all necessary supporting documentation and meets the criteria for clearance contained in the applicable rules and regulations of the Department in effect as of the date that the request for clearance was made.

XVII. INDUSTRIAL WASTES (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. Gulf Power is hereby authorized to operate the facilities shown in the Smith Unit 3 Site Certification Application and other documents on file with the Department and made a part hereof and as specifically described in Industrial Wastewater Facility Permit No. FL 0002267 Rev A or as subsequently revised. In addition to the provisions of Permit No. FL 0002267, Unit 3 shall operate in accordance with the limitations, monitoring requirements, and other conditions set forth below.

A. Surface Water Discharges

1. During the period beginning on the issuance date of this permit and lasting through the expiration date, the permittee is authorized to discharge from Outfall D001 - Once-through condenser cooling water (OTCW) and cooling tower blowdown (D017) during periods of normal plant operation through the discharge canal to Warren Bayou.

1/27/00

2/2/00

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

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	Maximum	Maximum Monthly Average	Measurement Frequency	Sample Type	Sample Point
Flow, MGD	Report	Report	1/hour	Pump Logs	INT-2
Temperature Rise, °F ¹	Report	18	4/day ¹	Calculated	INT-1
April - September	Report	20	4/day ¹	Calculated	EFF-1
Winter	Report				
PH Range, stand. units	6.5 (minimum) 8.5 (maximum)	NA	1/week	Grab	EFF-2
Total Residual Oxidants, mg/l	0.01	NA	1/week	Grab	EFF-2
Oil & Grease, mg/l	5.0	NA	1/month	Grab	EFF-2
Total Recoverable Copper, ug/l	2.9 ²	NA	1/year	Composite ³	EFF-2
Total Recoverable Lead, ug/l	5.6 ²	NA	1/year	Composite ³	EFF-2
Total Recoverable Nickel, ug/l	8.3 ²	NA	1/year	Composite ³	EFF-2

b. Total Residual Oxidant (TRO) means the value obtained using the amperometric titration method for total residual chlorine. Testing for TRO by titration shall be conducted according to the amperometric method, as specified in Section 4500-CI D, Standard Methods for the Examination of Water and Wastewater, 19th Edition (or most current edition).

c. Continuous chlorination of the cooling water intake is authorized by this permit.

d. The location of sampling points as specified above are as follows:

INT-1 - OTCW condenser inlets.

EFF-1 - OTCW discharge structure.

¹ The cooling water intake and discharge shall be monitored simultaneously four times per day spread out evenly over a 24-hour time period. The temperature rise shall be calculated for each temperature intake and discharge measurement and the daily temperature rise for any one day shall be average of all temperature rise values for that day.

² The actual limit shall be the water quality standard set forth in FAC 62-302.530 for Class II waters as specified here or the concentration of the intake cooling water, whichever is greater. If the Outfall 001 composite sample exceeds the intake concentration (and the intake concentration exceeds the water quality standard), the concentration of a minimum of five (5) additional subsamples shall be measured from the original intake and outfall composites and a "student's t-test" shall be run on these additional subsamples comparing discharge concentrations with the intake concentrations; unless the discharge concentration exceeds the intake concentration at the 95% confidence level, the facility shall be in compliance with the limitation.

³ Either 8-hour manual composite composed of 16 aliquots or 24-hour automatic composite.

INT-2 - OTCW circulator pump logs.

EFF-2 - Immediately downstream of the center of the second roadway embankment across the discharge canal downstream of the discharge structure.

2. During the period beginning on the issuance date of this permit and lasting through the expiration date, the permittee is authorized to discharge from **OUTFALL D017 – COOLING TOWER BLOWDOWN**, during periods of normal plant operation through the discharge canal to Warren Bayou.

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

DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS			
EFFLUENT CHARACTERISTIC	Maximum	Maximum Monthly Average	Measurement Frequency	Sample Type	Sample Point
Flow, MGD	Report	Report	1/hour	Pump Logs	EFF-7
pH Range, stand. units					
Minimum	Report	NA	1/week	Grab	EFF-7
Maximum	Report	NA	1/week	Grab	EFF-7
Free Available Oxidants (FAO), mg/l	Report	NA	1/week	Grab	EFF-7
Time of Chlorine Discharge Min/unit/day	See Item 1.A.6.f		Daily	Logs	EFF-7

b. Total Residual Oxidant (TRO) means the value obtained using the amperometric titration method for total residual chlorine. Testing for TRO by titration shall be conducted according to the amperometric method, as specified in Section 4500-C1 D, Standard Methods for the Examination of Water and Wastewater, 19th Edition (or most current edition).

c. The location of sampling points as specified above are as follows:

INT-3 - The cooling tower make-up water intake structure leading to the cooling tower.

EFF-7 - The end of the discharge structure leading from the cooling tower exit and prior to being discharged to the discharge canal.

d. The time of sampling shall be immediately after the opening of the blowdown valve and prior to being discharged into the discharge canal at point EFF-7.

e. Cooling tower blowdown shall be minimized to the degree allowed by best engineering practices.

f. The permittee shall, within 30 days of permit issuance and yearly thereafter, provide certification that the 126 priority pollutants (as listed in 40 CFR Part 423, Appendix A) are not detectable by the analytical methods in 40 CFR Part 136 in the cooling tower blowdown as a result of the addition of any maintenance chemicals. Compliance shall be demonstrated by one of the three methods:

Method 1 - sampling at a frequency of not less than once per year for all priority pollutants referenced above with submission of analysis results with each certification.

Method 2 - submission of certification(s) from the manufacturer that each product used contains no priority pollutants. Such submission is required only once for each product used, unless subsequent changes in the product formulation occur or the product is obtained from a different source. Certifications for all products in use shall be maintained on site.

Method 3 - calculations to assure that if priority pollutants are contained in any product(s), no discharge of any individual priority pollutant can occur at concentrations greater than detectable levels using analytical methods in 40 CFR Part 136 due to dilution within the cooling water system.

The certification shall be in the following form: "I certify that no priority pollutants at concentrations greater than detectable levels using analytical methods in 40 CFR Part 136 are being discharged from any maintenance chemicals added to the cooling towers. Compliance is demonstrated by Method ____."

g. Neither Free Available Oxidant (FAO) nor Total Residual Oxidant (TRO) shall be discharged from any one unit for more than two hours in any one day at concentrations limits specified above (as required in 40 CFR 423.15(j)(1) and (2)).

B. Other Limitations and Monitoring and Reporting Requirements

1. The sample collection, analytical test methods and method detection limits (MDLs) applicable to this permit shall be in accordance with Rule 62-4.246, Chapters 62-160 and 62-601, F.A.C., and 40 CFR 136, as appropriate. The list of Department established analytical methods, and corresponding MDLs (method detection limits) and PQLs (practical quantification limits), which is titled "Florida Department of Environmental Protection Table as Required By Rule 62-4.246(4) Testing Methods for Discharges to Surface Water" dated June 21, 1996, is available from the Department on request. The MDLs and PQLs as described in this list shall constitute the minimum acceptable MDL/PQL values and the Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those described above unless alternate

MDLs and/or PQLs have been specifically approved by the Department for this permit. Any method included in the list may be used for reporting as long as it meets the following requirements:

a. The laboratory's reported MDL and PQL values for the particular method must be equal or less than the corresponding method values specified in the Department's approved MDL and PQL list;

b. The laboratory reported PQL for the specific parameter is less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. Parameters that are listed as "report only" in the permit shall use methods that provide a PQL, which is equal to or less than the applicable water quality criteria stated in 62-302 FAC; and

c. If the PQLs for all methods available in the approved list are above the stated permit limit or applicable water quality criteria for that parameter, then the method with the lowest stated PQL shall be used.

Where the analytical results are below method detection or practical quantification limits, the permittee shall report the actual laboratory MDL and/or PQL values for the analyses that were performed following the instructions on the applicable discharge monitoring report. Approval of alternate laboratory MDLs or PQLs are not necessary if the laboratory reported MDLs and PQLs are less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. The approved alternate methods and MDLs and PQLs are listed for the following parameters:

Parameter	EPA Method	MDL (ug/l)	PQL (ug/l)
Arsenic	206.3/206.2/200.7	1.0/2.0/50.0	5.0/10.0/100.0
Chromium VI	7196	10.0	50.0
Nickel	200.7	3.3	40.0
Total Residual Chlorine	330.1	30.0	30.0
Total Radium 226 and Radium 228	903.0	0.70 pCi/l	2.0 pCi/l

The MDLs and PQLs listed above shall constitute the minimum reporting levels for the life of the permit. The Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those listed above.

2. Monitoring requirements specified in condition XVII.A.2. shall begin upon initiation of discharge from Outfall D017 cooling tower blowdown.

3. 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 3551
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

If no discharge occurs during the reporting period, sampling requirements of this permit do not apply. The statement "No discharge" shall be written on the DMR form. If, during the term period of this permit, the facility ceases to discharge, the Department shall be notified immediately upon cessation of discharge. Such notification shall be in writing.

4. Unless specified otherwise in this permit, all other reports and notifications required by this permit, 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
Northwest Florida District
160 Government Center
Pensacola, Florida 32501-5794
Phone Number (850) 595-8300

5. In order to determine compliance with the discharge limitations specified in Section XVII.A. of this permit sampling results shall be calculated and reported as follows:

Daily Average Value - the average of all sampling results for a parameter over a single day.

Monthly Average Value - the average of all sample results for a parameter over a monthly period.

Maximum - the maximum limitation for a single sampling result or, for report only, the maximum value of all sampling results during the reporting period.

6. After two years of data collection the permittee may request by permit revision a reduction in parameter monitoring frequencies in accordance with EPA Document 833-R-96-001 entitled Interim Guidance for Performance Based Reduction of NPDES permit Monitoring Frequencies (April 19, 1996).

7. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

8. Discharge of uncontaminated storm water, intake screen backwash water, turbine oil cooler water, and hydrogen generator cooler water is permitted without limitations or monitoring requirements, except that there shall be no discharge of floating oil.

9. 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. Any such discharges shall be reported to the Department when submitting DMR's.

10. Discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which ultimately may be released to waters of the State is prohibited unless specifically authorized elsewhere in this permit. This requirement is not applicable to products used for lawn and agricultural purposes or to the use of herbicides if used in accordance with labeled instructions and any applicable State permit.

A permit revision from the Department shall be required prior to the use of any biocide or chemical additive used in the cooling system (except chlorine as authorized elsewhere in this permit) or any other portion of the treatment system which may be toxic to aquatic life. The permit revision request shall include:

- a. Name and general composition of biocide or chemical
- b. Frequencies of use
- c. Quantities to be used
- d. Proposed effluent concentrations
- e. Acute and/or chronic toxicity data (laboratory reports shall be prepared according to Section 12 of EPA document no. EPA/600/4-90/027 entitled, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters for Freshwater and Marine Organisms, or most current addition.)
- f. Product data sheet
- g. Product label

The Department shall review the above information to determine if a major or minor permit revision is necessary. Discharge associated with the use of such biocide or chemical is not authorized without a permit revision by the Department. Permit revisions shall be processed in accordance with the requirements of Chapter 62-620, F.A.C.

11. All permit effluent limitations, standards, or prohibitions for a metal shall be reported and expressed as "Total Recoverable Metal" in accordance with Rule 62-620.620(2)(c)(1) F.A.C., unless expressed otherwise in Rule 62-302.530 for Class II(Shellfish Propagation or Harvesting) waters.

12. The submission of DEP Form 2-CS (62-620.910(5)) will be required at six months for Outfall D017 from the commencement of discharge from Outfall D017 to determine compliance with the permit effluent limitations and to ensure water quality standards are being met.

C. General Conditions

1. Drawings, plans, documents or specifications submitted by the Gulf Power, 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 Gulf Power 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.

D. Specific Conditions Related to Best Management Practices

Gulf Power shall comply with the Best Management Practices portion of the Smith Station Storm Water Pollution Prevention Plan (SWPPP).

E. 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.

XVIII. Groundwater

When required by Florida Administrative Code Chapter 62-701, Gulf shall file or amend the Ground Water Monitoring plan within 180 days of being advised by the Department for review and approval by the Northwest District of the DEP.

XIX. Toxic, Deleterious or Hazardous Materials

A. Spills

The spill of any toxic, deleterious, or hazardous materials shall be reported in the manner specified by Condition III.B., Noncompliance Notification.

B. Handling and Testing of Potentially Hazardous Material

Gulf shall continue to implement its current plan for handling and disposing of hazardous wastes.

XX. By-product and Solid Waste Storage

A. Solid Waste General

1. Any solid waste produced by the operation of the facility shall be disposed of in an approved disposal facility. By-products that are to be sold for reuse are not considered solid waste.

B. By-Product & Solid Waste Site Specific Standards

1. Any future by-product storage areas shall be designed, constructed, operated, maintained, closed and monitored in accordance with acceptable waste disposal practices providing environmental protection equivalent to those described in F.A.C. Chapter 62-701, or Chapter 62-673, as appropriate, and these conditions of Certification. The prohibitions of F.A.C. Chapter 62-701 shall not be violated.

2. All engineering plans, reports, and related information shall be provided by the engineer of record with professional certification and shall be approved by the NWSSWD of the DEP prior to construction. A construction certification report signed and sealed by a professional engineer, and record drawings showing all modifications to construction plans, shall be submitted to the NWSSWD of the DEP prior to operation of each by-product or solid waste storage and disposal area.

XXI. Federal Operating Permits and Fees

A. DEP Responsibilities

The Department of Environmental Protection shall implement the provisions of Title V of the 1990 Clean Air Act and the NPDES program for the Smith Generating Station developing conditions of certification requiring submission of annual operating permit information and annual pollutant emission fees in accordance with federal law and federal regulations and sections 403.0885, 403.0872, 403.5055, 403.509, and 403.511, F.S.

B. Gulf Power Responsibilities

Gulf shall submit the appropriate annual operating information as well as the appropriate annual pollutant emission and NPDES fees as required by federal law to the Department.

XXII. Wetlands Mitigation

A. General

1. Wetland Avoidance. The Permittee shall avoid impacting wetlands within the power plant site wherever practicable. Where necessary and feasible the location of plant facilities shall be varied to eliminate or reduce wetland impacts.

2. Fill Materials. Except as authorized by this Certification and other permits issued for this project, no fill materials may be obtained from excavated wetlands within the project site, unless in accordance with a mitigation plan submitted in compliance with the conditions of this Certification.

3. Additional Wetlands Mitigation. The Permittee may be required to provide additional mitigation and/or other measures if wetland monitoring and/or other information demonstrates that adverse impacts to protected, restored and/or mitigated wetlands have occurred as a result of project-related activities.

B. Additional Information Requirements

1. Expansion Area Wetlands Protection. Prior to the commencement of construction of any facilities located adjacent to the wetlands identified for preservation Gulf shall stake and rope off the protected wetland areas to prevent encroachment during construction. Staking shall remain in place until all adjacent construction activities are completed. Verification by DEP staff shall be required prior to commencement and upon completion of any construction activities.

2. The Permittee shall provide mitigation/ compensation (M/C) for any of the 15.2 acres of wetland or open water habitat within the jurisdiction of the DEP which is degraded or destroyed as a result of the construction of any portion of the power plant facilities. M/C may include the creation of new wetland or open water habitat, the restoration of degraded habitat, the enhancement of functions and values provided by existing wetland or open water habitats, removal of exotics, or other activities found by the relevant agencies and appropriate local government to be in compliance with their applicable regulations. Any elimination or degradation of any such wetland or open water habitat shall be in accordance with an approved mitigation plan to be attached to and incorporated into this document as Appendix B. The Mitigation Plan and any subsequent amendments to the plan shall be submitted for approval to the DEP's Northwest District Office. Gulf Power Shall submit the final Mitigation Plan within 90 days of certification. Submission of such plans shall be for the purpose of determining compliance with the Conditions of Certification. The mitigation plan or subsequent amendments shall, at a minimum, include the following:

a. Specific acreage figures and locations of all wetlands which would be impacted by the construction activities and other aspects of the project.

b. Modifications to the project which would reduce or eliminate the adverse environmental impacts of the project, including an explanation of why such alternatives were not undertaken or are not feasible.

c. Documentation that none of the proposed construction activities will adversely affect off site wetlands.

d. The specific acreages and locations of waters of the state to be created, enhanced, preserved, or protected as a result of the mitigation activity. The mitigation plan shall include the type and nature of these waters, species present or to be planted, plant density, anticipated source of plants, soils, proposed hydrologic regime, proposed elevations of the site, methods of construction or enhancement of the mitigation site, and a set of plan and cross sectional view drawings of the proposed mitigation site and activities.

e. A timetable of accomplishing the proposed mitigation activities.

f. A proposed conservation easement for the mitigation wetlands, if applicable.

g. A detailed maintenance and monitoring program designed to ensure the success of the mitigation plan proposed by the Permittee. Maintenance of the mitigation site shall include replanting of wetland vegetation; removal of exotic, invasive, or nuisance vegetation; additional construction to achieve the necessary hydrology; or any other activity necessary to secure success of the mitigation plan. Monitoring of the mitigation site shall be for the purpose of making a measured assessment of the mitigation plan's progress toward achieving a functioning wetland with a stable hydrologic regime; development or improvement of hydric soils; and natural, beneficial changes in vegetation composition, health, diversity, growth rates; and canopy characteristics. For any restored or enhanced wetland, the measure of success shall be survival of at least 80% of the appropriate wetland vegetation or coverage of at least 80% of the mitigation area by such vegetation. Monitoring of the mitigation site shall be conducted for not less than 5 years, with reports submitted annually to the DEP Northwest District Office. All monitoring stations shall be identified on a plan view of the mitigation site. This monitoring may be continued past the 5 year deadline on a year to year basis, depending on the extent to which the program has successfully achieved its objectives. However, DEP may at any time determine that such monitoring may be discontinued upon success of the program being demonstrated by the Permittee.

3. Prior to clearing activities within any of the on-site wetlands, an ecological survey shall be conducted to identify the presence of threatened or endangered species (plants and animals) as defined in the Application, likely to occur on the site based on range and habitat. This survey shall also identify the location of any wading bird colonies. Results of this survey shall be submitted to DEP and the Florida Fish and Wildlife Conservation Commission (FFWCC) and the United States Fish and Wildlife Service (USFWS). If it is determined that any of those species will be affected by the construction of any of the linear facilities, the Permittee shall consult with DEP and FFWCC to determine the appropriate steps to be taken to avoid, minimize, mitigate or otherwise appropriately deal with, any adverse impacts to resources within each agency's respective jurisdiction.

4. M/C plans must be found to fully compensate for the functions and values provided by wetlands that will be degraded or eliminated. DEP and SFWMD will work with the Permittee in the development of acceptable mitigation plans. The mitigation plans proposed by the Permittee shall be submitted for review and compliance monitoring to DEP and SFWMD and such review shall be subject to the time constraints set forth in specific Conditions XXII.9. below and IV.A.2 above, as appropriate.

5. For all construction activities in waters of the state where DEP has wetland resource protection jurisdiction pursuant to Chapter 403, F.S., the Permittee shall file with DEP's Office

of Siting Coordination and Northwest District Office the information described in F.A.C. Rule 17-17.665 and DEP Form 17-1.212(1), Section 3.2.2.

6. DEP shall promptly review the submittal for completeness and sufficiency and process the information in accordance with Condition III.H..

7. If DEP does not object within the time period specified, Permittee may begin construction pursuant to the terms of the conditions of certification and the subsequently submitted construction details and DEP shall provide to the Corps of Engineers a letter indicating that the full requirements of this condition have been met and the water quality certification for the purposes of 33 USC Section 1341 is thereby conveyed.

8. Permittee, at its option, may submit information for different wetlands modification activities at different time intervals. Each submittal shall be processed by DEP separately.

9. Semi-annual narrative reports shall be submitted to DEP's Northwest District Office, indicating the status of all construction activities within jurisdictional wetlands and waters of the state. These reports shall be submitted until all construction in that respective area is complete. The cover page shall indicate the certification number, project name and Gulf power Company's name. The reports include the following information:

a. Date the activity (dredge and fill) began; if work has not begun on site, please so indicate.

b. Brief description and extent of work (restoration, mitigation or maintenance) completed since the previous report or since certification was issued. Indicate on copies of the certification drawings those areas where work has been completed. Also indicate any areas in which the actual impacts were less than the scope of the certified work.

c. Brief description and extent of work anticipated in the next six months. Indicate on copies of the certification drawings those areas where it is anticipated that work will be done.

d. Reports detailing the progress of the restoration/mitigation program. The reports shall include: photographs taken from the same permanent stations (some of which must be in the vegetation sampling areas), a description of problems encountered and solutions undertaken, and anticipated work for the next six months.

e. This report shall include on the first page, just below the title, the certification of the following statement by the individual who supervised preparation of the report: "This report represents a true and accurate description of the activities conducted during the six month period covered by this report."

10. Upon completion of construction, the Permittee shall provide DEP with detailed engineering drawings which depict the pre and post construction contours in all areas in which construction occurred in jurisdictional wetland areas.

11. The Permittee shall perform the work authorized under the certification in a manner so as to minimize any adverse impacts on fish, wildlife, native vegetation, natural environmental values, water resources, and water quality.

12. The Permittee shall be responsible for the correction of any water quality problems that result from the construction, operation and/or maintenance of works authorized under this certification. The Permittee will work with DEP to determine additional methods necessary to ensure that state water quality standards are not violated as a result of construction.

13. Where necessary to prevent secondary impacts to adjacent wetlands during construction, adjacent wetland areas outside of the limits of construction shall be isolated from the construction area by silt fences. These silt containment devices shall be maintained and remain in place until all construction is complete and all associated side slopes or areas denuded of vegetation have been adequately stabilized. The Permittee shall be responsible for explaining the significance of these barriers to all construction personnel prior to construction. The Permittee shall use turbidity control as necessary so that turbidity levels in adjacent areas do not exceed 29 N.T.U.s above natural background. Any placement of fill or encroachment into jurisdictional wetlands or waterbodies outside the limits of construction shall be immediately reported to DEP's Northwest District Office. Appropriate remedial action to restore the affected area shall be immediately undertaken.

14. Best management practices for erosion control shall be implemented and maintained at all times during construction to prevent siltation and turbid discharges in excess of State water quality standards pursuant to Rule 62-302, F.A.C. Methods shall include, but are not limited to the use of staked hay bales; staked filter cloth; sodding, seeding, and mulching; staged construction; and the deployment of turbidity screens around the immediate project site.

Gulf shall be responsible for ensuring that erosion control devices and procedures are inspected and maintained daily during all phases of construction authorized by the certification until all areas that were disturbed during construction are sufficiently stabilized to prevent erosion, siltation, and turbid discharges.

The following measures shall be taken immediately by Gulf whenever turbidity levels within waters of the State surrounding the project site exceed State water quality standards established pursuant to Rule 62-302, F.A.C.:

- a. Immediately cease all work contributing to the water quality violation.

b. Stabilize all exposed soils contributing to the violation. Modify the work procedures that were responsible for the violation, and install more turbidity containment devices and repair any non-functioning turbidity containment devices.

c. Notify the Siting Coordination Office, and the DEP Northwest District office within 24 hours of the time the violation is first detected.

15. Organic soil deposits excavated on the construction site shall be transported to the mitigation area to mulch the mitigation area as practicable.

16. Within 30 days of achieving final grade, the wetland restoration and creation areas shall be surveyed and a topographic map shall be prepared. A topographic map shall be submitted to the Siting Coordination Office, and the Department's Northwest District office within 60 days of achievement of final grade. The topographic map shall meet the following criteria:

a. It shall clearly depict the wetland topography in such a way as to unambiguously show how the site will retain, detain, shed, or otherwise influence the flow and detention of water at the site;

b. It shall show six in. contour intervals based on a 50 ft., or finer, resolution grid;

c. It shall be certified by a registered land surveyor;

d. It shall show any hydrologic connections between the created and adjacent, existing wetlands; and

e. It shall show the variations of topographic relief within the graded areas, which may require showing topographic intervals or spot elevations as finer than six in., in some portions of the site.

17. The trees in the mitigation area shall be planted in staggered manner so as to avoid the establishment of straight rows of trees and to result in a more natural spatial distribution of the trees.

18. Forested wetland enhancement or restoration shall be considered successful when the following conditions are met:

a. An average of at least 400 wetland trees per acre shall be growing above the herbaceous stratum, with canopy cover of at least 35 percent;

b. The wetland species tree cover shall exceed 35% of the total area and in no area of an acre in size shall the tree cover be less than 20% total cover. Cover measurement shall be restricted to (1) those trees exceeding the herbaceous stratum in height and (2) those indigenous

species that contribute to the overstory of the mature forest of the area that are wetland vegetation listed in Florida Administrative Code Rule 62-301.400;

c. At least 80% of obligate groundcover (herbaceous) and obligate shrub (non-canopy woody species) vegetation shall among be those species listed in Florida Administrative Code Rule 62-301.400, and shall be reproducing naturally, either normal, healthy, vegetative spread (in ways that would be normal for each wetland species) or through seedling establishment, growth and survival. Nuisance species such as Mikania scandens (climbing hempvine), Typha sp. (cattail) and Ludwigia peruviana (primrose willow) and all exotic species, shall be limited to 1% or less of the total cover.

Gulf shall undertake required maintenance activities within the wetland compensation area in accordance with the approved Maintenance Plan as needed throughout the monitoring period. Maintenance shall include the manual removal (with sufficient frequency) of all nuisance and exotic plant species, such that their combined coverage at no time exceeds the criteria within the Wetland Compensation Success Criteria. Gulf may use state approved herbicides with the prior approval of the Department, if it encounters problems with the removal of nuisance and exotic plant species.;

d. At least 80 percent non-canopy cover of desirable plant species;

18. Gulf shall furnish to the Siting Coordination Office and the Department's Northwest District office annual statistical reports of vegetational sampling of the restored and created wetlands done by any mutually agreed-upon method. Acceptable methods may be found in Daubenmire (1968), Green (1979), Grieg-Smith (1983), Mueller-Dombois and Ellenberg (1974), Oosting (1956), Poole (1974), and Southwood (1978). It is the responsibility of SECI to ensure that the monitoring report provides a qualitative and quantitative depiction of the site that is representative of the conditions at the entire restoration and creation site. This report shall include on the cover page, just below the title, the certification of the following statement by the individual who supervised preparation of the report: "This report represents a true, accurate, and representative description of the site conditions present at the time of monitoring."

a. A monitoring plan describing sampling methods and report format and map of sampling locations and photographic stations shall be submitted to the Department for review and approval within 60 days prior to construction of the mitigation area. If this plan differs from the plan previously approved by the Department, a copy will be submitted to the DEP Northwest District for approval.

b. Annual statistical reports shall describe as appropriate for each restoration and enhancement area: (1) the density and percent cover of listed trees, (2) percent cover of listed and non-listed herbaceous species, bare ground and water. For forested wetlands, canopy cover shall be submitted for not less than the third, fifth, and any subsequent years after planting until a determination of a successful restoration has been made. Data for listed nuisance or exotic species shall be tabulated separately from the remaining data. A listed species is one listed in

Florida Administrative Code Rule 62-301.400. Reports shall also include an assessment of the jurisdictional status of each restoration and mitigation areas. Data shall be taken during the summer growing season. Reports shall be submitted annually within 60 days of data collection until a determination of a successful wetland restoration or enhancement has been made. The first annual statistical report data gathering shall occur not later than one year after planting.

c. Following implementation of the mitigation and restoration plan, monitoring of mitigation and restoration wetlands to assess the effectiveness of the mitigation and restoration projects, in accordance with the methods established in the monitoring section, shall be performed until a determination of success is obtained. At the end of the first three years of monitoring, Gulf may request in writing that the monitoring program be reviewed by the Department to determine whether or not the frequency or parameters of the monitoring program should be changed.

d. If it is determined by Department staff, based on visual inspection and review of the monitoring reports that the restoration or mitigation effort is not successful pursuant to Specific Condition No. 18. above, Gulf shall present methods and proposals to be reviewed and approved by the Department within 30 days of the Department's notification to ensure success of the effort. The plan of corrective actions shall be implemented within 90 days of written approval by the Department.

References cited in XXII. are the following:

Daubenmire, R. 1968. *Plant Communities: A Textbook of Synecology*. Harper & Row, New York. 300 pp.

Green, R. H. 1979. *Sampling Design and Statistical Methods for Environmental Biologists*. John Wiley & Sons, New York. 257 pp.

Grieg-Smith, P. 1983, 3rd Ed. *Quantitative Plant Ecology*. University of California Press, Berkeley.

Mueller-Dombois, D. and H. Ellenberg. 1974. *Aims and Methods of Vegetation Ecology*. John Wiley, New York. 547 pp.

Oosting, H. J. 1956. *The Study of Plant Communities: An Introduction to Plant Ecology*. W. H. Freeman, San Francisco. 440 pp.

Poole, R. W. 1974. *An Introduction to Quantitative Ecology*. McGraw-Hill, New York.

Southwood, T. R. E. 1978. *Ecological Methods*. Chapman & Hall, London.

XXIII. NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT

> 1. The Permittee, by January 31, April 30, July 31, and October 31, of each year, shall report the following information as specified below:

a. Water quality results from tests conducted on each production well of the system during the first two weeks of the months January, April, July, and October as appropriate to the reporting period. The water quality analysis shall test for the following chemical concentrations: chloride, sodium, sulfate, bicarbonate, carbonate, calcium, magnesium, potassium, and total dissolved solids. Prior to sampling, the Permittee shall purge approximately three to five well volumes from each well, and shall report with each set of test results, the duration of purging, purge volume, and purge rates used.

> b. Static water level data for each production well as recorded during the first two weeks of January, April, July, and October as appropriate to the reporting period. The Permittee shall contact the NFWFMD for assistance in designing the method and specifics of data collection. The water level data shall be referenced to mean sea level.

2. The NFWFMD retains the discretion to decide whether to require monthly water quality in the future based on resource concerns.

3. The use of the permitted water withdrawal is restricted to the use described in the Site Certification Application. Any change in the use of said water shall require a modification of the Site Certification.

4. The District's staff, upon proper identification, will have permission to enter, inspect and observe permitted and related facilities in order to determine compliance with the approved plans, specifications, and conditions of this permit.

5. The District's staff, upon providing prior notice and proper identification, may request permission to collect water samples for analysis, measure static and/or pumping water levels and collect any other information deemed necessary to protect the water resources of the area.

6. Gulf Power shall mitigate any significant adverse impact caused by withdrawals permitted herein on the resource and legal water withdrawals and uses, and on adjacent land use, which existed at the time of filing of the SCA. The District reserves the right to curtail permitted withdrawal rates if withdrawals cause significant adverse impacts on the resource and legal water withdrawals and uses, and on adjacent land use, which existed at the time of Site Certification.

7. Gulf Power shall not cause significant saline water intrusion or increased chloride levels. The District reserves the right to curtail permitted withdrawal rates if withdrawals cause significant saline water intrusion or increased chloride levels.

8. The District, pursuant to Section 373.042, F.S., at a future date, may establish minimum and/or management water levels in the aquifer, aquifers, or surface water hydrologically associated with the permitted withdrawals; these water levels may require the Gulf Power to limit withdrawal from these water sources to comply with the established levels.

9. Nothing in this Site Certification shall be construed to limit the authority of the Northwest Florida Water Management District to declare water shortages and issue orders pursuant to Section 373.175, F.S., or to formulate and implement a plan during periods of water shortage pursuant to Section 373.222246, F.S., or to declare Water Resource Caution Areas pursuant to Chapters 40A-2.801, and 62-40.41 F.A.C.

(a) In the event of a declared water shortage, water withdrawal reductions shall be made as ordered by the District.

(b) In the event of a declared water shortage or an area as a Water Resource Caution Area, the District may alter, modify or inactivate all or parts of this section of the Conditions of Certification.

10. Gulf Power shall, by January 31 of each year, submit for ground water withdrawals, a completed Water Use Summary Reporting Form (NFWFMD A2-I) for each month of the previous year. Water use amounts for each well may be calculated using flow meter readings at the plant divided by the pump rate of each well. The calculations must be provided with each submittal. The first report is due by January 31, 2003, and a final report shall be submitted when the wells are removed from service.

11. The District reserves the right, at a future date, to require the Gulf Power to submit actual pumpage records for withdrawals not otherwise required by this Certification.

12. Gulf Power shall reference the power plant's wells by their Florida Unique Identification Number when corresponding with the District (pumping reports, etc.).

13. Gulf Power shall properly plug and abandon any well determined unsuitable for its intended use, not properly operated and maintained, or removed from service. The well(s) shall be plugged and abandoned to District Standards in accordance with Section 40A-3.531, F.A.C. Gulf shall also notify the District within 30 days of removing any well associated with the facility from service.

14. Gulf Power shall provide for the efficient and non-wasteful use of water, and shall implement water conservation measures designed to enhance water use efficiency and reduce water demand and losses.

XXIV. DEPARTMENT OF COMMUNITY AFFAIRS

A. Wind Loading

Prior to the commencement of construction of Smith Unit 3, Gulf Power Company (Gulf) shall provide the Department of Community Affairs certification by a licensed engineer that the Smith Unit 3 structures and any associated liquid storage tanks will comply with the wind loading provisions of ASCE 7-95, "Minimum Design Loads for Buildings and other Structures."

B. Hurricane Preparation, Evacuation and Recovery Plan

Gulf shall develop a comprehensive hurricane preparation, evacuation and recovery plan (the "Plan") for the Lansing Smith Generating Station Unit 3 ("Smith Unit 3"). The Plan shall include the following elements:

1. Annual pre-season hurricane preparation activities.
2. Process for hurricane preparation to be undertaken prior to expected arrival at Smith Unit 3 of tropical storm-force winds (sustained winds greater than 39 mph), including (as appropriate to the expected force of storm):
 - a. Securing and/or removing any hazardous materials at Smith Unit 3
 - b. Minimum levels necessary for stability of any liquid storage tanks
 - c. Processes and criteria for staffing, securing and evacuation of Smith Unit 3 including:
 - (1) Determination of essential staffing
 - (2) Criteria for release of non-essential staff
 - (3) Process for preparing Smith Unit 3 for essential staff to remain on site
 - (4) Criteria for determining whether evacuation of essential staff is required
 - (5) Process for preparing Smith Unit 3 and conducting an evacuation of all staff, including provisions for securing fuel supplies
3. Communications plan for:
 - a. Notification of storm-specific decisions by and between Gulf and the Bay County Emergency Management Office
 - b. Coordination of post-storm Smith Unit 3 recovery efforts with Gulf and the Bay County Emergency Management Office
 - c. Coordination of changes in the Plan with the Bay County Emergency Management Office
4. General recovery estimates:
 - a. Types of damage which could be sustained at Smith Unit 3 from flooding at the following elevations:
 - (1) 14.2 feet above National Geodetic Vertical Datum at mean high tide
 - (2) 14.2 feet to 17.7 feet above National Geodetic Vertical Datum at mean high tide

- b. For each elevation category identified above:
- (1) Procedures for re-entry to Smith Unit 3 for recovery purposes
 - (2) Processes for achieving recovery
 - (3) Ranges of estimated time periods required for recovery

5. Gulf shall submit the Plan to the Department of Community Affairs (two copies), Florida Department of Environmental Protection, and the Bay County Emergency Management Office no later than the commencement of construction of Smith Unit 3. All receiving agencies shall provide their comments on the Plan to the Department of Community Affairs and Gulf within 30 days of receipt. The Department of Community Affairs and Gulf shall confer about the comments within the next 30 days. Within 30 days after such conferral, the Department of Community Affairs shall consolidate and provide to Gulf such comments as it deems appropriate. Gulf shall finalize the Plan within 60 days thereafter and provide copies to the Department of Environmental Protection, the Department of Community Affairs, and Bay County Emergency Management Office. The Plan shall be formally updated, using the same process, no less frequently than every 5 years following commercial operation of Smith Unit 3.

If the Department of Community Affairs deems the Plan or any of its periodic updates not to be in compliance with the requirements of this Condition, it may petition for enforcement of this condition pursuant to the Florida Electrical Power Plant Siting Act (ss. 403-501-403.518, Florida Statutes)

C. Noise Condition

Gulf shall notify area residents in advance of the onset of the steam cleaning noise phase of construction.

XXV. DEPARTMENT OF TRANSPORTATION

A. Access Management to the State Highway System:

No new access to the State Highway System is proposed in the site certification application. If new access or modification of current access to the State Highway System is proposed at a later date, such as related to the borrow pit sites when they are identified, access will be subject to the requirements of Rule Chapters 14-96, State Highway System Connection Permits, Administrative Process, and 14-97, State Highway System Access Management Classification System and Standards, Florida Administrative Code, will be required.

B. Overweight or Overdimensional Loads:

Operation of overweight or overdimensional vehicles by the applicant on the State transportation facilities will be subject to the safety and permitting requirements of Chapter 316, Florida Statutes, and Rule Chapter 14-26, Safety Regulations and Permit Fees for Overweight

and Overdimensional Vehicles, Florida Administrative Code.

C. Use of State of Florida Right of Way or Transportation Facilities:

If any use of State of Florida right of way or transportation facilities is later proposed, such usage will be subject to the requirements of the Department of Transportation's Utility Accommodation Manual and Rule Chapter 14-46, Railroads/Utilities Installation or Adjustment, Florida Administrative Code. ~~Depending upon the corridor or route used, any new or additional interconnections between the power plant and the City of Port Orange or other off-site water reuse system may require the applicant to meet the requirements of the Utility Accommodation Manual if the construction or installation of these interconnections fall within State of Florida right of way or a State transportation facility.~~

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D. Traffic Control:

Traffic control will be maintained on the State Highway System during plant construction and maintenance, particularly as related to the borrow pits when they are identified, in compliance with the standards contained in the Manual of Uniform Traffic Control Devices; Statewide Minimum Level of Service Standards, Rule Chapter 14-94, Florida Administrative Code; Florida Department of Transportation's Roadway and Traffic Design Standards and the Florida Department of Transportation's Standard Specifications for Road and Bridge Construction, whichever is more stringent.

FROM GULF POWER/ HGSS

ELECTRIC POWER PLANT SITE CERTIFICATION REVIEW

FOR

LANSING SMITH UNIT 3

SUBMITTED BY

GULF POWER COMPANY

PA 99-40

Siting Coordination Office

Department of Environmental Protection

State of Florida

3900 Commonwealth Boulevard

Tallahassee, Florida 32399-3000

1 SUMMARY

1.1 FACILITIES OVERVIEW

On June 7, 1999, Gulf Power Company (GPC) filed with the Department of Environmental Protection a Site Certification Application to certify a 574 megawatt (MW), natural gas-fired, combined cycle generating unit at Gulf Power's existing Lansing Smith Generating Station in Bay County, Florida. The proposed project is being permitted under the provisions of the Florida Electrical Power Plant Siting Act (PPSA). Certification of the 50.1 acre site north of the existing Lansing Smith units will allow the construction and operation of Lansing Smith 3, a modern high efficiency natural gas-fired unit.

Natural gas to fuel Unit 3 at the Lansing Smith site would be delivered by a new gas pipeline lateral from an existing Florida Gas and Transmission Company pipeline.

1.2 ENVIRONMENTAL AND SOCIOECONOMIC IMPACTS

Unit 3 and its associated facilities will occupy approximately 50.1 acres located north of two existing Lansing Smith Units within property owned by Gulf Power. Unit 1 is a 162 MW coal-fired generator, while Unit 2 is an 194 MW, coal-fired generator. The power plant has been in operation since 1965.

The proposed project would provide a peak of 325 construction jobs and an average of 180 jobs during the approximately 21 month construction phase. The power plant expansion will require 29 additional workers after Unit 3 becomes operational.

The new unit will be burning only natural gas. Impacts on air quality will be caused by emissions of sulfur dioxide, oxides of nitrogen, particulate matter and other minor constituents such as hydrocarbons. These emissions will be limited by use of control technology considered to be the best available. Fugitive dust from vehicles and heavy equipment will be controlled by a variety of methods to comply with federal and state emission limitations. The plant is not expected to contribute to violations of ambient air quality standards or to significantly impact public health and the environment.

Impacts to onsite wetlands have been avoided or minimized through orientation of the new facilities. Site impacts would be restricted to a silvicultural area just north of the existing plant. A new natural gas pipeline will come from the north via corridor generally along State Road 77. This pipeline will be permitted by Florida Gas.

Terrestrial ecological impacts will be minimal since most new facilities will be

constructed on previously disturbed land. The location of Unit 3 is north of and adjacent to the existing power generation units on ~~acres of~~ land that has been previously cleared and planted with pines. Silvicultural operations including prescribed burning has affected the ecological quality of the proposed site.

RECOMMENDATION

If Gulf Power agrees to abide by the Conditions of Certification, attached and incorporated herein as Appendix I, the Department of Environmental Protection would recommend certification of the Lansing Smith Unit 3 Project for the 574 MW to be generated by combustion of natural gas.

2 SITE CERTIFICATION PROCESS

2.1 DETERMINATION OF NEED

The "Power Plant Siting Act" (sections 403.501-518, Florida Statutes) requires that a formal "Determination of Need" be made by the Florida Public Service Commission (PSC) pursuant to section 403.519, F.S., prior to certification of any expansion in steam electric power generating capacity. The PSC found that the petition for the determination of need should be granted.

On August 2, 1999, the PSC issued Order No. PSC-99-1478-FOF-EI for Docket No. 990325-EI which stated the following in the CONCLUSION:

"We grant Gulf Power Company's petition for a determination of need for the proposed Smith Unit 3. The record, as discussed above, clearly demonstrates that Gulf has met the statutory criteria for a determination of need."

A copy of the PSC's Order is attached as Appendix IIA. The PSC's Order was based on the following findings: 1) "We find that Smith Unit 3 is necessary for the reliability and integrity of Gulf's electrical system as contemplated by Section 403.519, Florida Statutes." 2) "The testimony of Witnesses Moore, Neyman, Marler, Pope, Burke, and Howell demonstrates that Smith Unit 3 is necessary to provide adequate electricity at a reasonable cost to Gulf's ratepayers as that criterion is expressed in Section 403.519, Florida Statutes." 3) "Upon consideration of the evidence, we find that Smith Unit 3 is the most cost effective alternative available to Gulf to meet its need for adequate electricity at a reasonable price."

2.2 SITE CERTIFICATION APPLICATION REVIEW

The procedures and requirements for granting or denying a certification to construct and operate an electric power generating facility in the State of Florida are set forth in the "Florida

Power Plant Siting Act", Sections 403.501-518, Florida Statutes, and the "Power Plant Siting Rule", Chapter 62-17, Florida Administrative Code. The statute establishes the certification agent to be the Siting Board which is composed of the Governor and Cabinet of Florida.

The Department of Environmental Protection (DEP) has been designated as the lead agency for the review and evaluation of Site Certification Applications (SCAs) and is charged with preparing a SCA impact analysis report and a recommendation to the Siting Board for granting or denying the requested certification. A recommendation to grant certification shall include a Conditions of Certification statement that specifies all requirements and restrictions of the Certification that will apply to the construction and operation of the proposed facility.

Specific concerns to be addressed in the review of this SCA shall include but not be limited to:

- nearfield and farfield impacts on air quality;
- impacts on surface water or groundwater quality;
- impacts on terrestrial and aquatic ecosystems;
- impacts from solid waste or hazardous waste disposal;
- impacts from domestic or industrial wastewater disposal;
- impacts from stormwater management;
- impacts from site modification such as noise or meteorological changes;
- impacts on water supply;
- impacts on surrounding land uses;
- impacts on traffic;
- impacts on public lands and submerged lands;
- environmental and public health risk assessments;
- impacts on archaeological sites and historic preservation areas;
- accessibility to transmission corridors;
- proximity to transportation systems;
- fuel and fuel transportation and on-site storage requirements;
- cooling system requirements;
- soil and foundation conditions;
- construction and operational safeguards; and
- any site specific concerns identified in the review process.

Although the DEP is designated as the lead agency, many of the concerns that are to be addressed in the SCA impact assessment are outside the purview of DEP. Consequently, the Power Plant Siting Act ("Siting Act") requires several other state agencies to participate in the review process. Each of these agencies is directed to review the SCA with regard to compliance with the statutory and administrative requirements of the reviewing agency. Each of these agencies is further directed to prepare a written report to the DEP explaining their findings and specifying any restrictions or requirements that should be included in the Conditions of

Certification. These agencies are:

- Public Service Commission (PSC);
- Department of Community Affairs (DCA);
- Water Management District (WMD) with jurisdiction over the site;
- local governments with jurisdiction over the site;
- Fish and Wildlife Conservation Commission (FWCC);
- Regional Planning Council with jurisdiction over the site; and
- any other agency if requested by DEP, including EPA.

Other agencies or interest groups are encouraged to provide information, expertise and comment relating to the impact assessment. Comments, concerns and issues raised by these agencies, interest groups and the general public are integrated into the overall review and are addressed in the DEP report where appropriate. Written comments received prior to the publication date of the report are included in their entirety in Appendix II.

2.3 AGENCY COMMENTS

Public Service Commission

The Public Service Commission (PSC) has concluded that the Lansing Smith 3 project is needed and appears cost effective. In PSC Order No. PSC-99-1487-FOF-EI, issued August 2, 1999, the PSC concluded the following:

“We grant Gulf Power Company’s petition for a determination of need for the proposed Smith Unit 3. The record, as discussed above, clearly demonstrates that Gulf has met the statutory criteria for a determination of need.”

A copy of the PSC Order is attached as Appendix II.A

Department of Community Affairs

On November 30, 1999, the Department of Community Affairs (DCA) submitted their report on the Lansing Smith project. DCA stated: The final report presents recommendations addressing the impact upon the public of the proposed power plant, based on the degree to which power plant is consistent with the applicable portions of the State Comprehensive Plan. We conclude that the construction and operation of the Unit 3 power plant at this site is consistent with the State comprehensive Plan if our recommendations are included as conditions of certification.” The DCA’s entire report is attached as Appendix IIB.

The DCA assessed the consistency of the construction and operation of the combined cycle Unit 3 with the goals and policies of the State Comprehensive Plan (SCP). Recommended

conditions of certification were recommended by DCA to improve the project's consistency with the State Comprehensive Plan. The DCA assessed the compatibility of the proposed power plant with the SCP as a whole. It did so by concentrating on those goals and policies that appear to have some relevancy to the proposed power plant. These goals and policies included: Housing, Public Safety, Water Resources, Natural Systems and Recreational Lands, Air Quality, Energy, Hazardous and Nonhazardous Materials and Wastes, Land Use, Public Facilities, Cultural and Historic Resources, Transportation, and Employment. The DCA indicated a preference for locating additional electrical generating facilities at existing sites, other things being equal.

The DCA recommended that Unit 3 have a fire-fighting system, commensurate with the fire-fighting needs of this type of unit, that the DEP make a BACT determination as stringent as other recently certified combined cycle power plants, in order to minimize inconsistencies with the Air Quality policies of the SCP, that Gulf promote ride sharing during construction and operation, and that Gulf look into providing job and economic opportunities for unemployed and economically disadvantaged residents of the area. DCA also recommended conditions of certification concerning hurricane preparation, evacuation and recovery. Those conditions are included with the Conditions of Certification attached to this report as Appendix I.

West Florida Regional Planning Council

On September 27, 1999, the West Florida Regional Planning Council (WFRPC) submitted their report which is attached hereto in Appendix II.C. The Regional Planning Council stated in their report:

"The staff of the West Florida Regional Planning Council have reviewed the above referenced proposed project under the Intergovernmental Coordination & Review Process (IC&RP) and find it to be consistent with the Strategic Regional Policy Plan. No other comments are forwarded."

Northwest Florida Water Management District

On January 10, 2000, the Northwest Florida Water Management District submitted a report including a memorandum summarizing recent District actions on the Smith facility. The transmittal letter contained the following statement: "At this point the District has no further comments or input regarding facility proposals." The January 10, 2000, District memorandum is as follows:

"Gulf Power recently submitted a Consumptive Use Permit Modification and Renewal to increase their permitted withdrawals from the Floridan Aquifer by 0.5 Mgal/d for a total

amount of 1.2 Mgal/d. In addition Gulf Power also requested increases in the maximum daily and maximum monthly ground water withdrawal amounts. The applicant did not request a change in the permitted average daily surface water amount of 264.6 Mgal/d from North Bay.

"The company has determined that in order to meet increasing electrical demands in its service area it must add at least 427 MW (megawatts) of new generating resources to its system by the year 2002. The proposed Smith Unit 3, to be built just north of the existing facility, will utilize combined cycle (CC) design concepts and equipment to achieve a relatively high level of efficiency in electrical production. Gulf Power anticipates the construction of Smith Unit 4 within five years that will add further electrical generating capacity to the system.

"The proposed expansions will require an additional .25 Mgal/d of ground water per plant to provide a source of relatively "pure" water. Raw ground water will be used as a source of both filter water and demineralized water to be used for such purposes as turbine steam injection, evaporative coolers, drinking water and chemical cleaning. Gulf Power is proposing to construct an additional 12-inch diameter Floridan Aquifer well to meet the increased demands for ground water. The well will be located north of the expansion area near the intersection of the transmission line easement and County Road 2300. The proposed location and construction of the fourth well was previously authorized in 1984 permit application. This well will provide an additional .72 Mgal/d capacity of water needed for the plant's industrial needs.

B Gulf Power's surface water supply and return system operates continuously and consists of an intake area located on Alligator Bayou and a discharge canal which leads to West Bay. The applicant indicates that approximately 1.5% of the discharge water is lost to evaporation in the cooling system. Smith Units 3 and 4 will utilize a cooling tower and water previously discharged from existing Smith Units 1 and 2. The planned project will use hot water from the existing cooling system and discharge cooler water back to the existing discharge canal. Therefore, the proposed projects will not require an increase in surface water withdrawals.

"Raw ground water from the existing and proposed wells will be used as the precursor for both filtered and demineralized water production. The applicant indicates that .7 Mgal/d will be required for the existing Smith Units 1 and 2 due to the requirement for low sulfur coal and additional air pollution control equipment. The water use requirement for Smith Unit 3 is .25 Mgal/d and an additional .25 Mgal/d will be required when Smith Unit 4 is brought on line. Therefore, the facility's total demand for ground water upon completion of the applicant's two new power plants including power augmentation and normal operations is expected to be an average daily amount of approximately 1.2 Mgal/d. The cooling water system has the greatest need for water. Gulf Power submitted

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with the Site Certification Application (SCA) a detailed water budget flow diagram and spreadsheet which summarize the facility's normal operating and power augmentation demands.

"As part of the application, the District required the applicant to undertake a detailed evaluation of the anticipated impacts to the resource and existing users from the proposed increased ground water withdrawals. Of particular concern to the District is the potential for increased saltwater intrusion, which has impacted the quality of the water withdrawn from the applicant's wells. Site records indicate that ground water withdrawn has historically shown increased concentrations of chlorides in response to pumping. In 1997 and 1998, well LSGP #1 had an average chloride concentration of 275 mg/L (milligrams per liter), In 1999, wells LSGP #2 and LSGP #3 had chloride concentrations exceeding 100 mg/L. Trends in increasing chloride concentrations are evident from water quality records dating back to 1965. In 1965, the average chloride concentration in wells LSGP #1 and LSGP #2 was 8 mg/L in each well.

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"Gulf Power is of the opinion that the potential for impacts from saltwater intrusion will be reduced by several of its actions. For example, Gulf Power intends to redistribute some of its withdrawal activity further inland. Well LSGP #4, is to be located approximately 1.3 miles inland from the existing well field. This well will also provide an additional capacity of approximately .72 Mgal/d. Once this well is online, the main facility wells can be pumped at an average daily rate of .48 Mgal/d, a reduction of .22 Mgal/d from the currently permitted .7 Mgal/d. Additionally, Gulf Power plans to rotate the pumping of the main facility wells using an automated system. The automated pumping system will rotate pumping schedules on a daily basis among the three existing wells. This action will allow the wells to achieve ¹³ better water level recovery than is currently available with the manual rotation system. It is the specific objective of these efforts to minimize upconing of poorer quality water. ¹³ better

"As a result of the potential for upconing, the District issued the permit with Specific Conditions required water quality and level monitoring. Some of these conditions were revised as a result of comments received from Gulf Power. Moreover, Specific Condition No.1 required Quarterly reporting of the Plant's water use. This condition was revised to allow the annual reporting of daily water usage while the following condition (#2) retained the quarterly reporting requirement.

"2. The Permittee, by January 31, April 30, July 31, and October 31 of each year shall report the following information as specified below:

"a. Water quality results from tests conducted on each production well of the system during the first two weeks of the months of January, April, July, and October as appropriate to the reporting period. The water quality analysis shall test for the

following chemical concentrations: chloride, sodium, sulfate, bicarbonate, carbonate, calcium, magnesium, potassium, and total dissolved solids. Prior to sampling, the Permittee shall purge, approximately three to five well volumes from each well, and shall report with each set of test results, the duration of purging, purge volume, and purge rates used.

“b. Static water level data for each production well as recorded during the first two weeks of January, April, July, and October as appropriate to the reporting period, The Permittee shall contact the District for assistance in designing the method and specifics of data collection. The water level data shall be referenced to mean sea level.”

The entire report attached as Appendix II.D. The NFWFMD's proposed Conditions of Certification are included as part of the Department's Recommended Conditions of Certification attached to this report as Appendix I.

Division of Historical Resources

The Division of Historical Resources (DHR) in a letter dated July 2, 1999, stated:

“In accordance with Chapter 403, *Florida Statutes*, and implementing state regulations, we have reviewed the referenced project for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places*, or otherwise of historic, architectural or archaeological value.

“A review of the Florida Master file indicates that no significant archaeological or historic sites are recorded for or likely to be present within the project area.

Furthermore, because of the project location and/or nature it is ~~likely~~ ^{unlikely} that any such sites will be affected. Therefore, it is the opinion of this office that the project will have no effect on historic properties listed, or eligible for listing in the *National Register of Historic Places*.”

Bay County did not submit a report.

Department of Transportation

The ~~In~~ their November 29, 1999, report, the Department of Transportation (DOT) recommended the certification of the proposed power plant expansion contingent upon the conditions in Section VI of their report being addressed or met. Their report is attached as Appendix II.E. The DOT's Applicable Conditions of Certification are included in Appendix I.

Florida Fish and Wildlife Conservation Commission

On August 25, 1999, the Game & Fish Commission submitted a preliminary statement of issues containing the following areas of concern:

"1. Direct impacts to fish and wildlife habitat from project construction

"Approximately 32.7 acres of the 50.1 acre site proposed for the construction of Smith Unit 3 will be impacted by construction activities, with the remaining 17.4 acres being left as natural vegetated communities. Of the 32.7 acres to be developed, approximately 15.2 acres consists of wetlands. We will be assessing the adequacy of the mitigation plan to replace wetland functions and fish and wildlife habitat values when it is submitted pursuant to this application and the joint FDEP/U.S. Army Corps of Engineers dredge-and-fill application.

"2. Impacts of the construction and operation of the facility on listed fish and wildlife species

"The facility has the potential to impact listed species, either from direct construction impacts which will include loss of wetlands utilized by wading birds, or from project operations that could affect the estuarine resources important to bald eagles, brown pelicans, sea turtles, and manatees. Although the application indicates that there is a low probability of occurrence of listed species on the construction site, previously undocumented listed species use may be occurring. Regarding the manatee specifically, we will be assessing the importance of a warm water refuge for the manatee, in view of the increased observations of manatees in the Florida panhandle in the last few years."

On November 29, 1999, the Fish and Wildlife Conservation Commission submitted their final report which state:

"The Office of Environmental Services of the Florida Fish and Wildlife Conservation Commission has reviewed the referenced application, and has concluded that the certification of this proposed facility would not cause any significant impacts to fish and wildlife resources under our jurisdiction. Therefore, we offer no recommendations for conditions of certification."

Department of Health submitted no report.

Environmental Protection Agency

On November 23, 1999, the United States Environmental Protection Agency (EPA) 's sent a letter to the Department approving a custom natural gas monitoring schedule pursuant to 40 C.F.R. 75, Appendix D provided that certain conditions are met. The conditions are included in the draft Prevention of Significant Deterioration Permit (PSD Permit) incorporated

in a following section of this report and in the Conditions of Certification attached to this report. On December 9, 1999, EPA submitted an additional letter commenting on the Preliminary Determination and draft PSD Permit. A copy of EPA letters are attached as Appendix II.F.

2.4 HEARINGS

During the course of the SCA review process there are formal public and administrative hearings required by the Siting Act including:

- a Public Hearing on the compliance with land use plans and zoning requirements;
- a Certification Hearing on the Application including review of the DEP and other agency impact assessments and on the Conditions of Certification; and
- a final Hearing before the Siting Board.

2.5 CERTIFICATION PROCESS

Subsequent to the issuance of a Certification, the licensed facility may be required to participate in a Post Certification Review that determines compliance with and the adequacy of the Conditions of Certification. Furthermore, the Certification may be modified by the Siting Board or the Department at the request of the facility. However, any modification request requires a formal application and is subject to the same scrutiny as the original application.

3 PROPOSED GENERATION AND TRANSMISSION FACILITIES

3.1 GENERATION FACILITY

3.1.1 Site Location

The Project would be located entirely ^{ON} property owned by Gulf Power adjacent to the existing Lansing Smith Power Plant approximately two miles southwest of the community of Southport and approximately 2.5 miles northwest of Lynn Haven, in Bay County. Unit 3 will occupy approximately 50.1 acres and will be located north of the Lansing Smith site. The proposed project will be located on forested wet lands covered in part by planted in pines just north of the existing power plant. It is at the end of County Road 2300 approximately three miles west of State Road 77. North Bay borders the Lansing Smith site on the southeast. West Bay lies to the south and west of the Gulf Power property. Forested wetlands border the site on the north.

The existing generating units at the Lansing Smith site are currently connected to the

electric transmission grid serving the State of Florida. Unit 3 will be connected to the existing Lansing Smith switchyard via a bus line enabling use of the existing Gulf Power transmission facilities. However, some of the existing conductors on offsite, transmission lines will be upgraded to carry the additional electric current from the facility.

The natural gas, the only fuel for the new unit, would be supplied through a new lateral pipeline connecting the Smith site with Florida Gas Transmission Company's existing natural gas pipeline running East-West in Washington County south of the town of Wausau, Florida some 29 miles north of the site. Florida Gas will own, permit, and construct the new gas pipeline lateral to the site. It is expected that the lateral will generally follow State Road 77 and existing transmission line corridors in reaching the site. A meter station and associated equipment will be constructed on the Smith site.

3.1.2 Facility Description

This generating station currently consists of two active electric units fired by coal, storage tanks, a once-through cooling system, water treatment systems, an electric switch yard, a coal pile, ash pond, ash landfill and other related facilities. The Unit 3 power block area will occupy approximately five acres and will be located north of the developed portion of the Lansing Smith Power Park site housing Units 1 & 2. Unit 1 consists of a 162 MW coal-fired generator. Unit 2 is an 194 MW, coal-fired unit. There is also a 40 MW oil-fired combustion turbine, peaking unit on currently developed site. Of the 50.1 acres, 32.7 acres have been allocated for development of power generation and support facilities leaving 17.4 acres undisturbed. Laydown areas for storage of construction materials and equipment will cover approximately 14 acres. Stormwater detention ponds will cover 4.36 acres

3.1.2.1 Power Generation

Unit 3 will consist of a 540 MW (nominal), natural gas fired, combined cycle facility consisting of two 170 MW gas turbines with a 200 MW reheat steam turbine. With power augmentation the unit can generate up to 574 MW. Associated with the Unit 3 will be a mechanical draft cooling tower. The application indicated that the new combustion turbines would utilize dry-low nitrogen oxide burners (low NOx) for nitrogen oxide control.

3.1.2.2 Fuel and Fuel Handling

The natural gas for Unit 3 will be pumped to the site from Florida Gas Transmission Company's existing transmission system after construction of a new lateral. Fuel handling facilities, including the metering station, pumps, and an onsite piping system, would be constructed onsite to meet the requirements of the applicable National Fire Prevention Association codes.

3.1.2.3 Cooling Systems

Units 1 and 2 currently use approximately 274 million gallons per day (MGD) of brackish water from North Bay. Unit 3 will use a mechanical draft cooling tower drawing from the discharge side of Units 1 and 2. This new cooling tower will require approximately 7.37 MGD of the existing thermal discharge for cooling tower makeup water. A new pumping system will be required near the existing plant discharge to provide cooling water to the cooling tower. The new cooling tower will discharge about 3.7 MGD on an annual average into the existing Lansing Smith discharge canal.

3.1.2.4. Storm Water

New onsite drainage facilities are designed and will be constructed in accordance with the requirements of Bay County and DEP including the provisions of DEP Rule Chapter 62-25, F.A.C. Non-contaminated stormwater would be routed to the two proposed wet detention ponds. The eastern pond will cover 2.75 acres and will discharge to adjacent wetlands southeast of the site. The western detention pond will occupy 1.61 acres and discharge to existing wetlands to the west. The 24-year, 24 hour storm event is the design criteria used for the ponds. Interior drainage and collection systems will be designed for the 100-year, 24 hour storm event. Rainfall that comes in contact with potentially oily areas is isolated and routed to oil/water separators prior to disposal in an onsite percolation pond.

3.1.2.5. Wastewater Treatment

All treated and untreated wastewater (except once-through cooling water and emergency overflow from the main yard sump) from the operation of Units 1 and 2 is discharged to the ash pond. Wastewater streams that discharge to the ash pond include boiler blowdown, water treatment filter backwash, air preheater wash, ash and pyrite sluice, coal pile runoff, yard runoff, treated metal cleaning waste, treated demineralizer regeneration waste, treated domestic wastewater, and other minor process and non-process waste streams. Demineralizer regeneration waste is neutralized and allowed to settle in a retention pond prior to discharge to the ash pond. Metal cleaning waste is neutralized in pipe and is chemically precipitated and allowed to settle in a retention pond prior to discharge to the ash pond. Domestic wastewater receives secondary treatment in an extended aeration package treatment plant prior to discharge to the ash pond. Sanitary wastewater produced during normal plant operations of Unit 3 will also be routed to the existing Lansing Smith Plant sewage treatment system. The 29 new employees expected to be associated with Unit 3 would increase sanitary wastes by approximately 580 gallons per day. This minor increase in the current flow can be adequately accommodated by the existing treatment plant.

Some wastewater streams from Unit 3 will be indirectly discharged via cooling tower blowdown to the discharge canal and used for a portion of the proposed Unit 3 Cooling Tower

make-up water. These wastewaters will include evaporative cooler blowdown; and clean drains effluent from the turbine/boiler building. The cooling tower blowdown valve will be closed during chlorination until chlorine residuals are at acceptable levels as part of the biocide program. Gas turbine off-line compressor washdown water will be collected, tested, and trucked from the site for disposal according to its waste classification. Gas turbine and equipment waste, will be routed to an oil-water separator before draining to the site wastewater sump, in which the oil will be disposed of off-site and the wastewater effluent will be sent to the existing ash pond. Demineralizer waste composed of greensand filter backwash, multimedia filter backwash, reverse osmosis concentrate and mixed bed regenerate and condensate polisher regenerate will be routed to an existing stormwater sump at the existing Smith Plant which discharges to the ash pond. ~~Boiler blowdown from the Unit 3 will be routed to the turbine/boiler building floor drains where they will flow to an oil/water separator.~~ boiler blowdown At this point Gulf will route the discharge from the oil/water separator to the same stormwater sump that discharges to the ash pond. Transformer enclosure drains will be designed to release collected stormwater to the site storm water run-off system. Stormwater contaminated with oil will be removed and disposed of accordingly. Chemical cleaning waste streams will be diverted to the existing on-site metals cleaning pond for disposal. Reverse osmosis cleaning waste will be collected and disposed of off-site according to its waste classification. Storm water run-off will be collected in two on-site wet detention ponds designed for sheet run-off, from which water will discharge to adjacent wetlands. Ultimate discharge of cooling tower blowdown including evaporative cooler waste streams and the turbine/boiler building clean drains will be to the existing Lansing Smith Plant cooling system discharge tunnel canal.

Chemical cleaning wastes would continue to be collected and disposed offsite by a licensed contractor as is current practice..

3.1.2.7 Solid and Hazardous Waste Handling

Currently small quantities of solid waste are being generated by the Lansing Smith Plant. Solid waste generated by treatment of equipment wash wastewater, treatment of process water, residues from storm water basins, plant office wastes, and oily wastes are currently being hauled offsite for disposal by licensed contractors. This method of handling such wastes is not expected to change if Unit 3 is built.

No generation of hazardous waste at the Lansing Smith site is routinely done. Currently, Lansing Smith is operated in a manner to select paint, solvents, paint thinner, metal cleaning solutions and other chemicals so as to not produce hazardous wastes. Such policies are expected to continue if Unit 3 is certified. Should any such wastes be produced, they would be collected onsite and disposed offsite by a licensed contractor. No hazardous waste would be stored onsite for more than ninety days before removal.

3.2 ASSOCIATED LINEAR FACILITIES

There are no new linear facilities associated with the Lansing Smith Unit 3 project that require certification. The Unit 3 project will result in an upgrade of conductors on existing transmission structures.

4 GENERAL SITE SUITABILITY CONCERNS

4.1 AREA LAND USE

The Lansing Smith Plant is an existing power plant site located in an unincorporated area of Bay County two and one-half miles northwest of Lynn Haven, approximately 3.5 miles northwest of Panama City and approximately three miles southwest of the community of Southport. Unit 3 will be located on Gulf Power property immediately north of the existing Lansing Smith units. CR 2300 and existing transmission lines will border the Unit 3 site to the west. Gulf Power land currently zoned for agriculture and planted in pine trees abut the site to the north and east. North Bay and West Bay provide barriers to development on the Southeast, South and West of the site. The nearest residential development is two miles to the northeast on the outskirts of Southport.

On November 1, 1999, the Division of Administrative Hearings conducted a public hearing as required by section 403.508, Florida Statutes, to determine whether the power plant site would be in compliance with existing land use plans and zoning requirements. On December 30, 1999, the Administrative Law Judge issued a Recommended Order that recommended, "that the Governor and Cabinet, sitting as the Siting Board, enter a Final Order pursuant to Section 403.508(2), Florida Statutes, determining that the proposed site for the Gulf Power Smith Unit 3 is consistent and in compliance with the land use plans and zoning ordinances of Bay County."

4.2 IMPACT ON LAND USE AND SURROUNDING POPULATIONS

Construction noise including preoperation steam pipe blowing and steam venting may be noticed by some neighbors. Construction noise levels for site clearing and steel erection are estimated to be between 40 - 45 decibels (dBA) at residences nearest the site. This noise level is quieter than the noise level recommended for residential areas in the Model Community Noise Control Ordinance published by the Florida Department of Environmental Regulation in 1975. The cleaning of steam lines will also generate loud noise in two to three minute bursts over a period of several weeks. A public notification/complaint response program could help mitigate the disturbance of nearby residents. Noise levels during operation should not increase significantly.

Construction of Unit 3 is expected to cause an increase in local traffic on CR 2300 and SR 77. A peak impact of 464 trips per day is predicted for approximately six months with 257 trips per day projected as the average impact. This increase in traffic is not projected to degrade the area roadways below their acceptable levels of service.

The new unit and its associated facilities including parking lots, maintenance buildings, offices, storm water retention and sedimentation ponds, switchyard, gas metering station, water treatment facilities, cooling towers, and construction laydown areas will occupy approximately 32.7 acres of land. Of this, approximately 16.7 acres are uplands and 15.2 acres are wetlands. Mitigation will be required to compensate for the 15.2 acres of wetlands lost due to construction of the new plant. Approximately 17.4 acres of the site will be left intact. Secondary impacts such as dust, increased runoff and sedimentation, and temporary ground water lowering may occur but will be minimized by the use of best management construction practices.

5.1 AIR QUALITY IMPACTS

5.1.1 Facility Location:

The Smith Plant is located in Central Bay County, at the end of County Road 2300, which connects to State Road 77. This site is approximately 103 kilometers from Bradwell Bay National Wilderness Area, a Class I PSD Area.

5.1.2 Facility Category

The Gulf Power Smith Plant currently generates electric power from two oil or coal-fired steam units and one oil-fired combustion turbine with a combined (facility) summer net generating capacity of 386 megawatts (MW). This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a major facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD). Per Table 62-212.400-2, modifications at the facility resulting in emissions increases greater than: 100 TPY of CO, 40 TPY of NO_x, VOC or SO₂, 25/15 TPY of PM/PM₁₀, or 7 TPY of SAM requires review per the PSD rules and a determination for Best Available Control Technology (BACT) per Rule 62-212.400, F.A.C. The present (Smith Unit 3) addition includes concurrent installation of low NO_x burners on Smith Unit 1 resulting in net emissions decreases or less-than-significant increases in this PSD pollutant. Therefore, the addition is subject to PSD for CO, VOCs, PM/PM₁₀, SO₂ and Sulfuric Acid Mist (SAM).

The facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 TPY.

Certification of this project will add the following emissions units:

EMISSION UNIT NO.	SYSTEM	EMISSION UNIT DESCRIPTION
004	Power Generation Combustion	Turbine No.1 with duct burner (part of Combined Cycle Unit 3)
005	Power Generation Combustion	Turbine No.2 with duct burner (part of Combined Cycle Unit 3)
006	Water Cooling Mech. Draft	(Saltwater) Cooling Tower

Gulf Power proposes to install a natural gas-fired combined cycle unit that will consist of two (2) nominal 170 MW (@ 59°F) combustion turbine-generators and two heat recovery steam generators (HRSG) with duct burners. The HRSGs will raise steam to power a steam turbine thus producing approximately another 200 MW of electricity or 574 MW for the full combined cycle unit with duct burners and steam power augmentation (566 nominal MW).

The project includes a mechanical draft cooling tower to reduce the temperature of the blowdown water discharged into the existing discharge tunnel. A separate 121-foot stack will also be installed for each combustion turbine.

No emission increase will occur for nitrogen oxides (NO_x), however increases will occur for sulfur dioxide (SO₂), sulfuric acid mist (H₂SO₄ mist or SAM), particulate matter (PM/PM₁₀), Carbon Monoxide (CO) and Volatile Organic Compounds (VOC). Emission increases these pollutants will be greater than the significant emission levels per Table 62-212.400-2, F.A.C. Therefore, review for the Prevention of Significant Deterioration (PSD) is required for these emissions.

5.1.3 Review Criteria

This facility is located in Bay 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) for VOC, CO, SO₂ and PM/PM₁₀. Because the potential emissions for NO_x decrease or remain the same with the concurrent installation of low NO_x burners on Smith Unit 1, and emissions do not exceed the significant emission rates given in Chapter 62-212, Table 62-212.400-2, F.A.C., PSD review for this regulated pollutant is not applicable.

This evaluation consists of a review of the control technology for PM/PM₁₀, VOC, CO, SAM and SO₂. Additionally, NO_x will be reviewed to insure that it is reasonably consistent with similar installations and to evaluate the proposed facility-wide cap. An analysis of the air quality impact from proposed project is required to insure that there are no exceedances of the National or State Ambient Air Quality Standards.

5.1.4 AIR POLLUTION CONTROL TECHNOLOGY

5.1.4.1 Applicant Control Technology Proposal

POLLUTANT	CONTROL TECHNOLOGY	PROPOSED LIMIT
Particulate Matter	Pipeline Natural Gas Combustion Controls	10% Opacity
Volatile Organic Compounds	As Above	3 ppmvd (CTs) - gas 4 ppmvd (w/duct burners)- gas 6 ppmvd (w/DB & stm. aug.) - gas
Carbon Monoxide	As Above	13 ppmvd (CTs) - gas 16 ppmvd (w/duct burners)- gas 23 ppmvd (w/DB & stm. aug.) - gas
Sulfur Dioxide	As Above	2 gr/100 scf - gas
Nitrogen Oxides	Dry Low NO _x Combustors (CTs) Dry Low NO _x Burners (Unit 1 Boiler)	9 ppmvd (CTs) @ 15% O ₂ gas ** 10.6 ppmvd (w/DB) @ 15% O ₂ ** 13.6 ppmvd (w/DB & stm. aug.) **

** NOTE: The proposed NO_x emission rates listed are for informational purposes only.

According to the application, the new combined cycle unit will emit approximately 757 tons per year (TPY) of NO_x, 701 TPY of CO, 93 TPY of VOC, 105 TPY of SO₂, 12 TPY of sulfuric acid mist, and ~~253~~ TPY of PM/PM₁₀. The cooling tower will emit about 79.5 TPY of PM/PM₁₀. When low NO_x burners are installed on the existing unit 1, there will be no net increase in facility-wide NO_x emissions (facility-wide cap proposed). The combined use of duct burners and steam augmentation is proposed to be limited to 1000 hrs. /year.

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5.1.4.2 Standards of Performance for New Stationary Sources

The minimum project control technology basis is 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines (NSPS). The Department adopted Subpart GG by reference in Rule 62-204.800, F.A.C. The key emission limits required by Subpart GG are 75 ppm NO_x @15% O₂ (assuming 25 percent efficiency) and 150 ppm SO₂ @15% O₂ (or <0.8% sulfur in fuel). The proposal is consistent with the NSPS, which allows NO_x emissions over 100 ppm for the high efficiency unit to be purchased by Gulf. No National Emission Standards for Hazardous Air Pollutants exist for stationary gas turbines.

The 275 MMBtu duct burners required for supplementary gas-firing of the HRSG's are subject to 40 CFR 60, Subpart Da, Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978. The NO_x emissions estimated by Gulf of 0.07 pounds of NO_x per million Btu heat input (lb. NO_x/MMBtu) are less than half of the key historically applicable NSPS requirement of 0.20 lb. NO_x/MMBtu. Additionally, this is below the revised Subpart Da output-based limit of 1.6 lb NO_x/MW-hr promulgated on September 3, 1998.

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5.1.4.3 Determinations by EPA and States

The following table is a sample of information on recent NO_x control technology determinations by EPA and the States for combined cycle projects.

Project Location	Power Output and Duty	NO _x Limit ppmvd @ 15% O ₂ and Fuel	Technology	Comments
Lakeland, FL	50 MW CC CON	19/7.5 - NG 42/15/15 - No. 2 FO	DLN/HSCR/SCR WI/HSCR/SCR	230 MW WH 501G CT Initially 250 MW simple cycle and 25 ppmvd NO _x limit on gas
Duke NS, FL	00 MW CC CON	74.5 - NG	DLN/SCR	2x165 MW GE PG7241FA CTs Draft BACT issued 1/99
FPL Ft Myers, FL	500 MW CC CON	- NG	DLN	6x170 MW GE PG7241FA CTs Non-BACT
Santa Rosa, FL	241 MW CC CON	9 - NG (CT) 9.8/6/6 (CT&DB)	DLN DLN/SCR/SNCR	GE PG7241FA CT. 6 ppmvd by SCR/SNCR if DLN fails
KUA Cane III, FL	250 MW CC CON	9/4.5 - NG 42/15 - No. 2 FO	DLN/SCR WI/SCR	167 MW PG GE PG7241FA CT Draft BACT issued 1/99
Tallahassee, FL	260 MW CC CON	12 - NG 42 - No. 2 FO	DLN WI	160 MW GE PG7231FA CT DLN guarantee is 9 ppmvd
Eco-Electrica, PR	61 MW CC CON	- NG 9 - LPG, No. 2 FO	DLN & SCR	2x160 MW WH 501F CTs
Sithe/IPP, NY	012 MW CC CON	.5 - NG	DLN & SCR	4 x160 MW GE 7FA CTs
Hermiston, OR	74 MW CC CON	.5 - NG	SCR	2x160 MW GE 7FA CTs
Barry, AL	00 MW CC CON	.5 - NG (CT&DB)	DLN & SCR	3x170 MW GE PG7241FA CTs

CC = Combined Cycle

CON = Continuous

DLN = Dry Low NO_x

Combustion

GE = General Electric

DB = Duct Burner

HSCR = Hot SCR

SCR = Selective Catalytic Reduction

WH = Westinghouse

NG = Natural Gas

FO = Fuel Oil

LPG = Liquefied Propane Gas

ppm = parts per million

CT = Combustion Turbine

WI = Water or Steam Injection

SNCR = Selective Non-catalytic Reduction

5.1.4.4. Nitrogen Oxides Formation

Much of the discussion in this section is based on a 1993 EPA document on Alternative Control Techniques for NO_x Emissions from Stationary Gas Turbines. Project-specific information is included where applicable.

Nitrogen oxides form in the gas turbine combustion process as a result of the dissociation of molecular nitrogen and oxygen to their atomic forms and subsequent recombination into seven different oxides of nitrogen. Thermal NO_x forms in the high temperature area of the gas turbine combustor. Thermal NO_x increases exponentially with increases in flame temperature and linearly with increases in residence time. Flame temperature is dependent upon the ratio of fuel burned in a flame to the amount of fuel that consumes all of the available oxygen.

By maintaining a low fuel ratio (lean combustion), the flame temperature will be lower, thus reducing the potential for NO_x formation. Prompt NO_x is formed in the proximity of the

flame front as intermediate combustion products. The contribution of Prompt to overall NO_x is relatively small in lean, near-stoichiometric combustors and increases for leaner fuel mixtures. This provides a practical limit for NO_x control by lean combustion.

Fuel NO_x is formed when fuels containing bound nitrogen are burned. This phenomenon is not important when combusting natural gas. It is not important for the Gulf project because natural gas will be the only fuel used.

Uncontrolled emissions range from about 100 to over 600 parts per million by volume, dry, corrected to 15 percent oxygen (ppm @15% O_2). For large modern turbines, the Department estimates uncontrolled emissions at approximately 200 ppm @15% O_2 .

5.1.4.5 NO_x Control Techniques

Wet Injection

Injection of either water or steam directly into the combustor lowers the flame temperature and thereby reduces thermal NO_x formation. Typical emissions achieved by wet injection are in the range of 15–25 ppmvd when firing gas and 42 ppmvd when firing fuel oil in large combustion turbines. These values often form the basis, particularly in combined cycle turbines, for further reduction to BACT limits by other techniques. Carbon monoxide (CO) and hydrocarbon (HC) emissions are relatively low for most gas turbines. However steam and (more so) water injection increase emissions of both of these pollutants.

Combustion Controls

The excess air in lean combustion, cools the flame and reduces the rate of thermal NO_x formation. Lean premixing of fuel and air prior to combustion can further reduce NO_x emissions. This is accomplished by minimizing localized fuel-rich pockets (and high temperatures) that can occur when trying to achieve lean mixing within the combustion zones.

The above principle is used in a General Electric can-annular combustor operating on gas. For ignition, warm-up, and acceleration to approximately 20 percent load, the first stage serves as the complete combustor. Flame is present only in the first stage, which is operated as lean stable combustion will permit. With increasing load, fuel is introduced into the secondary stage, and combustion takes place in both stages. When the load reaches approximately 40 percent, fuel is cut off to the first stage and the flame in this stage is extinguished. The venturi ensures the flame in the second stage cannot propagate upstream to the first stage. When the fuel in the first-stage flame is extinguished (as verified by internal flame detectors), fuel is again introduced into the first stage, which becomes a premixing zone to deliver a lean, unburned, uniform mixture to the second stage. The second stage acts as the complete combustor in this configuration.

To further reduce NO_x emissions, GE developed the DLN-2.0 wherein air usage (other than for premixing) was minimized. The venturi and the centerbody assembly were eliminated and each combustor has a single burning zone. So-called "quaternary fuel" is introduced through pegs located on the circumference of the outward combustion casing. GE has made further improvements in the DLN design. The most recent version is the DLN-2.6 (proposed for the Gulf project). The combustor is similar to the DLN-2 with the addition of a sixth (center) fuel nozzle. ~~The emission characteristics of the DLN-2.6 combustor while firing natural gas are given in attached Figure 2 for a unit tuned to meet a 15 ppmvd NO_x limit (by volume, dry~~

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corrected to at 15 percent oxygen) at Jacksonville Electric Authority's Kennedy Station.

NO_x concentrations are higher in the exhaust at lower loads because the combustor does not operate in the lean pre-mix mode. Therefore such a combustor emits NO_x at concentrations of 15 parts per million by volume, dry, (ppmvd) at loads between 50 and 100 percent of capacity, but concentrations as high as 100 ppmvd at less than 50 percent of capacity. Note that VOC comprises a very small amount of the "unburned hydrocarbons" which in turn is mostly non-VOC methane.

The combustor can be tuned differently to achieve emissions as low as 9 ppmvd of NO_x and 9 ppm of CO. In all but the most recent gas turbine combustor designs, the high temperature combustion gases are cooled to an acceptable temperature with dilution air prior to entering the turbine (expansion) section. The sooner this cooling occurs, the lower the thermal NO_x formation. Cooling is also required to protect the first stage nozzle. When this is accomplished by air cooling, the air is injected into the component and is ejected into the combustion gas stream, causing a further drop in combustion gas temperature. This, in turn, results in a lower achievable thermal efficiency for the unit.

Larger units, such as the Westinghouse 501 G or the planned General Electric 7H, use steam in a closed loop system to provide much of the cooling. The fluid is circulated through the internal portion of the nozzle component or around the transition piece between the combustor and the nozzle and does not enter the exhaust stream. Instead it is normally sent back to the steam generator. The difference between flame temperature and firing temperature into the first stage is minimized and higher efficiency is attained.

Another important result of steam cooling is that a higher firing temperature can be attained with no increase in flame temperature. Flame temperatures and NO_x emissions can therefore be maintained at comparatively low levels even at high firing temperatures. At the same time, thermal efficiency should be greater when employing steam cooling. A similar analysis applies to steam cooling around the transition piece between the combustor and first stage nozzle.

At the present time, emissions achieved by combustion controls are as low as 9 ppmvd from gas turbines smaller than 200 MW (simple cycle), such as GE "F Class" units. Even lower NO_x emissions are achieved from certain units smaller than 100 MW, such as the GE 7EA line. With the concurrent installation of low NO_x burners on the existing Smith Unit 1, there will be no net increase in NO_x emissions.

Selective Catalytic Combustion

Selective catalytic reduction (SCR) is an add-on NO_x control technology that is employed in the exhaust stream following the gas turbine. SCR reduces NO_x emissions by injecting ammonia into the flue gas in the presence of a catalyst. Ammonia reacts with NO_x in the presence of a catalyst and excess oxygen yielding molecular nitrogen and water. The catalysts used in combined cycle, low temperature applications (conventional SCR), are usually vanadium or titanium oxide and account for almost all installations. For high temperature applications (Hot SCR up to 1100 °F), such as simple cycle turbines, zeolite catalysts are available but used in few applications to-date. SCR units are typically used in combination with wet injection or DLN combustion controls.

In the past, sulfur was found to poison the catalyst material. Sulfur-resistant catalyst

materials are now available, however, and catalyst formulation improvements have proven effective in resisting performance degradation with fuel oil in Europe and Japan, where conventional SCR catalyst life in excess of 4 to 6 years has been achieved, versus 8 to 10 years with natural gas. Excessive ammonia use tends to increase emissions of CO, ammonia (slip) and particulate matter (when sulfur-bearing fuels are used).

As of early 1992, over 100 gas turbine installations already used SCR in the United States. Only one combustion turbine project in Florida (FPC Hines Power Block 1) employs SCR. The equipment was installed on a temporary basis because Westinghouse had not yet demonstrated emissions as low as 12 ppmvd by DLN technology at the time the units were to start up in 1998. Seminole Electric will install SCR on a previously-permitted 501F unit at the Hardee Unit 3 project. The reasons are similar to those for FPC Hines Power Block I. Permit limits as low as 2.25 to 3.5 ppmvd NO_x have been specified using SCR on combined cycle F Class projects throughout the country.

Selective Non-Catalytic Combustion

Selective non-catalytic reduction (SNCR) reduction works on the same principle as SCR. The differences are that it is applicable to hotter streams than conventional or hot SCR, no catalyst is required, and urea can be used as a source of ammonia. No applications have been identified wherein SNCR was applied to a gas turbine because the exhaust temperature of 1100 °F is too low to support the NO_x removal mechanism.

The Department did, however, specify SNCR as one of the available options for the combined cycle Santa Rosa Energy Center. The project will incorporate a large 600 MMBtu/hr duct burner in the heat recovery steam generator (HRSG) and can provide the acceptable temperatures (between 1400 and 2000 °F) and residence times to support the reactions.

5.1.4.6 Control Technology Determination (BACT)

Following are the emission limits determined for the Gulf project assuming full load. Values for NO_x are corrected to 15% O₂. These limits or their equivalents in terms of pounds per hour, as well as the applicable averaging times, are given in the permit Specific Conditions.

Emission Unit	NO _x	CO BACT	SO ₂ /SAM BACT	VOC BACT	PM/Visibility (% Opacity)	Technology and Comments
C.T.'s with Duct Burners	82.9 lb/hr	16 ppmvd @15% O ₂	2 gr/100 scf natural gas	4 ppmvd @15% O ₂	10 - gas	Dry Low NO _x Combustors Natural Gas, Good Combustion
Steam power Augmentation	113.2 lb/hr	23 ppmvd @15% O ₂	2 gr/100 scf natural gas	6 ppmvd @15% O ₂	10 - gas	Unit limited to 1000 hours per year of operation
Cooling Tower					18.2 lb/hr	Annual Inspection / O&M Plan

< Add footnotes from p. 18 of Conditions in Appendix I >
5.2 SOURCE IMPACT ANALYSIS

5.2.1. Emission Limitations

The applicant's proposed annual emissions are summarized in the Table below (Section 7.2) and form the basis of the source impact review.

Operation of the existing units 1 and 2 will be limited as a result of a facility-wide NO_x emissions cap requested by Gulf. The existing units are currently included within a company-wide NO_x averaging plan, which allows for Unit 1 to operate at a NO_x emission rate (0.62 lb./MMBtu) which is higher than the promulgated Phase II limit. Without the emission cap, but incorporating Phase II NO_x emission limits of 0.40 lb./MMBtu on each existing emission unit (001 and 002), emissions could be as high as 3407 TPY (Unit 1) and 3935 (Unit 2) for a total of 7342 TPY. Additionally, there are uncontrolled emissions from the small diesel-fired peaking unit EU-003 (reported at 94 tons in 1998). Therefore, the proposed facility-wide cap of 6666 TPY is more stringent than the Phase II limits (which are more stringent than the averaging plan) even prior to including the new combined cycle unit within the cap. Lastly, the Department believes that it is reasonable to expect that Smith Unit 1 NO_x emissions will be reduced by 20-25% with the installation of low NO_x burners, which alone could provide room for the operation of the new combined cycle unit.

5.2.2 NO_x Facility-wide Emissions Summary

The historical NO_x emissions are shown below, forming a basis for the facility-wide NO_x cap (with concurrent installation of low NO_x burners on existing Unit 1 (EU-001)). Data from the diesel-fired peaking unit (EU-003) is intentionally ignored in this tabulation due to its relative insignificance, but the emission unit is included within the facility-wide cap.

Two-year Historical NO_x Emissions (TPY)

Consecutive 2 Year Period	EU-001 Past Actual Emissions	EU-002 Past Actual Emissions	EU-001 + EU-002 Past Actual Emissions	Representative of Typical operation
1997-1998	3359	2395	5754	NO
1996-1997	3533	2707	6240	NO
1995-1996	3881	2785	6666	YES
1994-1995	3344	3316	6661	YES
1993-1994	3148	3458	6606	(see note below)
FDEP Allowable			6666	FAC-wide cap.

Note: Data based upon CEMS except for 1993 and 1994, which is based upon AOR AP-42 Factors.

5.3 Air Quality Analysis

5.3.1 Introduction

The proposed project will increase emissions of four pollutants at levels in excess of PSD significant amounts: PM/PM₁₀, CO, SO₂, VOC and SAM. PM₁₀ and SO₂ are criteria pollutants and have national and state ambient air quality standards (AAQS), PSD increments, and significant impact levels defined for them. CO and VOC are criteria pollutants and have only AAQS and significant impact levels defined for them. Emission of VOCs are related to the formation of ozone and are not modeled for individual stationary sources. The VOC emissions increase is less than the *de minimis* monitoring level of 100 TPY; therefore, no air quality analysis is required for VOC. PM is a criteria pollutant, but has no AAQS or PSD increments defined for it; therefore, no air quality impact analysis was required for it either. Instead, the BACT requirement will establish the PM emission limits for this project. SAM is a non-criteria pollutant. There are no applicable PSD increments or AAQS for SAM. Instead, the BACT requirement will establish the SAM emission limit for this project. Due to the distance of the source from the PSD Class I Bradwell Bay National Wilderness Area (BBNWA), plus the type and amount of emissions from the source, no PSD Class I analyses were required for this project.

A review of the applicant's initial CO and SO₂ air quality impact analyses for this project showed no predicted significant impacts; therefore, further applicable AAQS and PSD increment impact analyses for these pollutants were not required. However, PM₁₀ impacts were predicted to be above one of the applicable PM₁₀ significant impact levels thus requiring further applicable AAQS and PSD increment impact analyses for this pollutant. Based on the preceding discussion the air quality analyses required by the PSD regulations for this project are the following:

- An analysis of existing air quality for PM₁₀, CO and SO₂;
- A significant impact analysis for PM₁₀, CO and SO₂;
- A PSD increment analysis for PM₁₀;

An Ambient Air Quality Standards (AAQS) analysis for PM_{10} ;

An analysis of impacts on soils, vegetation, and visibility and of growth-related air quality modeling impacts.

Based on these 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 more detailed discussion of the required analyses follows.

5.3.2 Models and Meteorological Data Used in the Air Quality Impact Analysis

The EPA-approved SCREEN3 (screening model) and Industrial Source Complex Short-Term (ISCST3) dispersion models were used to evaluate the pollutant emissions from the proposed project. These models determine ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, area, and volume sources. They incorporate 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. 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.

Meteorological data used in the ISCST3 model consisted of a concurrent five consecutive year period of hourly surface weather observations and twice-daily upper air soundings recommended by the department. Surface data were collected from the National Weather Service (NWS) stations at Pensacola (1986-1987) and Apalachicola, Florida (1988-1990). Upper air data were collected at Apalachicola, Florida during the period 1986-1990. 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.

5.3.3 Analysis of Existing Air Quality

Preconstruction ambient air quality monitoring is required for all pollutants subject to

PSD review unless otherwise exempted or satisfied. This requirement may be satisfied by using pre-existing representative monitoring data, if available. Also an exemption to the monitoring requirement shall be granted by rule if either of the following conditions is met: the maximum predicted air quality impact resulting from the projected emissions increase, as determined by air quality modeling, is less than a pollutant-specific de minimis ambient concentration; or the existing ambient concentrations are less than a pollutant-specific de minimis ambient concentration. 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 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. No de minimis ambient concentration is provided for ozone. Instead, the net emissions increase of VOC is compared to a de minimis monitoring emission rate of 100 tons per year.

The table below shows maximum predicted pollutant concentrations from the project for comparison to these de minimis levels.

MAXIMUM PREDICTED PROJECT POLLUTANT CONCENTRATIONS FOR COMPARISON TO THE DE MINIMIS LEVELS				
Pollutant	Averaging Time	Maximum Predicted Concentration ($\mu\text{g}/\text{m}^3$)	Impact Greater than De Minimis (Yes/No)	De Minimis Level ($\mu\text{g}/\text{m}^3$)
SO ₂	24-hr	2	No	13
PM ₁₀	24-hr	13	Yes	10
CO	8-hr	39	No	575
VOC	Annual Emission Rate	93 TPY	No	100 TPY

As shown in the table SO₂, CO and VOC impacts are predicted to be less than the de minimis levels; therefore, preconstruction monitoring is not required for these pollutants. However, PM₁₀ impacts from the project are predicted to be greater than the de minimis level; therefore, the applicant is not exempt from preconstruction monitoring for this pollutant. The applicant may instead satisfy the preconstruction monitoring requirement by using pre-existing representative data from a PM₁₀ monitoring site in Panama City. Data from this monitor were also used to establish PM₁₀ background concentrations for use in the required PM₁₀ AAQS analysis. These values are 28 and 73 $\mu\text{g}/\text{m}^3$ for the annual and 24-hour averaging times,

respectively.

5.3.4 Significant Impact Analysis

Initially, the applicant models the impacts of the proposed project's emissions at worst load conditions. In order to determine worst-case load conditions the SCREEN3 model was used to evaluate dispersion of emissions from the combined cycle facility for three loads (50%, 75% and 100%) and three seasonal operating conditions (summer, winter, and average). The worst case-operating mode identified by the SCREEN3 model for each pollutant and applicable averaging time was then used as input in the ISCST3 model. Over 500 receptors were placed along the facility's restricted property line and out to 10 km from the facility, which is located in a PSD Class II area. A mixed cartesian and polar grid receptor network was used. For each pollutant subject to PSD and also subject to PSD increment and/or AAQS analyses, this modeling compares maximum predicted pollutant concentrations 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. In the event that the maximum predicted pollutant concentrations of a proposed project are less than the appropriate significant impact levels, a full impact analysis for that pollutant is not required. A full impact analysis includes the predicted pollutant concentrations of emissions from the project along with emissions from other major sources located within the vicinity of the project and a background concentration to determine whether all applicable AAQS or PSD increments are predicted to be met for that pollutant. Consequently, a preliminary modeling analysis, which shows an insignificant impact, is accepted as the required air quality analysis (AAQS and PSD increments) for that pollutant and no further modeling for comparison to the AAQS and PSD increments is required. 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 POLLUTANT CONCENTRATIONS FOR COMPARISON TO THE PSD CLASS II SIGNIFICANT IMPACT LEVELS IN THE VICINITY OF THE FACILITY					
Pollutant	Averaging Time	Maximum Predicted Impact ($\mu\text{g}/\text{m}^3$)	Significant Impact Level ($\mu\text{g}/\text{m}^3$)	Significant Impact? (Yes/No)	Radius of Significant Impact (km)
SO ₂	Annual	0.040.09	1	No	-
	24-hr	1 1.7	5	No	-
	3-hr	6 8.6	25	No	-
PM ₁₀	Annual	0.5	1	No	-
	24-hr	13	5	Yes	2.4
CO	8-hr	14 38	500	No	-
	1-hr	36 111	2,000	No	-

The results of the significant impact modeling show that there are no significant impacts

predicted due to SO₂ and CO emissions from this project; therefore, no further modeling for these pollutants was required. The maximum predicted air quality impacts due to PM₁₀ emissions from the proposed project are greater than one of the PM₁₀ significant impact levels. Therefore, the applicant was required to do full impact PM₁₀ modeling within the applicable significant impact area. The significant impact area is based upon the predicted radius of significant impact.

5.3.5 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 (µg/m ³)	Background Concentration (µg/m ³)	Total Impact (µg/m ³)	Total Impact Greater than AAQS	Florida AAQS (µg/m ³)
PM ₁₀	Annual	1.3	28	29	No	50
	24-hr	11	73	84	No	150

5.3.6 PSD Increment Analysis

The PSD increment represents the amount that new sources in an area may increase ambient ground level concentrations of a pollutant from a baseline concentration which was established in 1977 (the baseline year was 1975 for existing major sources of SO₂) for SO₂ and 1988 for NO₂. As shown in this table, emissions from the proposed facility are not expected to cause or significantly contribute to a violation of any Class II PSD increment.

PSD CLASS II INCREMENT ANALYSIS				
Pollutant	Averaging Time	Maximum Predicted Impact (µg/m ³)	Impact Greater than Allowable Increment? (Yes/No)	Allowable Increment (µg/m ³)
PM ₁₀	Annual	1	No	17
	24-hr	11	No	30

5.3.6 Impact Analysis Impacts On Soils, Vegetation, And Wildlife

The maximum ground-level concentrations predicted to occur for PM₁₀, CO and SO₂ 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, vegetation and wildlife in the vicinity of the project.

5.3.7 Impact On Visibility

Natural gas is a clean fuel and produces little ash. This will minimize smoke formation. The low NO_x and SO₂ emissions will also minimize plume opacity. Because no add-on control equipment and no reagents are required, there will be no steam plume or tendency to form ammoniated particulate species. Due to the distance of the source from the BBNWA, plus the type and amount of emissions from the source, the NPS believes that there is a low potential for visibility impacts. Therefore, no regional haze analysis was required for this project.

5.3.8 Growth-Related Air Quality Impacts

The proposed project is being constructed to meet current and future state-wide electric demands. Additional growth in the immediate area as a direct result of the additional electric power provided by the project is not expected. The project will be constructed and operated with minimum labor and associated facilities and is not expected to significantly affect growth in the local area. Obviously any increase in highly efficient electric power capacity promotes or accommodates further state-wide growth.

5.3.9. CONCLUSION

Based on the foregoing technical evaluation of the application and other available information, the Department has made a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations.

5.4 WATER QUALITY RELATED IMPACTS

The Lansing Smith 3 project is designed to minimize impacts on surface and ground water resources. Unit 3 would use an off stream, mechanical draft cooling tower with makeup water coming from the existing Lansing Smith Plant thermal effluent. Unit 3 will require seven and one-half million gallons of water per day (7.5 MGD) to replace water lost due to evaporation and drift. Cooling tower blowdown would be discharged back to the Lansing Smith thermal discharge canal. ~~Certain industrial wastes will be sent to the cooling tower for reuse.~~

5.4.1 SURFACE WATER IMPACTS

The Units 1 and 2 on site currently use approximately 274 million gallons per day of

brackish water from North Bay via Alligator Bayou. Unit 3's mechanical draft cooling tower will require 7.5 MGD of makeup water from the Smith Plant thermal discharge. Blowdown from the cold side of the cooling tower will be sent back to the existing thermal discharge canal. The Smith Plant thermal discharge canal is approximately two miles long and discharges via Warren Bayou to West Bay. Most of the year the cooling tower blowdown will be cooler than the thermal discharge from Units 1 and 2. The overall rate of the combined discharge reduces from 5,120 gpm to 2,587 gpm due to evaporative and drift losses in the cooling tower. Consequently the Smith Plant's heat rejection rate to surface waters will be reduced approximately 1.3 percent. This will result in a slightly smaller thermal discharge plume and reduced thermal impacts in the West Bay receiving waters whenever all three units are operational.

Stormwater runoff will be collected and treated onsite in accordance with applicable regulations. Non-contaminated water from the Unit 3 area will be routed to two new detention/percolation ponds. New onsite stormwater drainage facilities will be designed and constructed in accordance with the requirements of DEP Rule Chapter 62-25, F.A.C. The 25 year, 72 hour storm event is the design criteria used. Rainfall from a lesser event normally percolates into the ground rather than discharging. Rainfall that comes in contact with potentially oily or greasy areas is isolated and routed to oil/water separators for treatment prior to reuse in the cooling tower.

L24

5.5.2 GROUND WATER IMPACTS

Three Floridan aquifer wells currently provide process water, service water and potable water to the site. Currently Units 1 and 2 use approximately 0.7 MGD. Additional water demand for Unit 3 will require approximately 0.5 MGD to be pumped from the ground from a new well located 1.3 miles further inland than the existing wells as permitted by NFWMD in August 1999. After review of ground water modeling based on a new pumping paradigm that shifts the primary supply well further inland, it is concluded that the predicted Floridan aquifer ground water withdrawals on the site by the pumping 1.2 MGD from the four wells will not adversely affect the Floridan aquifer, existing domestic, irrigation, or other public water supply wells in the area. Likewise, the annual average withdrawal of 0.72 MGD from the Floridan aquifer will not have significant adverse impacts.

The Lansing Smith Plant impacts on the surficial aquifer during normal operation are insignificant. No withdrawals of surficial aquifer ground water are made during normal operating conditions. During normal rainfall events, stormwater ponds would be operated so as to preclude or limit offsite direct discharges to the adjacent wetlands. Percolation from the ponds would temporarily increase groundwater elevations in the surficial aquifer. The surficial aquifer ultimately discharges to the surrounding wetlands. Any temporary increase in level of the surficial aquifer onsite would not be expected to interfere with any offsite neighbors due to the buffering of the wetlands and silvicultural areas.

During construction, minor dewatering would be necessary for construction of the new facilities. The stormwater detention ponds, to be installed soon after site clearing, will be used to treat groundwater collected due to infiltration in ditches or from dewatering. Most of the dewatering effluent is expected to percolate back into the surficial aquifer. The use of hay bales and best management practices in the conveying ditches as well as detention ponds will provide treatment via settling of suspended solids and thereby control or reduce any turbidity prior to any off site discharges. Such discharges will be monitored for turbidity. No adverse offsite effects are expected from dewatering activities.

5.5.3 IMPACTS ON THREATENED OR ENDANGERED SPECIES

Terrestrial ecological impacts will be minimal since new facilities will be constructed on land disturbed by silvicultural operations. The site of Unit 3 is adjacent to the existing power generation units on land that has been previously planted in slash pines and impacted by the construction and operation of the original power plant. However several populations of a rare Panhandle spiderlily are located within wetlands scheduled for development. Gulf Power expects these spiderlilies to transplant easily and will relocate these rare plants to similar wetland habitats on Gulf Power property that will not be disturbed by the proposed project. No animals of any endangered, threatened or species of special concern populations are expected to be impacted by construction of Unit 3 and its facilities.

5.5.4 ARCHAEOLOGICAL AND HISTORIC SITES

Location of Unit 3 facilities on the proposed site is not expected to impact any known archaeological or historic sites. The Division of Historical Resources has stated: "A review of the Florida Master file indicates that no significant archaeological or historic sites are recorded for or likely to be present within the project area. Furthermore, because of the project location and/or nature it is likely that any such sites will be affected. Therefore, it is the opinion of this office that the project will have no effect on historic properties listed, or eligible for listing in the *National Register of Historic Places*." UN

5.5.5 IMPACTS ON PUBLIC OR SUBMERGED LANDS

The construction of the Unit 3 facilities will not impact any wetlands in public ownership. Existing outfalls will be utilized for discharges of stormwater runoff, and that will only occur during excessive rainfall events. The retention of the stormwater in the existing plant stormwater system or in ditches, swales and percolation ponds proposed for Unit 3 should provide for adequate removal of suspended solids and oil and grease to protect water quality in the wetlands surrounding the site. Construction of the intake and discharge facilities in the existing Smith Plant discharge canal will be done in a manner to minimize turbidity.

5.5.6 SOIL AND FOUNDATION CONDITIONS

Borings made in 1998, indicate that the top 15 to 20 feet of the site is underlain by surficial sediments including black organic topsoil, tan to brown, slightly silty fine to medium

grined sands shading to medium to coarse-grained sands. The soils are considered to be poorly graded sands and silty sands. These sediments are underlain by a thin layer, one to seven feet thick of the Jackson Bluff Formation consisting of clayey, fine to medium grained calcareous sands. Next comes a 75 foot thick silty fine-grained calcareous sands of the Intracoastal Formation. These soils offer low to moderate bearing capacity and are subject to compression from structural loading and shock or vibration. Deep foundations, soil density improvement and preloading of soils will be necessary to construct heavy power plant facilities.

The geological logs for the site that would indicate care must be taken in designing adequate foundations to support the Unit 3 facilities. Deep piles into the Floridan Aquifer will be needed to support some of the on site structures. Due to the low site elevation, concern has been expressed about the potential for site flooding during severe storm events. Clean fill from off site sources will be used to replace and enhance surficial unconsolidated soils. The on site geology does not pose any undue challenge in designing or constructing stable foundations.

6.0 CONSTRUCTION AND OPERATIONAL SAFEGUARDS

As outlined in the application, construction procedures, including run-off control facilities and practices to avoid contamination of state waters, will be implemented. The construction site will be isolated from the general public by appropriate means which may include fences and guards. Compliance with OSHA standards and the provisions of Section 440.56, F.S. should adequately protect construction workers and operating personnel.

The conceptual design of the major pollution control equipment and operating procedures appears sufficient to protect the public and to protect the environment from significant harm.

7.0 COMPLIANCE AND VARIANCES

As currently designed, the construction and operation of Unit 3, will not contribute to a violation of air or water quality standards. No variances to environmental standards are necessary to implement the construction and operation of Unit 3 and its related facilities. Because of the Smith site's location in a hurricane sensitive area, the Department of Community Affairs has recommended conditions of certification requiring development of a hurricane preparation, evacuation and recovery plan. The DCA also noted that the site is outside the 100-year flood level which would comply with Federal Energy Management Agency Standards and local regulations.

8.0 CONCLUSIONS AND RECOMMENDATIONS

8.1 CONCLUSIONS

A. Construction Impacts

Construction of the proposed facilities necessary to implement Lansing Smith Unit 3 would have the following impacts:

1. Occupy or affect 32.7 acres of a proposed 50.1 acre site consisting of logged pine plantations mixed with freshwater wetlands adjacent to an existing power plant.
2. Provide an average of 180 jobs during construction.
3. Increase truck and vehicular traffic on CR 2300 and SR 77.

B. Operational Impacts

1. Increase the use of the facility.
2. The emissions of nitrogen oxides will be capped at historical levels due to installation of low Nox burners on Unit 1 even with an increased generation of electricity. The proposed project would result in increased emissions of PM/PM₁₀, CO, SO₂, VOC, and SAM. No violations of ambient air quality standards or violations of PSD increments are predicted.
3. Surface water discharges will decrease in volume and temperature from the project due to mixing of cooling tower blowdown from Unit 3 with the effluent from Units 1 & 2. Withdrawal from the North Bay/Alligator Bayou waters will not change. Thermal discharge from the combined Lansing Smith site to the West Bay system will decrease by about 1.3%.
4. Use of a new well constructed further inland and a decrease in pumping from existing wells should help decrease salt water upconing under the site.

C. Agency Conclusions

1. The Public Service Commission found the project to be needed.
2. The Department of Community Affairs concluded that the construction and operation of Unit 3 will be consistent with the State Comprehensive Plan the DCA recommendations are included as conditions of certification.
3. The West Florida Regional Planning Council found that the proposed project would be consistent with the Strategic Regional Policy Plan.
4. Bay County did not submit a report, but they did amend their local Comprehensive

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JAN 31 2000

THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF AIR REGULATION

In the Matter of an
Application for Permit by:

OGC CASE NO.: 99-2037

GULF POWER COMPANY,
Lansing Smith Unit 3,
Bay County, Florida

FDEP Construction Permit No. -
PSD-FL-269 / PA 99-40

WITHDRAWAL OF REQUEST FOR EXTENSION OF TIME


By and through undersigned counsel, Gulf Power Co. (Gulf) hereby withdraws its Request for Extension of Time to file a petition for formal administrative proceedings concerning the subject permit, in accordance with Chapter 120, Florida Statutes. On November 19, 1999, Gulf filed its Request for Extension of Time in response to the Department of Environmental Protection's (Department) "Intent to Issue PSD Permit" for FDEP Construction Permit No.: PSD-FL-269 (PA-99-40) for the Lansing Smith Unit 3 to be located in Bay County, Florida. The request was filed to allow Gulf additional time in which to discuss and negotiate certain changes in the proposed PSD permit with the Department. By order dated December 20, 1999, the Department granted Gulf an extension of time to file a petition for an administrative hearing through January 31, 2000. Gulf and the Department have now come to an agreement on the issues involved in the above-referenced proposed PSD permit. This agreement is reflected in the FDEP's revised proposed PSD Permit No.: PSD-FL-269 (PA-99-40), a copy of which is attached and incorporated by reference herein as Attachment A. The staff of the Department's Bureau of

Air Regulation has indicated to Gulf the Department's intent to issue a final PSD permit with the language reflected in Exhibit A, which language is acceptable to Gulf.

Therefore, Gulf hereby withdraws its Request for Extension of Time and will not seek a further extension of time to file such a petition, conditioned upon the Department's issuance of a Final PSD Permit in accordance with the agreed-upon permit language reflected in Attachment A hereto.

Respectfully submitted this 28th day of January 2000.

HOPPING GREEN SAMS & SMITH, P.A.

By: 

Douglas S. Roberts

Fla. Bar No. 559466

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Tallahassee, FL 32314

(850) 222-7500

Attorneys for GULF POWER COMPANY

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing has been furnished to the following by

U.S. Mail on this 28th day of January 2000:

Al Linero
Bureau of Air Regulation
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Scott Goorland, Esq.
Department of Environmental Protection
Room 669
2600 Blair Stone Road
Tallahassee, FL 32399-2400


Attorney

PERMITTEE:

Gulf Power Company
One Energy Place
Pensacola, Florida 32520-0328

File No.	PSD-FL-269 (PA99-40)
FID No.	0050014
SIC No.	4911
Expires:	December 31, 2002

Authorized Representative:

Robert G. Moore, V.P. Power Generation/Transmission

PROJECT AND LOCATION:

Permit pursuant to the requirements for the Prevention of Significant Deterioration of Air Quality (PSD Permit) for the construction of two nominal 170 megawatt (MW), gas-fired, stationary combustion turbine-electrical generators with duct-fired recovery steam generators (HRSGs) that will raise sufficient steam to produce approximately another 200 MWs from the steam generator. The unit will achieve a nominal 566 megawatts at annual average site conditions with duct burners. The unit is capable of a maximum of approximately 574 megawatts in combined cycle operation with power augmentation and evaporative cooling at 95 degrees F. The maximum heat input of the combustion turbines is 1751 MBTU/hr (LHV at 65 degrees F) each. The maximum heat input of the duct burners is 275 MBTU/hr (LHV at 65 degrees F) each. The plant will also include two 121 foot stacks; a small heater for the gas pipeline; and a 10-cell, mechanical draft salt water cooling tower. The unit is designated as Unit 3 and will be located at the Lansing Smith Electric Generating Plant, 4300 Highway 2300, Southport, Bay County. UTM coordinates are: Zone 16; 625.03 km E; 3349.08 km N.

STATEMENT OF BASIS:

This PSD permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and 40CFR52.21. 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

PREVENTION OF SIGNIFICANT DETERIORATION PERMIT PSD-FL-269

SECTION I - FACILITY INFORMATION

FACILITY DESCRIPTION

The existing Lansing Smith Electric Generating Plant consists of two oil or coal-fired steam units and one oil-fired combustion (peaking) turbine with a combined nominal generating capacity of approximately 420 megawatts (MW).

The proposed Gulf Smith Unit 3 will achieve a nominal 566 megawatts at annual average site conditions with duct burners. The unit is capable of a maximum of approximately 574 megawatts in combined cycle operation with power augmentation and evaporative cooling at 95 degrees F. The maximum heat input of the combustion turbines is a nominal 1751 MBTU/hr (LHV at 65 degrees F) each. The maximum heat input of the duct burners is a nominal 275 MBTU/hr (LHV at 65 degrees F) each. The plant will also include two 121 foot stacks; a small heater for the gas pipeline; and a 10-cell, mechanical draft salt water cooling tower. Simple cycle operation is not included within this permitting action. New major support facilities for Unit 3 include water treatment and storage facilities.

Emissions from Gulf Smith Unit 3 will be controlled by Dry Low NO_x (DLN) combustors firing exclusively pipeline quality natural gas. Inherently clean fuels and good combustion practices will be employed to control all pollutants.

EMISSION UNITS

This permit addresses the following emission units:

EMISSION UNIT	SYSTEM	EMISSION UNIT DESCRIPTION
004	Power Generation	One nominal 170 MW Gas Combustion Turbine complete with HRSG and Duct Burner
005	Power Generation	One nominal 170 MW Gas Combustion Turbine complete with HRSG and Duct Burner
006	Water Cooling	Cooling Tower

REGULATORY CLASSIFICATION

The facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (TPY).

This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD). Pursuant to Table 62-212.400-2, this facility modification results in emissions increases greater than 25/15 TPY of PM/PM₁₀, 40/7 TPY of SO₂/SAM, 100 TPY of CO and 40 TPY of VOCs. These pollutants require review per the PSD rules and a determination for Best Available Control Technology (BACT) per Rule 62-212.400, F.A.C.

PREVENTION OF SIGNIFICANT DETERIORATION PERMIT PSD-FL-269

SECTION I - FACILITY INFORMATION

This Project is subject to the applicable requirements of Chapter 403, Part II, F.S., Electric Power Plant and Transmission Line Siting because the steam electric generating capacity of this facility is greater than 75 MW. [F.S Chapter 403.503 (12) Definitions]

This facility is also subject to certain Acid Rain provisions of Title IV of the Clean Air Act..

PERMIT SCHEDULE

- 11/10/99 Notice of Intent published in The Panama City News Herald
- 11/01/99 Distributed Intent to Issue Permit
- 10/06/99 Application deemed complete and sufficient for PSD review.
- 06/07/99 Received PSD Application

RELEVANT DOCUMENTS:

The documents listed below are the basis of the permit. They are specifically related to this permitting action, but not all are incorporated into this permit. These documents are on file with the Department.

- Application received on June 7, 1999
- Department/BAR letters to Gulf dated June 28, and September 23, 1999
- Gulf (through ECT) letters dated September 7, October 6 and December 15, 1999
- Department's Intent to Issue and Public Notice Package dated November 1, 1999.
- Letters from EPA Region IV dated November 23 and December 9, 1999.
- Department's Final Determination and Best Available Control Technology Determination issued concurrently with this Final Permit.

PREVENTION OF SIGNIFICANT DETERIORATION PERMIT PSD-FL-269

SECTION II - ADMINISTRATIVE REQUIREMENTS

GENERAL AND ADMINISTRATIVE REQUIREMENTS

1. Regulating Agencies: All documents related to applications for permits to construct, operate or modify an emissions unit should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP), at 2600 Blairstone Road, Tallahassee, Florida 32399-2400 and phone number (850)488-0114. All documents related to reports, tests, and notifications should be submitted to the DEP Northwest District Office, 160 Governmental Center, Pensacola, Florida 32501-5794 and phone number 850/595-8300.
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. 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. [Chapters 62-210 and 62-212, F.A.C.]
6. Expiration: Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. [Rule 62-4.070(4), 62-4.210(2)&(3), 62-210.300(1)(a), F.A.C.]
7. BACT Determination: In accordance with paragraph (4) of 40 CFR 51.166(j) the Best Available Control Technology (BACT) determination shall be reviewed and modified as appropriate in the event of a plant conversion. This paragraph states: "For phased construction projects, the determination of best available control technology shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of best available control technology for the source." This reassessment will also be conducted for this project if there are any increases in heat input limits, hours of operation, oil firing, low or baseload operation, short-term or annual emission limits, annual fuel heat input limits or similar changes. [40 CFR 51.166, Rule 62-4.070 F.A.C.]

PREVENTION OF SIGNIFICANT DETERIORATION PERMIT PSD-FL-269

SECTION II - ADMINISTRATIVE REQUIREMENTS

8. Permit Extension: The permittee, for good cause, may request that this PSD 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 62-4.080, F.A.C.).
9. Application for Title IV Permit: An application for a Title IV Acid Rain Permit, must be submitted to the U.S. Environmental Protection Agency Region IV office in Atlanta, Georgia and a copy to the DEP's Bureau of Air Regulation in Tallahassee 24 months before the date on which the new unit begins serving an electrical generator (greater than 25 MW). [40 CFR 72]
10. Application for Title V Permit: An application for a Title V operating permit, pursuant to Chapter 62-213, F.A.C., must be submitted to the DEP's Bureau of Air Regulation, and a copy to the Department's Northwest District Office. [Chapter 62-213, F.A.C.]
11. New or Additional Conditions: Pursuant to Rule 62-4.080, F.A.C., for good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
12. Annual Reports: 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.
13. Stack Testing Facilities: Stack sampling facilities shall be installed in accordance with Rule 62-297.310(6), F.A.C.
14. Quarterly Reports: Quarterly excess emission reports, in accordance with 40 CFR 60.7 (a)(7) (c) (1998 version), shall be submitted to the DEP's Northwest District Office.

PREVENTION OF SIGNIFICANT DETERIORATION PERMIT PSD-FL-269

SECTION III - EMISSIONS UNIT(S) SPECIFIC CONDITIONS

APPLICABLE STANDARDS AND REGULATIONS:

1. 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, 62-17, 62-204, 62-210, 62-212, 62-213, 62-214, 62-296, and 62-297; and the applicable requirements of the Code of Federal Regulations Section 40, Parts 52, 60, 72, 73, and 75.
2. 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.]
3. These emission units shall comply with all applicable requirements of 40CFR60, Subpart A, General Provisions including:
 - 40CFR60.7, Notification and Recordkeeping
 - 40CFR60.8, Performance Tests
 - 40CFR60.11, Compliance with Standards and Maintenance Requirements
 - 40CFR60.12, Circumvention
 - 40CFR60.13, Monitoring Requirements
 - 40CFR60.19, General Notification and Reporting requirements
4. ARMS Emissions Units 004 and 005. Power Generation, each consisting of a nominal 170 megawatt combustion turbine-electrical generator and a supplementally fired (275 MMBtu/hr) heat recovery steam generator equipped with a natural gas fired duct burner. The CT's will include provisions for the optional use of evaporative coolers and steam power augmentation. The emissions units shall comply with all applicable provisions of 40 CFR 60, Subpart Da, Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978, adopted by reference in Rule 62-204.800(7), F.A.C.; and 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, adopted by reference in Rule 62-204.800(7)(b), F.A.C. except as noted herein. The Subpart GG requirement to correct NSPS test data to ISO conditions applies.
5. ARMS Emission Unit 006. Cooling Tower is a regulated emission unit. The Cooling Tower is not subject to a NESHAP because Chromium-based chemical treatment is not used.
6. All notifications and reports required by the above specific conditions shall be submitted to the DEP's Northwest District Office.

GENERAL OPERATION REQUIREMENTS

7. Fuels: Only pipeline natural gas shall be fired in the unit. [Applicant Request, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]
8. Combustion Turbine Capacity: The maximum heat input rate, based on the lower heating value (LHV) of the fuel to this Unit at ambient conditions of 65°F temperature, 100% load, and 14.7 psi pressure shall not exceed 1,751 million Btu per hour (mmBtu/hr) when firing natural gas.

PREVENTION OF SIGNIFICANT DETERIORATION PERMIT PSD-FL-269

SECTION III - EMISSIONS UNIT(S) SPECIFIC CONDITIONS

The 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. {Permitting note: The heat input limitations have been placed in the permit to identify the capacity of each emissions unit for purposes of confirming that emissions testing is conducted within 90-100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability} [Design, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]

9. Heat Recovery Steam Generator equipped with Duct Burner. The maximum heat input rate of each natural gas fired duct burner shall not exceed 275 MMBtu/hour (LHV). {Permitting note: The heat input limitations have been placed in the permit to identify the capacity of each emissions unit for purposes of confirming that emissions testing is conducted within 90-100 percent of the emissions unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability} [Design, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]
10. Unconfined Particulate Emissions: 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.
11. 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 DEP Northwest District office 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.]
12. 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.]
13. 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.]
14. Maximum allowable hours of operation for the 566 MW Combined Cycle Plant are 8760 hours per year while firing natural gas. Operation in steam power augmentation mode is limited to 1000 hours per year. [Applicant Request, Rule 62-210.200, F.A.C. (Definitions - Potential Emissions)]

PREVENTION OF SIGNIFICANT DETERIORATION PERMIT PSD-FL-269

SECTION III - EMISSIONS UNIT(S) SPECIFIC CONDITIONS

CONTROL TECHNOLOGY

15. Dry Low NO_x (DLN) combustors shall be installed on the stationary combustion turbine and Low NO_x burners shall be installed in the duct burner arrangement to comply with the NO_x emissions limits listed in Specific Conditions 19 and 20 [Rules 62-4.070 and 62-204.800(7), F.A.C. to avoid PSD Review]
16. The permittee shall design these units to accommodate adequate testing and sampling locations for compliance with the applicable emission limits (per each unit) listed in Specific Conditions No. 19 through 24. [Rule 62-4.070, Rule 62-204.800, F.A.C., and 40 CFR60.40a(b)]
17. DLN systems shall each be installed as per manufacturer's recommendation. [Rule 62-4.070 and 62-204.800(7), F.A.C. to avoid PSD Review]
18. Drift eliminators shall be installed on the cooling tower to reduce PM/PM₁₀ emissions.

EMISSION LIMITS AND STANDARDS

Note: The following emission limits and standards shall apply upon completion of the initial compliance tests, certification tests and performance specification tests as applicable, for each unit.

19. The following table is a summary of the BACT determination and is followed by the applicable specific conditions. Values for are corrected to 15 % O₂ on a dry basis. These limits or their equivalent in terms of lb/hr or NSPS units, as well as the applicable averaging times, are followed by the applicable specific conditions. Each Unit shall be initially tested to comply with the applicable NSPS and with the BACT limits as indicated below: [Rules 62-212.400, 62-204.800(7)(b) (Subpart GG and Da), 62-210.200 (Definitions-Potential Emissions) F.A.C.]

Emission Unit	NO _x ⁽¹⁾	CO BACT	SO ₂ /SAM BACT	VOC BACT	PM/Visibility (% Opacity)	Technology and Comments
C.T.'s : With Duct Burners	82.9 lb/hr	16 ppm @ 15% O ₂	2 gr/100 scf natural gas ⁽³⁾	4 ppm @ 15% O ₂	10 - gas	Dry Low NO _x Combustors Natural Gas, Good Combustion
Steam power Augmentation	113.2 lb/hr	23 ppm @ 15% O ₂	2 gr/100 scf natural gas ⁽³⁾	6 ppm @ 15% O ₂	10 - gas	Unit limited to 1000 hours per year of operation
Cooling Tower					18.2 lb/hr ⁽²⁾	Drift Eliminators

(1) NO_x limits not determined by BACT. (2) Listed for informational purposes only. (3) See Fuel Mon. Sch. in Specific Cond.33

20. Nitrogen Oxides (NO_x) Emissions:

- Emissions of NO_x in the stack exhaust gas, with the combustion turbine operating and the duct burner on shall not exceed 82.9 lb/hr (30 day rolling average). Emissions of NO_x in the stack exhaust gas, with the combustion turbine operating with steam augmentation and the duct burner on shall not exceed 113.3 lb/hr (30 day rolling average). Compliance will be determined by the continuous emission monitor system (CEMS) and prorated daily as necessary based upon hours of operation per operating mode. Emissions of NO_x in the stack exhaust gas with the combustion turbine operating with the duct burner on shall not

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SECTION III - EMISSIONS UNIT(S) SPECIFIC CONDITIONS

exceed 82.9 lb/hr and 113.3 lb/hr with steam augmentation to be demonstrated by initial stack test. [Rule 62-4.070 and 62-204.800(7), F.A.C. to avoid PSD Review]

- Emissions of NO_x from the duct burner shall not exceed 0.1 lb/MMBtu, which is more stringent than the NSPS (see Specific Condition 46). [Rule 62-4.070 and 62-204.800(7), F.A.C. to avoid PSD Review]
 - When NO_x monitoring data is not available, substitution for missing CEMS data shall be handled as required by Title IV (40 CFR 75) to calculate any specified average time. Heat input for these periods shall be determined by fuel sampling and measurement.
 - **Facility-wide NO_x emissions cap:** In addition to individual (point source) emission limits and NO_x averaging plan requirements, the Lansing Smith facility shall be required to comply with a facility-wide NO_x emissions cap of 6666 TPY. CEMS shall be the method of compliance. See specific condition 43 for reporting and record-keeping requirements.
 - The installation of low NO_x burners and a new burner management system are authorized for existing Smith Unit 1 (EU-001) as a means of complying with the facility-wide cap. Within 18 months of commissioning of these burners, an engineering report shall be submitted to the Department summarizing the observed changes (before versus after) in NO_x.
21. Carbon Monoxide (CO) Emissions: Emissions of CO in the stack exhaust gas with the combustion turbine operating and duct burner on shall exceed neither 16 ppm nor 23 ppm (@ 15%O₂) with steam augmentation to be demonstrated annually by stack test using EPA Method 10. {For informational purposes, this equates to 78.7 lb/hr and 116.6 lb/hr respectively} [Rule 62-212.400, F.A.C.]
22. Volatile Organic Compounds (VOC) Emissions: Emissions of VOC in the stack exhaust gas with the combustion turbine operating and duct burner on shall exceed neither 4 ppm nor 6 ppm (@ 15%O₂) with steam augmentation to be demonstrated by initial stack test using EPA Method 18, 25 or 25A. {For informational purposes, this equates to 10.2 lb/hr and 16.8 lb/hr respectively} [Rule 62-212.400, F.A.C.]
23. Sulfur Dioxide (SO₂) emissions: SO₂ emissions shall be limited by firing pipeline natural gas (sulfur content less than 20 grains per 100 standard cubic foot). Compliance with this requirement in conjunction with implementation of the Custom Fuel Monitoring Schedule in Specific Condition 44 will demonstrate compliance with the applicable NSPS SO₂ emissions limitations from the duct burner or the combustion turbine. {For informational purposes, annual SO₂ emissions will be up to 105 TPY}[40CFR60 Subpart GG and Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.]
24. Visible emissions (VE): VE emissions shall serve as a surrogate for PM/PM₁₀ emissions from the combustion turbine operating with or without steam augmentation and/or the duct burner and shall not exceed 10 percent opacity from the stack in use. PM/PM₁₀ emissions (for information only) are up to 43 lb/hr. [Rules 62-4.070, 62-212.400, and 62-204.800(7), F.A.C.]

EXCESS EMISSIONS

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25. [Deleted]
26. Excess emissions entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction, shall be prohibited pursuant to Rule 62-210.700, F.A.C. These emissions shall be included in the 30 day rolling average for NO_x.
27. Excess Emissions Report: If excess emissions occur for more than two hours 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, all excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. Following this format, 40 CFR 60.7, periods of startup, shutdown, malfunction, shall be monitored, recorded, and reported as excess emissions when emission levels (in terms of applicable averaging periods) exceed the permitted standards listed in Specific Condition No. 19 through 24. [Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., and 40 CFR 60.7 (1998 version)].

COMPLIANCE DETERMINATION

28. Compliance with the allowable emission limiting standards shall be determined within 60 days after achieving the maximum production rate, 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 (1998 version), and adopted by reference in Chapter 62-204.800, F.A.C.
29. Initial (I) performance tests shall be performed by the deadlines in Specific Condition 28. Initial tests shall also be conducted after any substantial modifications (and shake down period not to exceed 100 days after re-starting the CT) of air pollution control equipment such as installation of SCR or change of combustors. Annual (A) compliance tests shall be performed during every federal fiscal year (October 1 - September 30) pursuant to Rule 62-297.310(7), F.A.C., on these units as indicated. The following reference methods shall be used. No other test methods may be used for compliance testing unless prior DEP approval is received in writing.
- EPA Reference Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources" (I, A).
 - EPA Reference Method 10, "Determination of Carbon Monoxide Emissions from Stationary Sources" (I, A).
 - EPA Reference Method 20, "Determination of Oxides of Nitrogen Oxide, Sulfur Dioxide and Diluent Emissions from Stationary Gas Turbines." Initial test only for compliance with 40CFR60 Subpart GG, Da. Initial (only) NO_x compliance test for the duct burners (Specific Condition 20) shall be accomplished via testing with duct burners "on" as compared to "off" and computing the difference.

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- EPA Reference Method 18, 25 and/or 25A, "Determination of Volatile Organic Concentrations." Initial test only.
30. Continuous compliance with the NO_x emission limits: Continuous compliance with the NO_x emission limits shall be demonstrated with the CEM system based on the applicable averaging time of 30 day rolling average (DLN). Based on CEMS data, a separate compliance determination is conducted at the end of each operating day and a new average emission rate is calculated from the arithmetic average of all valid hourly emission rates from the previous operating day. 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. A valid operating day shall consist of at least one valid operating hour. These excess emissions periods shall be reported as required in Condition 41. Continuous compliance with the 0.1 lb/MMBtu limit for the duct burners will be demonstrated through continuous compliance with the combined duct burner and CT emission limits (see Specific Condition 46). [Rule 62-4.070 and 62-204.800(7), F.A.C. to avoid PSD Review]
31. Compliance with the SO₂ and PM/PM₁₀ emission limits: Notwithstanding the requirements of Rule 62-297.340, F.A.C., the use of pipeline natural gas, is the method for determining compliance for SO₂ and PM₁₀. For the purposes of demonstrating compliance with the 40 CFR 60.333 SO₂ standard, ASTM methods 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 or natural gas supplier data 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 in 40 CFR 60.335 or 40 CFR 75 are used when determination of fuel sulfur content is made. 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) (1998 version). A certification following installation (and prior to startup) shall be submitted that the drift eliminators were installed and that the installation is capable of meeting 0.001 gallons/100 gallons recirculation water flowrate. [BACT]
32. Compliance with CO emission limit: An initial test for CO shall be conducted concurrently with the initial NO_x test, as required. The initial NO_x and CO test results shall be the average of three valid one-hour runs. Annual compliance testing for CO may be conducted at less than capacity when compliance testing is conducted concurrent with the annual RATA testing for the NO_x CEMS required pursuant to 40 CFR 75. Alternatively to annual testing in a given year, periodic tuning data may be provided to demonstrate compliance in the year the tuning is conducted.
33. Compliance with the VOC emission limit: An initial test is required to demonstrate compliance with the VOC emission limit. Thereafter, the CO emission limit and periodic tuning data will be employed as surrogate and no annual testing is required.
34. Testing procedures: Testing of emissions shall be conducted with the combustion turbine operating at permitted capacity. Permitted capacity is defined as 95-100 percent of the

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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. Procedures for these tests shall meet all applicable requirements (i.e., testing time frequency, minimum compliance duration, etc.) of Chapters 62-204 and 62-297, F.A.C.

35. Test Notification: The DEP's Northwest District office shall be notified, in writing, at least 30 days prior to the initial performance tests and at least 15 days before annual compliance test(s).
36. Special Compliance Tests: The DEP may request a special compliance test pursuant to Rule 62-297.310(7), 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.
37. Test Results: 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. [Rule 62-297.310(8), F.A.C.].

NOTIFICATION, REPORTING, AND RECORDKEEPING

38. Records: All measurements, records, and other data required to be maintained by Gulf shall be recorded in a permanent form and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These records shall be made available to DEP representatives upon request.
39. Compliance Test Reports: 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.

MONITORING REQUIREMENTS

40. Continuous Monitoring System: The permittee shall install, calibrate, maintain, and operate a continuous emission monitor in the stack to measure and record the nitrogen oxides emissions from these units. Periods when NO_x emissions are above the standards, listed in Specific Condition No 19 and 20, shall be reported to the DEP Northwest District Office within one working day (verbally) followed up by a written explanation postmarked not later than three (3) working days (alternatively by facsimile within one working day). [Rules 62-204.800, 62-210.700, 62-4.130, 62-4.160(8), F.A.C and 40 CFR 60.7 (1998 version)].
41. CEMS for reporting excess emissions: Subject to EPA approval, the NO_x CEMS shall be used in lieu of the requirement for reporting excess emissions in accordance with 40 CFR 60.334(c)(1), Subpart GG (1998 version). Upon request from DEP, the CEMS emission rates

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for NO_x on the CT's shall be corrected to ISO conditions to demonstrate compliance with the NO_x standard established in 40 CFR 60.332.

42. Continuous Monitoring System Reports: The monitoring devices shall comply with the certification and quality assurance, and any other applicable requirements of Rule 62-297.520, F.A.C., 40 CFR 60.13, including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7(a)(5) or 40 CFR Part 75. Quality assurance procedures must conform to all applicable sections of 40 CFR 60, Appendix F or 40 CFR 75. The monitoring plan, consisting of data on CEM equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location shall be provided to the DEP Emissions Monitoring Section Administrator and EPA for review no later than 45 days prior to the first scheduled certification test pursuant to 40 CFR 75.62.
43. CEMS for reporting facility-wide NO_x emissions: The NO_x CEMS shall be used for ensuring compliance with the facility-wide cap. For the oil-fired peaking turbine (Emissions Unit EU-003) emissions shall be determined using fuel sampling and AP-42 emission factors. Monthly records shall be maintained of the facility-wide NO_x emissions and the owner/operator shall calculate the facility-wide cap on a monthly basis for each prior consecutive 12-month period. These records shall be made available to inspectors as necessary. Additionally, a summary shall be filed with each quarterly report as a means of demonstrating compliance with the facility-wide cap for each consecutive 12-month period. The monthly calculations for the coal-fired units shall consist of use of the monthly NO_x emission rate per MMBtu (as determined by CEMS using the appropriate fuel F factor) multiplied by the monthly fuel (MMBtu) usage as specified in the Lansing Smith Title V permit and converted as appropriate to tons of NO_x for each unit. The sum of the monthly NO_x emissions from the coal units and the oil-fired peaking turbine shall then be added to the monthly NO_x emissions from the combined cycle unit, which will be calculated based upon the monthly average NO_x emission rate (lb/hr) multiplied by the number of valid operating hours for the same period. This annual emissions cap shall become effective on the first day of the month following completion of the initial performance testing of Unit 3, and compliance shall begin based upon the first twelve months of operation thereafter. [Rule 62-4.070 and 62-204.800(7), F.A.C. to avoid PSD Review]
44. Natural Gas Monitoring Schedule: A custom fuel monitoring schedule pursuant to 40 CFR 75 Appendix D for natural gas may be used in lieu of the daily sampling requirements of 40 CFR 60.334 (b)(2) provided the following requirements are met (monitoring of nitrogen content is not required):
- The permittee shall apply for an Acid Rain permit within the deadlines specified in 40 CFR 72.30.
 - The permittee shall submit a monitoring plan, certified by signature of the Designated Representative, that commits to using a primary fuel of pipeline supplied natural gas pursuant to 40 CFR 75.11(d)(2).
 - Each unit shall be monitored for SO₂ emissions using methods consistent with the requirements of 40 CFR 75 and certified by the USEPA.

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

45. Determination of Process Variables:

- 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.
- 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]

46. Subpart Da Monitoring and Recordkeeping Requirements: The permittee shall comply with all applicable requirements of this Subpart [40CFR60, Subpart Da]. The requirements under 40 CFR 60.46a, 60.47a, 60.48a, and 60.49a regarding continuous monitoring systems for emissions of nitrogen oxides and for electrical output are inapplicable (due to impracticability) and therefore waived.

One Energy Place
Pensacola, Florida 32520

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RECEIVED

JAN 12 2000

BUREAU OF AIR REGULATION



January 7, 2000

A. A. Linero, P.E.
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Lansing Smith Generating Plant
Proposed PSD Permit for Unit 3, PSD-FL-269
Response to EPA Comments

Dear Mr. Linero:

Gulf Power Company has reviewed the two letters that FDEP received from EPA Region 4 regarding the proposed Lansing Smith Unit 3 PSD Permit, and we offer the following information in response to those letters.

EPA Letter dated November 23, 1999 regarding custom fuel monitoring schedule:

We appreciate very much EPA's approval of the custom fuel monitoring schedule for the sulfur content of natural gas under the New Source Performance Standards (NSPS) Subpart GG. Because 40 CFR Part 75 only addresses SO₂ emissions, Gulf Power respectfully requests that the custom fuel monitoring schedule clarify that the monitoring of the nitrogen content is not required, consistent with EPA's historical practice. In addition, Gulf Power requests that the Department note a typographical error in the second paragraph of the letter. EPA states that the Acid Rain Program allows the use of the default value for sulfur dioxide emissions when pipeline gas has a maximum "sulfur" content of 0.3 grains per 100 standard cubic feet (scf). The recent changes to 40 CFR Part 75 provide, however, that this default value can be used when the maximum "hydrogen sulfide" content is 0.3 grains per 100 scf or less and that the hydrogen sulfide content is at least 50% (by weight) of the total sulfur in the fuel. (64 Fed. Reg. 28564, 28579 (May 26, 1999))

EPA Letter dated December 9, 1999 with general comments on proposed permit

Regarding EPA Comment 1, Gulf Power and ECT disagree with EPA's statement that a default interest rate of 7% should be used in the economic analysis. As described in the OAQPS Cost Control Manual, the applicable interest rate is the "pretax marginal rate of

return or real private rate of return". Accordingly, this interest rate is not a constant, fixed value but rather is project-specific and will vary depending on the profitability and cost of capital for the project being evaluated. The 8.51 percent interest rate used for the Smith Unit 3 Project was provided by Gulf Power and represents a reasonable estimate of the cost of capital for the Smith Unit 3 Project.

We also disagree with the EPA comment regarding the CO catalyst energy penalty. A CO catalyst control system will impose backpressure on a CT which reduces CT power output. Quantification of the energy penalty was made by multiplying the decrease in power CT output by the cost of power and the annual operating hours. EPA suggests that the energy penalty be determined by assuming that the CT power output remains unchanged and calculating the penalty by multiplying the increase in fuel usage (due to an increase in heat rate [MMBtu/kW]) by the cost by the cost of natural gas. We believe the CT derate method is more appropriate.

EPA comments 2 and 3 suggest a shorter averaging time for the nitrogen oxides (NO_x) limit and that there be no allowance for excess emissions during startup and shutdown. Because the NO_x limit was voluntarily accepted by Gulf Power and was not imposed as Best Available Control Technology (because PSD was not triggered), we request that the Department retain the exemption for excess emissions during startup and shutdown. An exemption from excess emissions was requested due to startup, shutdown, or malfunction because the CT vendor emission performance levels can not be achieved during these periods. During cold and warm startups, temperatures within the HRSG must be increased slowly to avoid metallurgical damage. Accordingly, the CT must be operated at low load for a period of time to properly acclimate the HRSG to the hot CT exhaust gas stream. During these low load startup periods, CT emissions will exceed the vendor performance guarantees. A similar situation arises during CT/HRSG shutdown operations. Accordingly, an exemption from excess emissions due to startup, shutdown, or malfunction is considered appropriate and necessary. In addition, as outlined in our comment letter to the Department dated December 15, a 30-day rolling average for NO_x is being requested for Smith Unit 3.

Comment 4 in EPA's letter suggests that particulate matter limits in terms of pounds per hour (lb/hr) would be appropriate to include in the permit. Because of the very small quantities of particulate matter expected from the combustion of natural gas and the technical difficulties inherent in attempting to measure low levels of PM emissions via stack sampling, an opacity limit rather than a numeric lb/hr limit for particulate matter is considered appropriate. In addition, the quantification of emissions from the cooling tower is not practicable. We are concerned that the inclusion of a lb/hr limit could result in regular stack testing requirements under the Title V periodic monitoring provisions. Gulf Power therefore requests that the Department retain the conditions in the permit as proposed, without numeric limits for particulate matter emissions.

The correct PM emission rates for the Smith Unit 3 Project are 184 ton per year from the new combined cycle unit (CTG1 and CTG2 combined) and 79.5 ton per year from the cooling tower for a Project total (both CT/HRSG units and the cooling tower) of 263.5 ton per year.

EPA Air Impact Comments:

Regarding EPA Modeling Comment 1, additional dispersion modeling was performed to evaluate impacts at a plant property boundary defined by FDEP; reference Gulf Power response to sufficiency review questions dated October 6, 1999. The additional modeling yielded acceptable results; i.e., maximum impacts were shown to be below the PSD significant impact levels for SO₂ and CO and below the NAAQS and PSD Class II increments for PM₁₀.

With respect to EPA Modeling Comment 2, duct burner firing will only occur at 100 percent load. Accordingly, the footnotes showing use of supplemental duct burner firing for the 75 and 50 percent load cases in Table 2-2 are incorrect.

In response to EPA Modeling Comment 3, fourteen operating scenarios were evaluated using the SCREEN3 dispersion model to identify the worst-case scenario for refined modeling. Because the SCREEN3 model is a single-source model, the two CT/HRSG stacks were conservatively co-located in the screening assessment. In general, the two CT/HRSG units would be expected to operate at approximately the same load. Assuming that each CT/HRSG unit could operate independently at any of the fourteen scenarios would result in a total of 68 possible operating scenarios. Evaluation of each of these possible 68 scenarios is not practical nor considered necessary. Because of the conservative modeling procedures utilized, the fourteen scenarios evaluated assuming equal loads for each CT/HRSG unit is considered to be a reasonable approach in identifying the worst-case operating scenarios and estimating maximum air quality impacts.

Regarding EPA Modeling Comment 4, the sources with unavailable PM emission rates provided by FDEP are generally small sources with relatively short stacks, low exhaust temperatures, and located some distance from the Smith Plant. Accordingly, these sources would not be expected to have a significant PM₁₀ impact in the vicinity of the Smith Plant. Emission sources beyond the 2.2 km area of influence plus 50 km (i.e., within 53 km of the Smith Plant) were excluded from the modeled emission inventory in accordance with EPA and FDEP modeling guidance; reference Section IV.B of the EPA New Source Review Workshop Manual. The Florida Coast Paper Company emission source noted by EPA in Comment 4 is situated 62.4 km from the Smith Plant and was therefore excluded from the modeled emission inventory consistent with EPA and FDEP modeling guidance.

The assessment of PM₁₀ air quality impacts is considered to be conservative; i.e., over-estimate actual impacts) because: (a) all PM emission rates provided by FDEP were assumed to be equal to PM₁₀ emission rates, and (b) the *highest* 24-hour and annual average PM₁₀ concentrations obtained from the FDEP PM₁₀ monitoring site located in Panama City for 1997 and 1998 were used as background. Accordingly, the contributions of emission sources not explicitly modeled (e.g., the sources shown with unavailable emission rates in the FDEP inventory and the Florida Coast Paper Company) would be reflected in the monitored background concentrations. In addition, use of the highest background concentrations will "double-count" the contributions of emission sources that were included in the modeled emission inventory; i.e., a portion of the FDEP monitored ambient PM₁₀ data would be expected to have been caused by the same PM₁₀ emission sources which were included in the modeled emission inventory.

Concerning EPA Modeling Comment 5, the model results shown in Tables 7-9 and 7-14 are correct. The maximum PM₁₀ impacts shown in Table 7-9 are due primarily to PM₁₀ emissions from Smith Unit 3 cooling tower and represent the *highest* 24-hour average impacts. The model results shown in Table 7-14 represent the *highest, second highest* 24-hour impacts and demonstrate that there is little interaction between other Smith Plant emission sources and emissions from Unit 3 cooling tower; i.e., the impacts shown in Table 7-14 are also primarily due to emissions from Smith Unit 3 cooling tower.

Thank you for your consideration of these comments. We look forward to the finalization of the PSD permit soon. If you have any questions regarding these comments or ones we previously submitted, please call me at 850-444-6527.

Sincerely,



G. Dwain Waters, Q.E.P.
Air Quality Programs Coordinator

Cc: Mike Halpin, DEP BAR
Buck Oven, DEP Siting
James O. Vick, Gulf Power Company
Kim Flowers, Gulf Power Company
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