

## Appendix H-1, Permit History/ID Number Changes

Seminole Electric Cooperative, Inc.

[DRAFT/PROPOSED/FINAL] Permit No.: 1070025-001-AV

Facility ID No.: 1070025

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### **Permit History (for tracking purposes):**

E.U.

<u>ID No</u>	<u>Description</u>	<u>Permit No.</u>	<u>Issue Date</u>	<u>Expiration Date</u>	<u>Extended Date</u>	<u>Revised Date(s)</u>
-001	#1 Unit, W/ESP AND FGD	PA78-10/PSD-FL-018	09/18/79			10/12/88, 8/10/89
-002	#2 Unit, W/ESP AND FGD	PA78-10/PSD-FL-018	09/18/79			10/12/88, 8/10/89
-003	Railcar Maintenance	PA78-10/PSD-FL-018	09/18/79			10/12/88, 8/10/89
-004	Coal Storage Yard	PA78-10/PSD-FL-018	09/18/79			10/12/88, 8/10/89

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### **(if applicable) ID Number Changes (for tracking purposes):**

From: Facility ID No.: 31JAX540025

To: Facility ID No.: 1070025

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### Notes:

1 - AO permit(s) automatic extension(s) in Rule 62-210.300(2)(a)3.a., F.A.C., effective 03/21/96.

2 - AC permit(s) automatic extension(s) in Rule 62-213.420(1)(a)4., F.A.C., effective 03/20/96.

{Rule 62-213.420(1)(b)2., F.A.C., effective 03/20/96, allows Title V Sources to operate under existing valid permits}

Memorandum

*File*

Florida Department of  
**Environmental Protection**

TO: Chris Kirts, NED

FROM: Bruce Mitchell *[Signature]*

DATE: June 10, 1997

SUBJECT: Completeness Review of an Application Package for a Title V Operation Permit  
Seminole Electric Cooperative, Putnam Plant: 1070025-001-AV

The Title V operating permit application package for the referenced facility is being processed in Tallahassee. The application was previously forwarded to your office for your files and future reference. Please have someone review the package for completeness and respond in writing by July 10, 1997, if you have any comments. Otherwise, no response is required. If there are any questions, please call the project engineer, Ed Svec, at 904/488-1344 or SC:278-1344. It is very important to verify the compliance statement regarding the facility. Since we do not have a readily effective means of determining compliance at the time the application was submitted, please advise if you know of any emissions unit(s) that were not in compliance at that time and provide supporting information. Also, do not write on the documents.

If there are any questions regarding this request, please call me or Scott Sheplak at the above number(s).

RBM/bjb

cc: Bob Leech

*6/10/97 cc: Ed Svec  
Reading File*



# Department of Environmental Protection

Lawton Chiles  
Governor

Northeast District  
7825 Baymeadows Way, Suite B200  
Jacksonville, Florida 32256-7590

Virginia B. Wetherell  
Secretary

August 7, 1996

Mr. Michael Opalinski  
Director, Environmental Affairs  
Seminole Electric Cooperative, Inc.  
Post Office Box 272000  
Tampa, Florida 33688-2000

Dear Mr. Opalinski:

**Putnam County - Stationary Air Emission Sources**  
**Seminole Electric Cooperative, Inc.**  
**AIRS No. 1070025**  
**Addendum to Compliance Report for May 15, 1996 Inspection**

On August 5, 1996, Brenda Shiver contacted the Department to request a wording change to the above mentioned report. She had requested that the second comment under Section VII of the report be modified to delete the word "Unpermitted" from the beginning of the statement. Ms. Shiver stated that SECI believed that the limestone unloading area and silos mentioned in the inspection report are included in the facility's current State Site Certification and thus permitted. After extensive review of the documentation on file here in the Northeast District, the Compliance Section can find no mention of any air emission sources other than Unit 1, Unit 2, the Railcar Maintenance facility, and the Coal Storage Yard. The Department has no objection, however, in granting the wording modification Ms. Shiver requested with the understanding that the stationary air emission sources noted in the inspection, as well as any other stationary air emission sources, whether mentioned in the facility's current State Site Certification or not, should be included in the Title V permit application if required.

This section is continuing to investigate if these sources are included in the Certification and would appreciate any comments and interpretation that SECI might have. If I may provide any additional information, please contact me at (904)448-4310, extension 243. Thank you for your continued cooperation.

Sincerely,

Michael T. Dunbar  
Northeast District  
Air Program

xc: Bruce Mitchell, FDEP w/ report  
Brenda Shiver, SECI

MTD

*"Protect, Conserve and Manage Florida's Environment and Natural Resources"*

*Printed on recycled paper.*

## V. Suggested Corrective Actions

- (1) Please clean up excess grit from blasting area to prevent fugitive emissions around Railcar Maintenance Building.
- (2) Please make sure all unpermitted sources noted during the inspection (limestone unloading, silos) are mentioned in Title II application.

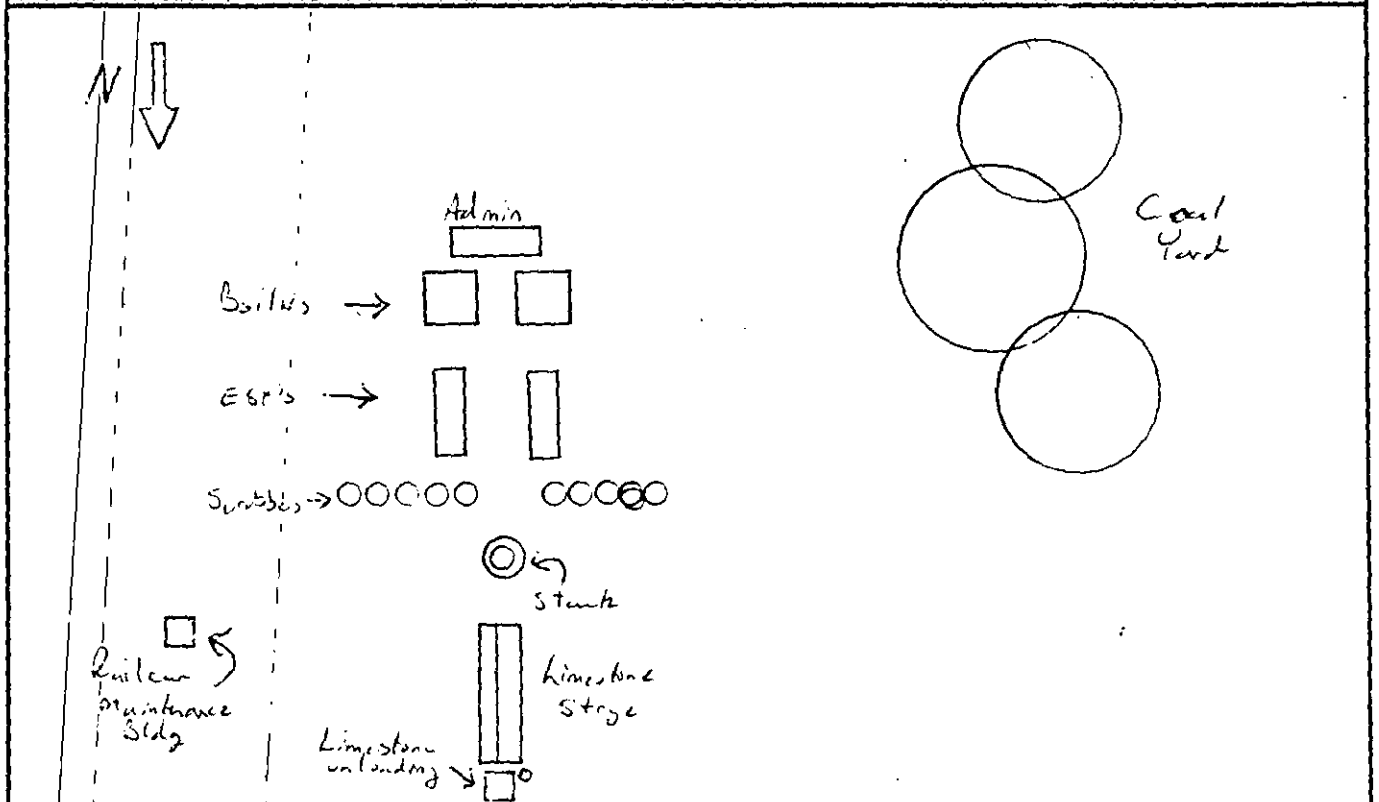
## VI. Notification to the Department from Facility

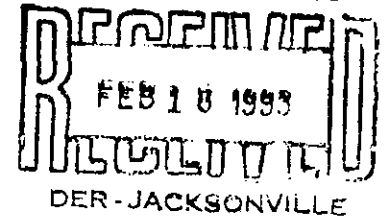
- (☒) Written notification concerning any corrections made is not required for this inspection.
- ( ) Written notification concerning corrective actions is required within ( ) days.
- ( ) Written schedule needed within ( ) days concerning:
- ( ) When construction will (start/ be completed).
  - ( ) When compliance will be achieved.
  - ( ) Other:
- ( ) Verbal notification is required once corrective actions are made.
- ( ) Verbal notification concerning corrective actions is required within ( ) days.
- ( ) A meeting with the facility is requested. Please contact ( ) to arrange a meeting.
- ( ) Other:

## VII. Comments

- C - Spill test observation not done due to lack of safety equipment
- unpermitted sources noted during inspection - needs inclusion into Title II
  - excess blast grit noted around Railcar Maintenance Building

## VIII. Facility/Source Diagram

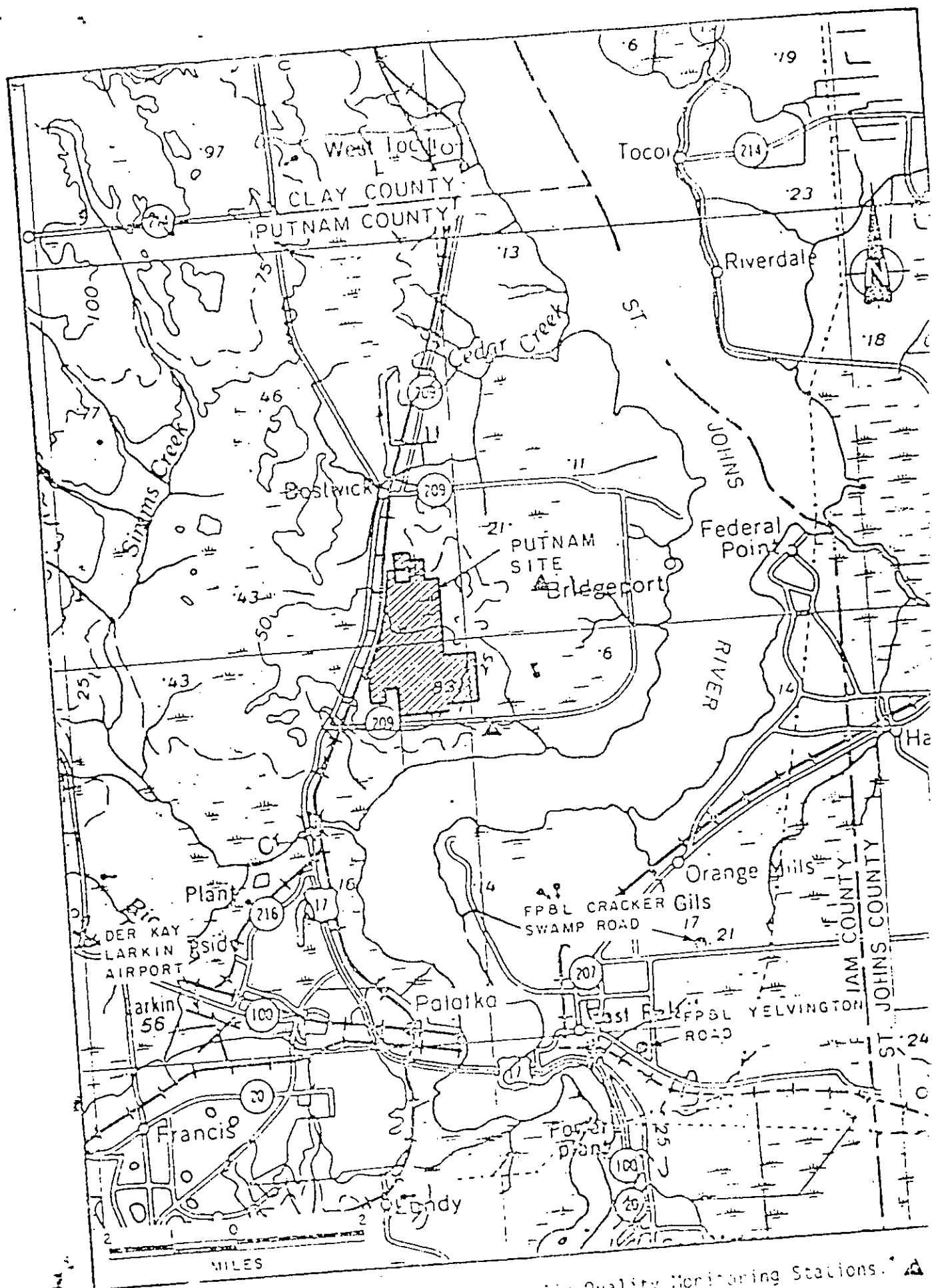




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State of Florida Department of Environmental Regulation  
Seminole Electric Cooperative, Inc.  
Seminole Units 1 & 2  
PA 78-10

CONDITIONS OF CERTIFICATION

I. Air

The Construction and operation of Units No. 1 and 2 at the Seminole steam electric power plant site shall be in accordance with all applicable provisions of Chapters 17-2, 17-5 and 17-7, Florida Administrative Code. In addition to the foregoing, the permittee shall comply with the following conditions of certification:

A. Emission Limitations

1. Stack emissions from Units 1 and 2 shall not exceed the following when burning coal:
  - a. SO<sub>2</sub> - 1.2 lb. per million BTU heat input, maximum two hour average.
  - b. NO<sub>x</sub> - 0.60 lb. per million BTU heat input.
  - c. Particulates - 0.03 lb. per million BTU heat input.
2. The height of the boiler exhaust stack for Units No. 1 & 2 shall not be less than 675 ft. above grade.
3. Particulate emissions from the coal handling facilities:
  - a. The applicant shall not cause to be discharged into the atmosphere from any coal processing or conveying equipment, coal storage system or coal transfer and loading system processing coal, visible emissions which exceed 20 percent opacity. Particulate emissions shall be controlled by use of control devices having a removal efficiency of not less than 99.9%.
  - b. The applicant must submit to the Department within ten (10) working days after it becomes available, copies of technical data pertaining to the selected particulate emissions control for the coal handling facility. These data should include, but not be limited to, guaranteed efficiency and emission rates, and major design parameters such as air/cloth ratio and flow rate. The Department may, upon review of these data, disapprove the use of such device if the Department determines the selected control device to be inadequate to meet the emission limits specified in 3(a) above. Such disapproval shall be issued within 30 days of receipt of the technical data.
4. Particulate emissions from the FGD sludge fixing facility shall be in compliance with Section 17-2.05(2).



B. Air Monitoring Program

1. The permittee shall install and operate continuously monitoring devices for the Units No. 1 & 2 boiler exhausts for sulfur dioxide, nitrogen dioxide and opacity. The monitoring devices shall meet the applicable requirements of Section 17-2.08, IAC. The opacity monitor may be placed in the duct work between the electrostatic precipitator and the FGD scrubber.
2. The permittee shall operate the two ambient monitoring devices for sulfur dioxide as generally shown on Figure 1. in accordance with EPA reference methods in 40 CFR, Part 53 and two ambient monitoring devices for suspended particulates as generally shown on Figure 1. The monitoring devices shall be specifically located at a location approved by the Department. The frequency of operation shall be every six days commencing as specified by the Department.
3. The permittee shall maintain a daily log of the amounts and types of fuels used and copies of fuel analyses containing information on sulfur content, ash content and heating values.
4. The permittee shall provide sampling ports into the stack and shall provide access to the sampling ports, in accordance with DER Publication, Standard Sampling Techniques and Methods of Analysis for the Determination of Air Pollutants from Point Source, July 1975.
5. The ambient monitoring program may be reviewed annually beginning two years after start-up of Unit No. 2 by the Department and the permittee.
6. Prior to operation of the source, the applicant shall submit to the Department a standardized plan or procedure that will allow the applicant to monitor emission control equipment efficiency and enable the applicant to return malfunctioning equipment to proper operation as expeditiously as possible.

C. Stack Testing:

1. Within 60 calendar days after achieving the maximum capacity at which each unit will be operated, but no later than 180 operating days after initial startup, the owner or operator shall conduct performance tests for particulates and SO<sub>2</sub> and furnish the Department a written report of the results of such performance tests.
2. Performance tests shall be conducted and data reduced in accordance with methods and procedures in accordance with DER's Standard Sampling Techniques and Methods of Analysis for Determination on Air Pollutants from Point Sources, July 1975.

3. Performance tests shall be conducted under such conditions as the Department shall specify based on representative performance of the facility. The owner or operator shall make available to the Department such records as may be necessary to determine the conditions of the performance tests.
4. The owner or operator shall provide 30 days prior notice of the performance tests to afford Department the opportunity to have an observer present.
5. Stack tests for particulates and SO<sub>2</sub> shall be performed annually in accordance with conditions C. 2, 3, and 4 above.

D. Reporting

1. For each Unit, stack monitoring, fuel usage and fuel analysis data shall be reported to the Department on a quarterly basis commencing with the start of commercial operation in accordance with 40 CFR, Part 60, Section 60.7., and in accordance with Section 17-2.08, FAC.
2. Ambient air monitoring data shall be reported to the Department quarterly commencing on the date of certification by the last day of the month following the quarterly reporting period utilizing the SAROAD or other format approved by the Department in writing.
3. Beginning one month after certification the applicant shall submit to the Department a quarterly status report briefly outlining progress made on engineering design and purchase of major pieces of equipment (including control equipment). All reports and information required to be submitted under this condition shall be submitted to the Administrator of Power Plant Siting, Department of Environmental Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32301.

II. Water Discharges

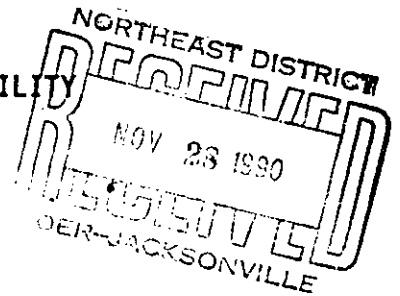
Any discharges into any waters of the State during construction and operation of Units No. 1 & 2 shall be in accordance with all applicable provisions of Chapter 17-3, Florida Administrative Code and 40 CFR, 423, Effluent Guidelines and Standards for Steam Electric Power Generating Point Source Category except as provided herein. Also the permittee shall comply with the following conditions of certification:

A. Plant Effluents and Receiving Body of Water

For discharges made from the power plant the following conditions shall apply.

## RAILCAR MAINTENANCE AND SURFACE COATING FACILITY

### SEMINOLE POWER PLANT



#### Introduction

Seminole Electric Cooperative, Inc. (SECI) is proposing to construct a railcar maintenance and surface coating facility at the Seminole Power Plant located north of Palatka, Florida in Putnam County.

Periodically, it is necessary for SECI to perform scheduled maintenance on its fleet of 300 railcars. Typical maintenance activities will include air brake repairs, wheel changes, welding, abrasive blasting and resurface coating of railcar interiors. Presently, these repairs are being conducted by an outside contractor, however, a cost analysis performed by SECI indicates a significant annual cost savings will be realized with construction of this facility.

The proposed facility will be constructed on an existing rail spur on the east side of the Seminole plant site, approximately 2000 ft. from the nearest plant boundary and 5000 ft. from the nearest residence (fig. 1).

The facility will consist of two (2) open sided metal shelters 70 feet long, 30 feet wide and 26 feet high. The shelters will be constructed 100 feet apart. Each shelter will be 35 % open on each side and 100 % open on both ends to provide adequate ventilation. An office building with restroom facilities will also be constructed. Sanitary waste discharge will be to an adequately sized septic tank and percolation field. Water will be supplied by a well constructed near the office location. A small storage shed for storing primer and surface coating material will be built near the surface coating shelter.

#### Description of Process

A diagram of the proposed facility is included as Figure 2. The process consists of the following three steps:

##### Step One - Car Clean Out and Physical Repair

Each railcar has some residual coal that must be removed. This coal will be shoveled by hand into 55 gallon drums. These covered drums will be stored on an lined area and periodically transported to the coal pile. No water will be used in this process. After cleaning, mechanical maintenance will be performed. During these maintenance activities no oil, grease, lubricants, solvents or other regulated substances will be used.

## Step Two - Abrasive Blasting

The railcars to be repaired have a corrosion resistant coating that must be replaced. The worn coating is removed by abrasive blasting. Fugitive particulate emissions from the blasting shelter will be reasonable confined as required by 17-2.610 (3)(C)(7)FAC. Only the interior of the cars will be cleaned. The cover and partial enclosure of the shelter will act as a windbreak to minimize the amount of residual particulate that becomes airborne.

## Step Three - Surface Coating

After the worn surface coating has been removed, the railcar will be moved to the surface coating shelter. The interior of the car will be cleaned by hand to remove any residual sand. Actual spray coating of the railcar interior will be conducted for eight hours, one day per week. Emissions from surface coating are considered minor as defined by 17-2.500 (Table 500-2) (Table 500-3) and (Table 510-1).

During the construction of the facility a limited amount of earthwork will be done to level the area and provide an access road.

There will be no water used in the work to be performed at the proposed facility. Stormwater runoff will be collected in the runoff ditches and routed to the northern section of the plant site for percolation and evaporation. There will be no wastewater discharge from this facility.

State of Florida Department of Environmental Regulation  
Seminole Electric Cooperative, Inc.  
Seminole Units 1 & 2  
PA 78-10

CONDITIONS OF CERTIFICATION (Revised 8/10/89)

I. Air

The construction and operation of Units No. 1 and 2 at the Seminole steam electric power plant site shall be in accordance with all applicable provisions of chapters 17-2, 17-5 and 17-7, Florida Administrative Code. In addition to the foregoing, the permittee shall comply with the following conditions of certification:

A. Emission Limitations

1. Stack emissions from Units 1 and 2 shall not exceed the following when burning coal:
  - a. SO<sub>2</sub> - 1.2 lb. per million Btu heat input, maximum two hour average.
  - b. NO<sub>x</sub> - 0.60 lb. per million Btu, 30 day rolling average.
  - c. Particulates - 0.03 lb. per million Btu heat input.
2. The height of the boiler exhaust stack for units No. 1 & 2 shall not be less than 675 ft. above grade.
3. Particulate emissions from the coal handling facilities:
  - a. The applicant shall not cause to be discharged into the atmosphere from any coal processing or conveying equipment, coal storage system or coal transfer and loading system processing coal, visible emissions which exceed 20 percent opacity. Particulate emissions shall be controlled by use of control devices having a removal efficiency of not less than 99.9%.
  - b. The applicant must submit to the Department within ten (10) working days after it becomes available, copies of the technical data pertaining to the selected particulate emissions control for the coal handling facility. These data should include, but not be limited to, guaranteed efficiency and emission rates, and major design parameters such as air/cloth ratio and flow rate. The Department may, upon review

State of Florida Department of Environmental Regulation  
Seminole Electric Cooperative, Inc.  
Seminole Units 1 & 2  
PA 78-10

CONDITIONS OF CERTIFICATION

I. Air

The construction and operation of Units No. 1 and 2 at the Seminole steam electric power plant site shall be in accordance with all applicable provisions of Chapters 17-2, 17-5 and 17-7, Florida Administrative Code. In addition to the foregoing, the permittee shall comply with the following conditions of certification:

A. Emission Limitations

1. Stack emissions from Units 1 and 2 shall not exceed the following when burning coal:
  - a.  $\text{SO}_2$  - 1.2 lb. per million BTU heat input, maximum two hour average.
  - b.  $\text{NO}_x$  - 0.70 lb per million BTU heat input.
  - c. Particulates - 0.30 lb. per million BTU heat input.
2. The height of the boiler exhaust stack for Units No. 1 & 2 shall not be less than 675 ft. above grade.
3. Particulate emissions from the coal handling facilities:
  - a. The applicant shall not cause to be discharged into the atmosphere from any coal processing or conveying equipment, coal storage system or coal or coal transfer and loading system processing coal, visible emissions which exceed 20 percent opacity. Particulate emissions shall be controlled by use of control devices having a removal efficiency of not less than 99.9%.
  - b. The applicant must submit to the Department within ten working days after

it becomes available, copies of technical data pertaining to the selected particulate emissions control for the coal handling facility. These data should include, but not be limited to, guaranteed efficiency and emission rates, and major design parameters such as air/cloth ratio and flow rate. The Department may, upon review of these data, disapprove the use of such device if the Department determines the selected control device to be inadequate to meet the emission limits specified in 3. a. above. Such disapproval shall be issued within 30 days of receipt of the technical data.

4. Particulate emissions from the FGD sludge fixing facility shall be in compliance with Section 17-2.05(2).

B. Air Monitoring Program

1. The permittee shall install and operate continuously monitoring devices for the Units No. 1 & 2 boiler exhausts for sulfur dioxide, nitrogen dioxide and opacity. The monitoring devices shall meet the applicable requirements of Section 17-2.660, F.A.C. and 40 C.F.R. 60.~~Section 17-2.00-~~ The opacity monitor may be placed in the duct work between the electrostatic precipitator and the FGD scrubber.
2. The permittee shall operate an ~~the two~~ ambient monitoring devices for sulfur dioxide as ~~generally shown on Figure 1-~~ in accordance with EPA reference methods in 40 C.F.R., Part 53 and an ~~two~~ ambient monitoring devices for suspended particulates as ~~generally shown on Figure 1.~~ The monitoring device shall be specifically located at a location approved by the Department. The frequency of operation shall be every six days commencing as specified by the Department.
3. The permittee shall maintain a daily log of the amounts and types of fuels used and copies of fuel analyses containing information on

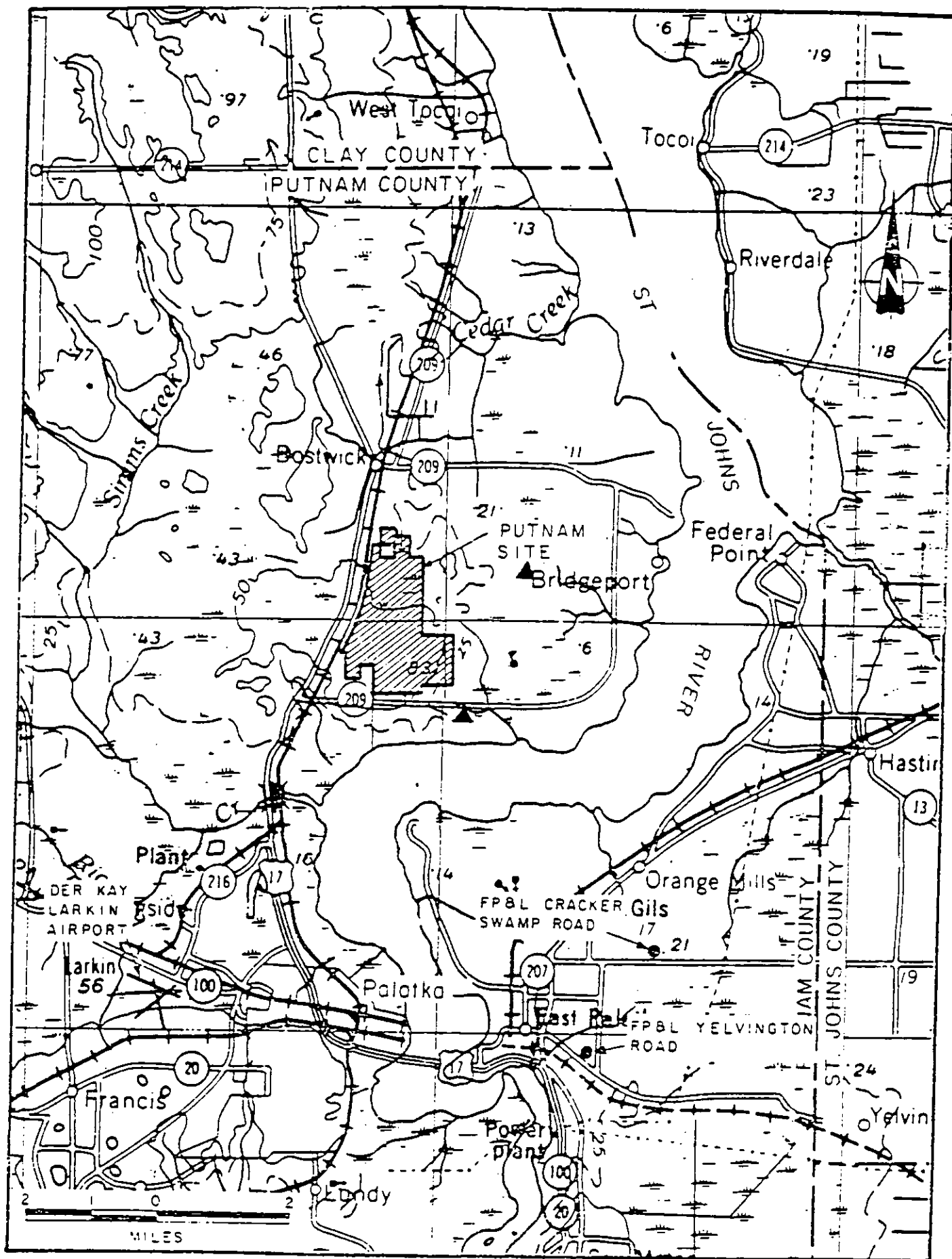
sulfur content, ash content and heating values.

4. The permittee shall provide sampling ports into the stack and shall provide access to the sampling ports in accordance with 17-2.700, Table 700-1 and 40 C.F.R. 60.8~~BER Publication, Standards Sampling Techniques and Methods of Analysis for the Determination of Air Pollutants from Point Sources, July 1975.~~
5. The ambient monitoring program may be reviewed annually beginning two year after start-up of Unit No. 2 by the Department and the permittee.
6. Prior to operation of the source, the applicant shall submit to the Department a standardized plan or procedure that will allow the applicant to monitor emission control equipment efficiency and enable the applicant to return malfunctioning equipment to proper operation as expeditiously as possible.

C. Stack Testing

1. Within 60 calendar days after achieving the maximum capacity at which each unit will be operated, but no later than 180 operating days after initial startup, the owner or operator shall conduct performance tests for particulates and SO<sub>2</sub> and furnish the Department a written report of the results of such performance tests.
2. Compliance Performance tests for particulate matter shall be conducted and data reduced in accordance with methods and procedures in accordance with 17-2.700, Table 700-1. BER's Standard Sampling Techniques and Methods of Analysis for Determination on Air Pollutants for Point Sources, July 1975.
3. Compliance Performance tests shall be conducted under such conditions as the Department shall specify based on representative compliance of the facility. The owner or operator shall make available to the Department such records as may be necessary to determine the conditions of the





compliance performance tests.

4. The owner or operator shall provide 15 30 days prior notice of the compliance performance tests to afford the Department the opportunity to have an observer present.
5. Compliance Stack tests for particulates and SO<sub>2</sub> shall be performed annually not earlier than 60 days before and not later than 60 days after the anniversary date of the previous year's annual compliance test in accordance with Conditions C.2, 3, and 4 above, provided that the requirements of Rule 17-2.700(2)(a)4., for testing each Federal fiscal year (October-September 30) are met.
6. SO<sub>2</sub> and NO<sub>x</sub> Continuous Emission Monitor required by Chapter 17-2, F.A.C., and 40 C.F.R. 60 subpart Da shall comply with the quality assurance requirements for gaseous continuous emission monitoring systems described in 40 C.F.R. 60, Appendix F.

D. Reporting

1. For each Unit, stack monitoring, fuel usage and fuel analysis data shall be reported to the Department on a quarterly basis commencing with the start of commercial operation in accordance with 40 C.F.R., Part 60, Section 60.77 and in accordance with Section 17-2.660, 17-2.08, F.A.C.
2. Ambient air monitoring data shall be reported to the Department quarterly commencing on the date of certification by the last day of the month following the quarterly reporting period utilizing the SAROAD or other format approved by the Department in writing.
3. Beginning one month after certification the applicant shall submit to the Department a quarterly status report briefly outlining progress made on engineering design and purchase of major pieces of equipment (including control equipment). All reports and information required to be submitted under this condition shall be submitted to the Administrator of Power Plant Siting,

## II. Water Discharges

Any discharges into any waters of the State during construction and operation of Units No. 1 & 2 shall be in accordance with all applicable provisions of Chapter 17-3, Florida Administrative Code and 40 C.F.R., 423, Effluent Guidelines and Standards for Steam Electric Power Generating Point Source Category except as provided herein. Also the permittee shall comply with the following conditions of certification.

### A. Plant Effluents and Receiving Body of Water

For discharges made from the power plant the following conditions shall apply.

#### 1. Receiving Body of Water (RBW)

The receiving body of water has been determined by the Department to be those waters of the St. Johns River and any other water affected which are considered to be waters of the State within the definition of Chapter 403, Florida Statutes.

#### 2. Point of Discharge (POD)

The point of discharge will be determined by the Department to be where the effluent physically enters the waters of the State.

#### 3. Thermal Mixing Zone

The instantaneous zone of thermal mixing for cooling tower blowdown shall not exceed an area of 1,235 ±55 square feet. During discharge, the blowdown from the cooling tower for Units No. 1 & 2 shall be withdrawn at the point of lowest temperature of the recirculating cooling water prior to the addition of makeup water. The temperature at the point of discharge into the St. Johns River shall not be greater than 98 93 degrees F. The temperature of the water at the edge of the mixing zone shall not exceed the limitations of Paragraph 17-3.05(1)(d) ,except on occasions in which the temperature of the unaffected receiving waters exceeds 92 degrees F.

4. Chemical Wastes and Boiler Blowdown

All discharges of low volume wastes (demineralizer regeneration, floor drainage, lab drains and similar wastes), shall comply with Chapter 17-3. If violations of Chapter 17-3 occur, corrective action shall be taken. These wastewaters shall be discharged to an adequately sized and constructed treatment facility. Operational cleaning wastes shall be treated to comply with 40 CFT Part 423 and Chapter 17-3, F.A.C., prior to discharge. Boiler blowdown, boiler fireside wash, air preheater wash, shall be disposed of in an adequately sized percolation pond; provided, however, that boiler blowdown from either unit may also be recycled to the Unit 1 and/or 2 cooling towers.

5. Coal Pile and Limestone Pile

Coal pile runoff and Limestone Pile runoff from less than 10-year 24-hour rainfall shall be treated as required to limit the suspended solids to 50 mg/l and to prevent increases in turbidity to less than 50 JTU in waters of the state beyond a distance of 150 meters from the POD.

6. Cooling Tower Blowdown

The cooling tower blowdown shall contain no detectable amounts of material added for corrosion inhibition, including but not limited to zinc and chromium.

7. Chlorine

The quantity of total residual chlorine discharged in the blowdown from the cooling tower shall not exceed 0.1 mg/l at the POD nor 0.01 mg/l beyond an instantaneous mixing zone of 750 square feet. There will be no limit on the duration of discharge of chlorine.

8. pH

The pH of all discharges shall be such that the pH be within the range of 6.0 to 8.5.

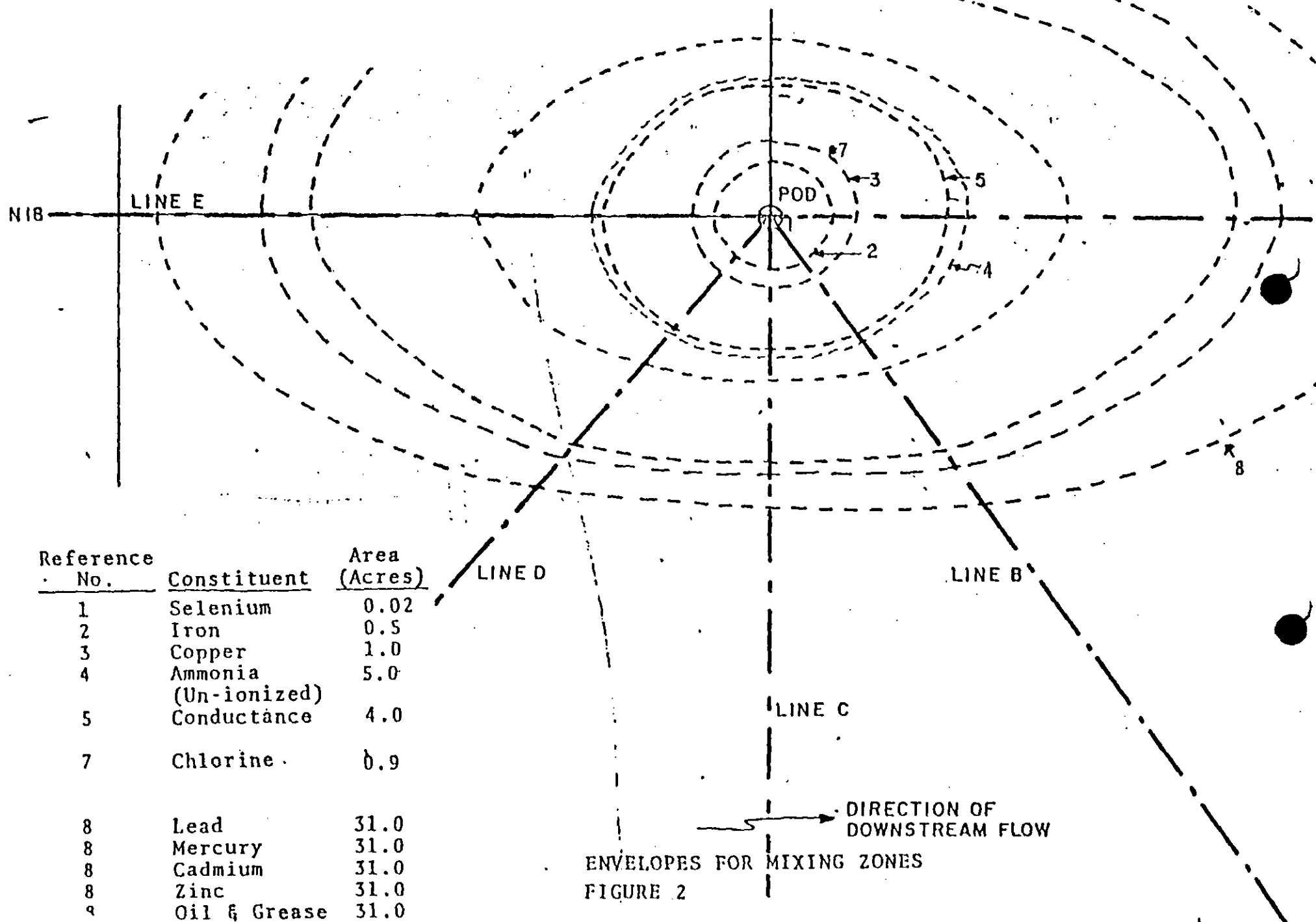
9. Polychlorinated Biphenyl Compounds

There shall be no net discharge of polychlorinated biphenyl compounds.

10. Mixing Zones

The discharge of the following pollutants shall not violate the Water Quality Standards of Chapter 17-3, F.A.C. beyond the edge of the designated instantaneous mixing zone as described herein and located within the envelopes as shown on Figure 2.

<u>Pollutants</u>	<u>Instantaneous Mixing Zone</u>	<u>Envelope of Mixing Zones</u>	
Ammonia	10,000 ft <sup>2</sup>	20,235 m <sup>2</sup>	5.0 Acres
Arsenic	8 ft <sup>2</sup>	65 m <sup>2</sup>	0.2 Acres
Chlorine	750 ft <sup>2</sup>	3,645 m <sup>2</sup>	0.9 Acres
Copper	1,000 ft <sup>2</sup>	4,047 m <sup>2</sup>	1.0 Acres
Iron	400 ft <sup>2</sup>	2,024 m <sup>2</sup>	0.5 Acres
Selenium	10 ft <sup>2</sup>	84 m <sup>2</sup>	0.02 Acres
Specific Conductance	8,015 ft <sup>2</sup>	16,188 m <sup>2</sup>	4.0 Acres
Lead		125,600 m <sup>2</sup>	31 Acres
Mercury		125,600 m <sup>2</sup>	31 Acres
Cadmium		125,600 m <sup>2</sup>	31 Acres
Zinc		125,600 m <sup>2</sup>	31 Acres
Oil and Grease		125,600 m <sup>2</sup>	31 Acres
Chromium	25 ft <sup>2</sup>	195 m <sup>2</sup>	0.05 Acres



ENVELOPES FOR MIXING ZONES  
FIGURE 2

# 11. Variances to Water Quality Standards

In accordance with the provisions of Sections 403.201 and 403.511(2), F.S., Seminole Electric Cooperative, Inc., is hereby granted variances to the Water Quality Standards of Chapter 17-3, F.A.C., for cadmium, lead, mercury, and zinc, but only at such times as the natural background levels of the St. Johns River approach or exceed those standards; in any event, the discharge shall comply with the effluent limitations set forth in paragraph II.A.12.a.

## 12. Effluent Limitations

a. The following instantaneous maximum effluent limitations shall apply for cadmium, mercury, lead and zinc at the locations specified:

(i) Cooling blowdown - concentrations shall not exceed four times the concentrations present in the river at Applicant's intake structure, or not exceed Class III surface water quality standards, whichever is higher.

(ii) Coal/limestone storage runoff - concentrations shall not exceed:

cadmium.....0.11 mg/l  
mercury.....0.0022 mg/l  
lead.....0.11 mg/l  
zinc.....1.76 mg/l

(iii) bottom ash sluice blowdown - concentrations shall not exceed the unweighted sum of the amount per liter described in (i) above plus the following amounts per liter:

cadmium.....0.11 mg/l  
mercury.....0.0055 mg/l  
lead.....0.11 mg/l  
zinc.....1.1 mg/l

- b. The following instantaneous maximum effluent limitations shall apply to the discharge from the chemical wastewater treatment facility:

<u>Pollutant</u>	<u>Effluent Limit</u> <u>(mg/l)</u>
Ammonia	28.5
Aluminum	174
Arsenic	0.073
Copper	0.66
Cyanide	0.004
Chromium	0.14
Nickel	0.09
Selenium	0.04
Oil and grease	15

B. Water Monitoring Programs

The permittee shall monitor and report to the Department the listed parameters on the basis specified herein. The methods and procedures utilized shall receive written approval by the Department. The monitoring program may be reviewed annually by the Department, and a determination may be made as to the necessity and extent of continuation, and may be modified in accordance with Condition No. XXV.

1. Chemical Monitoring

The following parameters shall be monitored as shown during discharge and reported monthly to the Department commencing with the start of commercial operation of the first unit and reported quarterly to the Department:

<u>Parameter</u>	<u>Location</u>	<u>Sample Type</u>	<u>Frequency</u>
Flow Intake	Intake	Recorder	Totalizer
Flow Groundwater	Wellfield	Recorder	Totalizer
	pipeline		
Flow, Discharge	C.T. Outfall	Recorder	Totalizer
Conductivity	C.T. Outfall	Recorder	Continuous
pH	C.T. Outfall	Multiple Grab	Weekly
Temperature	C.T. Outfall	Recorder	Continuous



<u>Parameter</u>	<u>Location</u>	<u>Sample Type</u>	<u>Frequency</u>
TSS	C.T. Outfall	Grab	Weekly
Chlorine Total Residual	C.T. Outfall	Multiple Grab	Weekly
Oil and Grease	C.T. Outfall & Intake	Grab	Weekly
Metals	C.T. Outfall, Intake & Waste Treatment Facility	Multiple Grab	as noted below <u>quarterly</u>
Arsenic	"	"	*
Copper	"	"	*
Iron	"	"	*
Aluminum	"	"	*
Lead	"	"	**
Mercury	"	"	**
Cadmium	"	"	**
Zinc	"	"	**

\* Weekly for the first three months, monthly for the next nine months, then quarterly thereafter.

\*\* Weekly for the first three months, biweekly for the next three months, monthly for the next three months, then quarterly thereafter.

### III. Groundwater

#### A. General

The use of groundwater from two wells for plant service water for Units 1 and 2 shall be minimized to the greatest extent practicable, but in no case shall exceed 3.9 mgd on a maximum daily basis or 0.85 mgd on an average annual basis.

#### B. Well Criteria

The submission of well logs and test results and location, design and construction of wells to provide plant service water shall be in accordance with applicable rules of the Department of Environmental Regulation and the St. Johns River Water Management District (SJRWMD). Total water use per month shall be reported quarterly to SJRWMD commencing with the start of construction.

C. Water Use Restriction

Groundwater is restricted to uses other than main steam condensing. Any change in the use of said water will require a modification of this condition.

D. Emergency Shortages

In the event an emergency water shortage should be declared pursuant to Section 373.175 or 373.246, F.S., by St. Johns River Water Management District for an area including the location of these withdrawal points, the Department, pursuant to Section 403.516, F.S., may alter, modify, or declare to be inactive, all or parts of Condition III.A.-F. An authorized Water Management District Representative, at any reasonable time, may enter the property to inspect the facilities.

E. Monitoring and Reporting

Seminole shall implement the following groundwater monitoring program:

1. The static groundwater levels shall be monitored and the results logged in accordance with the schedule shown in Table 1 at the wells shown in Figure 3. continuously at wells as approved by the BER and the St. Johns River Water Management District. Chemical analyses shall be made on samples from all monitored wells identified in this Condition. The location, frequency and selected chemical analyses shall be as given in Condition III.E.4.
2. The groundwater monitoring program shall be implemented at least one year prior to operation of Seminole No. 1. The Chemical analyses shall be in accord with the latest edition of Standard Methods for the Analysis of Water and Wastewater. The data shall be submitted within 30 days of collection/analysis to the St. Johns River Waste Management District and to the BER Power Plant Siting Section.
3. Seminole shall operate ~~install~~ flow meters in compliance with SJRWMD specifications on all production wells.

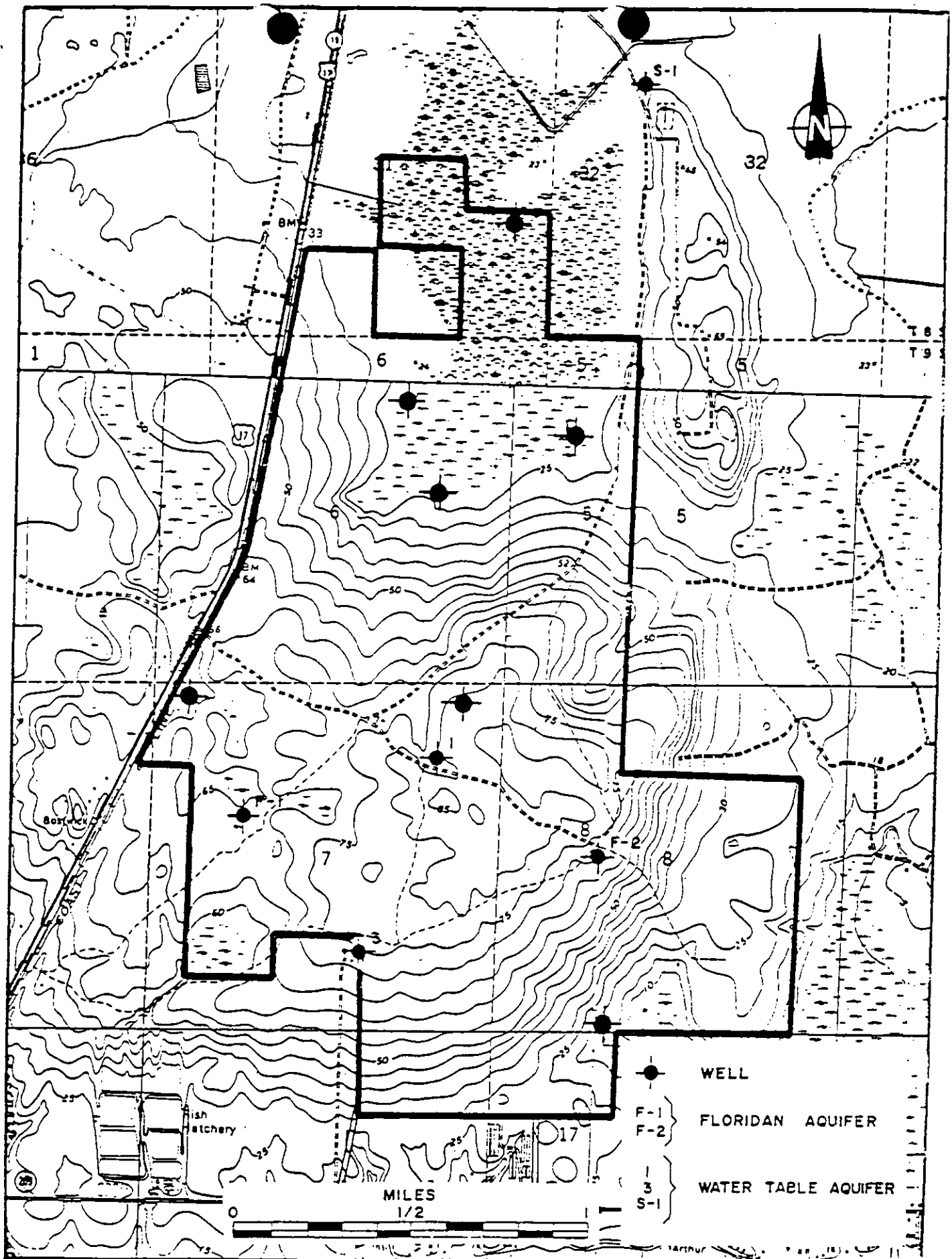


Figure 3. Monitor Well Location Map.

4. After consultation with the DER and SJRWMD, Seminole shall operate ~~install~~ a monitoring well system as generally shown in Figure 3 to monitor groundwater quality in the top 40 feet of surficial aquifer. One well shall be installed to a depth greater than 40 feet but less than 100 to monitor vertical dispersion or groundwater contaminants. Monitoring well location and designs shall be submitted to the Department and SJRWMD for review. Approval or disapproval of the locations and design shall be granted within 60 days. The water samples collected from each of the monitor wells shall be collected immediately after removal by pumping of a quantity of water equal to two casing volumes. The water quality analyses shall be performed monthly during the year prior to commercial operation and two years after operation and quarterly thereafter in accordance with the schedule shown in Table 1. Results shall be submitted to the Department and the SJRWMD by the 30th ~~15th~~ day of the month following the month during which such analyses were performed. Testing for the following constituents is required.

Conductance	Nickel
pH	Selenium
Chloride	Chromium
Iron	Arsenic
Cadmium	Beryllium
Zinc	Mercury
Copper	Lead
Sulfate	Gross Alpha
Silver	Barium

5. After the second year of monitoring and periodically thereafter, the Department and the applicant shall review the results of the monitoring program and determine the necessity for modifying or continuing the program.

F. Leachate

1. Zone of Discharge

Leachate from the FGD/sludge landfill, coal storage pile, bottom ash sump, percolation and FGD emergency pond shall not contaminate waters of the State (including both surface and groundwaters) in excess of

the limitations of Chapter 17.3, F.A.C., beyond the boundary of the site.

2. Corrective Action

When the groundwater monitoring system shows a violation of the groundwater water quality standards of Chapter 17-3, F.A.C., the appropriate ponds, FGD landfill, or coal pile shall be sealed, relocated or closed, or the operation of the affected facility shall be altered in such a manner as to assure the Department that no violation of the groundwater standards will occur beyond the boundary of the site.

IV. Control Measures During Construction

A. Stormwater Runoff

During construction and plant operation, necessary measures shall be used to settle, filter, treat or absorb silt containing or pollutant laden stormwater runoff to limit the suspended solids to 50 mg/l or less at the POD during rainfall periods less than the 10-year, 24-hour rainfall, and to prevent an increase in turbidity of more than 50 Jackson Turbidity Units above background in waters of the state beyond 150 meters from the POD.

Control measures shall consist at the minimum, of filters, sediment traps, barriers, berms or vegetative planting. Exposed or disturbed soil shall be protected as soon as possible to minimize silt and sediment laden runoff. The pH shall be kept within the range of 6.0 to 8.5 at the POD.

B. Sanitary Wastes

Disposal of sanitary wastes from construction toilet facilities shall be in accordance with applicable regulations of the Department and appropriate local health agency. The sewage treatment plant shall be operated in accordance with Chapters 17-3, 17-16, and 17-19, F.A.C. Plans and specifications for the sewage treatment plant shall be submitted to the Department's St. Johns River Subdistrict Manager for review and approval prior to installation.

C. Environmental Control Program

An environmental control program shall be established under the supervision of a qualified person to assure that all construction activities conform to good environmental practices and the applicable conditions of certification.

The permittee shall notify the Department if unexpected harmful effects or evidence of irreversible environmental damage are detected during construction, shall immediately report to the Department and shall within two weeks provide an analyses of the problem and a plan to eliminate or significantly reduce the harmful effects or damage, and to prevent reoccurrence.

V. Solid Wastes

Solid wastes resulting from construction or operation shall be disposed of in accordance with the applicable regulations of Chapter 17-7, F.A.C. The permittee shall submit a program for approval but outlining the methods to be used in handling and disposal of solid wastes indicating at least methods for erosion control, covering, vegetation and quality control.

Open burning in connection with land clearing shall be in accordance with Chapter 17-5, F.A.C. No additional permits shall be required, but the Division of Forestry shall be notified prior to burning. Open burning shall not occur if the Division of Forestry has issued a ban on burning due to fire hazard conditions.

VI. Operation Safeguards

The overall design, layout, and operation of the facilities shall be such as to minimize hazards to humans and the environment. Security control measures shall be utilized to prevent exposure of the public to hazardous conditions. The Federal Occupational Safety and Health Standards will be complied with during construction and operation. The Safety Standards specified under Section 440.56, F.S., by the Industrial Safety Section of the Florida Department of Commerce will also be complied with.

VII.     Screening

The permittee shall provide screening of the site through the use of aesthetically acceptable structures, vegetated earthen walls and/or existing or planted vegetation.

VIII.    Potable Water Supply System

The potable water supply system shall be designed and operated in conformance with Chapter 17-22, F.A.C. Information as required in 17-22.108 shall be submitted to the Department prior to construction and operation. The operator of the potable water supply system shall be certified in accordance with Chapter 17-16, F.A.C.

IX.       Transformer and Electric Switching Gear

The foundations for transformers, capacitors, and switching gear necessary for Seminole Units 1 and 2 to the existing distribution system shall be constructed of an impervious material and shall be constructed in such a manner to allow complete collection and recovery of any spills or leakage of oily, toxic, or hazardous substances.

X.        Toxic, Deleterious, or Hazardous Materials

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

XI.       Construction and Emergency Maintenance Activities in Waters of the State.

1. No construction on sovereignty submerged lands shall commence without obtaining lease or title from the Department of Natural Resources.
2. Construction of intake and discharge structures should be done in a manner to minimize turbidity. Turbidity screens should be used to prevent turbidity in excess of 50 JTU above background beyond 150 meters from the dredging, pile driving or construction site.
3. Dredging of the intake channel and discharge pipe trench should be performed by hydraulic dredge (small "mudcat" type is suitable): clamshell or

other excavating equipment is satisfactory behind cofferdams or other turbidity control devices.

4. All spoil shall be piped hydraulically or trucked to an upland disposal site of sufficient capacity to retain all material. The discharge pipe trench should be refilled with clean sand sized material.
5. Effective stabilization of submerged bottom sediments at the discharge pipe exist should be achieved and maintained during the period of operation by the placement of riprap or other suitable material.

XII. FGD/Sludge Landfill and Coal Pile

Adequate geophysical testing shall be conducted to determine if solution cavities are present under the landfill area. If such cavities are located, such cavities shall be sealed off and stabilized.

The proposed FGD sludge landfill area shall be monitored and studied pursuant to a detailed groundwater testing and monitoring program as defined in Condition III E.

The results of the program will be used by the Department in determining whether Seminole has affirmatively demonstrated that Florida Water Quality Standards (17-3 F.A.C.) will not be violated beyond the site boundary.

If the Department determines that Seminole has failed to affirmatively demonstrate that Florida Water Quality Standards (17-3 F.A.C.) will not be violated, Seminole shall present to the Department, within 90 days of such determination, a plan of correction, (which may include, if appropriate, an impermeable liner) for review and approval by the Department, and for timely implementation by Seminole.

During the initial years of operation of Unit 1, but not to exceed five years from start up of Unit 1, a FGD sludge disposal test and evaluation program shall be implemented in accordance with the program outline submitted to the Department on April 27, 1979 as attached and incorporated herein as Attachment 1. During the test program, any FGD sludge not utilized in the program shall be fixed so as to achieve an ultimate



permeability not greater than  $7 \times 10^{-7}$  cm/sec and shall be disposed of in a manner and located so as to not interfere with the sludge testing program.

Upon completion of the test and evaluation program Seminole shall submit a proposed method of FGD sludge disposal to the Department for Review. The Department shall indicate its approval or disapproval of the program within 60 days of receipt. Seminole shall implement the approved program as soon as practical upon receipt of approval from the Department. Should the program be disapproved by the Department Seminole shall fix the FGD sludge so as to achieve a permeability not greater than  $1 \times 10^{-7}$  cm/sec and place it with the bottom layer at least eight feet thick or line it with an impermeable liner.

Upon initiation of FGD sludge disposal, a quality control program shall be implemented to insure that the permeability of the FGD sludge does not exceed prescribed levels. Construction of perimeter berms of "Fixed" FGD sludge, if any, shall be in conformance with the provisions of Chapter 17-9, F.A.C., regarding earthen dams.

### XIII. Transmission Lines

Directly associated transmission lines shall be constructed and maintained in a manner to minimize environmental impacts in accordance with Chapter 403, F.S.

#### A- Construction

- 1- Filling and construction in waters of the State shall be minimized to the extent practicable. No such activities shall take place without obtaining lease or title from the Department of Natural Resources.
- 2- Placement of fill in wetland areas shall be minimized by spanning such areas with the maximum transmission lines span practicable.
- 3- Construction and access roads should avoid wetlands and be located in surrounding uplands. Any fill required in wetlands for construction but not required for maintenance purposes shall be removed and the ground restored to its original contours.

after transmission line placement.

- 4- Keyhole fills from upland areas are preferable to a single road and should be oriented as nearly parallel to surface water flow lines as possible.
- 5- Sufficient culverts shall be placed through fill causeways to maintain sheet flow. The number and locations of such culverts will be determined in the field by consultation with DER field inspectors.
- 6- Maintenance roads shall be planted with native species to prevent erosion and subsequent water quality degradation.
- 7- Construction activities should proceed as much as possible during the dry season.
- 8- Turbidity control measures, where needed, shall be employed to prevent violation of water quality standards.
- 9- Good environmental practices as described in Environmental Criteria for Electric Transmission Systems as published by the U.S. Department of Interior and the U.S. Department of Agriculture should be followed.
- 10- Any archaeological sites discovered during construction of the transmission lines shall be disturbed as little as possible and such discovery shall be communicated to the Department of State, Division of Archives, History and Records Management.

B- Maintenance

- 1- Vegetative removal for maintenance should be carried out in the following manner:

Vegetative clearing operations to be carried out within the corridor should follow the general standards for clearing rights-of-way for overhead transmission lines and follow good environmental practices as described in environmental criteria for Electric Transmission Systems, as published by The U.S. Department of The Interior and The U.S. Department of Agriculture, thus preserving immature tree species along the peripheries of the right-of-

way. These standards define the zone that shall be cleared of all tree growth as the area between structures 10 ft. to either side of the outside conductor. The remainder of the right-of-way from the cleared area to the right-of-way limit shall be screened. This translates to mean that only trees in excess of 10 ft. in height would be removed from the outer zone except where location of the access roads necessitates complete clearing.

- 2-B. Approved Chemicals or herbicides may be used for vegetation control along the transmission line without prior approval of the Department.

XIV. Change in Discharge

All discharges or emission authorized herein shall be consistent with the terms and conditions of this certification. The discharge of any pollutant not identified in the application, or any discharge more frequent than, or at a level in excess of that authorized herein, shall constitute a violation of the certification. Any anticipated facility expansions, production increases, or process modification which will result in new, different or increased discharges or expansion in steam generating capacity will require a submission of a new or supplemental application pursuant to Chapter 403, Florida Statutes.

XV. Noncompliance Notification

If, for any reason, the permittee does not comply with or will be unable to comply with any limitation specified in this certification, the permittee shall notify the St. Johns River Subdistrict Manager of the Department by telephone during the working day during which permittee becomes aware of said noncompliance and shall confirm this situation in writing within seventy-two (72) hours of first becoming aware of such conditions, supplying the following information:

- a. A description and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and stops being taken to reduce, eliminate and prevent recurrence of the noncomplying event.

XVI. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this certification. Such systems are not to be bypassed without prior department approval, except, during periods of when light oil is used for ignition, the FGD system may be bypassed.

XVII. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact resulting from noncompliance with any limitation specified in this certification, including but not limited to such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying event.

XVIII. Right of Entry

The permittee shall allow the Secretary of the Florida Department of Environmental Regulation and/or authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or in which records are required to be kept under the terms and conditions of this permit; and
- b. To have access to and copy all records required to be kept under the conditions of this certification; and
- c. To inspect and test any monitoring equipment or monitoring method required in this certification and to sample any discharge or pollutants, and
- d. To assess any damage to the environment or violation of ambient standards.

XIX. Revocation or Suspension

This certification may be suspended or revoked

pursuant to Section 403.512, Florida Statutes, or for violations of any Condition or certification.

XX. Civil and Criminal Liability

This certification does not relieve the permittee from civil or criminal responsibility or liability for noncompliance with any conditions of this certification, applicable rules or regulations of the Department, or Chapter 403, Florida Statutes, or regulations thereunder.

Subject to Section 403.511, Florida Statutes, this certification shall not preclude the institution of any legal action or relieve the permittee from any responsibilities or penalties established pursuant to any other applicable State Statutes or regulations.

XXI. Property Rights

The issuance of this certification does not convey any property rights in either real or personal property tangible or intangible, nor any exclusive privileges, nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. The applicant will obtain title, lease or right of use from the State of Florida, to any sovereign submerged lands occupied by the plant, transmission line structures, or appurtenant facilities.

XXII. Severability

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

XXIII. Definitions

The meaning of terms used herein shall be governed by the definitions contained in Chapter 403, Florida Statutes, and any regulation adopted pursuant thereto. In the event of any dispute over the meaning of a term

used in these general or special conditions which is not defined in such statutes or regulations, such dispute shall be resolved by reference to the most relevant definitions contained in any other state or federal statute or regulation or, in the alternative by the use of the commonly accepted meaning as determined by the Department.

XXIV. Review of Site Certification

The certification shall be final unless revised, revoked or suspended pursuant to law. At least every five years from the date of issuance of this certification or any National Pollutant Discharge Elimination System Permit issued pursuant to the Federal Water Pollution Control Act Amendments of 1972, for the plant units, the Department shall review all monitoring data that has been submitted to it during the proceeding five-year period, for the purposes of determining the extent of the permittee's compliance with the conditions of this certification of the environmental impact of this facility. The Department shall submit the results of its review and recommendations to the permittee. Such results will be repeated at least every five years thereafter.

XXV. Modification of Conditions

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

- a. The Board hereby delegates to the Secretary the authority to modify, after notice and opportunity for hearing, any conditions pertaining to monitoring, testing and evaluation programs, sampling, groundwater, mixing zones, zones of discharge or variances to water quality standards, or location of transmission line corridors within areas already approved at the land use hearing.
- b. All other modifications shall be made in accordance with Section 403.516, Florida Statutes.

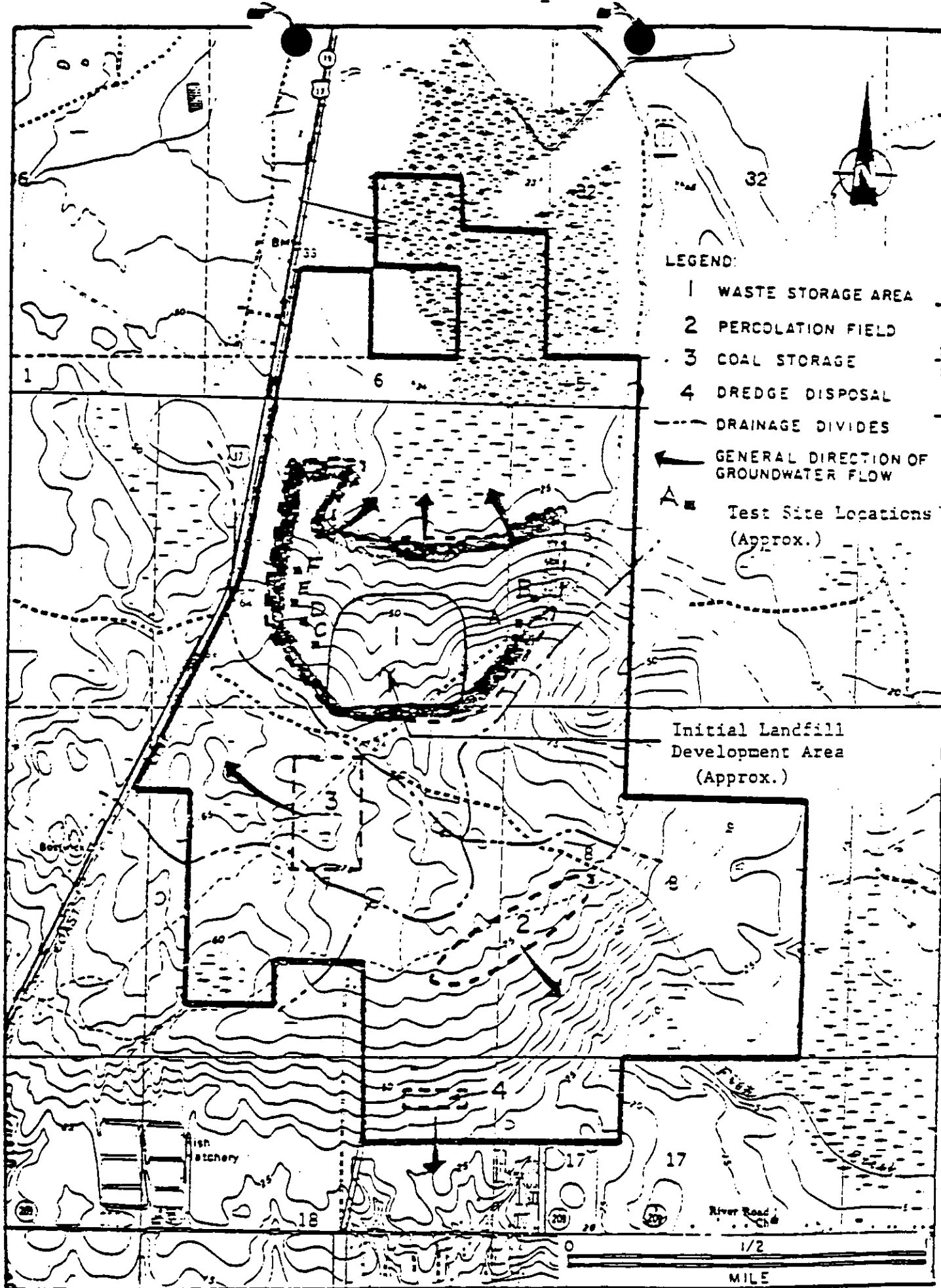
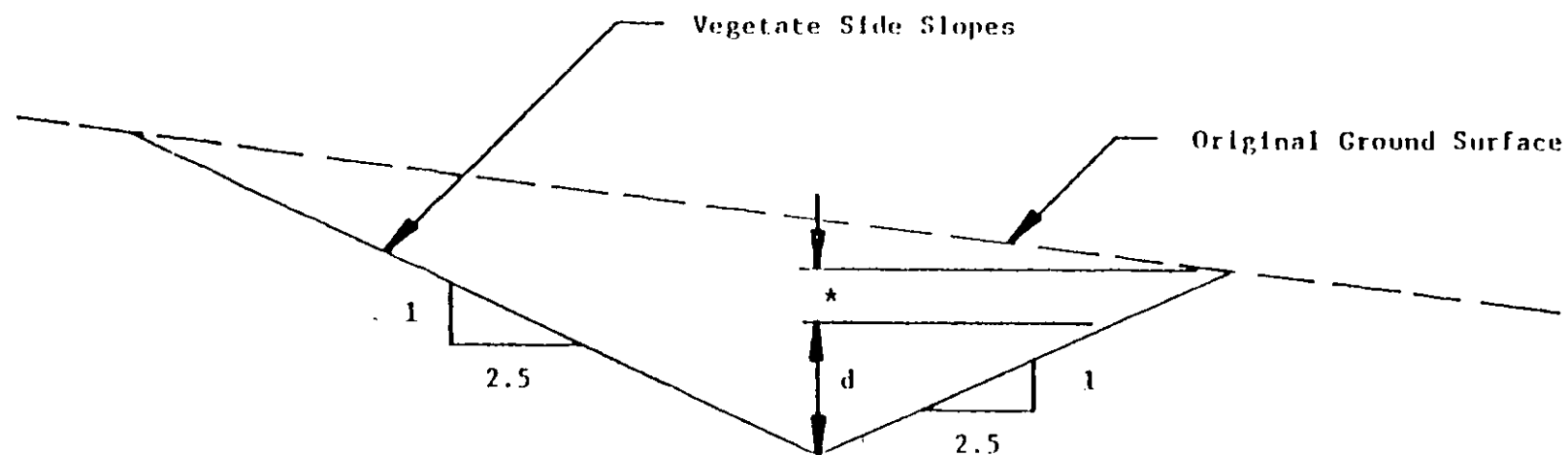


Figure A

FOR STUDY AND USE OF THE PUBLIC



$d$  = Flow Depth

\* = Freeboard, 1'-0 min.

Figure B  
TYPICAL CROSS SECTION  
DIVERSION CHANNEL.  
NO SCALE



PROPOSED PROGRAM FOR MONITORING AND EVALUATING  
THE GEOTECHNICAL AND ENVIRONMENTAL  
CHARACTERISTICS OF FGD SLUDGE AND ASH DISPOSAL

Seminole Electric Cooperative, Inc. (SECI) wishes to demonstrate to the Florida Department of Environmental Regulation (DER) and the Environmental Protection Agency (EPA) that it has the capability to dispose of the various power plant waste materials which will be produced at Seminole Units 1 and 2 in an environmentally acceptable manner. To ensure this environmentally acceptable disposal, SECI intends to include in its power plant sub-systems, a waste treatment system capable of processing all of the FGD sludge, fly ash and bottom ash produced by both Seminole Units 1 and 2. This waste treatment system will utilize accepted pozzolanic technology to chemically fix the power plant waste products.

Sludge and fly ash processed through the plant using the fixation process shall be defined herein as "stabilized" material. Sludge and fly ash blended within the plant without fixation additives shall be defined herein as "unstabilized" material.

The primary emphasis of the program is to evaluate the handleability, economics, structural stability and environmental acceptability of unstabilized fly ash and sludge (either unoxidized or oxidized) mixtures, and to develop a long term disposal plan in line with sound engineering principles acceptable to the DER and the EPA.

Attached please find our outline for the proposed program, Exhibit II, and Figures A through E.

## OUTLINE

### PHASE I - DESIGN AND DEVELOPMENT OF MONITORING PROGRAM

- A. Develop Disposal Concepts
  - Unstabilized disposal
  - Encapsulation
  - Selected stabilization
  - Total stabilization
- B. Select Disposal Concepts for Test Cell Development and Monitoring
  - Unstabilized disposal
  - Selected stabilization and encapsulation of oxidized sludge and ash.
  - Selected stabilization and encapsulation of unoxidized sludge and ash
  - Total stabilization of oxidized or unoxidized sludge and ash
- C. Design Test Cells and Monitoring Program for Concept Evaluation- See Figures A thru E
  - Establish monitoring point locations
  - Design test cells
  - Develop field and laboratory test program

### PHASE II - IMPLEMENTATION AND EVALUATION OF MONITORING PROGRAM

- A. Monitoring, Quality Control and Testing Program
  - Establish physical and chemical characteristics of disposal materials
  - Monitor runoff and leachate
  - Determine in situ material characteristics with regard to density, strength, permeability, stability, etc.
- B. Establish Effect of Various Disposal Concepts on Operations
  - Equipment and manpower requirements
  - Operating efficiency
  - Seasonal variations
  - Operational difficulties

### PHASE III - EVALUATION OF SHORT AND LONG TERM EFFECTS OF VARIOUS CONCEPTS

- A. Environmental Acceptability
  - Meets or exceeds Florida water quality standards
- B. Structural Integrity
  - Immediate and long term stability
- C. Operational Feasibility
  - Potential for reclamation and future land use

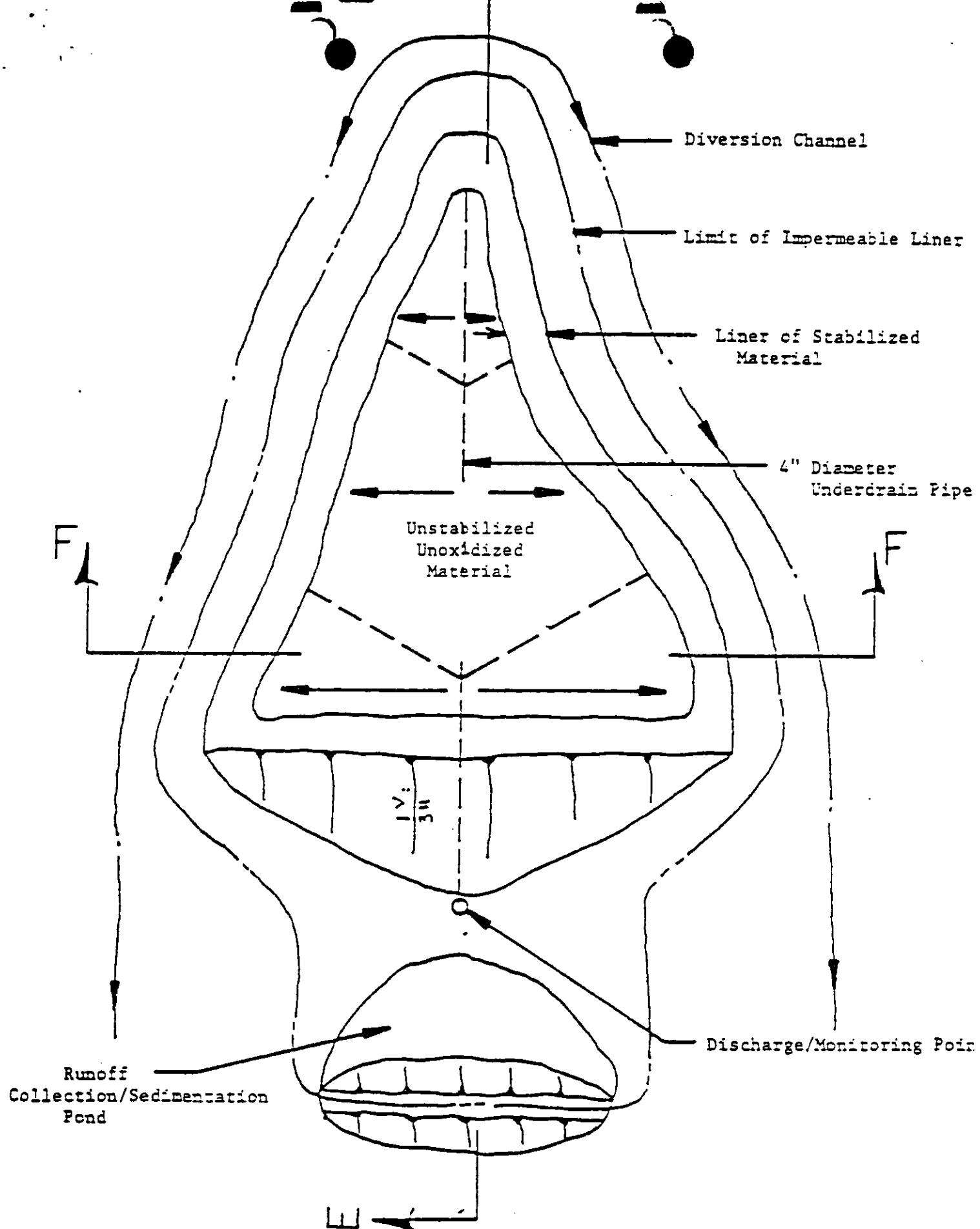


Figure C  
TEST SITE C  
SITE PLAN  
NO SCALE

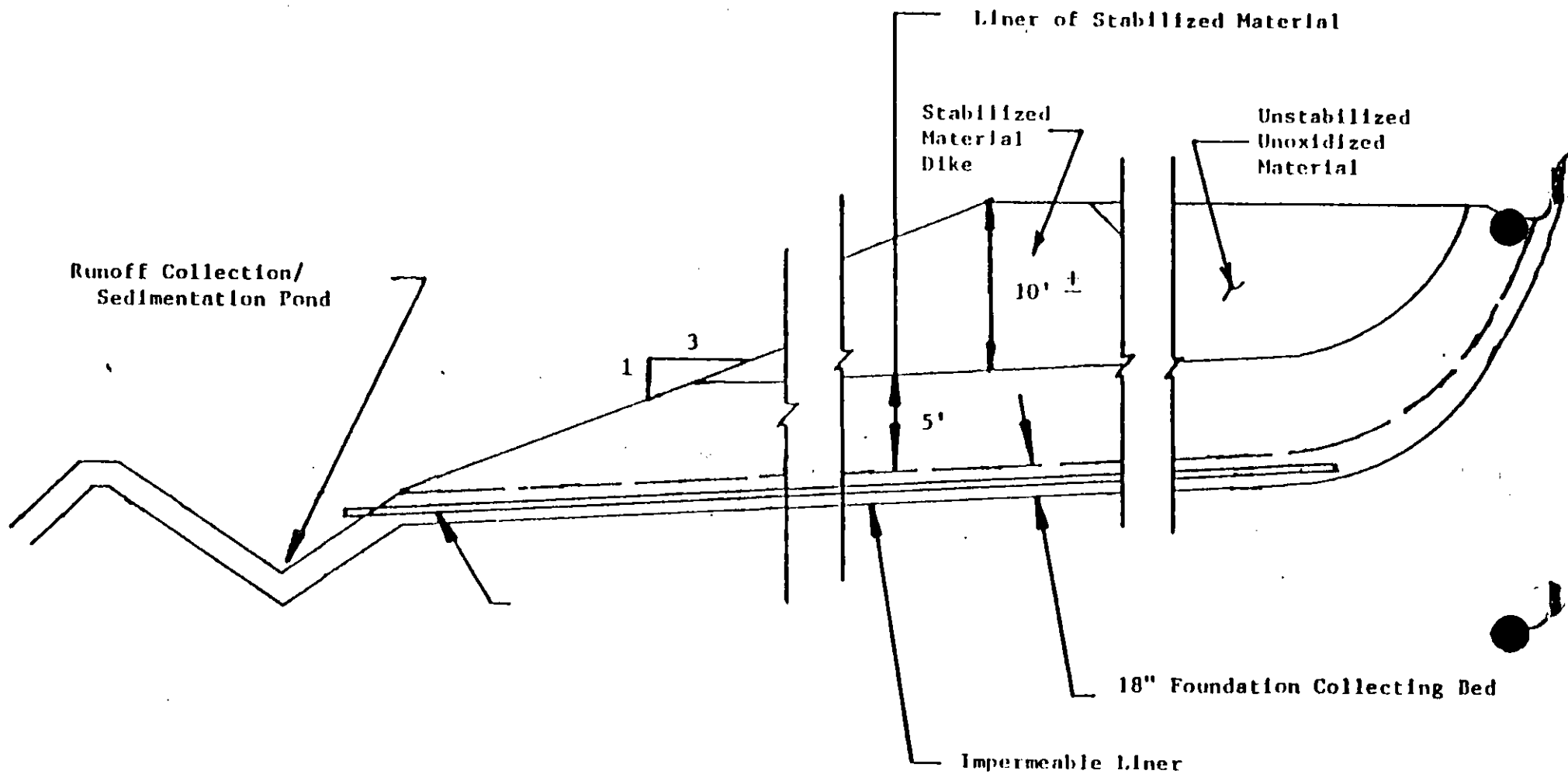


Figure D  
SECTION EE  
TYPICAL CROSS SECTION  
NO SCALE

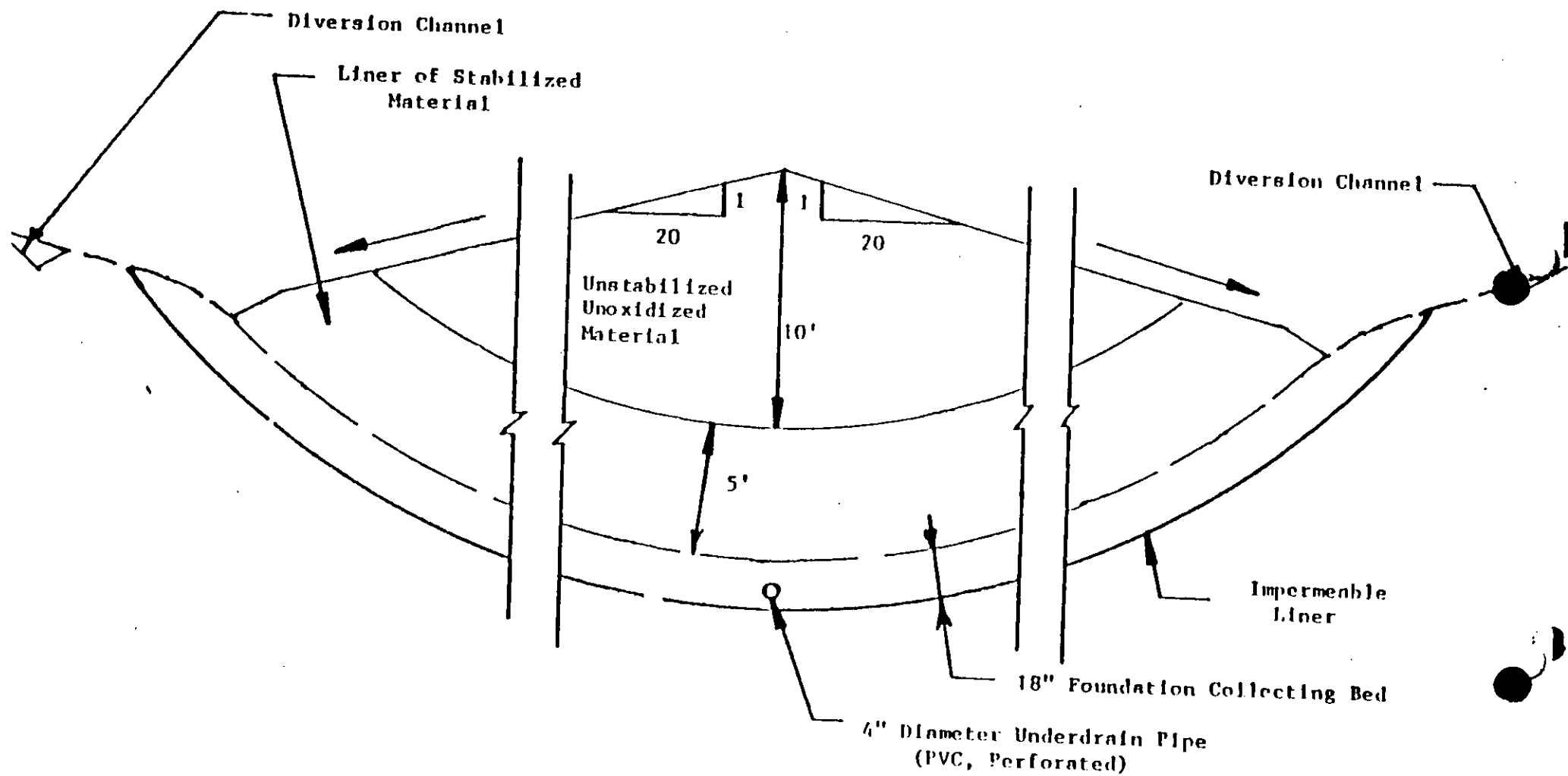


Figure E  
SECTION FF  
TYPICAL CROSS SECTION  
NO SCALE

Conditions of Certification  
as modified in 1988

State of Florida Department of Environmental Regulation  
Seminole Electric Cooperative, Inc.  
Seminole Units 1 & 2  
PA 78-10  
CONDITIONS OF CERTIFICATION

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Radioactive Materials : 10B-91



State of Florida Department of Environmental Regulation  
Seminole Electric Cooperative, Inc.  
Seminole Units 1 & 2  
PA 78-10

CONDITIONS OF CERTIFICATION

I. Air

The construction and operation of Units No. 1 and 2 at the Seminole steam electric power plant site shall be in accordance with all applicable provisions of Chapters 17-2, 17-5 and 17-7, Florida Administrative Code. In addition to the foregoing, the permittee shall comply with the following conditions of certification:

A. Emission Limitations

1. Stack emissions from Units 1 and 2 shall not exceed the following when burning coal:
  - a. SO<sub>2</sub> - 1.20 lb. per million BTU heat input, maximum two hour average.
  - b. NO<sub>x</sub> - 0.70 lb per million BTU heat input, maximum two hour average, 0.60 lbs. per million Btu, 30 day rolling average.
  - c. Particulates - 0.03 lb. per million BTU heat input.
2. The height of the boiler exhaust stack for Units No. 1 & 2 shall not be less than 675 ft. above grade.
3. Particulate emissions from the coal handling facilities:
  - a. The applicant shall not cause to be discharged into the atmosphere from any coal processing or conveying equipment, coal storage system or coal transfer and loading system processing coal, visible emissions which exceed 20 percent opacity. Particulate emissions shall be

controlled by use of control devices having a removal efficiency of not less than 99.9%.

- b. The applicant must submit to the Department within ten working days after it becomes available, copies of technical data pertaining to the selected particulate emissions control for the coal handling facility. These data should include, but not be limited to, guaranteed efficiency and emission rates, and major design parameters such as air/cloth ratio and flow rate. The Department may, upon review of these data, disapprove the use of such device if the Department determines the selected control device to be inadequate to meet the emission limits specified in 3. a. above. Such disapproval shall be issued within 30 days of receipt of the technical data.
4. Particulate emissions from the FGD sludge fixing facility shall be in compliance with Section 17-2.05(2).

B. Air Monitoring Program

1. The permittee shall install and operate continuous monitoring devices for the Units No. 1 & 2 boiler exhausts for sulfur dioxide, nitrogen dioxide and opacity. The monitoring devices shall meet the applicable requirements of Rules 17-2.660, F.A.C., and 40 C.F.R. 60. The opacity monitor may be placed in the duct work between the electrostatic precipitator and the FGD scrubber.
2. The permittee shall operate an ambient monitoring device for sulfur dioxide in accordance with EPA reference methods in 40 C.F.R., Part 53 and an ambient monitoring device for suspended particulates as shown on Figure 1. The monitoring device shall be specifically

located at a location approved by the Department. The frequency of operation shall be every six days commencing as specified by the Department.

3. The permittee shall maintain a daily log of the amounts and types of fuels used and copies of fuel analyses containing information on sulfur content, ash content and heating values.
4. The permittee shall provide sampling ports into the stack and shall provide access to the sampling ports in accordance with Rule 17-2.700, Table 700-1, F.A.C., and 40 C.F.R. 60.8.
5. The ambient monitoring program may be reviewed annually beginning two years after start-up of Unit No. 2 by the Department and the permittee.
6. Prior to operation of the source, the applicant shall submit to the Department a standardized plan or procedure that will allow the applicant to monitor emission control equipment efficiency and enable the applicant to return malfunctioning equipment to proper operation as expeditiously as possible.

C. Stack Testing

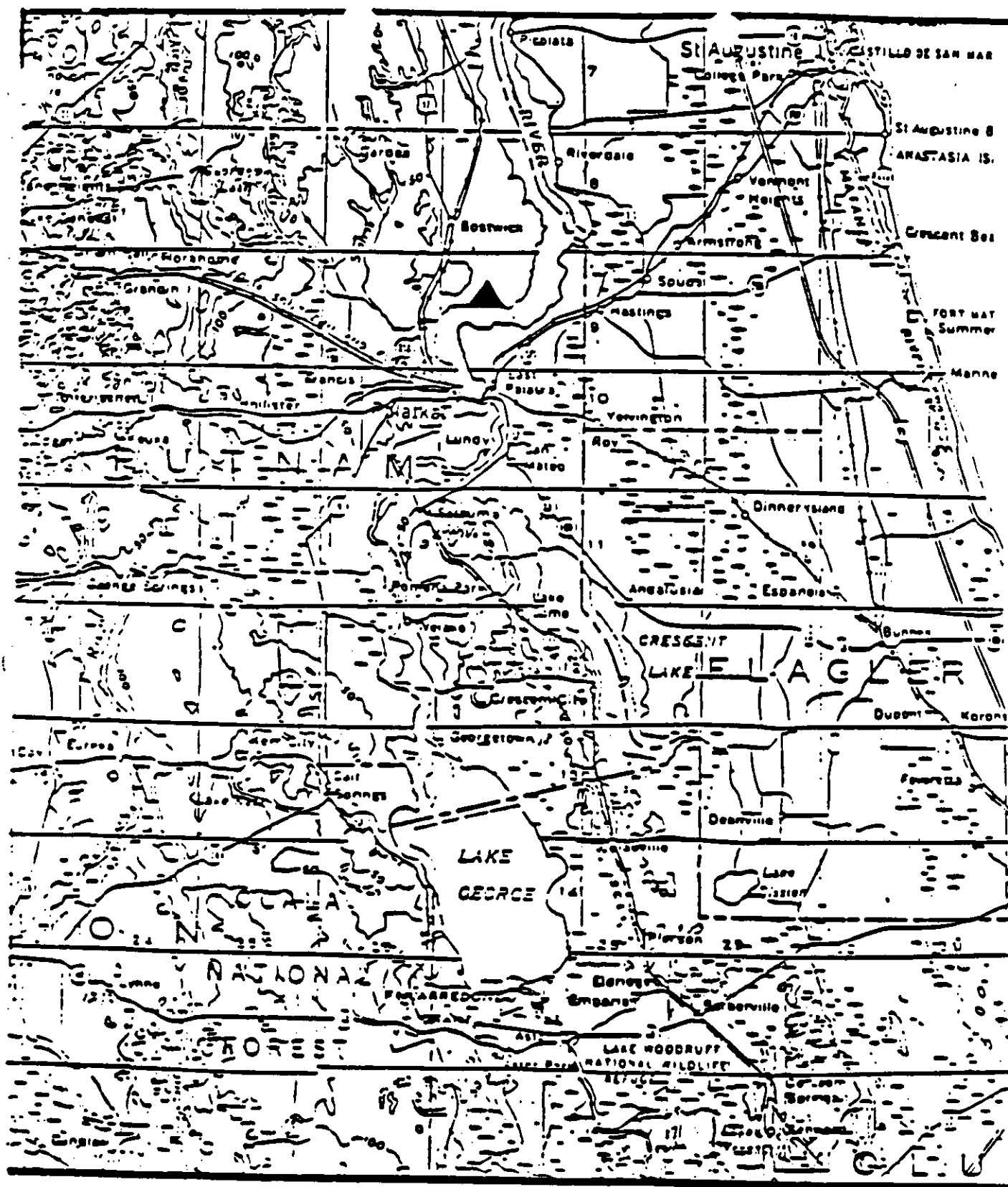
1. Within 60 calendar days after achieving the maximum capacity at which each unit will be operated, but no later than 180 operating days after initial startup, the owner or operator shall conduct performance tests for particulates and SO<sub>2</sub> and furnish the Department a written report of the results of such performance tests.
2. Compliance tests for particulate matter shall be conducted and data reduced in accordance with Rule 17-2.700, and Table 700-1, F.A.C..
3. Compliance tests shall be conducted under such conditions as the Department shall

specify based on representative compliance of the facility. The owner or operator shall make available to the Department such records as may be necessary for the Department to determine the appropriate operating conditions of the compliance tests.

4. The owner or operator shall provide 15 days prior written notice of the compliance tests to afford the Department the opportunity to have an observer present.
5. Compliance tests for particulates shall be performed annually during a testing period that commences not earlier than 60 days before and not later than 60 days after the anniversary date of the last compliance test in accordance with Conditions C.2, 3, and 4 above, provided that the requirements of Rule 17-2.700(2)(a)4., for testing each fiscal year (October-September 30) are met. If the plant is shut down for reasons beyond the control of the owner such that testing during the normal testing period cannot be accomplished, the annual compliance test shall be performed within 60 days after the unit is restarted and reaches its normal commercial production rate.
6. SO<sub>2</sub> and NO<sub>x</sub> Continuous Emission Monitors required by Chapter 17-2, F.A.C., and 40 C.F.R. 60 subpart Da shall comply with the quality assurance requirements for continuous emission monitoring systems described in 40 C.F.R. 60, Appendix F.

D. Reporting

1. For each Unit, stack monitoring, fuel usage and fuel analysis data shall be reported to the Department on a quarterly basis in accordance with Rule 17-2.660, F.A.C..
2. Ambient air monitoring data shall be reported to the Department quarterly



▲ FIGURE 1: Location of Ambient Air Quality Monitoring Station

commencing on the date of certification by the last day of the month following the quarterly reporting period utilizing the SAROAD or other format approved by the Department in writing.

3. Beginning one month after certification the applicant shall submit to the Department a quarterly status report briefly outlining progress made on engineering design and purchase of major pieces of equipment (including control equipment). All reports and information required to be submitted under this condition shall be submitted to the Administrator of Power Plant Siting, Department of Environmental Regulation, 2600 Blair Stone Road, Tallahassee, Florida 32301.

## II. Water Discharges

Any discharges into any waters of the State during construction and operation of Units No. 1 & 2 shall be in accordance with all applicable provisions of Chapter 17-3, Florida Administrative Code and 40 C.F.R., 423, Effluent Guidelines and Standards for Steam Electric Power Generating Point Source Category except as provided herein. Also the permittee shall comply with the following conditions of certification.

### A. Plant Effluents and Receiving Body of Water

For discharges made from the power plant the following conditions shall apply.

#### 1. Receiving Body of Water (RBW)

The receiving body of water has been determined by the Department to be those waters of the St. Johns River and any other water affected which are considered to be waters of the State within the definition of Chapter 403, Florida Statutes.

2. Point of Discharge (POD)

The point of discharge will be determined by the Department to be where the effluent physically enters the waters of the State.

3. Thermal Mixing Zone

The instantaneous zone of thermal mixing for cooling tower blowdown shall not exceed an area of 1,235 square feet. During discharge, the blowdown from the cooling tower for Units No. 1 & 2 shall be withdrawn at the point of lowest temperature of the recirculating cooling water prior to the addition of makeup water. The temperature at the point of discharge into the St. Johns River shall not be greater than 98 degrees F. The temperature of the water at the edge of the mixing zone shall not exceed the limitations of Paragraph 17-3.05(1)(d), F.A.C., except on occasions in which the temperature of the unaffected receiving waters exceeds 92 degrees F.

4. Chemical Wastes and Boiler Blowdown

All discharges of low volume wastes (demineralizer regeneration, floor drainage, lab drains and similar wastes), shall comply with Chapter 17-3. If violations of Chapter 17-3 occur, corrective action shall be taken. These wastewaters shall be discharged to an adequately sized and constructed treatment facility. Operational cleaning wastes shall be treated to comply with 40 CFR Part 423 and Chapter 17-3, F.A.C., prior to discharge. Boiler blowdown, boiler fireside wash, air preheater wash, and stack wash shall be disposed of in an adequately sized percolation pond; provided, however, that boiler blowdown from either unit may also be recycled to the Unit 1 and 2 cooling towers.

3.  
Modified per  
10/16/92  
Final Order

5. Coal Pile and Limestone Pile

Coal pile runoff and Limestone Pile runoff from less than 10-year 24-hour rainfall shall be treated as required to limit the suspended solids to 50 mg/l and to prevent increases in turbidity to less than 50 JTU in waters of the state beyond a distance of 150 meters from the POD.

6. Cooling Tower Blowdown

The cooling tower blowdown shall contain no detectable amounts of material added for corrosion inhibition, including but not limited to zinc and chromium.

7. Chlorine

The quantity of total residual chlorine discharged in the blowdown from the cooling tower shall not exceed 0.1 mg/l at the POD nor 0.01 mg/l beyond an instantaneous mixing zone of 750 square feet. There will be no limit on the duration of discharge of chlorine.

8. pH

The pH of all discharges shall be such that the pH be within the range of 6.0 to 8.5.

9. Polychlorinated Biphenyl Compounds

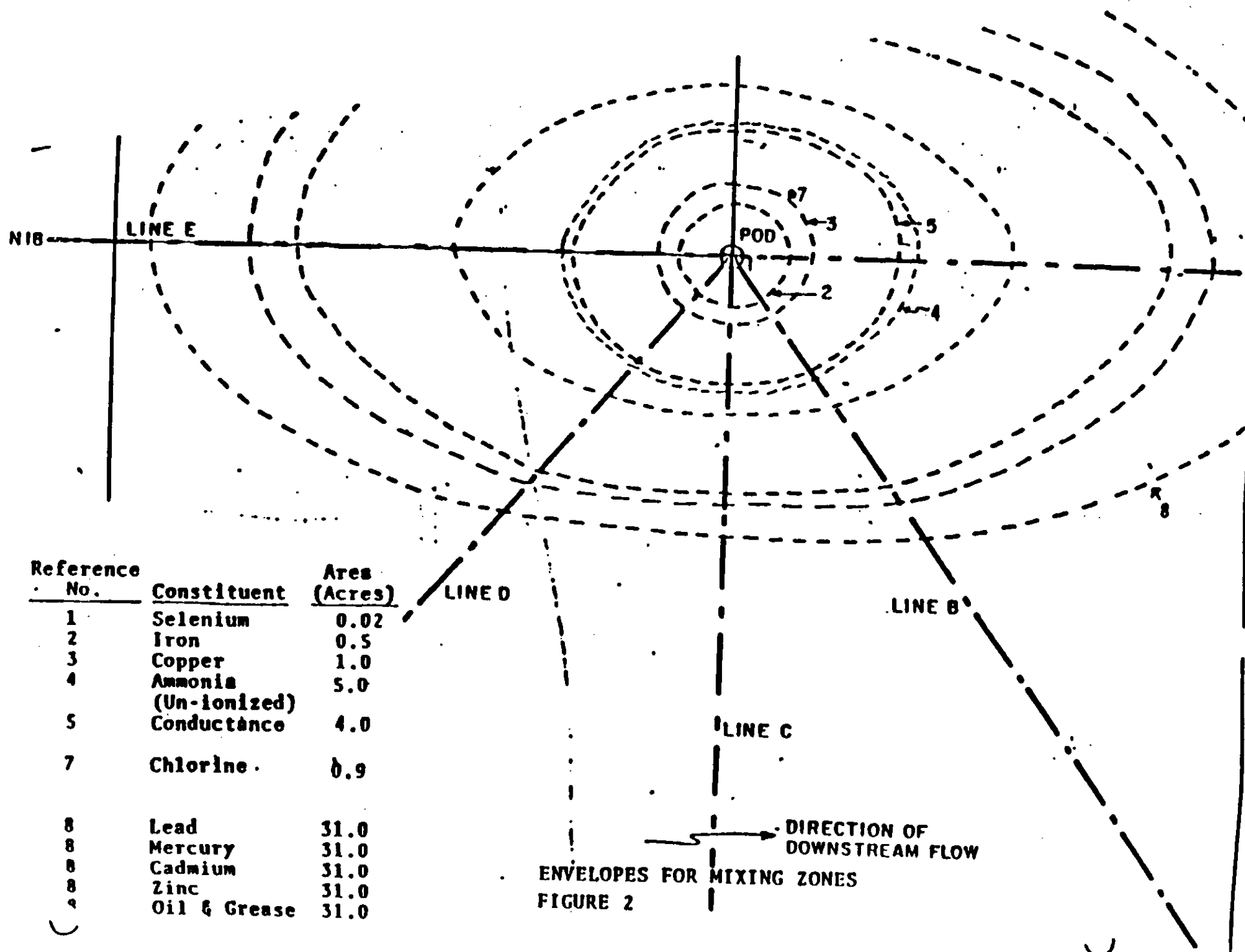
There shall be no net discharge of polychlorinated biphenyl compounds.

10. Mixing Zones

The discharge of the following pollutants shall not violate the Water Quality Standards of Chapter 17-3, F.A.C. beyond the edge of the designated instantaneous mixing zone as described herein and located within the envelopes as shown on Figure 2.

1993 NPDES  
is more  
stringent  
on chlorine





<u>Pollutants</u>	<u>Instantaneous Mixing Zone</u>	<u>Envelope of Mixing Zones</u>	
Ammonia	10,000 ft <sup>2</sup>	20.235 m <sup>2</sup>	5.0 Acres
Arsenic	8 ft <sup>2</sup>	65 m <sup>2</sup>	0.2 Acres
Chlorine	750 ft <sup>2</sup>	3,645 m <sup>2</sup>	0.9 Acres
Copper	1,000 ft <sup>2</sup>	4,047 m <sup>2</sup>	1.0 Acres
Iron	400 ft <sup>2</sup>	2,024 m <sup>2</sup>	0.5 Acres
Selenium	10 ft <sup>2</sup>	84 m <sup>2</sup>	0.02 Acres
Specific Conductance	8,015 ft <sup>2</sup>	16,188 m <sup>2</sup>	4.0 Acres
Lead		125,600 m <sup>2</sup>	31 Acres
Mercury		125,600 m <sup>2</sup>	31 Acres
Cadmium		125,600 m <sup>2</sup>	31 Acres
Zinc		125,600 m <sup>2</sup>	31 Acres
Oil and Grease		125,600 m <sup>2</sup>	31 Acres
Chromium	25 ft <sup>2</sup>	195 m <sup>2</sup>	0.05 Acres

#### 11. Variances to Water Quality Standards

In accordance with the provisions of Sections 403.201 and 403.511(2), F.S., Seminole Electric Cooperative, Inc., is hereby granted variances to the Water Quality Standards of Chapter 17-3, F.A.C., for cadmium, lead, mercury, and zinc, but only at such times as the natural background levels of the St. Johns River approach or exceed those standards; in any event, the discharge shall comply with the effluent limitations set forth in paragraph II.A.12.a.

#### 12. Effluent Limitations

a. The following instantaneous maximum

effluent limitations shall apply for cadmium, mercury, lead and zinc at the locations specified:

- (i) Cooling blowdown - concentrations shall not exceed four times the concentrations present in the river at Applicant's intake structure at the time of intake, or not exceed Class III surface water quality standards, whichever is higher.

(ii)  
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for \_\_\_\_\_  
(date)  
Final Order

~~(ii) Coal/limestone storage runoff - concentrations shall not exceed:~~

~~cadmium.....0.11 mg/l  
mercury.....0.0022 mg/l  
lead.....0.11 mg/l  
zinc.....1.76 mg/l~~

(iii) bottom ash sluice blowdown - concentrations shall not exceed the unweighted sum of the amount per liter described in (i) above plus the following amounts per liter:

cadmium.....0.11 mg/l  
mercury.....0.0055 mg/l  
lead.....0.11 mg/l  
zinc.....1.1 mg/l

- b. The following instantaneous maximum effluent limitations shall apply to the discharge from the chemical wastewater treatment facility:

<u>Pollutant</u>	<u>Effluent Limit</u> <u>(mg/l)</u>
Ammonia	28.5
Aluminum	174
Arsenic	0.073
Copper	0.66
Cyanide	0.004
Chromium	0.14
Nickel	0.09

Selenium  
Oil and grease

0.04  
15

B. Water Monitoring Programs

The permittee shall monitor and report to the Department the listed parameters on the basis specified herein. The methods and procedures utilized shall receive written approval by the Department. The monitoring program may be reviewed annually by the Department, and a determination may be made as to the necessity and extent of continuation, and may be modified in accordance with Condition No. XXV.

1. Chemical Monitoring

The following parameters shall be monitored as shown during discharge and reported monthly to the DER Northeast District Office:

<u>Parameter</u>	<u>Location</u>	<u>Sample Type</u>	<u>Frequency</u>
Flow Intake	Intake	Recorder	Totalizer
Flow Groundwater	Wellfield	Recorder	Totalizer
	pipeline		
Flow, Discharge	C.T. Outfall	Recorder	Totalizer
Conductivity	C.T. Outfall	Recorder	Continuous
pH	C.T. Outfall	Multiple Grab	Weekly
Temperature	C.T. Outfall	Recorder	Continuous

<u>Parameter</u>	<u>Location</u>	<u>Sample Type</u>	<u>Frequency</u>
TSS	C.T. Outfall	Grab	Weekly
Chlorine Total	C.T. Outfall	Multiple Grab	Weekly
Residual			
Oil and Grease	C.T. Outfall	Grab	Weekly
	& Intake		
Metals	C.T. Outfall,	Multiple Grab	Quarterly
	Intake & Waste		
	Treatment		
	Facility		
Lead	"	"	*
Mercury	"	"	*
Cadmium	"	"	*
Zinc	"	"	*

\*Weekly for the first three months, biweekly for the next three months, monthly for the next three months, then quarterly thereafter.

### III. Groundwater

#### A. General

The use of groundwater from two wells for plant service water for Units 1 and 2 shall be minimized to the greatest extent practicable, but in no case shall exceed 3.9 mgd on a maximum daily basis or 0.85 mgd on an average annual basis.

#### B. Well Criteria

The submission of well logs and test results and location, design and construction of wells to provide plant service water shall be in accordance with applicable rules of the Department of Environmental Regulation and the St. Johns River Water Management District (SJRWMD). Total water use per month shall be reported quarterly to SJRWMD commencing with the start of construction.

#### C. Water Use Restriction

Groundwater is restricted to uses other than main steam condensing. Any change in the use of said water will require a modification of this condition.

#### D. Emergency Shortages

In the event an emergency water shortage should be declared pursuant to Section 373.175 or 373.246, F.S., by St. Johns River Water Management District for an area including the location of these withdrawal points, the Department, pursuant to Section 403.516, F.S., may alter, modify, or declare to be inactive, all or parts of Condition III.A.-F. An authorized Water Management District Representative, at any reasonable time, may enter the property to inspect the facilities.

E. Monitoring and Reporting

Seminole shall implement the following groundwater monitoring program:

Modified  
per 12/27/91  
letter from  
MFO to FDER

1. Static groundwater levels shall be monitored and the results logged at wells as approved by the DER and the St. Johns River Water Management District in accordance with the schedule shown in Table 1 at the wells shown in Figure 3. Chemical analyses shall be made on samples from all monitored wells identified in this Condition. The location, frequency and selected chemical analyses shall be as given in Condition III.E.4.
2. The Chemical analyses shall be in accord with the latest edition of Standard Methods for the Analysis of Water and Wastewater.
3. Seminole shall operate flow meters in compliance with SJRWMD specifications on all production wells.
4. After consultation with the DER and SJRWMD, Seminole shall install a monitoring well system as generally shown in Figure 3 to monitor groundwater quality in the top 40 feet of surficial aquifer. One well shall be installed to a depth greater than 40 feet but less than 100 to monitor vertical dispersion or groundwater contaminants. Monitoring well location and designs shall be submitted to the Department and SJRWMD for review. Approval or disapproval of the locations and design shall be granted within 60 days. The water samples collected from each of the monitor wells shall be collected immediately after removal by pumping of a quantity of water equal to two casing volumes. The water quality analyses shall be performed monthly during the year prior to commercial operation and two years after operation and quarterly thereafter in accordance with the schedule shown in

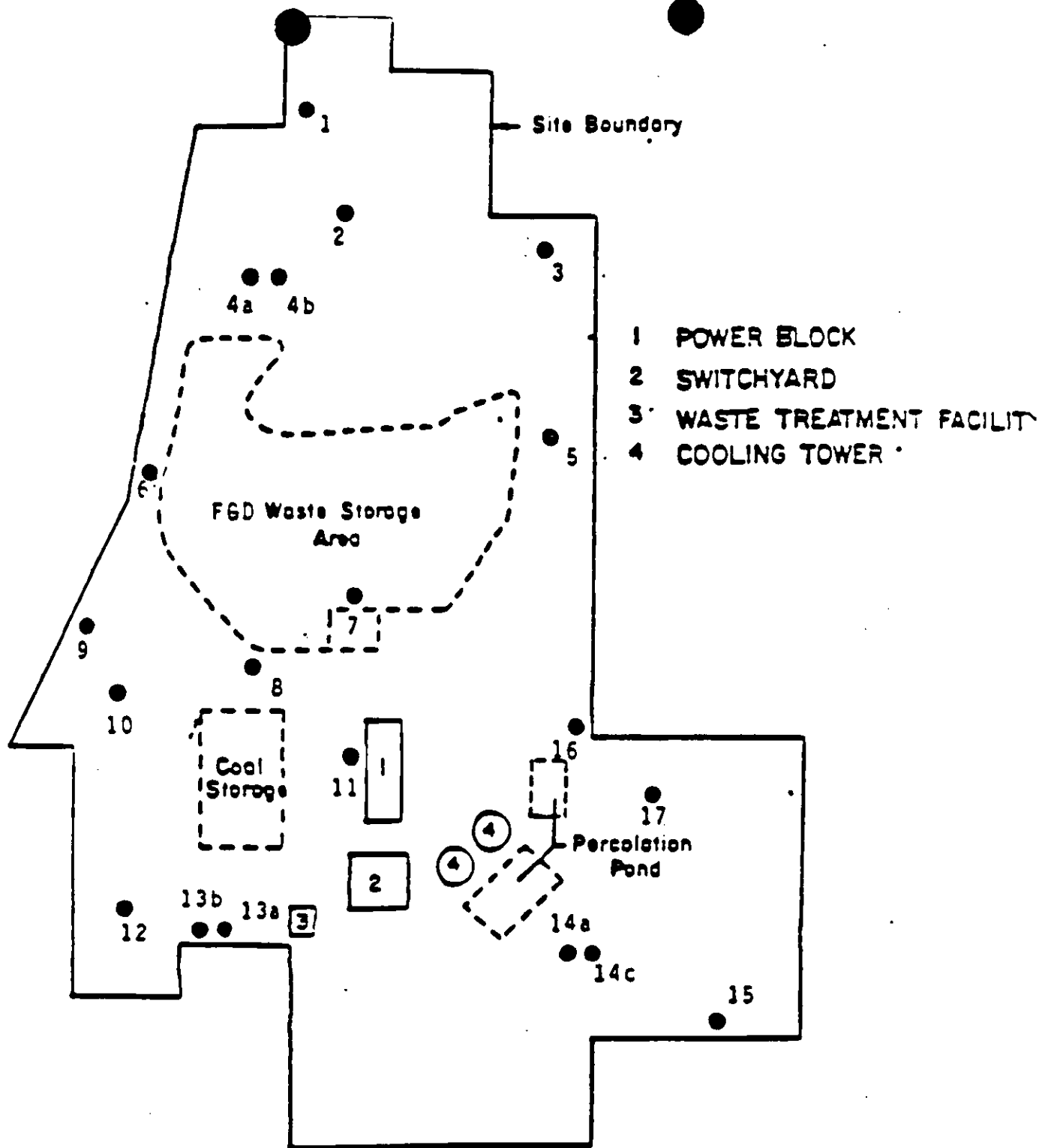


Figure 3 Monitor Well Location Map

Table 1. Results shall be submitted to the Department and the SJRWMD by the 30th day of the month following the month during which such analyses were performed. Testing for the following constituents is required.

Conductance	Nickel
pH	Selenium
Chloride	Chromium
Iron	Arsenic
Cadmium	Beryllium
Zinc	Mercury
Copper	Lead
Sulfate	Gross Alpha
Silver	Barium

5. After the second year of monitoring and periodically thereafter, the Department and the applicant shall review the results of the monitoring program and determine the necessity for modifying or continuing the program.

F. Leachate

1. Zone of Discharge

Leachate from the FGD/sludge landfill, coal storage pile, bottom ash sump, percolation and FGD emergency pond shall not contaminate waters of the State (including both surface and groundwaters) in excess of the limitations of Chapter 17.3, F.A.C., beyond the boundary of the site.

2. Corrective Action

When the groundwater monitoring system shows a violation of the groundwater water quality standards of Chapter 17-3, F.A.C., the appropriate ponds, FGD landfill, or coal pile shall be sealed, relocated or closed, or the operation of the affected facility shall be altered in such a manner as to assure the Department that no violation of the groundwater



Modified for 12/27/91  
Letter. See modifications

Table 1 Groundwater Monitoring Frequency

	FGD Area Wells 1,2,3,4A,4B,5,6,7,8		Coal Pile Area Wells 9,10,11,12,13A,13B		Perc Pond Area Wells 14A,14C,15,16,17	
	<u>Monthly</u>	<u>Quarterly</u>	<u>Monthly</u>	<u>Yearly</u>	<u>Monthly</u>	<u>Quarterly</u>
Conductance	X	X	X	X	X	X
pH	X	X		X	X	X
Chloride	X	X		X	X	X
Sulfate	X	X		X	X	X
Cadmium		X		X		X
Zinc	X	X		X	X	X
Iron	X	X	X	X	X	X
Copper		X		X		X
Silver		X		X		X
Nickel		X		X		X
Selenium	X	X		X	X	X
Chromium		X		X		X
Beryllium		X		X		X
Mercury	X	X		X	X	X
Lead		X		X		X
Barium		X		X		X
Arsenic	X	X		X	X	X
Gross Alpha		X		X		X

standards will occur beyond the boundary of the site.

IV. Control Measures During Construction

A. Stormwater Runoff

During construction and plant operation, necessary measures shall be used to settle, filter, treat or absorb silt containing or pollutant laden stormwater runoff to limit the suspended solids to 50 mg/l or less at the POD during rainfall periods less than the 10-year, 24-hour rainfall, and to prevent an increase in turbidity of more than 50 Jackson Turbidity Units above background in waters of the state beyond 150 meters from the POD.

Control measures shall consist at the minimum, of filters, sediment traps, barriers, berms or vegetative planting. Exposed or disturbed soil shall be protected as soon as possible to minimize silt and sediment laden runoff. The pH shall be kept within the range of 6.0 to 8.5 at the POD.

B. Sanitary Wastes

Disposal of sanitary wastes from construction toilet facilities shall be in accordance with applicable regulations of the Department and appropriate local health agency. The sewage treatment plant shall be operated in accordance with Chapters 17-3, 17-16, and 17-19, F.A.C. Plans and specifications for the sewage treatment plant shall be submitted to the Departments St. Johns River Subdistrict Manager for review and approval prior to installation.

C. Environmental Control Program

An environmental control program shall be established under the supervision of a qualified person to assure that all construction activities conform to good environmental practices and the applicable conditions of certification.

The permittee shall notify the Department if unexpected harmful effects or evidence of irreversible environmental damage are detected during construction, shall immediately report to the Department and shall within two weeks provide an analyses of the problem and a plan to eliminate or significantly reduce the harmful effects or damage, and to prevent reoccurrence.

V. Solid Wastes

Solid wastes resulting from construction or operation shall be disposed of in accordance with the applicable regulations of Chapter 17-7, F.A.C. The permittee shall submit a program for approval but outlining the methods to be used in handling and disposal of solid wastes indicating at least methods for erosion control, covering, vegetation and quality control.

Open burning in connection with land clearing shall be in accordance with Chapter 17-5, F.A.C. No additional permits shall be required, but the Division of Forestry shall be notified prior to burning. Open burning shall not occur if the Division of Forestry has issued a ban on burning due to fire hazard conditions.

VI. Operation Safeguards

The overall design, layout, and operation of the facilities shall be such as to minimize hazards to humans and the environment. Security control measures shall be utilized to prevent exposure of the public to hazardous conditions. The Federal Occupational Safety and Health Standards will be complied with during construction and operation. The Safety Standards specified under Section 440.56, F.S., by the Industrial Safety Section of the Florida Department of Commerce will also be complied with.

VII. Screening

The permittee shall provide screening of the site through the use of aesthetically acceptable

structures, vegetated earthen walls and/or existing or planted vegetation.

VIII. Potable Water Supply System

17-16  
mow  
17-555

The potable water supply system shall be designed and operated in conformance with Chapter 17-22, F.A.C. Information as required in 17-22.108 shall be submitted to the Department prior to construction and operation. The operator of the potable water supply system shall be certified in accordance with Chapter 17-16, F.A.C.

17-550  
-555  
-560

--- Transformer and Electric Switching Gear

The foundations for transformers, capacitors, and switching gear necessary for Seminole Units 1 and 2 to the existing distribution system shall be constructed of an impervious material and shall be constructed in such a manner to allow complete collection and recovery of any spills or leakage of oily, toxic, or hazardous substances.

X. Toxic, Deleterious, or Hazardous Materials

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

XI. Construction and Emergency Maintenance Activities in Waters of the State.

1. No construction on sovereignty submerged lands shall commence without obtaining lease or title from the Department of Natural Resources.
2. Construction of intake and discharge structures should be done in a manner to minimize turbidity. Turbidity screens should be used to prevent turbidity in excess of 50 JTU above background beyond 150 meters from the dredging, pile driving or construction site.
3. Dredging of the intake channel and discharge pipe trench should be performed by hydraulic dredge (small "mudcat" type

is suitable): clamshell or other excavating equipment is satisfactory behind cofferdams or other turbidity control devices.

4. All spoil shall be piped hydraulically or trucked to an upland disposal site of sufficient capacity to retain all material. The discharge pipe trench should be refilled with clean sand sized material.
5. Effective stabilization of submerged bottom sediments at the discharge pipe exist should be achieved and maintained during the period of operation by the placement of riprap or other suitable material.

#### XII. FGD/Sludge Landfill and Coal Pile

Adequate geophysical testing shall be conducted to determine if solution cavities are present under the landfill area. If such cavities are located, such cavities shall be sealed off and stabilized.

The proposed FGD sludge landfill area shall be monitored and studied pursuant to a detailed groundwater testing and monitoring program as defined in Condition III E.

The results of the program will be used by the Department in determining whether Seminole has affirmatively demonstrated that Florida Water Quality Standards (17-3 F.A.C.) will not be violated beyond the site boundary.

If the Department determines that Seminole has failed to affirmatively demonstrate that Florida Water Quality Standards (17-3 F.A.C.) will not be violated, Seminole shall present to the Department, within 90 days of such determination, a plan of correction, (which may include, if appropriate, an impermeable liner) for review and approval by the Department, and for timely implementation by Seminole.

During the initial years of operation of Unit 1, but not to exceed five years from start up of Unit 1, a

FGD sludge disposal test and evaluation program shall be implemented in accordance with the program outline submitted to the Department on April 27, 1979 as attached and incorporated herein as Attachment 1. During the test program, any FGD sludge not utilized in the program shall be fixed so as to achieve an ultimate permeability not greater than  $7 \times 10^{-7}$  cm/sec and shall be disposed of in a manner and located so as to not interfere with the sludge testing program.

Upon completion of the test and evaluation program Seminole shall submit a proposed method of FGD sludge disposal to the Department for Review. The Department shall indicate its approval or disapproval of the program within 60 days of receipt. Seminole shall implement the approved program as soon as practical upon receipt of approval from the Department. Should the program be disapproved by the Department Seminole shall fix the FGD sludge so as to achieve a permeability not greater than  $1 \times 10^{-7}$  cm/sec and place it with the bottom layer at least eight feet thick or line it with an impermeable liner.

Upon initiation of FGD sludge disposal, a quality control program shall be implemented to insure that the permeability of the FGD sludge does not exceed prescribed levels. Construction of perimeter berms of "Fixed" FGD sludge, if any, shall be in conformance with the provisions of Chapter 17-9, F.A.C., regarding earthen dams.

#### XIII. Transmission Lines

Directly associated transmission lines shall be constructed and maintained in a manner to minimize environmental impacts in accordance with Chapter 403, F.S.

##### A. Construction

1. Filling and construction in waters of the State shall be minimized to the extent practicable. No such activities shall take place without obtaining lease or title from the Department of Natural Resources.

2. Placement of fill in wetland areas shall be minimized by spanning such areas with the maximum transmission lines span practicable.
3. Construction and access roads should avoid wetlands and be located in surrounding uplands. Any fill required in wetlands for construction but not required for maintenance purposes shall be removed and the ground restored to its original contours after transmission line placement.
4. Keyhole fills from upland areas are preferable to a single road and should be oriented as nearly parallel to surface water flow lines as possible.
5. Sufficient culverts shall be placed through fill causeways to maintain sheet flow. The number and locations of such culverts will be determined in the field by consultation with DER field inspectors.
6. Maintenance roads shall be planted with native species to prevent erosion and subsequent water quality degradation.
7. Construction activities should proceed as much as possible during the dry season.
8. Turbidity control measures, where needed, shall be employed to prevent violation of water quality standards.
9. Good environmental practices as described in Environmental Criteria for Electric Transmission Systems as published by the U.S. Department of Interior and the U.S. Department of Agriculture should be followed.
10. Any archaeological sites discovered during construction of the transmission lines shall be disturbed as little as possible and such discovery shall be communicated to the Department of State,

Division of Archives, History and Records  
Management.

B. Maintenance

1. Vegetative removal for maintenance should be carried out in the following manner:

Vegetative clearing operations to be carried out within the corridor should follow the general standards for clearing rights-of-way for overhead transmission lines and follow good environmental practices as described in environmental criteria for Electric Transmission Systems, as published by The U.S. Department of The Interior and The U.S. Department of Agriculture, thus preserving immature tree species along the peripheries of the right-of-way. These standards define the zone that shall be cleared of all tree growth as the area between structures 10 ft. to either side of the outside conductor. The remainder of the right-of-way from the cleared area to the right-of-way limit shall be screened. This translates to mean that only trees in excess of 10 ft. in height would be removed from the outer zone except where location of the access roads necessitates complete clearing.

2. Approved Chemicals or herbicides may be used for vegetation control along the transmission line without prior approval of the Department.

XIV. Change in Discharge

All discharges or emission authorized herein shall be consistent with the terms and conditions of this certification. The discharge of any pollutant not identified in the application, or any discharge more frequent than, or at a level in excess of that authorized herein, shall constitute a violation of the certification. Any anticipated facility expansions, production increases, or process modification which will result in new, different or increased discharges or expansion in steam



generating capacity will require a submission of a new or supplemental application pursuant to Chapter 403, Florida Statutes.

XV. Noncompliance Notification

If, for any reason, the permittee does not comply with or will be unable to comply with any limitation specified in this certification, the permittee shall notify the St. Johns River Subdistrict Manager of the Department by telephone during the working day during which permittee becomes aware of said noncompliance and shall confirm this situation in writing within seventy-two (72) hours of first becoming aware of such conditions, supplying the following information:

- a. A description and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying event.

XVI. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this certification. Such systems are not to be bypassed without prior department approval, except, during periods of when light oil is used for ignition, the FGD system may be bypassed.

XVII. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact resulting from noncompliance with any limitation specified in this certification, including but not limited to such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying event.

XVIII. Right of Entry

The permittee shall allow the Secretary of the Florida Department of Environmental Regulation and/or authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or in which records are required to be kept under the terms and conditions of this permit; and
- b. To have access to and copy all records required to be kept under the conditions of this certification; and
- c. To inspect and test any monitoring equipment or monitoring method required in this certification and to sample any discharge or pollutants, and
- d. To assess any damage to the environment or violation of ambient standards.

XIX. Revocation or Suspension

This certification may be suspended or revoked pursuant to Section 403.512, Florida Statutes, or for violations of any Condition or certification.

XX. Civil and Criminal Liability

This certification does not relieve the permittee from civil or criminal responsibility or liability for noncompliance with any conditions of this certification, applicable rules or regulations of the Department, or Chapter 403, Florida Statutes, or regulations thereunder.

Subject to Section 403.511, Florida Statutes, this certification shall not preclude the institution of any legal action or relieve the permittee from any responsibilities or penalties established pursuant to any other applicable State Statutes or regulations.

XXI. Property Rights

The issuance of this certification does not convey any property rights in either real or personal property tangible or intangible, nor any exclusive privileges, nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. The applicant will obtain title, lease or right of use from the State of Florida, to any sovereign submerged lands occupied by the plant, transmission line structures, or appurtenant facilities.

XXII. Severability

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

XXIII. Definitions

The meaning of terms used herein shall be governed by the definitions contained in Chapter 403, Florida Statutes, and any regulation adopted pursuant thereto. In the event of any dispute over the meaning of a term used in these general or special conditions which is not defined in such statutes or regulations, such dispute shall be resolved by reference to the most relevant definitions contained in any other state or federal statute or regulation or, in the alternative by the use of the commonly accepted meaning as determined by the Department.

XXIV. Review of Site Certification

The certification shall be final unless revised, revoked or suspended pursuant to law. At least every five years from the date of issuance of this certification or any National Pollutant Discharge Elimination System Permit issued pursuant to the Federal Water Pollution Control Act Amendments of

1972, for the plant units, the Department shall review all monitoring data that has been submitted to it during the proceeding five-year period, for the purposes of determining the extent of the permittee's compliance with the conditions of this certification of the environmental impact of this facility. The Department shall submit the results of its review and recommendations to the permittee. Such results will be repeated at least every five years thereafter.

XXV. Modification of Conditions

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

- a. The Board hereby delegates to the Secretary the authority to modify, after notice and opportunity for hearing, any conditions pertaining to monitoring, testing and evaluation programs, sampling, groundwater, mixing zones, zones of discharge or variances to water quality standards, or location of transmission line corridors within areas already approved at the land use hearing.
- b. All other modifications shall be made in accordance with Section 403.516, Florida Statutes.

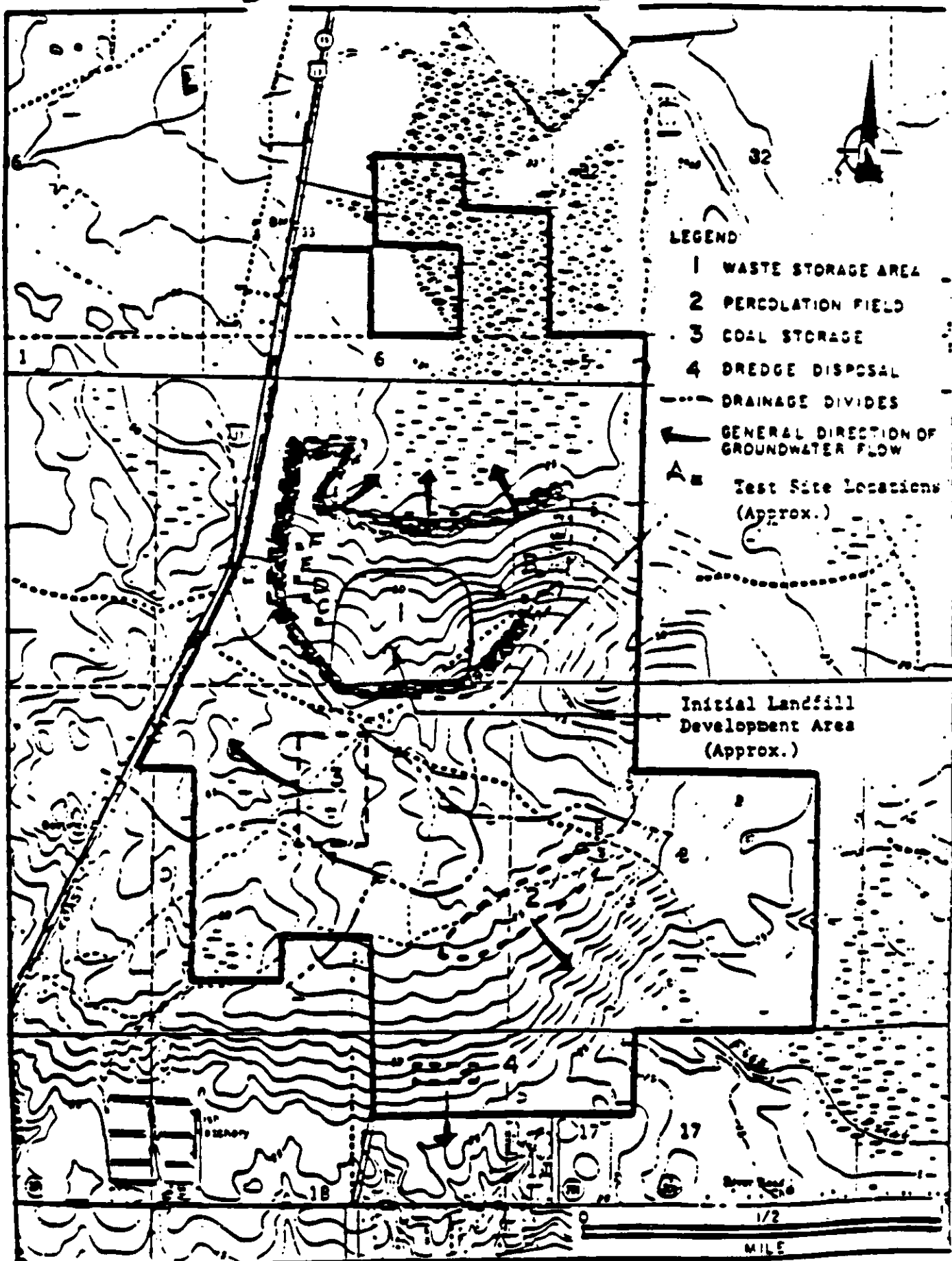
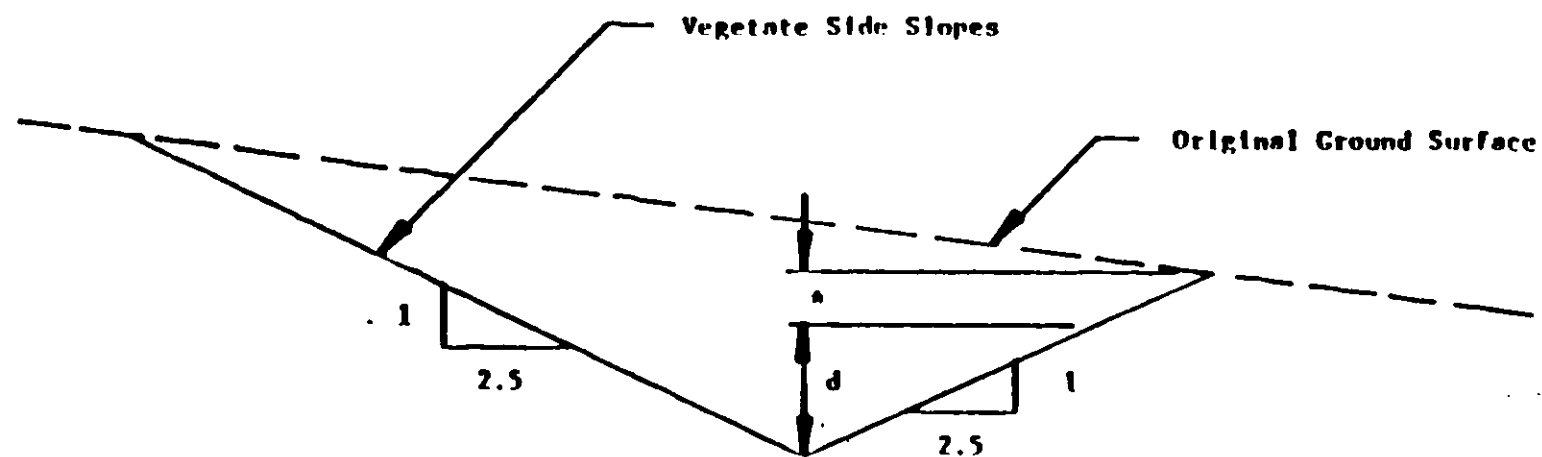


Figure A

FOR OFFICIAL USE ONLY



$d$  = Flow Depth

$a$  = Freeboard, 1'-0 min.

Figure B  
TYPICAL CROSS SECTION  
DIVERSION CHANNEL.  
NO SCALE

**PROPOSED PROGRAM FOR MONITORING AND EVALUATING  
THE GEOTECHNICAL AND ENVIRONMENTAL  
CHARACTERISTICS OF FGD SLUDGE AND ASH DISPOSAL**

Seminole Electric Cooperative, Inc. (SECI) wishes to demonstrate to the Florida Department of Environmental Regulation (DER) and the Environmental Protection Agency (EPA) that it has the capability to dispose of the various power plant waste materials which will be produced at Seminole Units 1 and 2 in an environmentally acceptable manner. To ensure this environmentally acceptable disposal, SECI intends to include in its power plant sub-systems, a waste treatment system capable of processing all of the FGD sludge, fly ash and bottom ash produced by both Seminole Units 1 and 2. This waste treatment system will utilize accepted pozzolanic technology to chemically fix the power plant waste products.

Sludge and fly ash processed through the plant using the fixation process shall be defined herein as "stabilized" material. Sludge and fly ash blended within the plant with fixation additives shall be defined herein as "unstabilized" material.

The primary emphasis of the program is to evaluate the handleability, economics, structural stability and environmental acceptability of unstabilized fly ash and sludge (either unoxidized or oxidized) mixtures, and to develop a long term disposal plan in line with sound engineering principles acceptable to the DER and the EPA.

Attached please find our outline for the proposed program, Exhibit II, and Figures A through E.

## OUTLINE

### PHASE I - DESIGN AND DEVELOPMENT OF MONITORING PROGRAM

- A. Develop Disposal Concepts
  - Unstabilized disposal
  - Encapsulation
  - Selected stabilization
  - Total stabilization
- B. Select Disposal Concepts for Test Cell Development and Monitoring
  - Unstabilized disposal
  - Selected stabilization and encapsulation of oxidized sludge and ash.
  - Selected stabilization and encapsulation of unoxidized sludge and ash
  - Total stabilization of oxidized or unoxidized sludge and ash
- C. Design Test Cells and Monitoring Program for Concept Evaluation - See Figures A thru E
  - Establish monitoring point locations
  - Design test cells
  - Develop field and laboratory test program

### PHASE II - IMPLEMENTATION AND EVALUATION OF MONITORING PROGRAM

- A. Monitoring, Quality Control and Testing Program
  - Establish physical and chemical characteristics of disposal materials
  - Monitor runoff and leachate
  - Determine in situ material characteristics with regard to density, strength, permeability, stability, etc.
- B. Establish Effect of Various Disposal Concepts on Operations
  - Equipment and manpower requirements
  - Operating efficiency
  - Seasonal variations
  - Operational difficulties

### PHASE III - EVALUATION OF SHORT AND LONG TERM EFFECTS OF VARIOUS CONCEPTS

- A. Environmental Acceptability
  - Meets or exceeds Florida water quality standards
- B. Structural Integrity
  - Immediate and long term stability
- C. Operational Feasibility
  - Potential for reclamation and future land use



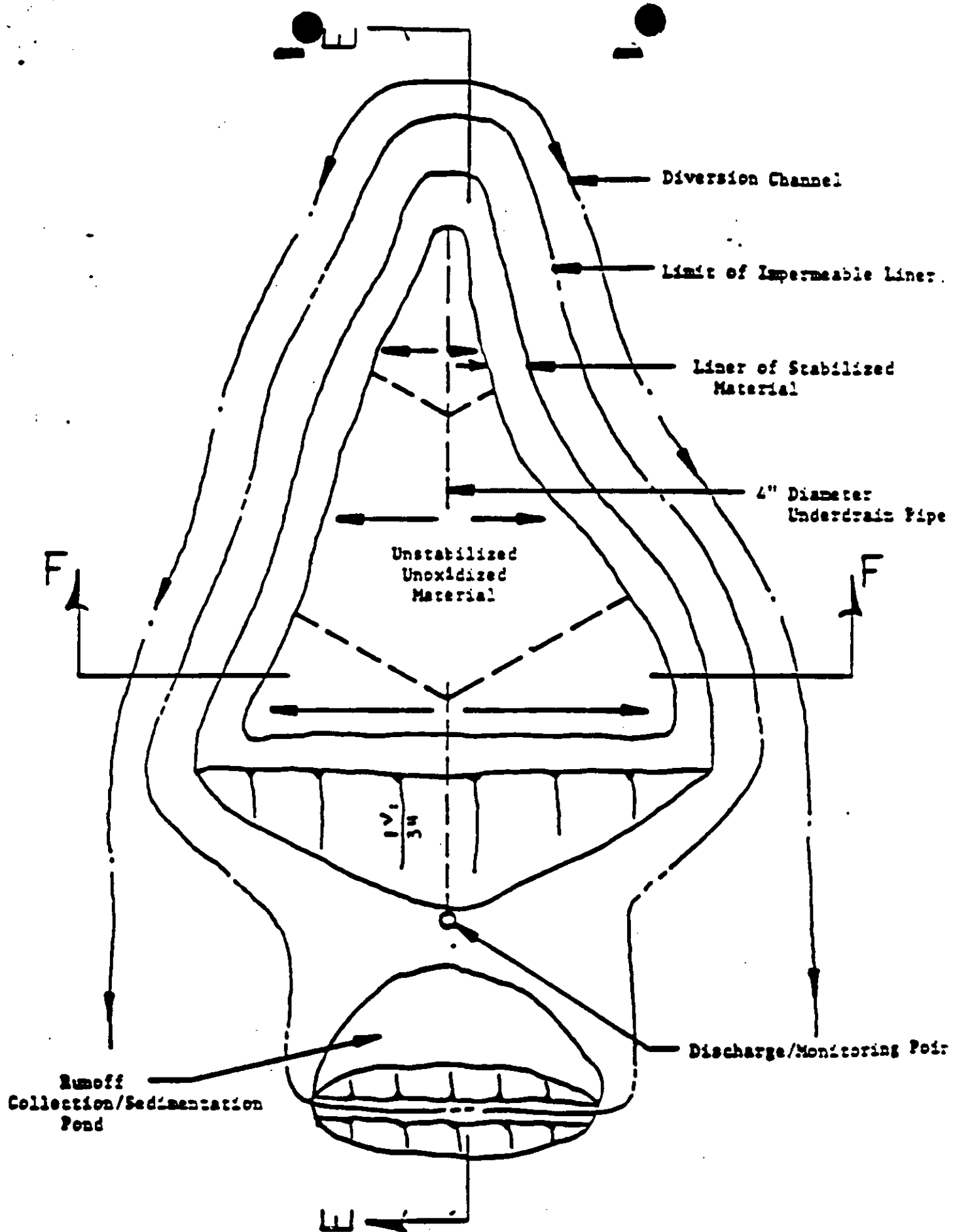


Figure C  
TEST SITE C  
SITE PLAN  
NO SCALE

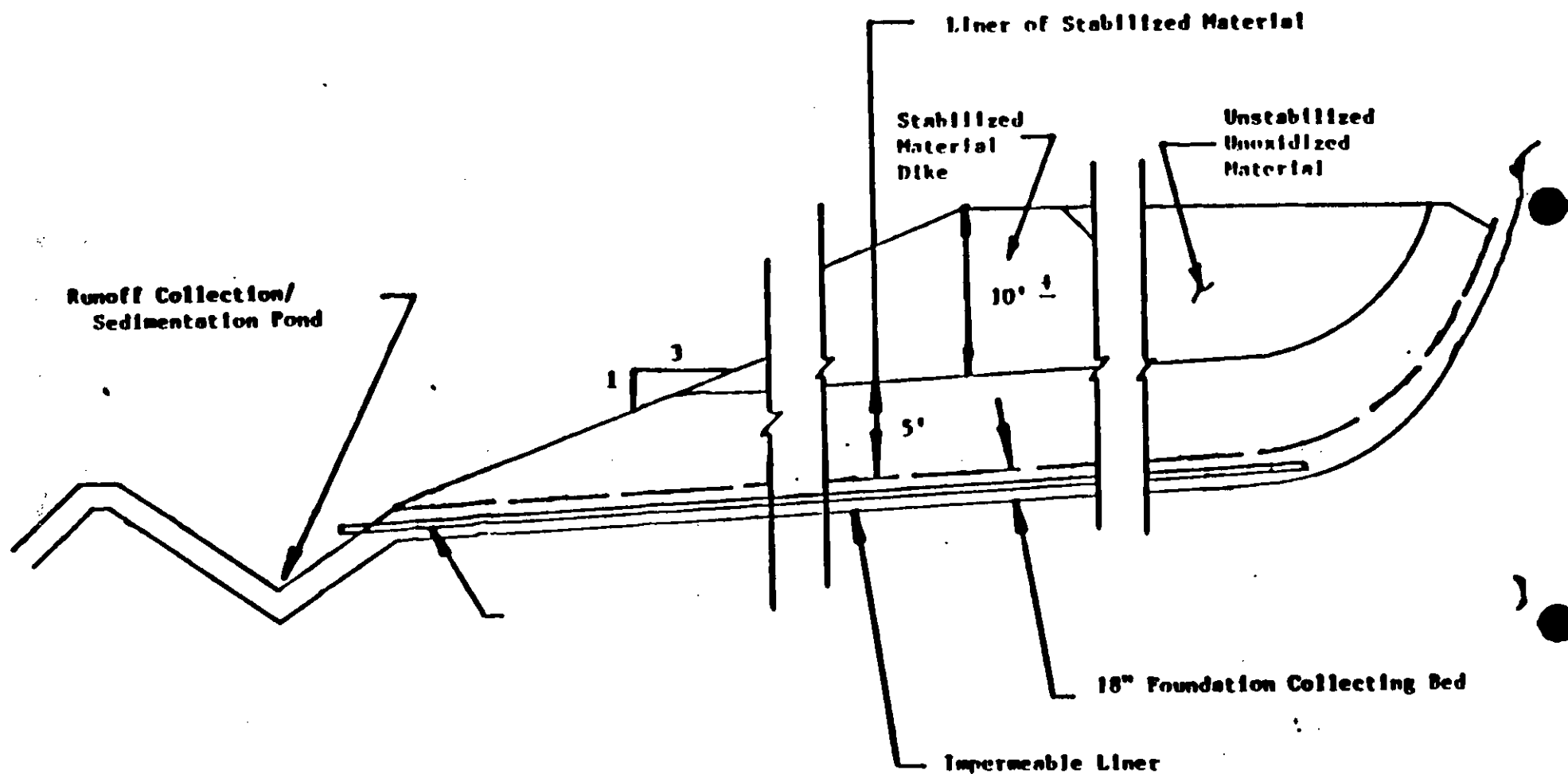


Figure D  
SECTION EE  
TYPICAL CROSS SECTION  
NO SCALE

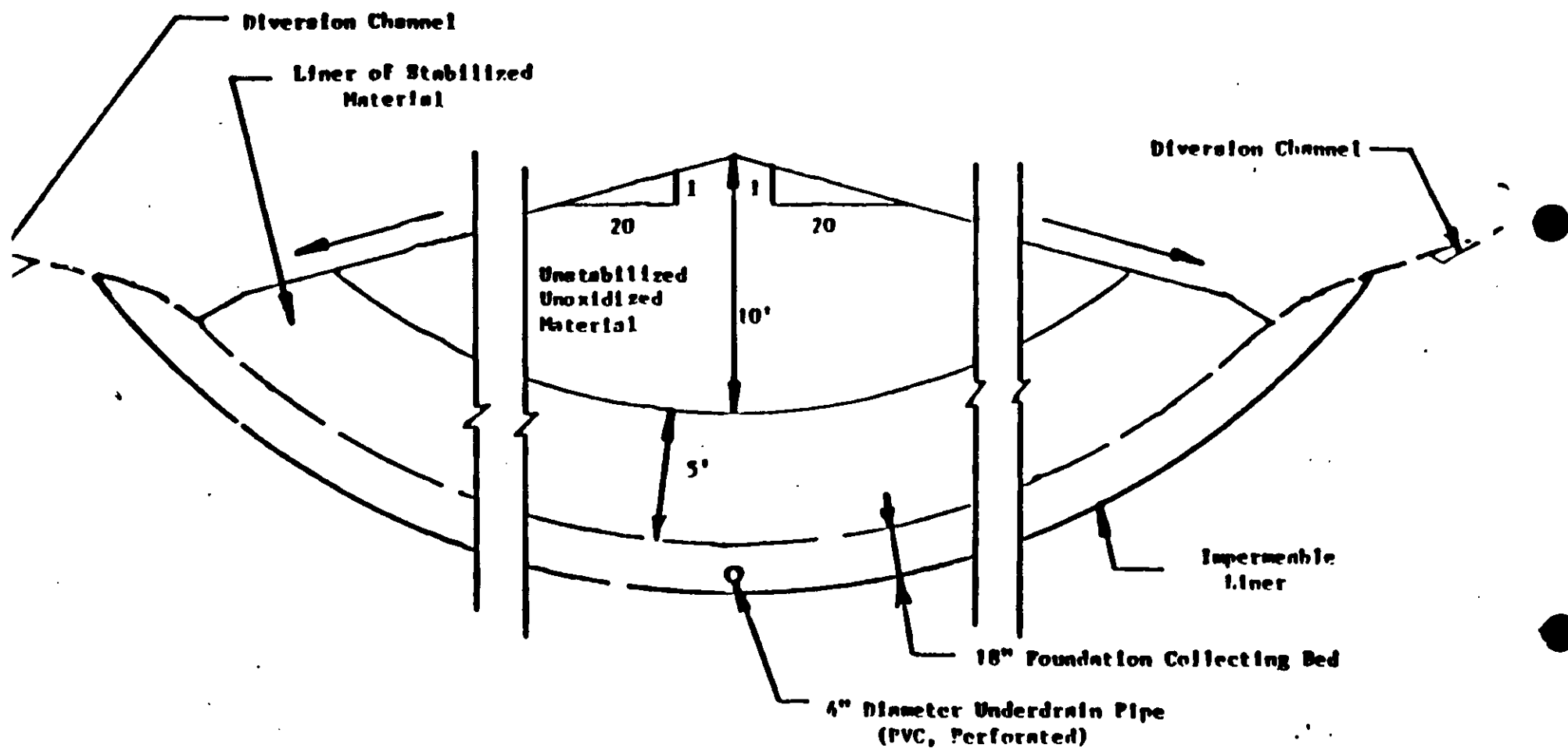


Figure E  
SECTION FF  
TYPICAL CROSS SECTION  
NO SCALE

RECEIVED DEC 2 1992

*Effluent Limitations  
coal pile runoff  
deletion.*

BEFORE THE STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

In Re: )  
)  
Seminole Electric Cooperative, Inc.)  
Seminole Power Plant Units 1 & 2 )  
Power Plant Certification )  
Modification Request )  
No. PA 78-10 )  
Putnam County, Florida )  
\_\_\_\_\_)

FINAL ORDER  
MODIFYING CONDITIONS OF CERTIFICATION

The Department of Environmental Regulation after notice and opportunity for hearing modifies the Conditions of Certification for the Seminole Electric Cooperative, Seminole Power Plant pursuant to the Florida Electrical Power Plant Siting Act Section 403.516(1), Florida Statutes, and Condition XXV, Modification of Conditions, which delegates authority to modify conditions to the Department.

On September 11, 1992, Seminole Electric Cooperative, Inc. submitted a petition to the Department requesting certain modifications of the Conditions of Certification for the above referenced facility.

On October 1, 1992, Notice of Proposed Modification of Power Plant Certification was served on all parties, and a Notice of Proposed Modification of Power Plant Certification was published in the Florida Administrative Weekly. No hearing was requested, therefore the Department adopts the proposed agency action as final.

Accordingly, the Department pursuant to Section 403.516(1), Florida Statutes (Supp 1990), modifies the Conditions of Certification as follows:

**B2. Effluent Limitations**

a. The following instantaneous maximum effluent limitations shall apply for cadmium, mercury, lead and zinc at the locations specified:

(i) Cooling blowdown - concentrations shall not exceed four times the concentrations present in the river at Applicant's intake structure, or not exceed Class III surface water quality standards, whichever is higher.

~~(iii) -- Coal/limestone-storage-runoff --  
concentrations shall not exceed:~~

~~-cadmium-----0.11-mg/l~~

~~-mercury-----0.0022-mg/l~~

~~-lead-----0.11-mg/l~~

~~-zinc-----1.76-mg/l~~

(ii) ~~(iii)~~ bottom ash sluice blowdown -

concentrations shall not exceed the  
unweighted sum of the amount per liter  
described in (i) above plus the  
following amounts per liter:

cadmium.....0.11 mg/l

mercury.....0.0055 mg/l

lead.....0.11 mg/l


zinc.....1.1 mg/l

b. no change

Any party to this Order has a right to seek judicial review of this Order pursuant to Section 120.67, Florida Statutes by the Filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, and by filing a copy of the Notice of the Notice of Appeal accompanied by the Applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Order is filed with the clerk of the Department.

DONE AND ORDERED this 25<sup>th</sup> day of November 1992 in  
Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

  
\_\_\_\_\_  
Carol M. Browner  
Secretary

Certificate of Service

I hereby certify that a copy of the Petition for Modification of the Seminole Electric Cooperative, Seminole Power Plant Site Certification was sent to the following parties by United States mail on November 30, 1992.

Wayne Flowers, Esquire  
St. Johns River Water Mngm.  
Dist.  
Post Office Box 1429  
Palatka, Florida 32178-1429

Steve Pfeiffer, General  
Counsel  
Department of Community  
Affairs  
2740 Center View Drive  
Tallahassee, FL 32399-2100

Michael Palecki, Esquire  
Florida Public Service  
Commission  
Fletcher Building  
101 East Gaines Street  
Tallahassee, FL 32399-0863

James S. Alves, Esquire  
Hopping Boyd Green & Sams  
Post Office Box 6526  
Tallahassee, Florida 32314

Mike Opalinski  
Manager Environmental Affairs  
Seminole Electric  
Cooperative, Inc.  
Post Office Box 272000  
Tampa, Florida 33688-2000

Robert Vandiver, Esquire  
Public Service Commission  
101 East Gaines Street  
Tallahassee, FL 32399-0850

Kathryn Funchess, Esquire  
Department of Community  
Affairs  
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Mr. Henry Dean  
Executive Director  
St. Johns River Water Mgmt.  
Dist.  
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Mail Station 58  
Tallahassee, FL 32399-0450

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Board of County Commissioners  
Columbia County Courthouse  
Post Office Drawer 1529  
Lake City, FL 32055

Mr. Samuel Taylor  
Board of County Commissioners  
Putnam County  
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Gainesville, FL 32605



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Chairman  
Board of County Commissioners  
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Marion County Attorney  
601 SE 25th Avenue  
Ocala, FL 32671

Mark Scruby  
Clay County Attorney  
Post Office Box 1366  
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Mr. Charles Harwood  
Withlacoochee Regional  
Planning  
Council  
1241 SW Tenth Street  
Ocala, FL 32674

Mr. Charles F. Justice  
N Central Florida Regional  
Planning Council  
235 S Main Street, Suite 205  
Gainesville, FL 32601

Mr. Brian Teeple  
NE Central Florida Regional  
Planning Council  
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Jacksonville, FL 32256


William Phelan, City Attorney  
City of Ocala  
101 SW Third Street  
Ocala, FL 32670

The Honorable Gerald T. Whitt  
City of Lake City  
Post Office Box 1687  
Lake City, FL 32055

Don Wright, Esquire  
Board Counsel  
St. Johns River Water  
Management District  
Post Office Box 2828  
Orlando, FL 32802

Mr. Jerry Scarborough  
Executive Director  
Suwannee River Water  
Management  
District  
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Live Oak, FL 32060

Mr. W. W. Jernigan, Chairman  
Board of County Commissioners  
Suwannee County Courthouse  
200 South Ohio Avenue  
Live Oak, FL 32060

  
Richard T. Donelan  
Assistant General Counsel  
State of Florida Department  
of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400  
Telephone: (904) 488-9730

REC'D ENV.

MAR 28 1991

FILE COPY

BEFORE THE STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

In Re:

Seminole Electric Cooperative, Inc. )  
Seminole Power Plant )  
Power Plant Certification )  
Modification Request )  
No. PA 78-10 )  
Putnam County, Florida )

FINAL ORDER MODIFYING CONDITIONS  
OF CERTIFICATION

On August 29, 1990, Seminole Electric Cooperative, Inc. submitted a request to modify the Conditions of Certification for the Seminole Power Plant relating to the construction and operation of a rail car maintenance and surface coating facility at the Seminole Power Plant site. The requested modification was submitted pursuant to Section 403.516, F.S., to the Department and parties to the original 1978-1979 certification proceedings.

On November 9, 1990, a Notice of Request for Modification of Power Plant Certification was served on all parties with a provision that a hearing would be held if requested on or before December 24, 1990. No hearing was requested. No party has objected to the proposed modification:

THEREFORE, IT IS ORDERED:

The Department hereby modifies the Conditions of Certification for the Seminole Power Plant as follows:

Condition XXVI. is added as follows:

**XXVI. Rail Car Maintenance Facility**

The rail car maintenance and surface coating facility shall be designed, constructed and operated in conformance with chapters 17-2, 17-25, and 17-302, F.A.C. and the following limitations:

A. Visible Emissions - shall not exceed 20% opacity.

B. VOC Emissions - shall not exceed 37.7 lbs/hr. or 7.84 T/year.

C. Particulate Emissions - Unconfined particulate emissions from abrasive blasting shall be controlled as required by Section 17-2.610(3)(c), F.A.C., using the

following precautions:

1. Only the interior of the railcars shall be cleaned.
  2. The cover and the partial enclosure of the shelter will act as a windbreak to minimize the amount of residual particulate that becomes airborne.
- D. Stormwater Runoff - shall be collected in existing runoff ditches and routed to percolation/evaporation areas on site.
- E. Wastewater - There shall be no discharge of wastewater from the maintenance facility site.
- F. sanitary Waste - Shall be disposed of in accordance with the applicable substantive requirements of chapter 10D-6, F.A.C.
- G. Water - The associated drinking water system shall comply with the substantive requirements of chapters 10-D-4, 17-550 and 17-555, F.A.C. consumptive use of groundwater shall be governed by the non-procedural provisions of 40C-2.381, F.A.C. and Section 18.0.1, Part III, "Applicants Handbook consumptive Uses of Water."

#### NOTICE OF RIGHTS

Any party to this Order has the right to seek judicial review of this Order pursuant to Section 120.68, Florida Statutes by filing a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of the General counsel, 2600 Blair Stone Road, Tallahassee, Florida, 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the appropriate filing fees with the appropriate district court of appeal. The Notice of Appeal must be filed within 30 days from the date of the Final Order is filed with the clerk of the Department.

DONE AND ORDERED this 26 day of March, 1991, in Tallahassee, Florida

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

  
\_\_\_\_\_  
CAROL M. BROWNER  
SECRETARY

**Certificate of Service**

I hereby certify that a copy of the petition of Modification of the Seminole Power Plant Site Certification was sent to the following parties by United States mail on March 26, 1991.

Ms. Kathryn Funchess  
Deputy General Counsel  
Department of Community  
Affairs  
2740 Center View Drive  
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Mr. Brian Teeple  
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Planning Council  
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Mr. Michael Palecki  
Florida Public Service  
Commission  
101 East Gaines Street  
Tallahassee, FL 32314

Mr. Samuel Taylor  
Board of County Commissioners  
Putnam County  
P.O. Box 758  
Palatka, FL 32178

Mr. Jim Alves  
Hopping Boyd Green & Sams  
P.O. Box 6526  
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Mr. Henry Dean  
Executive Director  
St. Johns River Water  
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Mr. G. Steven Pfeiffer  
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North Central Florida  
Regional Planning Council  
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Suite 205  
Gainesville, FL 32601

Mr. Ludie Shipp, Chairman  
Board of County Commissioners  
Columbia County Courthouse  
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Mr. Don Wright  
Board Counsel  
St. Johns River Water  
Management District  
P.O. Box 2828  
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Mr. Mark Scruby  
Clay County Attorney  
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Green Cove Springs, FL 32043

Mr. Marvin Pritchett,  
Chairman  
Board of County Commissioners  
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Mr. William Phelan  
City Attorney  
City of Ocala  
101 S.W. Third Street  
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Mr. Maxie Carter, Jr.,  
Board of County Commissioners  
Bradford County  
P.O. Drawer B  
Starke, FL 32091

The Honorable Gerald T. Whitt  
City of Lake City  
P.O. Box 1687  
Lake City, FL 32055

Mr. W.W. Jerenign, Chairman  
Board of County Commissioners  
Suwannee County Courthouse  
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Mr. Jerry Scarborough  
Executive Director  
Suwannee River Water Management  
District  
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Live Oak, FL 32060

*Hamilton S. Owen*

*for* Richard Donelan  
Assistant General Counsel

State of Florida Department  
of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400  
Telephone: (904) 488-9730

A/

September 29, 1980

Mr. Hamilton S. Owen  
Fl. Dept. of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32301

RE: Particulate Emissions Control  
Coal Handling Equipment

Dear Buck:

In compliance with Section I.A.3.b of Seminole's Conditions of Certification, please find the following enclosed documents concerning particulate emissions control on the coal handling equipment:

1. A letter dated August 8, 1980 from the Dravo Corporation to Burns & Roe, Inc.
2. A preliminary drawing of the coal handling system showing relative locations of controls.
3. Specification for Dust Suppression Systems.
4. Specification for Dust Collection Equipment and Dust Collection Ductwork, Hoods and Chutes.

If you have any questions concerning any of the above material, please contact me.

Sincerely,

Mike Opalinski  
Manager of Environmental Affairs

MO/117  
Enclosures

C  
O  
P  
Y

1054 0208

HOPPING BOYD GREEN & SAMS

ATTORNEYS AND COUNSELORS

123 SOUTH CALHOUN STREET

POST OFFICE BOX 6526

TALLAHASSEE, FLORIDA 32314

(904) 222-7500

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THOMAS M. DE ROSE  
KATHLEEN E. MOORE  
RICHARD W. MOORE  
LAURA BOYD PEARCE  
DAVID L. POWELL  
DOUGLAS S. ROBERTS  
CECELIA C. SMITH  
CHERYL G. STUART

March 24, 1989

OF COUNSEL  
W. ROBERT FOXES

Mr. Hamilton S. Oven, Jr., P.E.  
Administrator, Siting Coordination Section  
Department of Environmental Regulations  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

RE: Seminole Electric Cooperative, Inc./Units 1 & 2/PA  
78-10/Conditions of Certification

Dear Mr. Oven:

As you know, the Site Certification for Seminole Units 1 & 2 was modified by Secretary Twachtman's Order dated October 12, 1988. In order to make it easier for the Department and Seminole to refer to the Site Certification Conditions in the future, I have prepared a document that reflects all of the Conditions of Certification as modified in 1988. A copy of that document is attached hereto for your review.

The attached document should accurately reflect the original conditions as modified with the exception of a few scrivener's errors. These are as follows:

1. Condition II. A. 4. on page 6 - the third sentence should begin with the word "Operational" rather than "Preoperational"; the second line of that same sentence should refer to 40 CFR instead of 40 CFT; the third sentence of the paragraph should contain the words "and stack wash" as did the original certification;

2. Condition II. A. 12. a. (1) - the phrase "at the time of" was repeated in the Secretary's Order. That unintentional duplication is removed in the attached; and

Mr. Hamilton S. Owen  
March 24, 1989  
Page 2

3. Condition II. B. 1. - The footnote in the Secretary's Order deleted both footnotes to the Monitoring Frequency Entry. The attached reinserts the second footnote.

I believe that all other provisions of the attached are a correct reflection of the original Order as modified, and corrected as discussed above. Please review this and let me know whether you agree that the Department and Seminole can agree that the attached constitute the correct compiled Conditions of Certification for the plant.

Sincerely,



William H. Green

WHG/wrn

Enclosure

cc: Mike Roddy ✓





December 27, 1991

Ms. Rita Felton  
Industrial Waste Engineer  
FDER-Northeast District  
Suite B-200  
7825 Baymeadows Way  
Jacksonville, Florida 32256-7577

RE: OCTOBER 7, 1991 INDUSTRIAL WASTE/GROUNDWATER  
MONITORING PROGRAM INSPECTION

Dear Ms. Felton,

Seminole Electric Cooperative, Inc. (SECI) received the results of the Industrial Waste Compliance Biomonitoring Inspection, Toxic Sampling Inspection and Groundwater Monitoring Inspection on December 17, 1991. As we agreed to in our telephone conversation on December 18, 1991, Seminole response was extended to December 30, 1991, to allow adequate time to respond to the inspection report results.

The following are the responses to the issues noted in your report:

1. Thermometer in TSS oven not placed in sand.

Response: The SECI Plant Chemist has researched applicable Standard Methods including EPA-600/4-79-20, Methods for Chemical Analysis of Water and Wastewater, and can find no requirement for placing the TSS oven thermometer in glass beads or sand.

Due to the limited space available in the TSS oven, SECI chemists are continuing to investigate the feasibility of following your suggestion. We would appreciate receiving any material which references the above method as standard laboratory practice.

2. Department requests submittal of SECI split sample analytical results.

Response: Split samples taken by SECI during the October inspection were retained in case a problem was detected by the Department. Since no problems were encountered, no analysis were performed.

Groundwater

1. Gross Alpha analysis for second and third quarters 1991 missing.

Response: As previously discussed, second quarter Gross Alpha analysis were submitted on the May monthly report. Third quarter analysis were conducted in August but due to an error, was not typed on the monthly report. Laboratory analysis sheets and an August monthly report are attached.

SECI does take extremely strong exception to the fact that this error should label the entire groundwater sampling procedure as marginal as recorded on the Wastewater Compliance Inspection Report. This is a reporting error and not a deficiency in the sampling procedure. Seminole has installed well wizards on all groundwater monitoring wells to insure the integrity of samples taken and which we feel is a vast improvement over manual sampling. The marginal rating on the sampling procedure is unjustified.

2. In January, 1992 all laboratory sampling and analysis must be approved as required in 17-160 FAC.

Response: The QA/QC plan required by 17-160 FAC has been submitted to the Department's Quality Assurance Section in Tallahassee.

3. Future Monitoring results must be submitted on DER Form 17-1.216 (2).

Response: SECI will begin submitting groundwater monitoring reports on the DER form beginning in January 1992.

4. Monitoring reports must be submitted within fifteen days after analysis are received.

Response: Condition of Site Certification III.E.4 requires groundwater monitoring reports to be submitted by the 30th day of the month following the month during which such analysis were performed. SECI will continue to follow this reporting schedule.

5. Facility and individual monitoring well GMS numbers must be submitted on the DER reporting form.

Response: SECI will begin submitting the GMS numbers in January 1992.

6. Storet codes for each parameter must be submitted on the DER form.

Response: SECI will submit storet codes beginning January 1992.

Ms. Rita Felton  
December 27, 1991  
Page 3

7. Provide elevation of monitoring wells to the nearest 0.1 feet.

Response: This information has been submitted previously but will be resubmitted on the January report.

8. Provide information on well installation date, depth and length of monitoring interval.

Response: This information has been previously submitted to the Department as part of the groundwater monitoring plan approval process and verbally to Robert Martin, DER-Northeast District.

9. Provide recent site plan indicating location of all ponds and monitor wells.

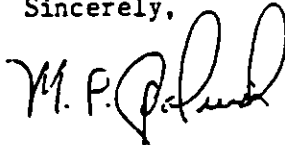
Response: This information was provided in early December to Robert Martin.

10. Reduced Monitoring

Response: As allowed by Section III, Table 1 and discussed with Robert Martin, DER-Northeast District beginning in January 1992, SECI will sample and analyze monitoring wells 1-2-3-4A-4C-5-6-7C-8-14A-14C-15-16 and 17 quarterly. Wells 9-10-11-12-13A and 13B ~~will be sampled annually.~~

If you have any questions concerning this response please do not hesitate to contact me at (813) 963-0994.

Sincerely,



Mike Opalinski  
Manager, Environmental Affairs

Attachment

cc: Peter McGarry - EPA  
Mike Tanski - DER Tallahassee

PB:jz



**Controls for Environmental Pollution, Inc.**

P.O. Box 5351 • Santa Fe, New Mexico 87502

OUT OF STATE 800/545-2188 • FAX - 505-822-9288

**Controls for Environmental  
Pollution, Inc.**

P.O. Box 5351

Santa Fe, NM 87502

Attn:

Phone: (505) 982-9841/(800) 545-2188

**Seminole Electric Coop., Inc.**  
P.O. Box 1577  
Palatka, FL 32177

Attn: Walt Egan  
Invoice Number:

Order #: 91-08-560

Date: 09/11/91 09:47

Work ID: Water (NR)

Date Received: 08/22/91

Date Completed: 09/11/91

### SAMPLE IDENTIFICATION

Sample Number	Sample Description
01	W-1 094
03	W-3 094
05	W-4C 094
07	W-6 094
09	W-14A 094
11	W-15 094
13	W-17A 094

Sample Number	Sample Description
C2	W-2 094
C4	W-4A 094
06	W-5 094
C8	W-8 094
10	W-14C 094
12	W-16 094
14	W-18 094

Remainder of sample(s) for routine analysis will be disposed of three weeks from final report date. Sample(s) for bacteria analysis only, will be disposed of immediately after analysis. This is not applicable if other arrangements have been made.

Approved By 

PAGE.02

SEMINOLE ELECTRIC

DEC 17 '91 15:18



Controls for Environmental Pollution, Inc.

P.O. Box 5351 • Santa Fe, New Mexico 87502

OUT OF STATE 800/245-2122 • FAX - 505-832-9289

Order # 91-08-360

09/11/91 09:47

Controls for Environmental

Page 2

# TEST RESULTS BY SAMPLE

Sample: 01A W-1 094

Collected: 08/08/91

Test Description  
Gross Alpha

Result  
<2

D.L.  
2

Units  
pCi/liter

Analyzed By

Sample: 02A W-2 094

Collected: 08/08/91

Test Description  
Gross Alpha

Result  
<2

D.L.  
2

Units  
pCi/liter

Analyzed By

Sample: 03A W-3 094

Collected: 08/13/91

Test Description  
Gross Alpha

Result  
<2

D.L.  
2

Units  
pCi/liter

Analyzed By

Sample: 04A W-4A 094

Collected: 08/08/91

Test Description  
Gross Alpha

Result  
<2

D.L.  
2

Units  
pCi/liter

Analyzed By

Sample: 05A W-4C 094

Collected: 08/09/91

Test Description  
Gross Alpha

Result  
<2

D.L.  
2

Units  
pCi/liter

Analyzed By

PAGE.03

SEMINOLE ELECTRIC

DEC 17 '91 13:18



Controls for Environmental Pollution, Inc.

P.O. BOX 5351 • Santa Fe, New Mexico 87502

OUT OF STATE 800/848-2188 • FAX: 505-832-8288

Order # 91-06-560

09/11/91 09:47

Controls for Environmental

Page 3

Sample: 06A W-5 094

Collected: 08/14/91

Test Description

Gross Alpha

Result

&lt;2

D.L.

2

Units

pCi/liter

Analyzed By

Sample: 07A W-6 094

Collected: 08/13/91

Test Description

Gross Alpha

Result

&lt;2

D.L.

2

Units

pCi/liter

Analyzed By

Sample: 08A W-8 094

Collected: 08/13/91

Test Description

Gross Alpha

Result

&lt;2

D.L.

2

Units

pCi/liter

Analyzed By

Sample: 09A W-14A 094

Collected: 08/13/91

Test Description

Gross Alpha

Result

&lt;2

D.L.

2

Units

pCi/liter

Analyzed By

Sample: 10A W-14C 094

Collected: 08/14/91

Test Description

Gross Alpha

Result

&lt;2

D.L.

2

Units

pCi/liter

Analyzed By

PAGE.05

SEMINOLE ELECTRIC

DEC 17 '91 15:19



Controls for Environmental Pollution, Inc.

PO BOX 6361 • Santa Fe, New Mexico 87502

OUT OF STATE 800/546-2122 • FAX: 505-822-2222

Controls for Environmental

Page 4

0-00000001-08-360

07/11/91 09:27

Sample: 11A W-15 094

Collected: 08/06/91

Test Description

Gross Alpha

Result

<2

D.L.

2

Units

pCi/liter

Analyzed

By

Sample: 12A W-16 094

Collected: 08/06/91

Test Description

Gross Alpha

Result

3+/-2

D.L.

2

Units

pCi/liter

Analyzed

By

Sample: 13A W-17A 094

Collected: 08/07/91

Test Description

Gross Alpha

Result

3+/-2

D.L.

2

Units

pCi/liter

Analyzed

By

Sample: 14A W-18 094

Collected: 08/07/91

Test Description

Gross Alpha

Result

<2

D.L.

2

Units

pCi/liter

Analyzed

By

\*\* TOTAL PAGE.05 \*\*

NOTE: (-) MEANS LESS THAN, (.) MEANS NO ANALYSIS REQUIRED THIS MONTH

NOTE: (-) MEANS LESS THAN, (.) MEANS NO ANALYSIS REQUIRED THIS MONTH

**MONTH: AUGUST, 1991**

WELL NUMBERS										
	1	2	3	4A	4C	5	6	7B	8	9
CONSTITUENT										
CONDUCTIVITY (UMHO/CM)	500	230	50	280	270	100	50	.	50	50
PH	7	6.8	5	7.1	7	6.2	4.7	.	4.8	4.6
CHLORIDE (PPM)	11	12	14	7	7	17	9	.	9	.
SULFATE (PPM)	-1	12	-1	-1	-1	7	12	.	6	.
ARSENIC (PPM)	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	.	-0.002	.
BARIUM (PPM)	.	.	.	.	.	.	.	.	.	.
BERYLLIUM (PPM)	.	.	.	.	.	.	.	.	.	.
CADMIUM (PPM)	.	.	.	.	.	.	.	.	.	.
CHROMIUM (PPM)	.	.	.	0.003	.	.	.	.	.	.
COPPER (PPM)	.	.	.	.	.	.	.	.	.	.
IRON, TOTAL (PPM)	0.172	0.339	0.202	0.553	1.06	0.643	0.197	.	0.417	.
LEAD (PPM)	.	.	.	.	-0.003	.	.	.	.	.
MERCURY (PPM)	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002	.	-0.0002	.
NICKEL (PPM)	.	.	.	.	.	.	.	.	.	.
SELENIUM (PPM)	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	.	-0.002	.
SILVER (PPM)	.	.	.	.	.	.	.	.	.	.
ZINC (PPM)	-0.005	-0.005	0.016	-0.005	0.006	-0.005	0.006	.	-0.005	.
GROSS ALPHA (PIC/L)	-2	-2	-2	-2	-2	-2	-2	.	-2	.



# GROUNDWATER MONITORING REPORT/SECI UNITS 1 & 2.

NOTE: (-) MEANS LESS THAN, (.) MEANS NO ANALYSIS REQUIRED THIS MONTH

MONTH: AUGUST, 1991

WELL NUMBERS										
	10	11	12	13A	13B	14A	14C	15	16	17
CONSTITUENT										
CONDUCTIVITY (UMHOA/CM)	80	800	40	35	220	450	180	45	700	500
PH	4.7	7.5	4.7	4.8	4.1	4.2	7.6	5.2	5.4	4.7
CHLORIDE (PPM)	.	.	.	.	.	109	6	7	200	162
SULFATE (PPM)	.	.	.	.	.	48	2	3	73	31
ARSENIC (PPM)	.	.	.	.	.	-0.002	-0.002	-0.002	-0.002	-0.002
BARIUM (PPM)	.	.	.	.	.	.	.	.	.	.
BERYLLIUM (PPM)	.	.	.	.	.	.	.	.	.	.
CADMIUM (PPM)	.	.	.	.	.	.	.	.	.	.
CHROMIUM (PPM)	.	.	.	.	.	.	.	.	.	.
COPPER (PPM)	.	.	.	.	.	.	.	.	.	.
IRON, TOTAL (PPM)	.	.	.	.	.	0.463	-0.1	0.218	0.832	2.44
LEAD (PPM)	.	.	.	.	.	.	.	.	.	.
MERCURY (PPM)	.	.	.	.	.	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002
NICKEL (PPM)	.	.	.	.	.	.	.	.	.	.
SELENIUM (PPM)	.	.	.	.	.	-0.002	-0.002	-0.002	-0.002	-0.002
SILVER (PPM)	.	.	.	.	.	.	.	.	.	.
ZINC (PPM)	.	.	.	.	.	-0.005	-0.005	0.006	-0.005	0.011
GROSS ALPHA (PIC/L)	.	.	.	.	.	-2	-2	-2	3+/-2	5+/-2

AUG 09 1979

REF: AAR-AP

Mr. T. E. Crumlish  
Project Director  
Seminole Electric Cooperative, Inc.  
Suite 108  
2510 East Busch Boulevard  
Tampa, Florida 33617

Dear Mr. Crumlish:

Review of your December 13, 1978 application to construct two 680 megawatt power boilers near Palatka, Florida has been completed. The construction is subject to rules for the Prevention of Significant Air Quality Deterioration (PSD), contained in 40 CFR 51.12.

We have determined that the construction as described in the application meets all applicable requirements of the PSD regulations, subject to the conditions in the Final Determination (enclosed). This office performed a Preliminary Determination concerning the proposed construction, and published a request for public comment on February 10, 1979. A public hearing was held on June 4, 1979. Comments received were relayed to your office. Your comments, as well as other written comments and those received at the public hearing, were addressed in the Final Determination. Anticipating the Commission's Stationary Source is hereby issued for the proposed construction, subject to the conditions in the Final Determination. This determination is based solely on the requirements of 40 CFR 51.12, and federal regulations governing significant deterioration of air quality. It does not apply to state or other permits issued by this agency or permits issued by other agencies. Information regarding PSD permitting requirements can be provided if you contact Mr. Joe Pennington, Director, Office of Program Investigation and Operations, at 484/581-4777. Additionally, construction covered by this authority to construct must commence within 18 months from the receipt of this letter.

The United States Court of Appeals for the D. C. Circuit has issued a ruling in the case of Alabama Power Co. vs. Douglas M. Costle (76-1004 and consolidated cases) which has significant impact on the EPA prevention of significant deterioration (PSD) program and permits issued thereunder. Although the court has stayed its decision pending resolution of petitions for reconsideration, it is possible that the final decision will require modification of the PSD regulations and could affect permits issued under the existing program. Examples of potential impact areas include the scope of best available control technology (BACT), source applicability, the amount of increment available (baseline definition), and the extent of preconstruction monitoring that a source may be required to perform. The applicant is hereby advised that this permit may be subject to revocation as a result of the final court decision and its ultimate effect.

Please be advised that a violation of any condition issued as part of this approval, as well as any construction which proceeds in material variance with information submitted in your application, will be subject to enforcement action.

Authority to Construct will take effect on the date of this letter. The complete analysis which justifies this approval has been fully documented for future reference, if necessary. Any questions concerning this approval may be directed to Mrs. Ray Cunningham, Chief, Air Strategy Development Section (404/881-3286).

Sincerely yours,

Thomas W. Devine, Director  
Air & Hazardous Materials Division

Enclosure

cc: Dr. J.F. Babrowski, Chief  
Bureau of Air Quality Management  
Florida Department of Environmental Regulation

RPfall-001 3286-7/17/79

4AH-AP  
Pratt

4AH-AP  
Cunningham

4AH-AP  
W. Smith

4AH-AP  
Devine

*Yellow*

*10.9.5*

REF: 4AH-AF

Mr. Robert E. Wales, Project Manager  
Burns and Roe, Inc.  
Burns and Roe Building  
5520 Los Santos Way  
Jacksonville, FL 32211

Dear Mr. Wales:

This letter is in response to your September 11, 1979 letter to Mr. Winston Smith.

Per Condition C of the final PSD determination for Seminole Plant Units 1 and 2, we have reviewed the draft contract for supply of the electrostatic precipitator (ESP) and find that the technical information provided therein is acceptable. No additional technical information or discussions with your representative (Dave Ross) is needed at this time regarding the design specifications for the ESP.

Please be aware that our review of and concurrence with the technical information provided in your September 11 letter does not relieve Seminole Electric Corporation, Incorporated from final compliance with the particulate emission limit specified in the final PSD permit for Seminole Plant Units 1 and 2.

If you have any comments or questions regarding this letter, please contact Mr. Frank Collins of my staff at 404/881-4552.

Sincerely yours,

Tommie A. Gibbs  
Chief  
Air Facilities Branch

cc: T. Crumlish, Seminole Electric

4AH-AF:Collins:gray:4552:10/31/79

4AH-AF  
Collins

4AH-AF  
Gibbs

United States  
Environmental Protection  
Agency

Region 4  
345 Courtland Street NE  
Atlanta GA 30308

Alabama, Georgia, Florida,  
Mississippi, North Carolina,  
South Carolina, Tennessee,  
Kentucky



MAR 6 1979

REF:4AH-AP

REC'D MAR 9 1979

Mr. T.E. Crumlish  
Project Director  
Seminole Electric Cooperative, Inc.  
Suite 108  
210 East Busch Boulevard  
Tampa, Florida 33612

Dear Mr. Crumlish:

In response to your December 15, 1978 letter, the Air and Hazardous Materials Division of EPA's Region IV Office has reviewed your application for permission to construct. Enclosed are two copies of the preliminary determination.

As stated in the determination, it is our preliminary determination that construction of the proposed source can be approved if certain conditions are met. This approval would apply only to the requirements of EPA's "Regulations for the Prevention of Significant Deterioration of Air Quality." Other approvals, including State permits, must also be obtained prior to construction.

Also enclosed for your information is a copy of the public notice of the preliminary determination, to be published in the "Palatka Daily News" and the "Florida Star".

This information is being mailed to you for informational purposes. No action is required of you at this time unless you wish to comment on our findings to date. If you have any questions, please call Mr. Roger Pfaff at 404/881-2864.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Winston A. Smith".

Winston A. Smith, Chief  
Air Programs Branch

Enclosures

cc: Dr. J. P. Subramani, Chief  
Bureau of Air Quality Mgt.  
DER-Tallahassee

U. S. Environmental Protection Agency

NOTICE

PRELIMINARY DETERMINATION CONCERNING THE PROPOSED CONSTRUCTION OF A  
POWER PLANT.

Seminole Electric Cooperative, Inc. has applied to the U.S. Environmental Protection Agency (EPA) to construct two 680 megawatt coal fired steam-electric units in Putnam County, Florida. The proposed construction is subject to EPA regulations for the Prevention of Significant Deterioration (PSD), 40 CFR 52.21. EPA has made a Preliminary Determination that the construction can be approved with conditions.

The maximum degree of Class II PSD increment consumption caused by the proposed construction is predicted to be as follows:

Particulate Matter, annual increment:	0
Particulate Matter, 24 hour increment:	5%
Sulfur Dioxide, annual increment:	25%
Sulfur Dioxide, 24 hour increment:	66%
Sulfur Dioxide, 3 hour increment:	85%

No Class I area will be affected.

Any person may submit written comments to EPA and/or request a public hearing. To be considered, any written comments must be received by EPA not later than 30 days from the date of this notice and submitted to:

Mr. Winston A. Smith, Chief  
Air Programs Branch  
U.S. Environmental Protection Agency  
345 Courtland Street  
Atlanta, Georgia 30308

A request for a public hearing must be received not later than 15 days from the date of this notice, and sent to Mr. Smith.

A copy of all materials submitted by the applicant and a copy of the Preliminary Determination is available for inspection at the County Commissioners' Office in Palatka, Florida.

Review of a Proposed Air Pollution Source Pursuant to Environmental  
Protection Agency Rules for the Prevention of Significant  
Deterioration (PSD)  
40 CFR 52.21

Seminole Electric Cooperative, Inc.

Seminole Plant Units No. 1 and No. 2  
Putnam County, Florida

U.S. Environmental Protection Agency  
345 Courtland Street, N.E.  
Atlanta, Georgia 30308

## I Introduction

Seminole Electric Cooperative, Inc., has applied to the U.S. Environmental Protection Agency to construct a coal fired steam electric plant in Putnam County, Florida. The proposed construction is subject to review under 40 CFR 52.21, Regulations for the Prevention of Significant Deterioration (PSD). Under these regulations, a new source of air pollution in any one of 28 specified categories which will emit more than 100 tons per year of any pollutant, is subject to review for each of those pollutants. One of these categories is fossil fuel-fired steam electric plants of more than 250 million BTU per hour heat input, of which Seminole Plant is one.

Paragraph (r) of the PSD regulations requires, in part, that EPA issue a Preliminary Determination whether the source should be approved, approved with conditions, or disapproved. It is the decision of EPA that the source should be approved with conditions. The conditions are included to ensure that the applicant complies with emission control techniques and emission limits which are a part of the application. The conditions of approval follow on the next page.



## CONDITIONS OF APPROVAL

### A. FOR THE ELECTRIC UTILITY STEAM GENERATING UNITS

The applicant shall comply with emission limits and other requirements as specified by the U.S. Environmental Protection Agency's Standards of Performance for Electric Utility Steam Generating Units proposed on September 19, 1978 (40 CFR 60, Subpart Da). Emission limits for particulate matter, sulfur dioxide and nitrogen oxides are specified below:

#### Item 1 - Particulate Matter

- (a) Particulate matter in gases discharged into the atmosphere from the steam generators shall not exceed 13 ng/J (0.03 lb/million Btu) heat input.
- (b) Gases discharged into the atmosphere from the steam generators shall not exhibit greater than 20 percent opacity except for one 6 minute period per hour of not more than 27 percent opacity.

#### Item 2 - Sulfur Dioxide

- (a) Sulfur dioxide in gases discharged into the atmosphere from the steam generators shall not exceed:
  - 1. 340 ng/J heat input (0.80 lb/million Btu) derived from the combustion of fuel oil.
  - 2. 520 ng/J heat input (1.2 lb/million Btu) derived from the combustion of coal except as provided under paragraph (b) of this section and;
  - 3. 15 percent of the potential combustion concentration (85 percent reduction) except as provided under paragraphs (b) and (c) of this section.
- (b) The sulfur dioxide emissions allowed under paragraph (a) of this section may be exceeded up to three 24-hour periods during any calendar month; however, the sulfur dioxide emissions must be reduced to less than 25 percent of the potential combustion concentration (75 percent reduction) at all times.

(c) The requirements under paragraph (a) of this section do not apply when the sulfur dioxide emitted to the atmosphere is less than 86 ng/J heat input (0.20 lb/million Btu).

(d) For purposes of determining compliance with provisions of paragraph (a)(3) of this section, any reduction in potential sulfur dioxide emissions resulting from the following may be credited in accordance with 40CFR60.48a(b):

- (1) Fuel pretreatment.
- (2) Coal pulverizers.
- (3) Bottom ash and fly ash interaction.

(e) When different fuels are combusted simultaneously, the applicable standard is determined by proration using the following formula:

$$PS_{SO_2} = x(340) + y(520)/100$$

where:

$PS_{SO_2}$  is the prorated standard for sulfur dioxide when combusting different fuels simultaneously (ng/J heat input).

x is the percentage of total heat input derived from the combustion of fuel oil.

y is the percentage of total heat input derived from the combustion of coal.

### Item 3 - Nitrogen Oxide Emissions

(a) Nitrogen oxides in gases discharged into the atmosphere from the steam generators shall not exceed:

1. 130 ng/J heat input (0.3 lb/million Btu) derived from the combustion of fuel oil.
2. 260 ng/J heat input (0.6 lb/million Btu) derived from the combustion of bituminous coal.

(b) When both fuels are combusted simultaneously, the applicable standard is determined by proration using the following formula:

$$PS_{NO_x} = x(130) + y(260)/100$$

Where:

$PS_{NO_x}$  is the applicable standard for nitrogen oxides when multiple fuels are combusted simultaneously (ng/J heat input):

x is the percentage of total heat input derived from the combustion of fuel oils.  
y is the percentage of total heat input derived from the combustion of bituminous coal.

#### B. FOR THE COAL PREPARATION AND MATERIALS HANDLING FACILITIES

For the coal preparation facilities, the applicant must meet requirements as specified by the U.S. Environmental Protection Agency's Standards of Performance for Coal Preparation Plants promulgated on January 15, 1976 (40 CFR 60, Subpart Y). Opacity requirements for these and other materials handling facilities are specified below.

##### Item 1

The applicant shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, coal transfer and loading system, or any other materials handling system, including lime and limestone processing and handling, gases which exhibit 20 percent opacity or greater.

#### C. SUBMISSION OF FINAL DESIGN SPECIFICATIONS TO EPA:

##### Item 1 - Control Devices

The applicant must submit to EPA, within ten working days after it becomes available, copies of all technical data pertaining to the selected control devices, including formal bid from the vendor, guaranteed efficiency or emission rate, and final detailed engineering specifications. A list of any additional required information will be sent to the applicant upon receipt of this submittal. Although the type of control devices which are described in the application have been determined by EPA in its initial pre-construction review to be adequate, EPA must review the final selected devices and EPA may, upon review of these data, disapprove the application if EPA determines the selected control devices to be inadequate to meet the emission limits specified in this conditional approval.

## Item 2 - Coal Characteristics and Contracts

Before approval can be granted by EPA for the precipitator and scrubber under condition C.1. above, characteristics of the coal to be fired must be known. Therefore, before these approvals are granted, the applicant must submit to EPA copies of coal contracts which should include the expected sulfur content, ash content, and heat content of the coal to be fired. These data will be used by EPA in its evaluation of the adequacy of the control devices.

As an alternative to the submittal of contracts for purchase of coal, the applicant may submit the following information:

- (a) The name of the coal supplier;
- (b) The sulfur content, ash content, and heat content of the coal as specified in the purchase contract;
- (c) The location of the coal deposits covered by the contract (including mine name and seam);
- (d) The date by which the first delivery of coal will be made
- (e) The duration of the contract; and
- (f) An opinion of counsel for the applicant that the contract(s) are legally binding.

## II BACKGROUND

On May 19, 1978, EPA received from Mr. T. E. Crumlish an application from Seminole Electric Cooperative, Inc. to construct two 680 megawatt coal fired steam electric generators in Putnam County, Florida. Additional information was submitted from Seminole or its representatives on June 8, July 3, October 26, November 28, November 29, and December 15, 1978. Also on December 15, Seminole submitted a revision to its application which changed the proposed emission rate of sulfur dioxide from the plant. This revision was submitted in order to make the proposed plant comply with proposed revisions to EPA's New Source Performance Standards published on September 19, 1978. Since the modification to the application increased the proposed SO<sub>2</sub> emission rate, EPA advised Seminole that this modification would change the date of complete application for review under the PSD regulation to December 15, 1978. Seminole objected to this determination in its letter of December 15, because this determination may have caused Seminole to be required to conduct ambient air quality monitoring in the vicinity of the proposed plant. EPA determined that, due to the existence of monitoring data already conducted in the area, and the minimal impact of the plant with regard to National Ambient Air Quality Standards, no additional monitoring would be required.

### III REVIEW REQUIREMENTS

The pollutants for which potential emissions are greater than 100 tons per year, and therefore subject to review, are particulate matter, sulfur dioxide, nitrogen oxides, and carbon monoxide. Review of control technology and ambient impacts is required. For sources applying after August 7, 1978, ambient monitoring may be required.

Certain portions of the PSD review may not be required if the proposed modification is subject to EPA's interpretative ruling, or if the source is a nonprofit health or education institution, or if the source has previously received approval under PSD and is only relocating. None of these exemptions applies in this case.

Other exemptions can apply to control technology review and ambient impact review. For control technology review, if allowable emissions of any pollutant are less than 50 tons per year, 1000 pounds per day, and 100 pounds per hour, or if a modification is made to an existing facility and the emissions are offset by reductions elsewhere, review may not be required. None of these exemptions applies in this case.

For ambient impact review and monitoring requirements, other exemptions are provided for. In addition to the allowable emission threshold, there are exemptions for temporary sources and for sources whose net emissions, after considering decreases, do not increase. None of these exemptions apply in this case.

#### A. Control Technology Review

The applicant is required to install best available control technology (BACT) for each pollutant, taking into account energy, environmental and economic impacts and other costs. EPA concludes that the systems proposed by the applicant represent BACT for particulate, SO<sub>2</sub> and nitrogen oxides. There is currently no applicable technology for reduction of carbon monoxide emissions beyond what is accomplished in the boiler.

##### 1. Particulate

The applicant will install a high efficiency electrostatic precipitator (ESP) to control particulate emissions. Emission limits have been specified by EPA as a condition of approval. Bag filters are to be used to control particulate emissions from fly ash handling. Opacity limitations are imposed to ensure proper design and operation.

A combination of liquid spray and bag filter systems will be used to control particulate emissions from coal handling and lime and limestone handling. Opacity limitations are imposed to ensure proper design and operation.

## 2. Sulfur Dioxide

The applicant has proposed the use of coal washing and the installation of a limestone scrubber which will achieve an overall reduction of 85% of potential sulfur dioxide emissions. This will comply with proposed requirements under 40 CFR 60, Federal New Source Performance Standards. This requirement is considered BACT, and is included as a condition of approval.

## 3. Nitrogen Oxides

The applicant has proposed boiler design controls which limit flame temperature and oxygen availability in order to control the formation of nitrogen oxides in the boiler to 0.6 lb/mm Btu. EPA considers this system to represent BACT. An emission limitation of 0.6 lb/mm Btu is a condition of approval.

## B. Impact Review

The PSD regulations require the following air quality impacts to be assessed by the applicant:

- 1) National Ambient Air Quality Standards (NAAQS)
- 2) PSD increments
- 3) Visibility, soils and vegetation
- 4) Impacts due to growth caused by proposed source

All these impacts were assessed by the applicant. Air quality modelling showed no violations of the NAAQS with all sources in the area of the Seminole Plant in operation. Likewise, the PSD increment analysis showed no violations with Units 1 and 2 operating at maximum load.

The percent consumption of the Class II PSD increments caused by the Seminole Plant are presented in the following table:

Increment	Pollutant	
	Particulate	SO2
Annual	0	25%
24 hour	5%	66%
3 hour	N/A	85%

Impacts on visibility, soils and vegetation and on air quality due to growth were judged to be minimal.

The closest Class I area is Okefenokee National Wilderness Area, about 105 km away. There will be no impact from the proposed plant on this area.

The closest area where NAAQS is now being violated is the City of Jacksonville, about 50 km away. The impact of particulate emissions from Seminole on this area will be below the levels EPA considers significant.



NPDES  
JMS

BEFORE THE STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

In Re: )  
 )  
Seminole Electric Cooperative, Inc.)  
Seminole Power Plant Units 1 & 2 )  
Power Plant Certification )  
Modification Request )  
No. PA 78-10 )  
Putnam County, Florida )  
\_\_\_\_\_)

FINAL ORDER  
MODIFYING CONDITIONS OF CERTIFICATION

The Department of Environmental Regulation after notice and opportunity for hearing modifies the Conditions of Certification for the Seminole Electric Cooperative, Seminole Power Plant pursuant to the Florida Electrical Power Plant Siting Act Section 403.516(1), Florida Statutes, and Condition XXV, Modification of Conditions, which delegates authority to modify conditions to the Department.

On May 15, 1992, Seminole Electric Cooperative, Inc. submitted a petition to the Department requesting certain modifications of the Conditions of Certification for the above referenced facility.

On June 19, 1992, Notice of Proposed Modification of Power Plant Certification was served on all parties, and a Notice of Proposed Modification of Power Plant Certification was published in the Florida Administrative Weekly. No hearing was requested, therefore the Department adopts the proposed agency action as final.

Accordingly, the Department pursuant to Section 403.516(1), Florida Statutes (Supp 1990), modifies the Conditions of Certification as follows:

Condition II.A.3. Thermal Mixing Zone

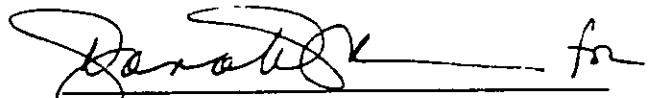
The instantaneous zone of thermal mixing for cooling tower blowdown shall not exceed an area of 1,235-square feet, 1705 square feet at a daily average discharge temperature of 95° F. During discharge, the blowdown from the cooling towers for Units No. 1 & 2 shall be withdrawn at the point of lowest temperature of the

recirculating cooling water prior to the addition of makeup water. The temperature at the point of discharge to the St. Johns River shall not be greater than 98 degrees F, nor shall it exceed 95° F on a daily average. The temperature of the water at the edge of the mixing zone shall not exceed the limitations of paragraph ~~17-3-05(1)(d)~~ 17-302.520(4)(a), F.A.C. except on occasions in which the temperature of the unaffected receiving waters exceeds 92 degrees F.

Any party to the this Order has a right to seek judicial review of this Order pursuant to Section 120.67, Florid Statutes by the Filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, and by filing a copy of the Notice of Appeal accompanied by the Applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Order is filed with the clerk of the Department.

DONE AND ORDERED this 14th day of October 1992 in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

  
Carol M. Browner  
Secretary

FILING AND ACKNOWLEDGEMENT

FILED, on this date, pursuant to S120.52 Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Mary L. Wilson      10-14-92  
Clerk                              Date

Certificate of Service

I hereby certify that a copy of the Petition for Modification of the Seminole Electric Cooperative, Seminole Power Plant Site Certification was sent to the following parties by United States mail on October 16<sup>th</sup>, 1992.

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