

ATC

Date: 3/24/97 11:13:24 AM
From: Karen Skinner TAL
Subject: Putnam Power Plant
To: Clair Fancy TAL
To: Craig Diltz TAL
CC: Hamilton Buck Oven TAL
CC: Chip Collette TAL

Rich Piper from FP&L cc:ed you on a letter he sent to Buck/us re the proposed update/cleanup to the conditions we are proposing (Chip, I'll send you a copy through InterOffice mail). In that I don't think you saw the final draft we sent him, I am attaching it to this E-mail, so Rich's comments will make better sense. I suspect we will have to do a formal modification rather than a "technical revision" to make all the changes he suggested -- many of the deletions and so forth can be construed as substantive versus our editorial changes, although I doubt they will be particularly objectionable.

State of Florida Department of Environmental Protection
 Florida Power & Light Company, Putnam Plant Palatka Station
 Case No. PA-74-01
 CONDITIONS OF CERTIFICATION

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State of Florida Department of Environmental Protection
Florida Power & Light Company, Putnam Plant Palatka Station
Case No. PA 74-01
CONDITIONS OF CERTIFICATION

The permittee shall comply with the following conditions of certification:

1. Fuel

A. Auxiliary Boilers:

Fuel consumed should not contain more than 0.7% sulfur nor should stack emissions exceed rule 62-296, F.A.W. chapter 17-2.600(6)

B. Combustion Turbines:

- (i) Only fuel oil with not more than 0.7 percent sulfur content or natural gas may be fired.
- (ii) Opacity shall not exceed 20 percent opacity except for one 6-minute period per hour. Opacity shall not exceed 27 percent.

C. Heat Recovery Steam Generators

(i) Only the following fuels may be fired: (a) natural gas or (b) fuel oil with not more than 0.7 percent sulfur content by weight.

(ii) Emissions shall not exceed the following limitations

(a) Opacity emissions shall not exceed 20 percent (6-minute average), except for one 6-minute period per hour of not more than 27 percent.

(b) Excess opacity resulting from malfunctions is permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess opacity shall be minimized and shall not exceed two hours in any 24-hour period unless specifically authorized by the Department for long term operation.

(c) Excess opacity resulting from startup or shutdown is permitted, provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall not exceed 30 minutes.

(d) Nitrogen oxides emissions shall not exceed 0.2 lb/ mmBtu heat input when distillate oil is combusted or 0.4 lb/mmBtu heat input when residual oil is combusted. The nitrogen oxides emissions shall not exceed 0.2 lb/mmBtu heat input at all times, including periods of startup, shutdown, or malfunction.

(iii) To determine compliance with the emissions limit for sulfur dioxide, receipts for fuel oil shall be maintained for each shipment which certify that the oil complies with the specifications for fuel oil No. 2, as defined by the American Society of Testing and Materials in ASTM D396-78, standard specification for fuel oil.

Quarterly reports based on such receipts shall be submitted to the Northeast District Office certify containing no more than 0.5 weight percent sulfur or oil that has a sulfur dioxide emission rate eq 0.5 lb/mmBtu heat input and which meets the ASTM specifications was combusted in the duct bur preceding quarter. All quarterly reports shall be postmarked by the 30th day following the end of quarter.

(iv) To determine compliance with the opacity limit, Method 9 shall be used as requi s. 60.8 (July 1, 1990) Edition). The initial performance test shall be performed within 60 days after production rate for the HRSGs, but not later than 180 days after initial startup. Annual complianc performed at least once during each federal fiscal year (October 1 - September 30). Thirty (30) d compliance test and fifteen (15) days prior to each annual compliance test, notice shall be provid District Office. The results of each test shall be submitted to the Northeast District Office within 45 completion. Other Department-approved methods may be used for compliance testing after prior

(v) To determine compliance with the nitrogen oxides emissions limit, FPL shall con test using EPA Reference Methods 7E and 3A, gas codified in 40 CFR part 60 Appendix A). The i shall be performed within 60 days after achieving the maximum production rate for the HRSGs, bu days after initial startup. Annual compliance tests shall be performed at least once during each fe (October 1-September 30). Thirty (30) days prior to the initial compliance test and fifteen (15) da annual compliance test, notice shall be provided to the Northeast District Office. The results of ea submitted to the Northeast District Office within 45 days of test completion.

(vi) FPL shall maintain records of opacity and must submit excess emissions report quarter during which there are excess emissions from the HRSGs. If there are no excess emissio quarter, FPL shall submit a report stating that no excess emissions occurred during the quarterly r quarterly reports shall be submitted to the Department's Northeast District Office.

(vii) FPL shall satisfy any applicable nitrogen oxides emissions records maintenanc forth in 40 CFR s. 60.49b(g) (July 1, 1990 Edition).

(viii) All records required under this condition shall be maintained by FPL for a per following the date of such record.

D. Wind Restrictions and Monitoring

(i) Wind Restriction

The permittee will burn fuel oil containing no more than 0.50% sulfur when sustaine miles per hour for any continuous period of three hours or longer.

(ii) Wind Monitoring

The permittee shall measure wind velocity and wind direction at hourly intervals in t only for those hours during which combustion turbines at either of the combined cycle units of the with greater than 0.5 percent sulfur content. Wind data for the hours during which oil with greater content was burned each month, or, if applicable, a statement that no oil with greater than 0.5 per burned during that month, shall be reported to the Northeast District Office of the Department by t

month following each reporting period. Wind velocity and direction measurements required by this made in accordance with recognized methods and procedures.

2. Stack Height

Minimum stack heights for the paired combined cycle unit exhaust stacks shall be 71 feet a with a height of at least 150 feet shall be constructed if monitoring data per Condition 5 indicates have been violated.

Wind Restriction

~~The permittee will burn fuel oil containing no more than 0.50% sulfur when sustained winds hour for any continuous period of three hours or longer.~~

Wind Monitoring

~~The permittee shall measure wind velocity and wind direction at hourly intervals in the plan those hours during which combustion turbines at either of the combines cycle units of the plant op greater than 0.5 percent sulfur content. Wind data for the hours during which oil with greater than content was burned each month, or, if applicable, a statement that no oil with greater than 0.5 per burned during that month, shall be reported to the Northeast District Office of the Department by t month following each reporting period. Wind velocity and direction measurements required by this made in accordance with recognized methods and procedures.~~

3. Sampling Platform

The permittee shall install a sampling platform on one stack or shall provide sampling ports access facilities as may be prescribed by the Department in performing stack sampling.

4. Continuous Monitoring Devices

The permittee shall install and operate continuous monitoring devices on one of the paired the following: Opacity, Nitrogen Oxides. Records of such monitoring shall be available for inspec

5. Ambient Air Samplers

The permittee shall install and operate continuously for a 24-hour period every six days, tw West-Gaeke, monitoring devices for sulfur dioxide and two suspended air particulate sampling de these ambient air samples will be determined by consultation with the Chief, Bureau Air Monitorin the Department. The data collected will be reported to the Chief, Bureau of Air Monitoring and As by the 45th day following the end of the reporting period, utilizing the SAROAD or other mutually and ~~DEP DER~~ shall examine the ambient monitoring program and decide by 1/10/92 to upgrade t delete it.

6. Water Effluents

Water effluents shall conform to the limitations of Chapter 62-302, F.A.C., including but not

contained in Paragraph 7 below. Iron, chlorine, nickel and zinc shall meet the water quality standard Administrative Code Rule 62-302, at the boundary of a mixing zone defined to be an area that is 8 and 90 meters in width, taking into account the particular shoreline configuration, as shown on Fi

7. Monitoring

Monitoring shall be conducted at the frequencies listed below on the following waste stream applicable: Cooling Tower Blowdown, West EP Pond, North Fuel Oil Tank Farm, waste streams St. Johns River. Cooling Tower Blowdown and Physical Chemical Treatment System discharge simultaneously or separately through the same pipe. Monitoring reports shall be submitted quarterly to the Department's Director of the Northeast District:

| <u>Effluent Characteristics</u> | <u>Limitation</u> | <u>Monitoring</u> |
|---------------------------------|---|---|
| * Flow | To existing plant discharge area. Cooling tower blowdown shall be minimized to the degree allowed by best engineering practice; furthermore, the combined flow to the St. Johns River from the cooling tower and the chemical waste treatment system shall not exceed 2,200 gpm. | Continuous recorders or pump logs |
| * Temperature | Not to exceed 98°F. at the P.O.D. and not to exceed 92°F. or 5° F. above ambient at the boundary of a 3-dimensional zone of mixing described by a cylinder if 50 meters radius running horizontally from the P.O.D. and which extends vertically to the river surface and river bottom. | Continuous (recorder or pump logs) at any point between the blowdown discharge at the cooling tower and the P.O.D. of cooling water into the river. |
| * Phosphate to Blowdown tank | 50 ppm | Weekly |
| * Dissolved solids | 6000 ppm | Daily |
| * pH | 6.0-8.5 | Daily |

* Floating solids
and visible foam

None visible

None

8. Change in Discharge

All discharges or emissions authorized herein shall be consistent with the terms and conditions of this certification. The discharge of any pollutant identified in this certification more frequently than or in excess of that authorized shall constitute a violation of the certification. Any solids, sludges, filter pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner that prevents any pollutants from such materials from entering waters of the state.

9. Noncompliance Notification:

If, for any reason, the permittee does not comply with or will be unable to comply with any condition in this certification, the permittee shall provide prompt notification to the Director of the Northeast District of the Department of Environmental Protection sent no later than 3:00 p.m. of the next normal work day following the occurrence of noncompliance, and shall submit the following information in writing, within ninety-six (96) hours of becoming aware of such condition:

A. A description of the discharge and cause of noncompliance; and

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

10. Facilities Operation

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

11. Adverse Impact

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

12. Bypassing

Any diversion or bypass of facilities necessary to maintain compliance with the terms and conditions of this certification is prohibited, except (i) where unavoidable to prevent loss of life or severe property damage or excessive storm drainage or runoff would damage any facilities necessary for compliance with the terms and conditions of this certification, the permittee shall promptly notify the Director of the Northeast District of the Department of Environmental Protection of each such bypass in accordance with the procedure contained in condition 9 of this certification.

13. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or c wastewaters shall be disposed of in a manner such as to prevent any pollutant from such material waters of the state.

14. Right of Entry

The permittee shall allow the Secretary of the Florida Department of Environmental Protect representatives, upon the presentation of credentials:

A. a. To enter upon the permittee's premises where an effluent source is located or in whi required to be kept under terms and conditions of this certification; and

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

C. c. To inspect any monitoring equipment or monitoring method required in this certificati any discharge of pollutants.

15. Revocation or Suspension

After notice and opportunity for a hearing, this certification may be suspended, or revoked during its term for cause including, but not limited to, the provisions of s. 403.512, Chapter 403, FI failure to comply with the terms and conditions of the certification.

16. New Pollutant Standards

If an effluent or emission standard or prohibition (including any schedule of compliance sp effluent or emission standard or prohibition) is established for a pollutant which is present in this c such standard or prohibition is more stringent than any limitation for such pollutant in this certifica shall be revised in accordance with the new effluent or emission standard or prohibition and the p

17. Civil and Criminal Liability

Nothing in this certification shall be construed to relieve the permittee from civil or criminal non-compliance with any condition of this certification, applicable rules or regulation of the Depart 403, Florida Statutes.

18. Legal Action

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

19. Property Rights

The issuance of this certification does not convey any property rights in either real or personal property, nor does it authorize any injury to public or private property or any invasion of any infringement of Federal, State or local laws or regulations

20. Severability

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

21. Debris Discharge

No debris shall be discharged to waters of the State from the intake screens with the exception of those necessary for the operation of the intake screens. Additionally, the Permittee shall, beginning no later than July 1, 1978, undertake a study to evaluate nekton collected on the intake screens to ambient temperature waters and shall submit a report no later than November 1, 1979.

22. Free Available Chlorine

After December 31, 1976 or six months after commencement of boiler operations, whichever is later, free available chlorine shall not exceed an average concentration of 0.2 mg/l and a maximum concentration of one mg/l during a maximum of one two-hour period a day. Chlorine concentration monitoring shall be conducted during the period of maximum expected residual, at any point between the exit from the cooling tower to the river. The results of such a monitoring shall be reported, quarterly to the North Carolina Department of Environment and Natural Resources. Additionally, a study shall be instituted to evaluate all practicable methods to reduce total chlorine levels, including, but not necessarily limited to, (i) ~~(1)~~ minimization of chlorine addition commensurate with the requirements, (ii) ~~(2)~~ reduction of flow during chlorination, and (iii) ~~(3)~~ discontinuation of blowdown chlorination and subsequent periods of high concentration. Results of this study, including facilities proposed to reduce total chlorine residuals shall be submitted within twenty-four months of plant operation. Subsequently, chlorination procedures to reduce total chlorine residual shall be instituted to the extent practicable.

23. Biocide Discharge

Any biocide discharge from any point source shall comply with the requirements of the Federal Fungicide, and Rodenticide Act, as amended (U.S.C. 136 et. seq.) and the use of such pesticide shall be consistent with the labeling.

24. Polychlorinated Biphenyl Compounds

There shall be no release from containment devices or structures of polychlorinated biphenyl compounds into the environment.

25. Turbid Waters

There shall be no surface discharge of turbid waters to waters of the State from the spoil disposal system. Any spoil excavated during construction or maintenance dredging shall be deposited on a berm or other control device shall be constructed around the spoil disposal area to insure against erosion of excavated material which may cause turbidity in excess of 29 Nephelometric 50-Jackson Turbidity background in waters of the State.

26. Barge Slip

The Barge Slip shall be of a sheet pile type construction with a poured concrete cap. Riprap shall be placed along the river bank adjacent to the barge slip to prevent erosion due to removal of natural vegetation. Riprap shall be removed from the barge slip prior to the departure of any barge. Such oil shall be disposed of by the treatment system.

27. Utilities Tunnel

Construction of the utilities tunnel under U.S. 17 shall be expedited to occur in a minimal amount of time. Construction shall be performed in accordance with the standards of the Florida Department of Transportation in close coordination with:

~~Mr. C. A. Benedict~~
District Engineer Fifth Division
Florida Department of Transportation
Post Office Box 47
Deland, Florida 32720

and with:

~~Mr. J.A. Crookshank, Jr.~~
Maintenance Engineer, Putnam County
Post Office Drawer "X"
St. Augustine, Florida 32084

28. Stormwater Runoff

During construction and plant operation necessary measures shall be employed to settle, filter, and contain silt-containing pollutant-loaded stormwater runoff to prevent contamination of water of the State. Measures may include sediment traps, barriers and use of berms or vegetation. Exposed or disturbed soils shall be stabilized as possible to minimize silt and sediment runoff into waters of the State.

29. Turbidity Control

Turbidity control shall be installed prior to any construction or maintenance dredging to insure that the State waters is not increased more than 29 Nephelometric 50-Jackson Turbidity units.

30. Groundwater Monitoring Plan

The Groundwater Monitoring Plan for the Putnam Power Plant, approved on February 25, 1997, by the Department, is incorporated by reference.

Copies of any subsequent revisions to the Groundwater Monitoring Plan which are approved by the Department's Northeast District Office shall be filed with the Department's Siting Coordination Office to the parties hereto by certified mail, and, in the absence of a request for a hearing thereon with respect to such revision, the revisions shall become part of this certification without the need for further filing fees.

31. Review of Site Certification

This certification shall be final unless revoked or suspended pursuant to law. Five years from issuance of any National Pollutant Discharge Elimination System Permit issued pursuant to the Federal Pollution Control Act Amendments of 1972, for the Combined Cycle Units, the Department shall review monitoring data that have been submitted to it during the preceding five year period, for the purpose of determining the extent of the permittee's compliance with the conditions of this certification and the environmental performance of the facility. The Department shall submit the results of its review and recommendations to the Permittee of record in this certification proceeding.

32. Monitoring Program Review

The results of the air and water monitoring programs will be reviewed by the Department and Florida Power & Light Company at the end of each year of operation to determine the necessity and/or extent of corrective actions. The methods and procedures utilized in the monitoring program shall be approved by the Department annually by the Department and Florida Power & Light Company, and may be modified by agreement of the Permittee of record in this certification proceeding.

33. Modification of Conditions

The conditions of this certification may be modified in the following manner:

A. The Board, pursuant to 403.516(1), F.S., hereby delegates to the Secretary the authority to provide notice and opportunity for hearing, any conditions pertaining to air and water monitoring and sampling, and any exceptions to water quality standards.

B. Conformance With Federally Delegated Permits

This certification shall be modified to conform to any subsequent amendments, modifications, or conditions by DEP under a federally delegated or approved program to any separately issued Prevention of Significant Deterioration (PSD) permit, Title V Air Permit, or National Pollutant Discharge Elimination System (NPDES) permit for the facility. FPL shall send each party to the certification proceeding (at the parties last known address) copies of notice requests submitted by FPL for modifications or conditions of the above-listed permits if the request involves a relief mechanism (e.g., mixing zone, variance, etc.) or a relaxation of conditions included in the permit due to state permitting requirements, or more restrictive air emission limitations in the air permits. DEP shall notify all parties to the certification of its intent to modify conditions under this section prior to taking final agency action.

C. All other modifications shall be made in accordance with Section 403.516, Florida Statutes.

----- History Notes -----

Certification issued 10/16/74 by Pollution Control Board
Modified 5/18/76, Governor Graham
Modified 9/26/78, Secretary Landers/parties/stipulation
Modified 8/20/80
Modified 3/15/84, Governor Graham
May have been modified in 1985 -- researching Archives
Modified 4/15/86, _____?; -- researching Archives
Modified 7/16/91, Secretary Browner
Modified 12/14/95, Secretary Wetherell

FL



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MAR 24 1997

BUREAU OF
AIR REGULATION

March 21, 1997

Hamilton S. Oven, Jr.
Professional Engineer Administrator
Siting Coordination Office
State of Florida
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: **FPL Putnam Plant ; PA74-01**
Conditions of Certification

Dear ^{Buck}~~Mr. Oven~~:

This correspondence is in response to your letter of February 24, 1997 regarding the revised Conditions of Certification for the Putnam facility. In our review of the revised conditions, several items were apparent which could be addressed for purpose of clarity:

Page 2, item iv: The sentence that begins "The initial performance test shall be performed...." can be stricken entirely, as this testing was completed years ago.

Page 3, item 2: The sentence that begins "Stacks with a height of...." can be deleted since the Ambient Air Sampling required in Condition 5 has been eliminated.

Page 4, item 3: "Sampling Platform - The permittee shall install...." As above, this condition was completed several years ago, so this language can be stricken.

Page 4, item 5: "Ambient Air Samplers" - The samplers referenced in the condition were removed several years ago, with concurrence from the Department. This condition can be deleted.

Page 4, item 6: "Water Effluents" The parameter of copper has been omitted from the sentence "Iron, chlorine, nickel and zinc shall...." It should read "Iron, chlorine, copper, nickel and zinc shall...."

Page 4, item 7: "Monitoring" - The first sentence lists the waste streams for which monitoring is required. The North Fuel Oil Tank Farm (OSN 004) was deleted as an outfall in the December 15, 1995 modification. This language change was not addressed in the "Final Order". This "correction should be made now.

Page 4, item 7: "Monitoring" - The final sentence of this section requires quarterly submittal of surface water monitoring reports to the DEP's Northeast District Office. The current requirement in the SPDES permit, as a result of delegation of the NPDES program on May 1, 1995, is monthly reporting through DEP-Tallahassee. This section should be updated.

Page 5, Table of Effluent Characteristics, Limitation and Monitoring - In previous editions of the Conditions of Certification, this table has contained a fourth heading - Waste Stream. It is necessary to have this column since it is not clear which Serial Discharge Streams are to be monitored for the listed effluent characteristic. Additionally, the limitation on combined flow to the St. Johns River from the cooling tower and the chemical waste treatment system of 2,200 gpm has not been a part of previous permits. The table should read:

| <u>Effluent Characteristics</u> | <u>Limitation</u> | <u>Monitoring</u> | <u>Waste Stream</u> |
|---------------------------------|--|---|--|
| * Flow | To existing plant discharge area. Cooling tower blowdown shall be minimized to the degree allowed by best engineering practice. | Continuous recorders or pump logs | Cooling tower blowdown, Physical / Chemical Treatment System, West EP Pond |
| * Temperature | Not to exceed 98 F. at the P.O.D. and not to exceed 92 F. or 5 F. above ambient at the boundary of a 3-dimensional zone of mixing described by a cylinder of 50 meters radius running horizontally from the P.O.D. and which extends vertically to the river surface and river bottom. | Continuous (recorder or pump logs) at any point between the blowdown discharge at the cooling tower and the P.O.D. of cooling water into the river. | Cooling tower blowdown |
| * Phosphate | 50 ppm | Weekly | Physical Chemical Treatment System |
| * Dissolved solids | 6000 ppm | Daily | Cooling tower blowdown, Physical Chemical Treatment System, West EP Pond |

| | | | |
|---|--------------|-------|--|
| * pH | 6.0 - 8.5 | Daily | Cooling tower blowdown, Physical Chemical Treatment System, West EP Pond |
| *Floating solids and visible foam | None visible | Daily | Cooling tower blowdown, Physical Chemical Treatment system |

Page 8, item 22: "Free Available Chlorine" - Much of this section should be deleted since it has long ago been completed. The language of the remainder should be changed to reflect the requirements of the NPDES permit concerning free available chlorine. The section should read:

"Chlorine concentration monitoring shall be conducted two times per week, during the period of maximum expected residual, at any point between the exit from the cooling tower and the P.O.D. of cooling water in the river. If the grab sample for total residual chlorine (TRC) taken prior to discharge from the cooling tower indicates that no TRC is present, sampling for FAC is not required. If FAC is present, multiple grabs shall be conducted hourly until it can no longer be detected. When TRC measures "less than detectable" and the cooling tower blowdown has been established, it is not required to sample for TRC again until a chlorination of the cooling tower water has been performed."

The statement requiring reporting of monitoring results should be updated to reflect the delegation of the NPDES program to the FDEP from EPA.

With respect to the History Notes section, in general the dates provided appear to be correct. I would add that the date of 5/20/80 should be inserted as the date for the fourth change to the Conditions of Certification. FPL also has archived many of our older files, and thus some of this information is not easily accessible.

I would be pleased to discuss this further with you, or with other members of the Department if you have any questions.

Very truly yours,



Rich Piper
Senior Environmental Specialist
Florida Power & Light Company

cc:

Clair Fancy
Craig Diltz

DARM
DWF

RECEIVED

JAN 12 1994

MANAGER
ENVIRONMENTAL AFFAIRS

FLORIDA POWER & LIGHT COMPANY
Report of Laboratory Analyses

STATE OF FLORIDA LABORATORY CERTIFICATION NUMBERS
DRINKING WATER CERTIFICATION NUMBER: 56275
ENVIRONMENTAL CHEMISTRY CERTIFICATION NUMBER: E56078

PUTNAM PLANT

ANALYSES OF #2 FUEL OIL FIRED DECEMBER 1993

| | |
|--------------------------------|----------|
| Date Sampled | 12/03/93 |
| API Gravity @ 60 F: | 33.6 |
| Density (lb. per bbl): | 299.712 |
| Heat of Combustion (Btu/lb.): | 19443 |
| Heat of Combustion (MBtu/bbl): | 5827 |
| Sulfur (% by weight): | 0.39 |

COPIES TO: PPN PLANT MGR. PPN/PPN ANALYZED BY: *V. Floriani*
V. FLORIANI - JEN/GB
TECHNICAL MANAGER
K. WASHINGTON-ETS/JB

CERTIFIED BY: *K. Washington*

F-PPN-4

DECEMBER 28, 1993



RECEIVED

March 21, 1994

MAR 28 1994

Mr. Clair Fancy
DEP/Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Bureau of
Air Regulation

**RE: Putnam Plant
PPS-74-01
NSPS Notification for Auxiliary Boiler Initial Compliance Test**

In compliance with 40 CFR 60.44c(g), FPL is hereby submitting as the initial compliance test for the auxiliary boiler a copy of the fuel oil analysis which shows that the fuel oil available for the auxiliary boiler when placed into service, in December 1993, was less than the 0.5% sulfur required by 40 CFR 60.42c(d). Also enclosed is a copy of a letter from the plant manager attesting that the only fuel oil available for the auxiliary boiler meets ASTM specification for grade No. 1 and 2.

40 CFR 60.43c(c) is not applicable since the auxiliary boiler has a heat input less than 30 MBtu per hour.

Please call me at (407) 625-7661 if you have any questions.

Sincerely,

A handwritten signature in cursive script, appearing to read 'D. MacDougall', is written over a horizontal line.

Dan MacDougall
Environmental Specialist
Environmental Affairs

cc: Jewel Harper, EPA
Ernest Frey DEP/JAX

B. Owen



Florida Power & Light Company, P.O. Box 088801, North Palm Beach, FL 33408-8801

12/21 Houston - km
J. MacDougall
Putnam - file

December 14, 1993

RECEIVED

DEC 20 1993

Division of Air
Resources Management

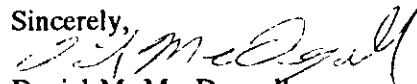
Mr Clair Fancy, Chief
Bureau of Air Regulation
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399

**RE: Putnam Plant
PPS 74-01
Initial Fire of Auxiliary Boiler**

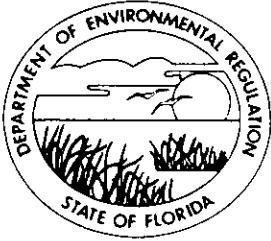
Dear Mr. Fancy:

In compliance with 40 CFR 60.7(a)(3), FPL is hereby notifying the Department that the auxiliary boiler at the Putnam Plant was initial fired on December 8, 1993. If you have any questions or comments, please call me at (407) 625-7661.

Sincerely,


Daniel M. MacDougall
Environmental Specialist
Florida Power & Light

cc: Ernest Frey DEP-NED



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Virginia B. Wetherell, Secretary

April 22, 1993

Dan M. MacDougall
Environmental Affairs
Florida Power & Light
Post Office Box 088801
North Palm Beach, FL 33408-8801

RE: FPL Palatka (Putnam) Power Plant, PPS 74-01
Auxiliary Boiler Replacement

Dear Mr. MacDougall:

The Department has reviewed the material you submitted on February 10, 1993 concerning the proposed replacement of the auxiliary boilers for the FPL Putnam Plant, PPS No. 74-01. No agency objections or adverse comments on this activity have been received by the Department. The Department has reviewed the material and concluded that no further review or approvals are required so long as the work is performed in accordance with the information submitted with your letter. No formal modification of certification is required to address the more stringent limit imposed under the separately-applicable federal new source performance standards contained in 40 CFR 60, Subpart D.c.

Sincerely,

Hamilton S. Owen

Hamilton S. Owen, P.E.
Siting Coordination
Administrator

cc: Richard T. Donelan
Douglas S. Roberts
Parties to FPL Putnam Certification

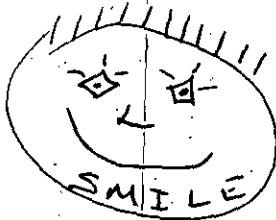
Department of Environmental Regulation
Routing and Transmittal Slip

To: (Name, Office, Location)

- 1. ~~Treston Lewis~~ EPL
- 2. ~~DARM~~ Patry 2 de / Patry
- 3. 70 GPC
- 4. 5/2/93

Remarks:

FYI



RECEIVED

APR 23 1993

Division of Air
Resources Management

From:

[Handwritten signature]

Date

4-22-93

Phone

7-0472



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

| For Routing To Other Than The Addressee | |
|---|-----------------|
| To _____ | Location: _____ |
| To _____ | Location: _____ |
| To _____ | Location: _____ |
| From _____ | Date: _____ |

Interoffice Memorandum

TO: Buck Oven

FROM: Teresa M. Heron *J.H.*
Katherine Zhang *ykz*

THRU: Preston Lewis *PL*
Clair Fancy *CF*

DATE: March 16, 1993

SUBJ: Palatka (Putman) Power Plant
Site Certification PPS No 74-01
Auxiliary Boiler Replacement

This is to acknowledge receipt of the auxiliary boiler replacement amendment request at the above mentioned facility. The new 10,000 lbs/hr auxiliary boiler will comply with a more stringent emission limit than required by the condition of certification on the two (2) existing permitted 37,000 lbs/hr auxiliary boilers. This is the 40 CFR 60 Subpart Dc NSPS for Steam Generators.

The Bureau of Air Regulation has reviewed this information as submitted and have no adverse comments. Thank you for the opportunity to review and comment on this amendment request.

TH-KZ/plm



February 10, 1993

Hamilton S. Oven, Jr., P.E.
Department of Environmental Regulation
2600 Blair Stone Road, Room 612
Tallahassee, FL 32399-2400

RECEIVED

FEB 10 1993

**RE: Palatka (Putnam) Power Plant
Site Certification PPS No. 74-01
Auxiliary Boiler Replacement**

**D. E. R.
SITING COORDINATION**

Dear Buck:

As briefly discussed with you and Mr. Clair Fancy on December 14, 1992, FPL is planning to replace the two existing 37,000 lb/hr auxiliary boilers at the Putnam Plant with a new 10,000 lb/hr auxiliary boiler. The Putnam Plant was certified pursuant to the Florida Power Plant Siting Act on October 16, 1974. The new auxiliary boiler by virtue of its smaller size and efficient design will result in less air emissions as compared to the existing auxiliary boilers. FPL has utilized, for informational purposes, the Department's permit application form to provide the Department with specific information about the new auxiliary boiler.

The existing auxiliary boilers are authorized by Site Certification Condition 1.A. which limits the sulfur in the fuel to 0.7% S. The new auxiliary boiler will be required to comply with 40 CFR 60 Subpart Dc which has a more stringent limit of 0.5% S in fuel. These NSPS limits will thus establish a more stringent emission limit for the replacement auxiliary boiler than required by the conditions of certification. However, the installation of the new auxiliary boiler does not require formal modification to the Site Certification since the new auxiliary boiler is essentially a replacement of in-kind equipment (with less impact) and is subject to more stringent limits (40 CFR 60 Subpart Dc) than originally contained in the current Site Certification.

The current schedule calls for the installation of the new auxiliary boiler to begin on June 1, 1993. If you have any questions about the auxiliary boiler replacement please call me at (407) 625-7661.

Sincerely,

A handwritten signature in black ink that reads "Dan M. MacDougall" followed by a stylized flourish.

Dan M. MacDougall
Environmental Specialist
Environmental Affairs

cc: Clair Fancy
Richard T. Donelan
Counsel for Parties to Certification Order

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301



BOB GRANAN
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: AUXILIARY BOILER New¹ Existing¹
APPLICATION TYPE: Construction Operation Modification REPLACEMENT
COMPANY NAME: FLORIDA POWER & LIGHT COMPANY COUNTY: PUTNAM
Identify the specific emission point source(s) addressed in this application (i.e. Line
Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) AUX BOILER FOR THE
PUTNAM PLANT
SOURCE LOCATION: Street HIGHWAY 17 SOUTH City EAST PALATKA
UTM: East _____ North _____
Latitude 29 ° 37 ' 43 "N Longitude 81 ° 35 ' 25 "W
APPLICANT NAME AND TITLE: FLORIDA POWER & LIGHT COMPANY
APPLICANT ADDRESS: JEN/GB PO BOX 088801 NORTH PALM BEACH FL 33408-8801

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of _____

I certify that the statements made in this application for a _____
permit are true, correct and complete to the best of my knowledge and belief. Further,
I agree to maintain and operate the pollution control source and pollution control
facilities in such a manner as to comply with the provision of Chapter 403, Florida
Statutes, and all the rules and regulations of the department and revisions thereof. I
also understand that a permit, if granted by the department, will be non-transferable
and I will promptly notify the department upon sale or legal transfer of the permitted
establishment.

*Attach letter of authorization

Signed: _____

Name and Title (Please Type)

Date: _____ Telephone No. _____

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have
been designed/examined by me and found to be in conformity with modern engineering
principles applicable to the treatment and disposal of pollutants characterized in the
permit application. There is reasonable assurance, in my professional judgment, that

See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed _____

Name (Please Type)

Company Name (Please Type)

Mailing Address (Please Type)

Florida Registration No. _____ Date: _____ Telephone No. _____

SECTION II: GENERAL PROJECT INFORMATION

- A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

THE TWO EXISTING (37,000)lb/hr OIL FIRED AUXILIARY BOILERS ARE BEING REPLACED WITH A NEW 10,000 lb/hr DUAL FUEL FIRED AUXILIARY BOILER TO BE LOCATED NEAR THE CT'S. THE ORIGINAL AUXILIARY BOILERS WERE PERMITTED PURSUANT TO THE POWER PLANT SITING ACT (Chp 403 F.S.). ATTACHMENT IIAL SHOWS THAT THE NEW AUXILIARY BOILER WILL HAVE LESS IMPACT AS COMPARED TO THE EXISTING AUXILIARY BOILERS.

- B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction JUNE 1993 Completion of Construction DECEMBER 1993

- C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

GENERALLY THE COST OF POLLUTION CONTROL SYSTEMS FOR THIS TYPE OF AUXILIARY BOILER IS IMBEDDED IN THE TOTAL COST OF THE PROJECT SINCE THE POLLUTION CONTROLS ARE AN INTEGRAL PART OF THE DESIGN AND OPERATION OF THE AUXILIARY BOILER.

- D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

SITE CERTIFICATION PPS-74-01 ORIGINALLY ISSUED 10/16/74 AND LAST MODIFIED 5/28/92

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;
 if power plant, hrs/yr: _____ ; if seasonal, describe: THE AUXILIARY BOILER'S OPERATIONAL
SCHEDULE IS DEPENDENT UPON THE OPERATION OF UNITS 1 & 2 AND THE NEED FOR POWER. THE
AUXILIARY BOILER WILL NOT OPERATE WHEN BOTH UNITS ARE ONLINE AND AT FULL LOAD. THE NEW
AUXILIARY BOILER WILL GENERALLY BE USED TO SUPPLY STEAM DURING UNITS 1 & 2 START-UP, :
SHUTDOWN, AND STAND-BY OPERATIONS AND NOT FUEL CLEANING OR HEAT TRACING AS WAS DONE IN 1
 F. If this is a new source or major modification, answer the following questions. PAST.
 (Yes or No)

- 1. Is this source in a non-attainment area for a particular pollutant? NO
 - a. If yes, has "offset" been applied? _____
 - b. If yes, has "Lowest Achievable Emission Rate" been applied? _____
 - c. If yes, list non-attainment pollutants. _____
- 2. Does best available control technology (BACT) apply to this source?
 If yes, see Section VI. YES*
- 3. Does the State "Prevention of Significant Deterioration" (PSD)
 requirement apply to this source? If yes, see Sections VI and VII. NO
- 4. Do "Standards of Performance for New Stationary Sources" (NSPS)
 apply to this source? YES**
- 5. Do "National Emission Standards for Hazardous Air Pollutants"
 (NESHAP) apply to this source? NO
- H. Do "Reasonably Available Control Technology" (RACT) requirements apply
 to this source? NO
 - a. If yes, for what pollutants? _____
 - b. If yes, in addition to the information required in this form,
 any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justifi-
 cation for any answer of "No" that might be considered questionable.

* BACT REQUIRED BY 17-296.406 F.A.C.
 ** THE NEW AUXILIARY BOILER IS SUBJECT TO 40 CFR 60 SUBPART Dc

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

NOT APPLICABLE

| Description | Contaminants | | Utilization Rate - lbs/hr | Relate to Flow Diagram |
|-------------|--------------|------|---------------------------|------------------------|
| | Type | % Wt | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

B. Process Rate, if applicable: (See Section V, Item 1)

NOT APPLICABLE

1. Total Process Input Rate (lbs/hr): _____

2. Product Weight (lbs/hr): _____

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

| Name of Contaminant | Emission ¹ | | Allowed Emission Rate per Rule 17-2 | Allowable ³ Emission lbs/hr | Potential ⁴ Emission | | Relate to Flow Diagram |
|---------------------|-----------------------|-------------|-------------------------------------|--|---------------------------------|------|------------------------|
| | Maximum lbs/hr | Actual T/yr | | | lbs/yr | T/yr | |
| SO2 (OIL) | 7.5 | | 0.5%* | 7.5 | | 32.9 | |
| SO2 (GAS) | 9x10 ⁻³ | | 0.5%* | 9x10 ⁻³ | | 0.04 | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹ See Section V, Item 2. SEE ATTACHMENT IIAI FOR OTHER EMISSION ESTIMATES

² Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

³ Calculated from operating rate and applicable standard.

⁴ Emission, if source operated without control (See Section V, Item 3).

* 40 CFR 60.42c(d) SUBPART Dc

D. Control Devices: (See Section V, Item 4) ALL CONTROLS ARE INTEGRAL TO THE DESIGN AND OPERATION OF THE AUXILIARY BOILER

| Name and Type (Model & Serial No.) | Contaminant | Efficiency | Range of Particles Size Collected (in microns) (If applicable) | Basis for Efficiency (Section V Item 5) |
|---------------------------------------|-------------|------------|---|--|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

E. Fuels

| Type (Be Specific) | Consumption* | | Maximum Heat Input (MMBTU/hr) |
|--------------------|--------------|-------------|----------------------------------|
| | avg/hr | max./hr | |
| NATURAL GAS | | 0.0155 MMCF | 15.5 |
| # 2 FUEL OIL | | 105 gal/hr | 14.8 |
| | | | |
| | | | |

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis: GAS/OIL

Percent Sulfur: 10 grains/1000 SCF/0.5% S max Percent Ash: 0/0.05

Density: 0.5826 SG/7.132 lb/gal lbs/gal Typical Percent Nitrogen: 0.02/0.76

Heat Capacity: BTU/lb 1000 Btu/SCF/141,000Btu/gal BTU/gal

Other Fuel Contaminants (which may cause air pollution):

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average 0 Maximum 0

G. Indicate liquid or solid wastes generated and method of disposal.

THE NEW AUXILIARY BOILER DOES NOT PRODUCE ANY ADDITIONAL LIQUID OR SOLID WASTES AS PART OF ITS OPERATION WHEN COMPARED WITH THE EXISTING AUXILIARY BOILERS.

4. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 45 ft. Stack Diameter: 2.5 od / 2.0 id ft.
 Gas Flow Rate: 5786 ACFM DSCFM Gas Exit Temperature: 550 °F.
 Water Vapor Content: 4.5 % Velocity: 31 FPS

SECTION IV: INCINERATOR INFORMATION
 NOT APPLICABLE

| Type of Waste | Type O (Plastics) | Type I (Rubbish) | Type II (Refuse) | Type III (Garbage) | Type IV (Pathological) | Type V (Liq. & Gas By-prod.) | Type VI (Solid By-prod.) |
|--------------------------|-------------------|------------------|------------------|--------------------|------------------------|------------------------------|--------------------------|
| Actual lb/hr Incinerated | | | | | | | |
| Uncontrolled (lbs/hr) | | | | | | | |

Description of Waste _____
 Total weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____
 Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____
 Manufacturer _____
 Date Constructed _____ Model No. _____

| | Volume (ft) ³ | Heat Release (BTU/hr) | Fuel | | Temperature (°F) |
|-------------------|--------------------------|-----------------------|------|--------|------------------|
| | | | Type | BTU/hr | |
| Primary Chamber | | | | | |
| Secondary Chamber | | | | | |

Stack Height: _____ ft. Stack Diameter: _____ Stack Temp. _____
 Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: Cyclone Wet Scrubber Afterburner
 Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.): _____

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

2. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
NOT APPLICABLE
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
SEE ATTACHMENT V3
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
SEE ATTACHMENT V3
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)
NOT APPLICABLE
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions x potential (1-efficiency).
NOT APPLICABLE
6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
SEE ATTACHMENT V6
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
SEE ATTACHMENT V7
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.
SEE ATTACHMENT V7

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.

NOT APPLICABLE

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

NOT APPLICABLE

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

Yes No

Contaminant

Rate or Concentration

SEE ATTACHMENT VI

| | |
|--|--|
| | |
| | |
| | |
| | |

B. Has EPA declared the best available control technology for this class of sources (if yes, attach copy)

Yes No

Contaminant

Rate or Concentration

| | |
|--|--|
| | |
| | |
| | |
| | |

C. What emission levels do you propose as best available control technology?

Contaminant

Rate or Concentration

| | |
|--|--|
| | |
| | |
| | |
| | |

D. Describe the existing control and treatment technology (if any).

1. Control Device/System:

2. Operating Principles:

3. Efficiency:*

4. Capital Costs:

*Explain method of determining

- 5. Useful Life:
- 7. Energy:
- 9. Emissions:

- 6. Operating Costs:
- 8. Maintenance Cost:

| Contaminant | Rate or Concentration |
|-------------|-----------------------|
| | |
| | |
| | |

10. Stack Parameters

- a. Height: ft. b. Diameter: ft.
- c. Flow Rate: ACFM d. Temperature: °F.
- e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

- a. Control Device: b. Operating Principles:
- c. Efficiency:¹ d. Capital Cost:
- e. Useful Life: f. Operating Cost:
- g. Energy:² h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device: b. Operating Principles:
- c. Efficiency:¹ d. Capital Cost:
- e. Useful Life: f. Operating Cost:
- g. Energy:² h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

¹ Explain method of determining efficiency.

² Energy to be reported in units of electrical power - KWH design rate.

- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency:¹
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:²
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency:¹
- d. Capital Costs:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:²
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

- 1. Control Device:
- 2. Efficiency:¹
- 3. Capital Cost:
- 4. Useful Life:
- 5. Operating Cost:
- 6. Energy:²
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:
- a. (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:

¹ Explain method of determining efficiency.

² Energy to be reported in units of electrical power - KWH design rate.

- (5) Environmental Manager:
- (6) Telephone No.:
- (7) Emissions:¹

| Contaminant | Rate or Concentration |
|-------------|-----------------------|
| | |
| | |
| | |

(8) Process Rate:¹

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

| Contaminant | Rate or Concentration |
|-------------|-----------------------|
| | |
| | |
| | |

(8) Process Rate:¹

10. Reason for selection and description of systems:

¹Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

NOT APPLICABLE

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ () SO₂ _____ Wind spd/dir _____

Period of Monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? [] Yes [] No

b. Was instrumentation calibrated in accordance with Department procedures?
[] Yes [] No [] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicant's Maximum Allowable Emission Data

| Pollutant | Emission Rate |
|-----------------|-----------------|
| TSP | _____ grams/sec |
| SO ₂ | _____ grams/sec |

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

PUTNAM PLANT
COMPARISON OF EXISTING AUX BOILERS TO PROPOSED AUX BOILER*

| | EXISTING AUX BOILERS | NEW AUX BOILER | | ADVANTAGES OF NEW BOILER |
|--------------------------------------|----------------------|----------------|---------|---|
| NUMBER OF UNITS | TWO UNITS | ONE UNIT | | |
| MANUFACTURER | CLEAVER-BROOKS | VA-POWER | | |
| MODEL | D-60 | CIRCULATIC | | |
| RATING | 2140 BoHP (BOTH) | 350 BoHP | | 84% SMALLER SIZE |
| THERMAL OUTPUT | 74.6 MMBTU/HR (BOTH) | 11.7 MMBTU/HR | | 84% LESS HEAT FLOW GENERATED |
| AIR REQUIRED | 18,100 SCFM (BOTH) | 2980 SCFM | | 84% LESS AIR CONSUMED |
| WATER BLOWDOWN | 6 GPM (BOTH) | 1 GPM | | 84% LESS WATER CONSUMED |
| FUEL | #2 OIL | NAT. GAS | #2 OIL | DUAL FUEL CAPABILITY |
| CONSUMPTION | 760 GPH (BOTH) | 15,500 SCFH | 105 GPH | 86% LESS OIL CONSUMED |
| EMISSIONS | #2 OIL | NAT. GAS | #2 OIL | PRIMARY FUEL IS NATURAL GAS WHICH PRODUCES LESS EMISSIONS THAN #2 OIL |
| SO _x (LB/HR) @ 0.5% S OIL | 48 (BOTH) | TRACE | 7.5 | |
| NO _x (LB/HR) @ 0.2% N OIL | 30 (BOTH) | 3.0 | 4.8 | |
| PARTICULATES (#/HR) | 0.93 (BOTH) | TRACE | 0.15 | |

* Notes: Manufacturer's data for new unit
Existing Cleaver-Brooks units are 18 years old.

TABLE 1.4-2. EMISSION FACTORS FOR SULFUR DIOXIDE (SO₂), NITROGEN OXIDES (NO_x), AND CARBON MONOXIDE (CO) FROM NATURAL GAS COMBUSTION^{a, b}

| Combustor Type (size, 10 ⁶ Btu/hr heat input) | SO ₂ ^c | | | NO _x ^d | | | CO | | |
|---|-----------------------------------|------------------------------------|--------|-----------------------------------|------------------------------------|----------------|-----------------------------------|------------------------------------|--------|
| | kg/10 ⁶ m ³ | lb/10 ⁶ ft ³ | Rating | kg/10 ⁶ m ³ | lb/10 ⁶ ft ³ | Rating | kg/10 ⁶ m ³ | lb/10 ⁶ ft ³ | Rating |
| <u>Utility/large industrial boilers (>100)</u> | | | | | | | | | |
| Uncontrolled | 9.6 | 0.6 | A | 8800 | 550 ^e | A | 640 | 40 | A |
| Controlled - Low NO _x burners | 9.6 | 0.6 | A | 1300 | 81 | D ^e | NA | NA | |
| Controlled - Flue gas recirculation | 9.6 | 0.6 | A | 850 | 53 | D ^e | NA | NA | |
| <u>Small industrial boilers (10-100)</u> | | | | | | | | | |
| Uncontrolled | 9.6 | 0.6 | A | 2240 | 140 | A | 560 | 35 | A |
| Controlled - Low NO _x burners | 9.6 | 0.6 | A | 1300 | 81 | D ^e | 980 | 61 | D |
| Controlled - Flue gas recirculation | 9.6 | 0.6 | A | 480 | 30 | C | 590 | 37 | C |
| <u>Commercial boilers (0.3-<10)</u> | | | | | | | | | |
| Uncontrolled | 9.6 | 0.6 | A | 1600 | 100 | B | 330 | 21 | C |
| Controlled - Low NO _x burners | 9.6 | 0.6 | A | 270 | 17 | C | 425 | 27 | C |
| Controlled - Flue gas recirculation | 9.6 | 0.6 | A | 580 | 36 | D | NA | NA | |
| <u>Residential Furnaces (<0.3)</u> | | | | | | | | | |
| Uncontrolled | 9.6 | 0.6 | A | 1500 | 94 | B | 640 | 40 | B |

NA = Not Applicable.

- Expressed as weight pollutant/volume natural gas fired.
- Based on an average natural gas higher heating value of 8270 kcal/m³ (1000 Btu/scf). The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value.
- Reference 7. Based on average sulfur content of natural gas, 4600 g/10⁶ Nm³ (2000 gr/10⁶ scf).
- Expressed as NO_x. For tangentially fired units, use 4400 kg/10⁶ m³ (275 lb/10⁶ ft³). At reduced loads, multiply factor by load reduction coefficient in Figure 1.4-1. Note that NO_x emissions from controlled boilers will be reduced at load conditions.

ATTACHMENT V3

reference: EPA OAQPS
technology transfer network
clearinghouse for inventories
and emission factors (chief
bulletin board service)

TABLE 1.3-1. UNCONTROLLED EMISSION FACTORS FOR FUEL OIL COMBUSTION

EMISSION FACTOR RATING: A

| Boiler Type ^a | Particulate ^b Matter | | Sulfur Dioxide ^c | | Sulfur Trioxide | | Carbon Monoxide ^d | | Nitrogen Oxide ^e | | Volatile Organics ^f Nonmethane | | Methane | |
|--|------------------------------------|------------------------|-----------------------------|------------------------|----------------------|------------------------|---------------------------------|------------------------|-------------------------------|------------------------------|--|------------------------|----------------------|------------------------|
| | kg/10 ³ l | lb/10 ³ gal | kg/10 ³ l | lb/10 ³ gal | kg/10 ³ l | lb/10 ³ gal | kg/10 ³ l | lb/10 ³ gal | kg/10 ³ l | lb/10 ³ gal | kg/10 ³ l | lb/10 ³ gal | kg/10 ³ l | lb/10 ³ gal |
| Utility Boilers Residual Oil | R | R | 19S | 157S | 0.34S ^h | 2.9S ^h | 0.6 | 5 | 8.0 (12.6)(5) ⁱ | 67 (105)(42) ⁱ | 0.09 | 0.76 | 0.03 | 0.28 |
| Industrial Boilers Residual Oil | R | R | 19S | 157S | 0.24S | 2S | 0.6 | 5 | 6.6 ^j | 55 ^j | 0.034 | 0.28 | 0.12 | 1.0 |
| Distillate Oil | 0.24 | 2 | 17S | 142S | 0.24S | 2S | 0.6 | 5 | 2.4 | 20 | 0.024 | 0.2 | 0.006 | 0.052 |
| Commercial Boilers Residual Oil | R | R | 19S | 157S | 0.24S | 2S | 0.6 | 5 | 6.6 | 55 | 0.14 | 1.13 | 0.057 | 0.475 |
| Distillate Oil | 0.24 | 2 | 17S | 142S | 0.24S | 2S | 0.6 | 5 | 2.4 | 20 | 0.04 | 0.34 | 0.026 | 0.216 |
| Residential Furnaces Distillate Oil | 0.3 | 2.5 | 17S | 142S | 0.24S | 2S | 0.6 | 5 | 2.2 | 18 | 0.085 | 0.713 | 0.214 | 1.78 |

^a Boilers can be approximately classified according to their gross (higher) heat rate as shown below:

- Utility (power plant) boilers: $>10^8$ J/hr ($>100 \times 10^6$ Btu/hr)
- Industrial boilers: 10.6×10^9 to $10^6 \times 10^9$ J/hr (10×10^6 to 100×10^6 Btu/hr)
- Commercial boilers: 0.5×10^9 to 10.6×10^9 J/hr (0.5×10^6 to 10×10^6 Btu/hr)
- Residential furnaces: $<0.5 \times 10^9$ J/hr ($<0.5 \times 10^6$ Btu/hr)

^b References 3-7 and 24-25. Particulate matter is defined in this section as that material collected by EPA Method 5 (front half catch).

^c References 1-5. S indicates that the weight % of sulfur in the oil should be multiplied by the value given.

^d References 3-5 and 8-10. Carbon monoxide emissions may increase by factors of 10 to 100 if the unit is improperly operated or not well maintained.

^e Expressed as NO₂. References 1-5, 8-11, 17 and 26. Test results indicate that at least 95% by weight of NO_x is NO for all boiler types except residential furnaces, where about 75% is NO.

^f References 18-21. Volatile organic compound emissions are generally negligible unless boiler is improperly operated or not well maintained, in which case emissions may increase by several orders of magnitude.

^g Particulate emission factors for residual oil combustion are, on average, a function of fuel oil grade and sulfur content:

- Grade 6 oil: $1.25(S) + 0.38$ kg/10³ liter [$10(S) + 3$ lb/10³ gal] where S is the weight % of sulfur in the oil. This relationship is based on 81 individual tests and has a correlation coefficient of 0.65.
- Grade 5 oil: 1.25 kg/10³ liter (10 lb/10³ gal)
- Grade 4 oil: 0.88 kg/10³ liter (7 lb/10³ gal)

^h Reference 25.









ⁱ Use 5 kg/10³ liters (42 lb/10³ gal) for tangentially fired boilers, 12.6 kg/10³ liters (105 lb/10³ gal) for vertical fired boilers, and 8.0 kg/10³ liters (67 lb/10³ gal) for all others, at full load and normal (>15%) excess air. Several combustion modifications can be employed for NO_x reduction: (1) limited excess air can reduce NO_x emissions 5-20%, (2) staged combustion 20-40%, (3) using low NO_x burners 20-50%, and (4) ammonia injection can reduce NO_x emissions 40-70% but may increase emissions of ammonia. Combinations of these modifications have been employed for further reductions in certain boilers. See Reference 23 for a discussion of these and other NO_x reducing techniques and their operational and environmental impacts.

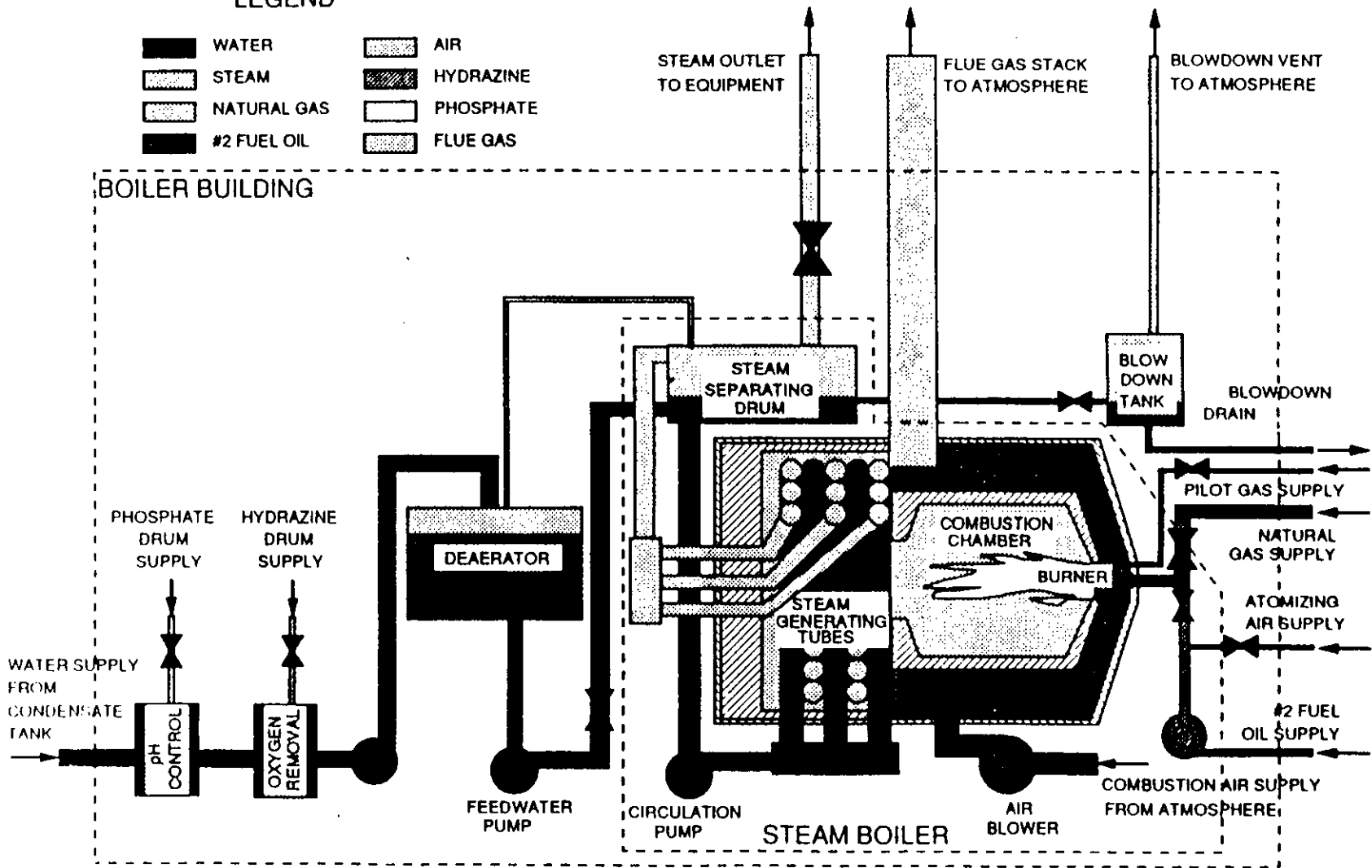
^j Nitrogen oxide emissions from residual oil combustion in industrial and commercial boilers are strongly related to fuel nitrogen content, estimated more accurately by the empirical relationship:

kg NO₂/10³ liters = $2.75 + 50(N)^2$ [lb NO₂/10³ gal = $22 + 400(N)^2$] where N is the weight % of nitrogen in the oil. For residual oils having high (>0.5 weight %) nitrogen content, use 15 kg NO₂/10³ liter (120 lb NO₂/10³ gal) as an emission factor.

AUXILIARY STEAM BOILER FLOW DIAGRAM

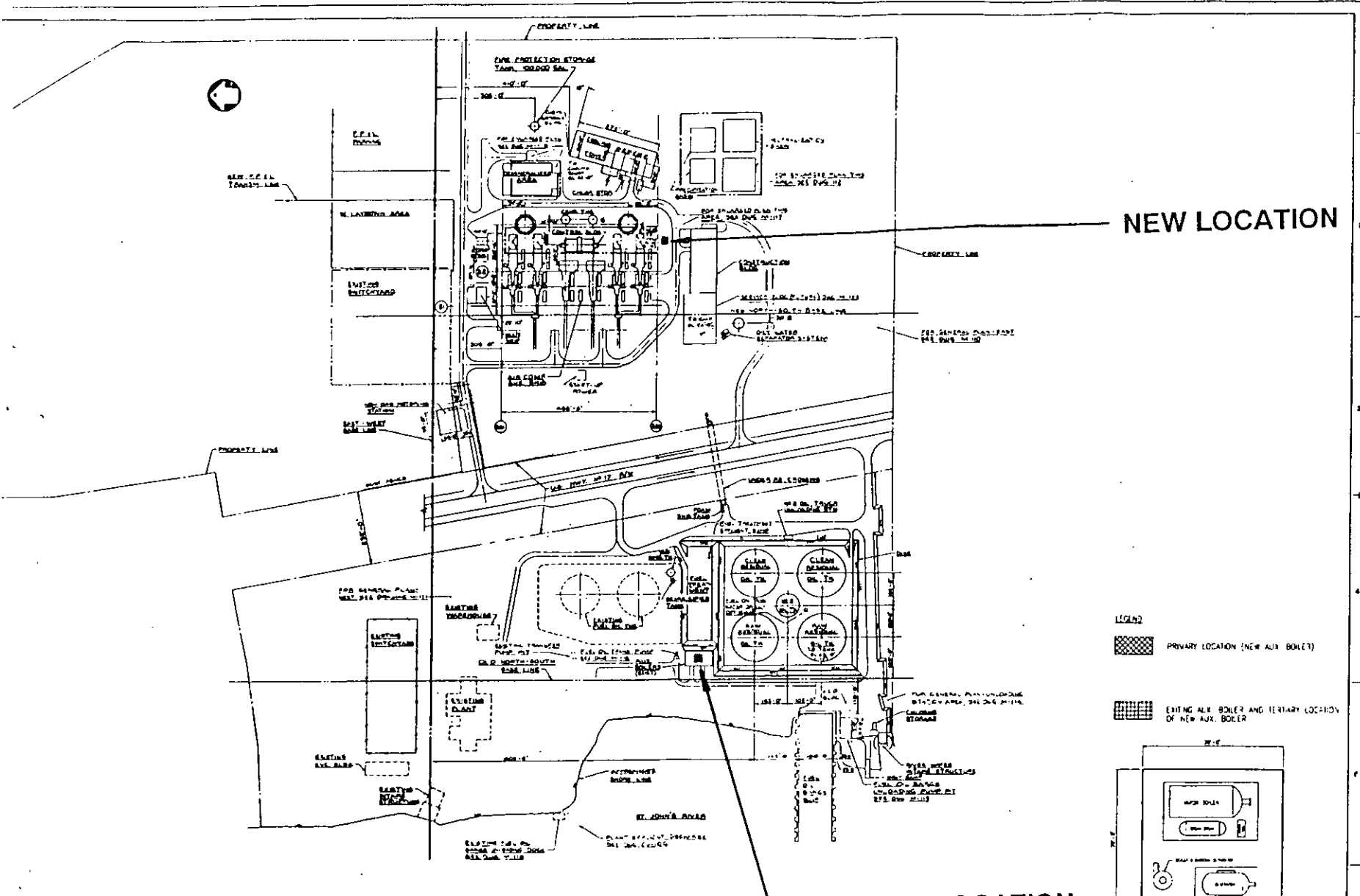
LEGEND

- | | | | |
|---|-------------|---|-----------|
|  | WATER |  | AIR |
|  | STEAM |  | HYDRAZINE |
|  | NATURAL GAS |  | PHOSPHATE |
|  | #2 FUEL OIL |  | FLUE GAS |





| | | |
|------|-----|----------|
| DATE | BY | REV |
| AS | N/A | 00000000 |
| W | | 00000000 |

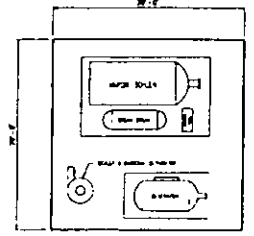
FLOW DIAGRAM
AUXILIARY STEAM BOILER
D. STANLEY



NEW LOCATION

EXISTING LOCATION

- LEGEND**
-  PRIMARY LOCATION (NEW AUX. BOILER)
 -  EXISTING AUX. BOILER AND TERTIARY LOCATION OF NEW AUX. BOILER



PROPOSED AUXILIARY BOILER LAYOUT

| | |
|--|-----------------------|
| PUTNAM UNITS 1 & 2/LAST PAGE | |
| PLOT PLAN AUX. BOILER REPLACEMENT PROPOSED LOCATIONS | |
| DATE: 01/11/1982 | DESIGNER: G.W. GARCIA |
| PROJECT: PPM-C-54-001/164 PPM-C-023-9 | |

ATTACHMENT VI.

The replacement auxiliary boiler is subject to 40 CFR 60 Subpart Dc but is not subject to PSD. The new auxiliary boiler is also subject to 17-296.405 F.A.C. which requires the replacement boiler to utilize best available controls. Such controls for the replacement auxiliary boiler include use of clean fuels (i.e., natural gas as the primary fuel, and low sulfur fuel and (0.5% S) as the secondary fuel), efficient combustion, and good operating practices to minimize air emissions.



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

| For Routing To Other Than The Addressee | |
|---|-----------------|
| To _____ | Location: _____ |
| To _____ | Location: _____ |
| To _____ | Location: _____ |
| From _____ | Date _____ |

Interoffice Memorandum

TO: Buck Oven

FROM: Teresa M. Heron *J.H.*
Katherine Zhang *ykz*

THRU: Preston Lewis *PL*
Clair Fancy *CF*

DATE: March 16, 1993

SUBJ: Palatka (Putman) Power Plant
Site Certification PPS No 74-01
Auxiliary Boiler Replacement

This is to acknowledge receipt of the auxiliary boiler replacement amendment request at the above mentioned facility. The new 10,000 lbs/hr auxiliary boiler will comply with a more stringent emission limit than required by the condition of certification on the two (2) existing permitted 37,000 lbs/hr auxiliary boilers. This is the 40 CFR 60 Subpart Dc NSPS for Steam Generators.

The Bureau of Air Regulation has reviewed this information as submitted and have no adverse comments. Thank you for the opportunity to review and comment on this amendment request.

TH-KZ/plm



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

| For Routing To Other Than The Addressee | |
|---|-----------------|
| To: _____ | Location: _____ |
| To: _____ | Location: _____ |
| To: _____ | Location: _____ |
| From: _____ | Date: _____ |

Interoffice Memorandum

TO: Buck Oven
FROM: Mike Harley *mike*
DATE: May 27, 1992
SUBJ: Compliance Test Procedures
FP&L Putnam PPSC PA-74-01

We have no objection to the approval of the above referenced request.

Florida Power & Light Company's April 2, 1992 request for approval to use alternate sampling procedures for the measurement of NO_x emissions from the Putnam Plant has been reviewed. FP&L has requested approval to:

- o Measure NO_x emissions using EPA Methods 7E and 3A in lieu of EPA Method 20.
- o Determine the NO_x emitted from the duct burner by measuring NO_x emissions at the duct burner outlet under two different operating conditions. The NO_x emissions will be measured with only the turbine operating and then with both the turbine and the duct burner operating.
- o Calculate the gas flow rates using the measured fuel consumption rates and the F-factors given in EPA Method 19 in lieu of measuring the gas flow rates with EPA Method 2.

The company's proposal is acceptable pursuant to the caveats of the May 22, 1992 letter from the Region IV Office of EPA.

Based on a May 26, 1992 conversation with David McNeal of EPA, the reference to 40 CFR 60.49b(h) in EPA's May 22, 1992 letter should be 40 CFR 60.48b(h).

Please send us a copy of your final action.

cc: Jim Pennington
Barry Andrews
Patty Adams ✓
Andy Kutyna

Department of Environmental Regulation
Routing and Transmittal Slip

To: (Name, Office, Location) *Pattly Adams*

- 1.
- 2.
- 3.
- 4.

Remarks:

| | |
|--------------------|-------------|
| From: | Date: |
| <i>Mike Harley</i> | <i>5/28</i> |
| | Phone: |
| | <i>36</i> |



FEDERAL EXPRESS

October 6, 1992

Mr. C. H. Fancy, Chief
Bureau of Air Regulation
State of Florida
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399

RECEIVED
OCT 8 1992
Bureau of
Air Regulation

RE: **Putnam Plant, Unit No. 2**
Initial Start-up

Dear Mr. Fancy:

In accordance with the requirements listed in 40 CFR 60.49b and 60.7, this constitutes notification that initial start-up of Putnam Unit No. 2 subsequent to replacement of the HRSG's occurred on September 23, 1992. The design heat input capacity of each HRSG is 250 MMBtu/hr. The units are permitted to burn natural gas or fuel oil with not more than 0.5 percent sulfur by weight, with the primary fuel being natural gas. There are no annual capacity factor limits on this unit. There is no emergency SO₂ control technology on this unit.

Capacity factors anticipated for each permitted fuel for the next twelve-month period are as follows:

Natural Gas:

Total Combined-cycle Unit Operation - approx. 66%
Duct burners operation - approx. 8%

Distillate Oil:

Total Combined-cycle Unit Operation - < 0.3%
Duct burners operation - none

Residual Oil:

No residual oil operation anticipated for the next twelve months by either the duct burners or the total combined-cycle unit.

Although this notification applies only to the HRSG's as the regulated sources under NSPS due to their reconstruction and, therefore, only the forecast capacity factor for the HRSG-associated duct burners is pertinent, we have provided the forecast for the total combined-cycle unit for your reference. Please note that it is not our intent at present to burn any oil, either residual or distillate, in the duct burners.

Please call me at (407) 697-6926 if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Elsa A. Bishop".

Elsa A. Bishop
Senior Environmental Specialist
Florida Power & Light Company

EAB:jm

cc: Ernest Frey - DER/JAX
Jewel Harper - EPA,Atlanta
H. S. Oven - DER/Tall



CORRECTED

April 15, 1992

Mr. C. H. Fancy, Chief
Bureau of Air Permitting
State of Florida
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399

RE: Putnam Plant, Unit No. 2
Commencement of Construction

Dear Mr. Fancy:

As required by 40 CFR 60.7(a)(1), this constitutes notification that reconstruction of the Putnam Plant Unit No. 2 Heat Recovery Steam Generators (HRSG) commenced on April 10, 1992. We have resubmitted this notification, due to an error in the subject heading of the original notification (copy attached).

Please call me at (407) 697-6926 if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Elsa A. Bishop".

Elsa A. Bishop
Senior Environmental Specialist
Florida Power & Light Company

EAB:jm

cc: Ernest Frey - DER/JAX
Jewel Harper - EPA/Atlanta
H. S. Oven - DER/TAI



CORRECTED

April 15, 1992

Mr. C. H. Fancy, Chief
Bureau of Air Permitting
State of Florida
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399

RE: Putnam Plant, Unit No. 2
Completion of Construction

Commencement

Dear Mr. Fancy:

As required by 40 CFR 60.7(a)(1), this constitutes notification that reconstruction of the Putnam Plant Unit No. 2 Heat Recovery Steam Generators (HRSG) commenced on April 10, 1992.

Please call me at (407) 697-6926 if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Elsa A. Bishop".

Elsa A. Bishop
Senior Environmental Specialist
Florida Power & Light Company

EAB:jm

cc: Ernest Frey - DER/JAX
Jewel Harper - EPA/Atlanta
H. S. Oven - DER/Tall

bcc: R. N. Allen - JEN/NP
W. T. Bethea - PPN
P. C. Cunningham - HBG&S
C. D. Henderson - JEN/NP
N. H. Roen - JEN/NP
A. Rodriguez - JPG/CSE
M. A. Smith - JEN/NP

file



Florida Power & Light Company, P.O. Box 078768, West Palm Beach, FL 33407-0768

FAXED
FEDERAL EXPRESS

April 14, 1992

Mr. C. H. Fancy, Chief
Bureau of Air Regulation
State of Florida
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399

RE: **Putnam Plant, Unit No. 1**
Initial Start-up

Dear Mr. Fancy:

In accordance with the requirements listed in 40 CFR 60.49b and 60.7, this constitutes notification that initial start-up of Putnam Unit No. 1 subsequent to replacement of the HRSG's occurred on March 31, 1992. The design heat input capacity of each HRSG is 250 MMBtu/hr. The units are permitted to burn natural gas or fuel oil with not more than 0.5 percent sulfur by weight, with the primary fuel being natural gas. There are no annual capacity factor limits on this unit. There is no emergency SO₂ control technology on this unit.

Capacity factors anticipated for each permitted fuel for the next twelve-month period are as follows:

Natural Gas:

Total Combined-cycle Unit Operation - approx. 66%
Duct burners operation - approx. 8%

Distillate Oil:

Total Combined-cycle Unit Operation - < 0.3%
Duct burners operation - none

RECEIVED
APR 17 1992
Division of Air
Resources Management

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL PACKAGE TRACKING NUMBER

1801591083

1347#

1801591083

RECIPIENT'S COPY

| | | | | | | | | | |
|--|--|--|--|---|--|---|--|--|--|
| From (Your Name) Please Print Elsa A. Bishop Company | | Your Phone Number (Very Important) (407) 847-6911 Department/Floor No | | To (Recipient's Name) Please Print C. H. Fancy Company | | Recipient's Phone Number (Very Important) | | | |
| Street Address 00 VILLAGE BLVD | | City ST PALM BEACH FL | | Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes) 2600 Blair Stone Road | | City Tallahassee, Florida | | | |
| State FL | | ZIP Required 33407 | | State | | ZIP Required 32399 | | | |
| YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.) Domestic Affairs XXXXXXXX | | | | IF HOLD FOR PICK-UP, Print FEDEX Address Here Street Address City State ZIP Required | | | | | |
| PAYMENT 1 <input type="checkbox"/> Bill Sender 2 <input type="checkbox"/> Bill Recipient's FedEx Acct No 3 <input type="checkbox"/> Bill 3rd Party FedEx Acct No 4 <input type="checkbox"/> Bill Credit Card 5 <input type="checkbox"/> Cash/Check | | | | Emp No Date Federal Express Use <input type="checkbox"/> Cash Received <input type="checkbox"/> Return Shipment <input type="checkbox"/> Third Party <input type="checkbox"/> Chg To Del <input type="checkbox"/> Chg To Hold Street Address City State Zip Received By Date/Time Received FedEx Employee Number REVISION DATE 6/91 PART #131204 EXEM11/91 FORMAT #099 099 © 1990-91 FEDEX PRINTED IN U.S.A. | | | | | |
| 4 SERVICES (Check only one box) | | 5 DELIVERY AND SPECIAL HANDLING (Check services required) | | 6 PACKAGES WEIGHT in Pounds Only YOUR DECLARED VALUE | | 7 | | | |
| Priority Overnight (Deliver by next business morning) 11 <input type="checkbox"/> YOUR PACKAGING 16 <input checked="" type="checkbox"/> FEDEX LETTER 12 <input type="checkbox"/> FEDEX PAK * 13 <input type="checkbox"/> FEDEX BOX 14 <input type="checkbox"/> FEDEX TUBE Economy Two-Day (Deliver by second business day) 30 <input type="checkbox"/> ECONOMY Freight Service (For Extra Large or other packages over 150 lbs) 70 <input type="checkbox"/> OVERNIGHT FREIGHT ** (Confirmed invoice required) † Delivery commitment may be later in some areas. | | Standard Overnight (Deliver by next business afternoon) 51 <input type="checkbox"/> YOUR PACKAGING 56 <input type="checkbox"/> FEDEX LETTER * 52 <input type="checkbox"/> FEDEX PAK * 53 <input type="checkbox"/> FEDEX BOX 54 <input type="checkbox"/> FEDEX TUBE Government Overnight (Restricted to authorized users only) 46 <input type="checkbox"/> GOVT LETTER 41 <input type="checkbox"/> GOVT PACKAGE 80 <input type="checkbox"/> TWO-DAY FREIGHT ** * Declared Value Limit \$100 ** Call for delivery schedule. | | 1 <input type="checkbox"/> HOLD FOR PICK-UP (If in Box #) 2 <input checked="" type="checkbox"/> DELIVER WEEKDAY 3 <input type="checkbox"/> DELIVER SATURDAY (If extra charge) (Not available to all locations) 4 <input type="checkbox"/> DANGEROUS GOODS (Extra charge) 5 <input type="checkbox"/> 6 <input type="checkbox"/> DRY ICE _____ lbs 7 <input type="checkbox"/> OTHER SPECIAL SERVICE _____ 8 <input type="checkbox"/> 9 <input type="checkbox"/> SATURDAY PICK-UP (Extra charge) 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12 <input type="checkbox"/> HOLIDAY DELIVERY (If offered) (Extra charge) | | DIM SHIPMENT (Chargeable Weight) <input type="checkbox"/> _____ lbs Received At <input type="checkbox"/> Regular Stop <input type="checkbox"/> Drop Box <input type="checkbox"/> BSC <input type="checkbox"/> On-Call Stop <input type="checkbox"/> Station | | Total Total Total Street Address City State Zip Date/Time | |

RECEIVED


Residual Oil:

No residual oil operation anticipated for the next twelve months by either the duct burners or the total combined-cycle unit.

Although this notification applies only to the HRSG's as the regulated sources under NSPS due to their reconstruction and, therefore, only the forecast capacity factor for the HRSG-associated duct burners is pertinent, we have provided the forecast for the total combined-cycle unit for your reference. Please note that it is not our intent at present to burn any oil, either residual or distillate, in the duct burners.

Please call me at (407) 697-6926 if you have any questions.

Sincerely,



Elsa A. Bishop
Senior Environmental Specialist
Florida Power & Light Company

EAB:jm

cc: Ernest Frey - DER/JAX
Jewel Harper - EPA,Atlanta
H. S. Oven - DER/Tall
CHF/BA/PL



CORRECTED

RECEIVED

MAY 08 1992

Division of Air
Resources Management

September 13, 1991

Mr. C. H. Fancy, Chief
Bureau of Air Permitting
State of Florida
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399

RE: **Putnam Plant, Unit No. 1**
Commencement of Construction

Dear Mr. Fancy:

As required by 40 CFR 60.7(a)(1), this constitutes notification that reconstruction of the Putnam Plant Unit No. 1 Heat Recovery Steam Generators (HRSG) commenced on August 31, 1991. We have resubmitted this notification, due to an error in the subject heading of the original notification (copy attached).

Please call me at (407) 697-6926 if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Elsa A. Bishop".

Elsa A. Bishop
Senior Environmental Specialist
Florida Power & Light Company

EAB:jm

cc: Ernest Frey - DER/JAX
Jewel Harper - EPA/Atlanta
H. S. Oven - DER/Tall



CORRECTED

September 13, 1991

Mr. C. H. Fancy, Chief
Bureau of Air Permitting
State of Florida
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399

RE: Putnam Plant, Unit No. 1
Completion of Construction

Commencement
Dear Mr. Fancy:

As required by 40 CFR 60.7(a)(1), this constitutes notification that reconstruction of the Putnam Plant Unit No. 1 Heat Recovery Steam Generators (HRSG) commenced on August 31, 1991.

Please call me at (407) 697-6926 if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads 'Elsa A. Bishop'.

Elsa A. Bishop
Senior Environmental Specialist
Florida Power & Light Company

EAB:jm

cc: Ernest Frey - DER/JAX
Jewel Harper - EPA/Atlanta
H. S. Oven - DER/TAI



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

| For Routing To Other Than The Addressee | |
|---|----------------|
| To _____ | Location _____ |
| To _____ | Location _____ |
| To _____ | Location _____ |
| From _____ | Date _____ |

Interoffice Memorandum

TO: Howard Rhodes
Ernie Frey
Clair Fancy

FROM: Hamilton S. Owen *HSE*

DATE: March 14, 1991

SUBJECT: FPL - Putnam Power Plant Modification
PA 74-01E

Please have the appropriate members of your staff review the attached petition for modification of the FPL Putnam Power Plant, Module NO. 8044. Please submit any comments to me by May 1, 1991.

If additional information is required please let me know by April, 15, 1991.

HOPPING BOYD GREEN & SAMS

ATTORNEYS AND COUNSELORS

123 SOUTH CALHOUN STREET

POST OFFICE BOX 6526

TALLAHASSEE, FLORIDA 32314

(904) 222-7500

FAX (904) 224-8551

KATHLEEN BLIZZARD
RICHARD W. MOORE
ANGELA R. MORRISON
MARIBEL N. NICHOLSON
DIANA M. PARKER
LAURA BOYD PEARCE
GARY V. PERKO
MICHAEL P. PETROVICH
DAVID L. POWELL
DOUGLAS S. ROBERTS
CECELIA C. SMITH

OF COUNSEL
W. ROBERT FOKES

CARLOS ALVAREZ
JAMES S. ALVES
BRIAN H. BIBEAU
ELIZABETH C. BOWMAN
WILLIAM L. BOYD, IV
RICHARD S. BRIGHTMAN
PETER C. CUNNINGHAM
THOMAS M. DeROSE
WILLIAM H. GREEN
WADE L. HOPPING
FRANK E. MATTHEWS
RICHARD D. MELSON
WILLIAM D. PRESTON
CAROLYN S. RAEPPLE
GARY P. SAMS
ROBERT P. SMITH, JR.
CHERYL G. STUART

March 13, 1991

RECEIVED

MAR 13 1991

DER BAUM

BY HAND DELIVERY

Mr. Hamilton S. Oven
Siting Coordination Administrator
Department of Environmental Regulation
2600 Blair Stone Road, Room 338
Tallahassee, Florida 32399-2400

Re: Florida Power & Light Company, Putnam Power Plant,
Proposed Modification of Conditions of
Certification

Dear Buck:

Enclosed are an original and 14 copies of a Request for Modification of the Conditions of Certification for Florida Power & Light Company's (FPL) Putnam Power Plant, complete with exhibits. We hereby request that the modification be approved under the authority granted to you by Condition No. 32 of the Site Certification, and Section 403.516(1), Florida Statutes. Pursuant to Rule 17-17.293(1)(c), Florida Administrative Code, a check in the amount of \$10,000 is included with this Request.

The purposes of this request are to:

(1) Incorporate new source performance standards applicable to the heat recovery steam generators as a result of proposed refurbishments; and

(2) Allow the construction activities necessary for the refurbishment to occur; and

(3) Update the certification to include the current groundwater monitoring plan for the plant and to clarify air-related conditions.

Mr. Hamilton S. Oven
March 13, 1991
Page 2

If you have any questions or need additional information, please do not hesitate to call upon me.

Respectfully submitted,

HOPPING BOYD GREEN & SAMS

By Angela R. Morrison
William H. Green
Angela R. Morrison

Attorneys for Florida Power &
Light Company

bjh/LtrOven
Enclosures

cc (w/enc):
Elsa A. Bishop, FPL
Winifred Perkins, FPL

Putnam

Barth. Over
Barry Godman
Preston Linn
4/26/91

May 1, 1991

meet with FPL

June 13, 1991

Notice of Intent Action
Complete

FPL - PUTNAM
MAY 1, 1991 MTG

| <u>Name</u> | <u>Company & Address</u> | <u>Telephone</u> |
|-----------------|---------------------------------------|------------------|
| Preter Lewis | DER - TALLAHASSEE | 488-1344 |
| Bill Green | Hopping, Boyd, Green & Sams (for FPL) | 222-7500 |
| Elsa Bishop | F P & L | (407) 697-6926 |
| Angela Morrison | # BGS | 222-7500 |
| Buck Owen | DER | (904) 488-1344 |
| Ken Kosky | KEN | (904) 331-9000 |

Does not require

Do a small boiler BACT - Treat dust
burners like a boiler - Do modify

4/19/91

FPL - Putnam

LOCATED 1 MI SE OF PALATKA

(NO. PPS 74-0)

- NPDES Certified in 10/10/74 THIS IS A MODIFICATION
- Fuel .7% Sulfur OR Natural Gas fine ^{DUCT BURNERS and} Combustion Turbine
 - (4) COMBUSTION TURBINE / HRSG / Aux. BOILER ^{COMBUSTION TURBINES} 968 mm BTU/HR
 - (4) DUCT BURNERS (250 mm BTU/HR)
 - Natural Gas and Fuel oil w/.5% Sulfur will be used in HRSG
 - WILL ADD WATER INJECTION SYSTEM AND ACCEPT NO_x STANDARD TO CONTROL NO_x EMISSION

| | NATURAL GAS | DISTILLATE OIL | RESIDUAL |
|-----------------|--------------|----------------|----------|
| NO _x | .2 lb/mm BTU | .2 LB/mm BTU | 0.4 |
| SO ₂ | .5 lb/mm BTU | | |

- Why is residual oil being used? - pg 3 (2)
What is its sulfur content? MAX .7%
- Why do you use 0.5% S fuel oil ^{FOR THE HRSG} ~~and~~ ~~Combustion~~ and 0.7% in the ~~HRSG~~ Combustor?
- Why was the Air permit application never signed, dated or sealed? Beck over's copy was signed, dated and stamped.
- NO_x controlled by water injection
Letters

① Letter FPL to Twardowski 3/26/90
- Two Combined cycle turbines - each comprised of two combustion turbines (Commercial unit #1, 1977 unit #2 1978)

NO EPA allowed this to be submitted

- Will avoid increased emission by ~~not~~ ^{intelligently} using a water injection and accepting NO_x standards
- SO₂ would increase from 204 kg/HR to 225 kg/HR when firing distillate and .26 to .28 kg/HR when firing Natural gas (DISTILLATE limit 0.5% Sulfur)

② Letter DER to EPA 4/12/90 Asking for PSD Determination

③ Letter EPA to DER 12/3/90 NOT SUBJECT TO PSD

- EPA suggest sources provide ACTUAL OPERATING HISTORY DATA AND REASONABLE ASSURANCE THAT "EXTENT OR PRIORITY OF THEIR USE" NOT CHANGE.

Putnam (Cont.)

(4) Letter FPL (HOPKINS/BOYD/GREEN) TO EPA 12/7/90

- Responded to questions raised by EPA concerning physical changes and usage after modification.
- Stated that they should apply to DER for making on PSD applicability.

(5) Letter FPL to DER 12/13/90

- FPL response notifies EPA that PSD is not triggered.

(6) Request for modification of Conditions of Certification Received 3/13/91 (BUCK OVER'S COPY SIGNED & STAMPED)

- HRSG's RECONSTRUCTED BUT NO CHANGE IN PLANT'S POTENTIAL EMISSIONS. See pg A-5 for list of changes

- see p A-6, A-7 and A-8/9 for division of factors

- see NSPS for NG on page A-12

- see page A-13 and A-14 for details of monitoring NG and oil fired SG units

- Table A-1 specifies ~~stack~~ projects the stack parameter for various fuels

- last section gives the "certification" conditions

HRSG
NO_x 2 LB/MMBTU (NG) .4 LB/MMBTU (OIL)

~~HRSG~~
~~(OIL) 2 LB~~ x

WHAT IS THE MMBTU IN HRSG TO Calculate NO_x? see

Pg 2 of existing Conditions of Cert

Do a Small boiler BACT - treat Dust
binners like a boiler - Do modeling (T screen
single



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

DEC 13 1990

4APT-AEB

Mr. Clair H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

REC -

DEC 18

DER 5 11/11

RE: FPL Putnam Revised Applicability Determination Request

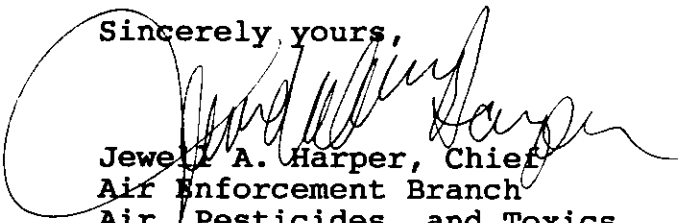
Dear Mr. Fancy:

By letter of April 12, 1990, your office requested EPA assistance in a Prevention of Significant Deterioration (PSD) applicability determination for proposed modifications at the FPL Putnam Plant. We responded to your request in a letter dated May 9, 1990. Since that time, Mr. William Green, attorney for FPL, has requested from EPA an applicability determination for a revised scenario at the plant in which physical changes will be made only to the HRSG steam system internals. This request, dated October 26, 1990, asks that EPA make a finding of non-applicability of PSD to the proposed project.

EPA responded to this latest request by letter to you dated December 3, 1990. As stated in that letter, we feel that it is appropriate that FDER make the final determination on applicability while EPA's role is to provide assistance and support. To that end, we provided several questions which we thought needed to be answered in order to make an applicability determination. Mr. Green responded to these questions by letter dated December 7, 1990.

Based on Mr. Green's response (i.e., the source is not physically limited by the current steam system, the amount of fuel combusted will not change, the utilization priority of the source will not change), it would be our interpretation that the changes would not be subject to PSD review. If you have any questions or comments on this issue, please contact Mr. Gregg Worley of my staff at (404) 347-2904.

Sincerely yours,


Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides, and Toxics
Management Division

cc: Mr. William Green, Esquire
123 South Calhoun Street
P.O. Box 6526
Tallahassee, Florida 32314

HOPPING BOYD GREEN & SAMS

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OF COUNSEL
W. ROBERT FOKES

RECEIVED
DEC 10 1990
DER-BAQM

December 7, 1990

Mr. Clair Fancy
Division of Air Resources Management
Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: Florida Power & Light Company
Putnam Plant
PSD Applicability Request

Dear Clair:

Please find enclosed a copy of our response to the Environmental Protection Agency's (EPA's) letter dated December 3, 1990, a copy of which is also attached. Jewell Harper indicated in her letter that Prevention of Significant Deterioration (PSD) review would not be necessary for proposed changes to the heat recovery steam generators at Florida Power & Light Company's Putnam plant, provided that certain further documentation was submitted to EPA. Our reply to EPA includes that additional information.

We trust that you will concur that PSD review is unnecessary for the steam system improvements, and respectfully request your early written confirmation to that effect. As always, if you have any questions, please do not hesitate to call.

Sincerely,



William H. Green

cc: Jewell Harper

HOPPING BOYD GREEN & SAMS

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December 7, 1990

Ms. Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division
Environmental Protection Agency
Region IV
345 Courtland Street, N.E.
Atlanta, GA 30365

RE: FPL Putnam Plant
PSD/NSPS Applicability Determination Request

Dear Ms. Harper:

We are in receipt of a copy of your letter to Mr. Clair Fancy dated December 3, 1990 relating to the above. At the outset, I would like to thank you on behalf of Florida Power & Light Company (FPL) and myself for the prompt response to our earlier requests and your continued guidance in this matter. The purpose of this letter is to respond to the questions set forth in your letter to Mr. Fancy and to confirm the understanding of you and your staff concerning the other aspects of the improvements discussed in your letter. Your questions and FPL's responses are as follows:

EPA Question No. 1.:

Are the changes to the HRSO internals considered routine replacements according to industry standards?

a. Are the parts being replaced with the same or equivalent parts?

Ms. Jewell Harper
December 7, 1990
Page 2

b. Is the current condition of the unit such that it cannot be operated at capacity?

FPL Response:

The electric utility industry has not developed "industry standards" for the replacement of component parts of heat recovery steam generators (HRSGs). These replacements are made on a case-by-case basis and deal primarily with the need to replace steam tubes as they experience wear and resulting failure. The system is designed to remove otherwise wasted exhaust gas energy from the exhaust gasses and to convert it into usable energy. In effect, leaking steam tubes waste otherwise usable energy.

The parts that would be replaced by the proposed work are functionally equivalent to those parts which came with the original units. The parts have been improved somewhat to decrease the likelihood and hopefully the frequency of leaks. For example, the configuration of the original steam tubes involved certain angles and stresses which tend to produce points where erosion and wear and resulting leaks become intensified. The replacement tubes will have greater tolerances between tubes and a somewhat improved configuration to make the tube stresses more uniform and, hopefully, make leaks less frequent. None of these changes would cause the components to have a non-equivalent function.

The current condition of the Putnam units is such that both the combustion turbines and the HRSGs can be run at maximum capacity. When the units are running, the more efficient steam tube system will generate more electrical energy from a given amount of fuel combusted. However, the changes will not allow the units to combust more fuel.

EPA Question No. 2:

Can the source document, within reason, that the usage of the source will not increase?

Ms. Jewell Harper
December 7, 1990
Page 3

Comment: The increased efficiency of the unit due to the proposed changes would lead one to believe that the unit would be utilized more frequently than in the past. The source should provide data as to the actual operating history of this unit and provide reasonable assurances that the "extent or priority of their utilization" will not change.

FPL Response:

Changes to the HRSG steam system internals will not increase the usage of the HRSGs or the extent or priority of their utilization. The Putnam units currently have top priority for usage among all of FPL's fossil-fired units. The proposed changes will not cause them to move ahead of the nuclear units. The Putnam Plant will, nevertheless, realize a significant increase in efficiency; i.e., the amount of megawatts generated from a given quantity of fuel.


Your letter reflected a discussion which occurred between Mr. Greg Worley of your staff and myself concerning the changes. I believe that your letter correctly reflects our discussion and I would like to confirm, once again, that the changes proposed to the HRSGs deal only with heat transfer efficiency as FPL attempts to capture more electrical output from otherwise wasted exhaust gasses. These efficiency changes are independent of the amount of fuel fired in the units. In addition, the current steam system does not physically limit the firing or operation of the combustion turbines; rather, they limit the amount of heat that can be recovered from the combustion turbine exhaust gasses. Moreover, the proposed steam system changes do not include any changes to the duct burners (the actual emissions source of the HRSGs) nor will they affect the amount of their use.

In light of the above and in light of our understanding of your letter, we conclude that the proposed changes will not be subject to PSD review. As you suggested, we have now requested confirmation of that interpretation by the Florida Department of Environmental Regulation (DER), as you will see from the enclosed correspondence.

Ms. Jewell Harper
December 7, 1990
Page 4

We wish to thank you for your continued assistance and guidance in these important matters.

Sincerely,

A handwritten signature in black ink, appearing to read "Bill Green", with a long horizontal flourish extending to the right.

William H. Green
Angela R. Morrison

WHG/wrn:ltrharper
cc: Clair Fancy, Chief
Bureau of Air Regulation, DER

Ms. Jewell Harper
December 7, 1990
Page 5

bc: Dr. Martin A. Smith, FPL
Ms. Elsa Bishop, FPL



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

DEC 03 1990

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DEC 06 1990

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Mr. Clair H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: FPL Putnam Revised Applicability Determination Request

Dear Mr. Fancy:

By letter of April 12, 1990, your office requested EPA assistance in a Prevention of Significant Deterioration (PSD) applicability determination for proposed modifications at the FPL Putnam Plant. We responded to your request in a letter dated May 9, 1990. Since that time, Mr. William Green, attorney for FPL, has requested from EPA an applicability determination for a revised scenario at the plant in which physical changes will be made only to the HRSG steam system internals. This request, dated October 26, 1990, asks that EPA make a finding of non-applicability of PSD to the proposed project.

As you know, Florida has a SIP approved permitting program and full authority for implementing PSD regulations. Thus, we feel that it is appropriate that FDER make the final determination on applicability while EPA's role is to provide assistance and support. We are happy to offer you assistance in this determination.

From the information submitted by Mr. Green, the determination does not appear to be very clear-cut. The changes to the HRSG internals raise several questions which may be similar to the issues raised in the WEPCO court case; however, no physical changes will be made to fuel firing units. Some of the questions which would need to be answered are:

1. Are the changes to the HRSG internals considered routine replacements according to industry standards?
 - a. Are the parts being replaced with the same or equivalent parts?
 - b. Is the current condition of the unit such that it cannot be operated at capacity?

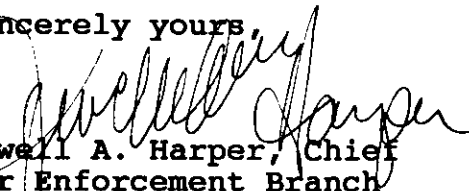
2. Can the source document, within reason, that the usage of the source will not increase?

Comment: The increased efficiency of the unit due to the proposed changes would lead one to believe that the unit would be utilized more frequently than in the past. The source should provide data as to the actual operating history of this unit and provide reasonable assurances that the "extent or priority of their utilization" will not change.

It is our understanding, from a discussion between Mr. Green and Mr. Gregg Worley of my staff that the proposed changes will only allow the unit to more efficiently transfer heat and will have no effect on the amount of fuel fired. Apparently, the current steam system does not physically limit the firing or operation of the turbine. Additionally, the increased efficiency will not change the plant's position on the priority list. We have requested that Mr. Green provide answers to the questions stated above in order to aid in the applicability determination.

If the situation is as stated above, it would be our interpretation that the changes would not be subject to PSD review. As stated previously, we are currently reviewing this information and awaiting additional information to confirm FPL's position. We will continue to provide information and assistance to you as it becomes available. If you have any questions or comments on this issue, please contact Mr. Gregg Worley of my staff at (404) 347-2904.

Sincerely yours,



Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides, and Toxics
Management Division

Enclosure

cc: Mr. William Green, Esquire
123 South Calhoun Street
P.O. Box 6526
Tallahassee, Florida 32314

Turner
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OF COUNSEL
W. ROBERT FOKES

October 26, 1990

Ms. Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxics
Management Division
Environmental Protection Agency
Region IV
345 Courtland Street, N.E.
Atlanta, GA 30365

RE: FPL Putnam Plant
PSD/NSPS Applicability Determination

Dear Ms. Harper:

As you will recall, by letter dated March 26, 1990, our client, Florida Power & Light Company (FPL) requested an applicability determination from the Florida Department of Environmental Regulation (DER) regarding whether New Source Performance Standards (NSPS) or Prevention of Significant Deterioration (PSD) permitting requirements would apply to certain proposed changes to FPL's Putnam combined cycle power plant. We appreciate the timely response to that request contained in your letter of May 11, 1990 wherein you concluded that the proposed changes to the combustion turbines (CTs) would trigger PSD review, and that the proposed changes to the Heat Recovery Steam Generators (HRSGs) would constitute reconstruction that would trigger NSPS applicability to those components.

In light of EPA's determination, FPL has further evaluated its options for the Putnam Power Plant and has elected to forego the changes to the CTs and the related emissions increases that you found would trigger PSD review. Only the heat transfer related replacements at the HRSGs will be pursued at present. Of course, in view of the cost of those component changes, FPL acknowledges the correctness of your earlier determination that the HRSGs will be required to meet the applicable NSPS.

Ms. Jewell Harper
October 26, 1990
Page 2

We have evaluated the proposed HRSG changes under applicable regulations at the request of FPL and, because they will not involve any changes in emissions from the source, we concluded that PSD review will not be triggered. As you are probably aware, the HRSGs recover heat from the CT exhaust gases and use that heat to generate steam electric energy. The HRSGs themselves do not generate emissions, with the exception of their supplemental duct burners, which can be used to raise the temperature of CT exhaust gases. (Attachments 1 and 2 depict the combined cycle unit block diagram and component relationships.) The changes proposed for the Putnam HRSGs will not involve the existing duct burners which, incidentally, will comply with NSPS; rather, the changes relate solely to the steam system and are intended to increase its reliability and efficiency. The changes include the following items:

- Replacement of steam tube modules
- Addition of tubing and replacement of steam drum internals to achieve lower steam and water velocities and reduced erosion
- Replacement of low pressure separation vessels
- Steam performance improvements to existing de-aerators
- Replacement of evaporator forced circulation pumps
- Replacement of boiler feed pump impellers and mechanical seals
- Replacement of miscellaneous steam and water piping.

It should be noted that the above changes will not affect the normal operations of the Putnam Plant units, nor will they influence the extent or priority of their utilization; thus, Plant emissions will be unaffected by the changes.

In view of the continued importance of this project and its scheduling constraints, we respectfully request confirmation by EPA of our interpretation of the

Ms. Jewell Harper
October 26, 1990
Page 3

nonapplicability of PSD permitting to the facts outlined above.

Once again, we thank you for your earlier timely response in this matter and look forward to your continued guidance. Of course, please do not hesitate to call if you have any questions in this matter.

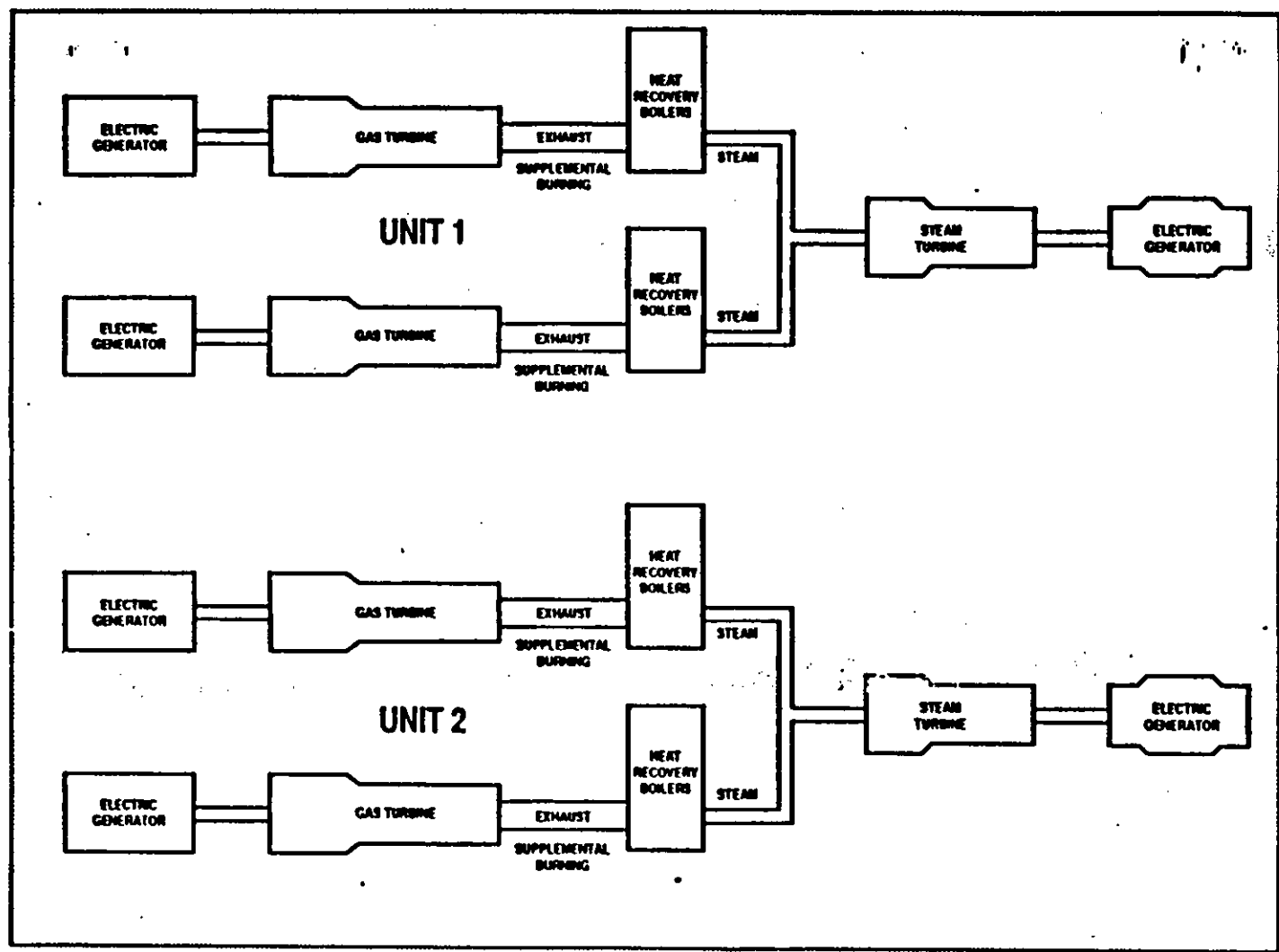
Sincerely,



William H. Green
Angela R. Morrison

WHG/wrn:ltrharper

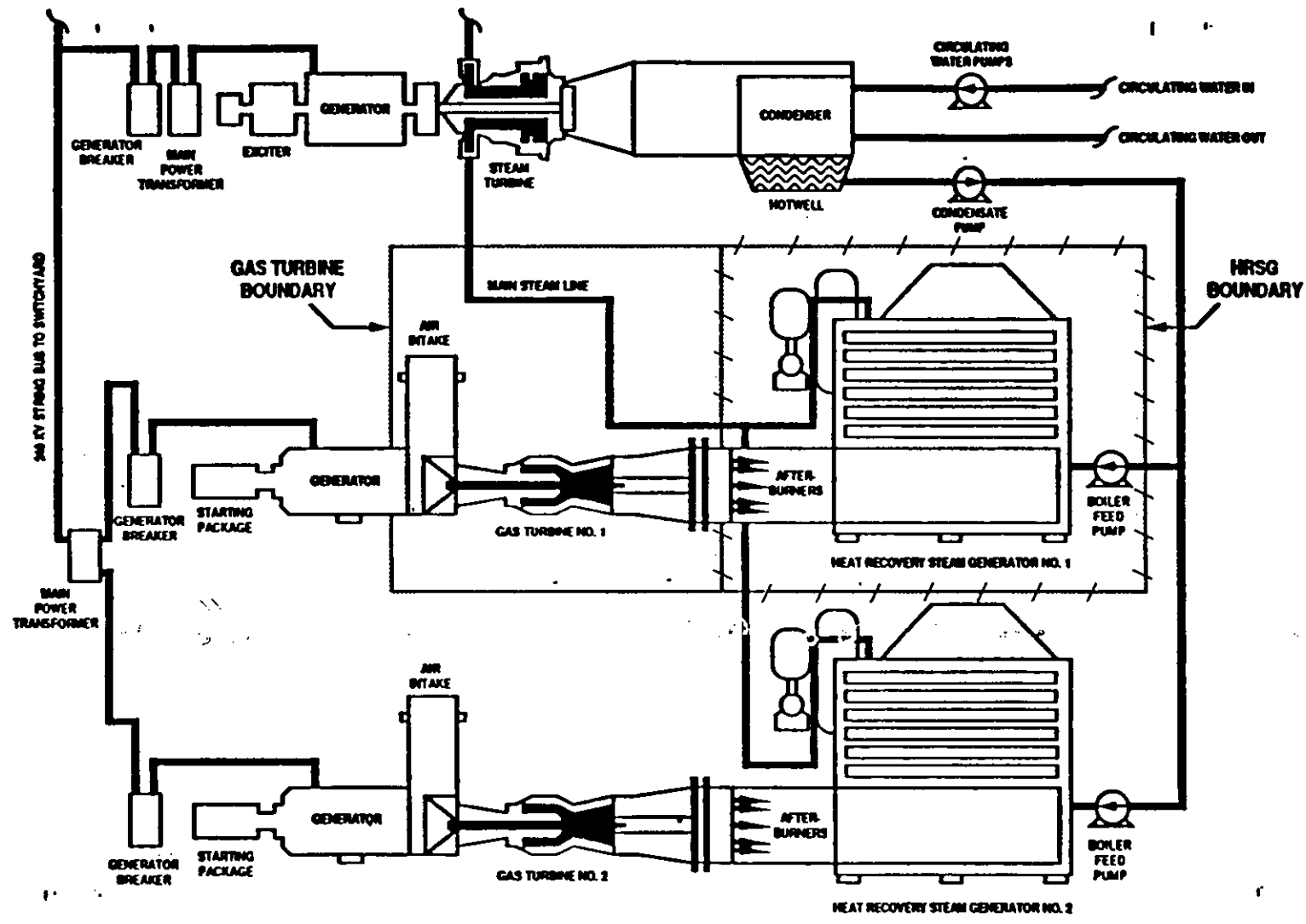
cc: Greg Worley, EPA Air Enforcement Branch
Clair Fancy, Chief, Bureau of Air Regulation, DER
Dr. Martin A. Smith, FPL



Attachment 1

FPL PUTNAM COMBINED CYCLE POWER PLANT
(Block Diagram)





Attachment 2

FPL PUTNAM PLANT COMBINED CYCLE UNIT

