BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In Re:	OGC #88-0181
Seminole Electric Cooperative Inc.	
Seminole Power Plant, Units 1 & 2	
Modification of Certification	
No. PA 78-10	
Putnam County, Florida	

FINAL ORDER MODIFYING CONDITIONS
OF CERTIFICATION

On February 26, 1988, Seminole Electric Cooperative, Inc. submitted a request to modify the Conditions of Certification for the Seminole Power Plant Units 1 & 2 relating to revised air quality emission standards, air and water quality monitoring, compliance testing, mixing zones, recycling of boiler blowdown, water quality limitations, ground water monitoring, sanitary wastes, solid wastes, and maintenance activities.

This request was submitted pursuant to Section 403.516(1), F.S., and Condition XII of the Conditions of Certification, which delegate modifications of conditions to the Department.

On July 15, 1988, a Notice of Proposed Agency Action was served on all parties with a provision that a hearing would be held if requested on or before August 31, 1988. No hearing was requested. No party has objected to the proposed modifications. Therefore,

IT IS ORDERED:

The Department hereby modifies the Conditions of Certification for Seminole Power Plant Units 1 & 2 issued to Seminole Electric Cooperative, Inc. as follows:

Condition I.A.1. is modified to read as follows:

b. NO_x - 0.70 lbs. per million BTU heat input, maximum two hour average, 0.60 lbs. per million Btu, 30 day rolling average.

c. Particulates - ~~0.30~~ 0.03 lb. per million BTU heat input.

Condition I.B. is modified to read as follows:

1. The permittee shall install and operate ~~continuously~~ 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 ~~Section 17-2.08~~ Rules 17-2.660 FAC 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 ~~the two~~ an ambient monitoring devices for sulfur dioxide ~~as generally shown on Figure 1.~~ in accordance with EPA reference method 40 CFR, Part 53 and ~~two~~ an 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.

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 for Analysis for the Determination of Air Pollutants from Point Source, July 1975~~ Rule 17-2.700, and Table 700-1 F.A.C. and 40 CFR 60.8.

Condition I.C. is modified to read as follows:

2. ~~Performance~~ Compliance tests for particulate matter shall be conducted and data reduced in accordance with ~~methods and procedures in DER's Standard Sampling Techniques and Methods of Analysis for Determination of Air Pollutants for Point Sources, July 1975~~ Rule 17-2.700, and Table 700-1 F.A.C.

3. ~~Performance~~ 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 performance compliance tests.

Condition II.A.4. is modified to read as follows:

4. All discharges of low volume wastes-----. Boiler blowdown, boiler fireside wash, air preheater wash, 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.

Condition II.A.12.a.(i) is modified to read as follows:

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

Conditions II.B.1. and 2. are modified to read as follows:

1. Chemical Monitoring

The following parameters shall be monitored as shown during discharge ~~commencing with the start of Commercial operation of the first unit and reported quarterly to the Department;~~ and reported monthly to the DER Northeast District Office:

Parameter	Location	Sample Type	Frequency
(Flow through Oil and Grease---No Change)			
Metals	C.T. Outfall Intake & Waste Treatment Facility	Multiple Grab	~~as noted below;~~ quarterly
~~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.~~

~~2.~~ ~~Physical-Monitoring~~

~~The-permittee-in-consultation-with-the-Department, shall-develop-and-implement-a-program-to-verify mixing-zone-diffusion-coefficients.~~

Condition III.E. is modified to read as follows:

1. ~~The~~ Static groundwater levels shall be monitored and the results logged ~~continuously~~ 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 ----

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 accordance with the latest edition of Standard Methods for the Examination of Water and Wastewater. ~~The-data-shall-be-submitted-within-30-days-of collection/analysis-to-the-St.-Johns-River-Water Management-District-and-to-the-DER-Power-Plant Siting-Section.~~

3. Seminole shall ~~install~~ operate flow meters in compliance with SJRWMD specifications on all production wells.

4. After consultation----. 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 day of the month ----.

Condition XI is modified as follows:

XI Construction and Emergency Maintenance Activities in Waters of the State

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 Council, 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 the Final Order is filed with the clerk of the Department.

DONE AND ORDERED the 12 day of October, 1988, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

DALE TWACHTMANN
Secretary

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Telephone: (904) 488-9730

A copy of the aforegoing Final Order has been served by U.S. Mail on the following persons this _____ day of October, 1988:

Betsy Pittman, Esquire
Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

William H. Green, Esquire
Hopping Boyd Green & Sams
Post Office Box 6526
Tallahassee, Florida 32314

Suzanne Brownless, Esquire
Florida Public Service Commission
Fletcher Building
101 East Gaines Street
Tallahassee, Florida 32399-0854

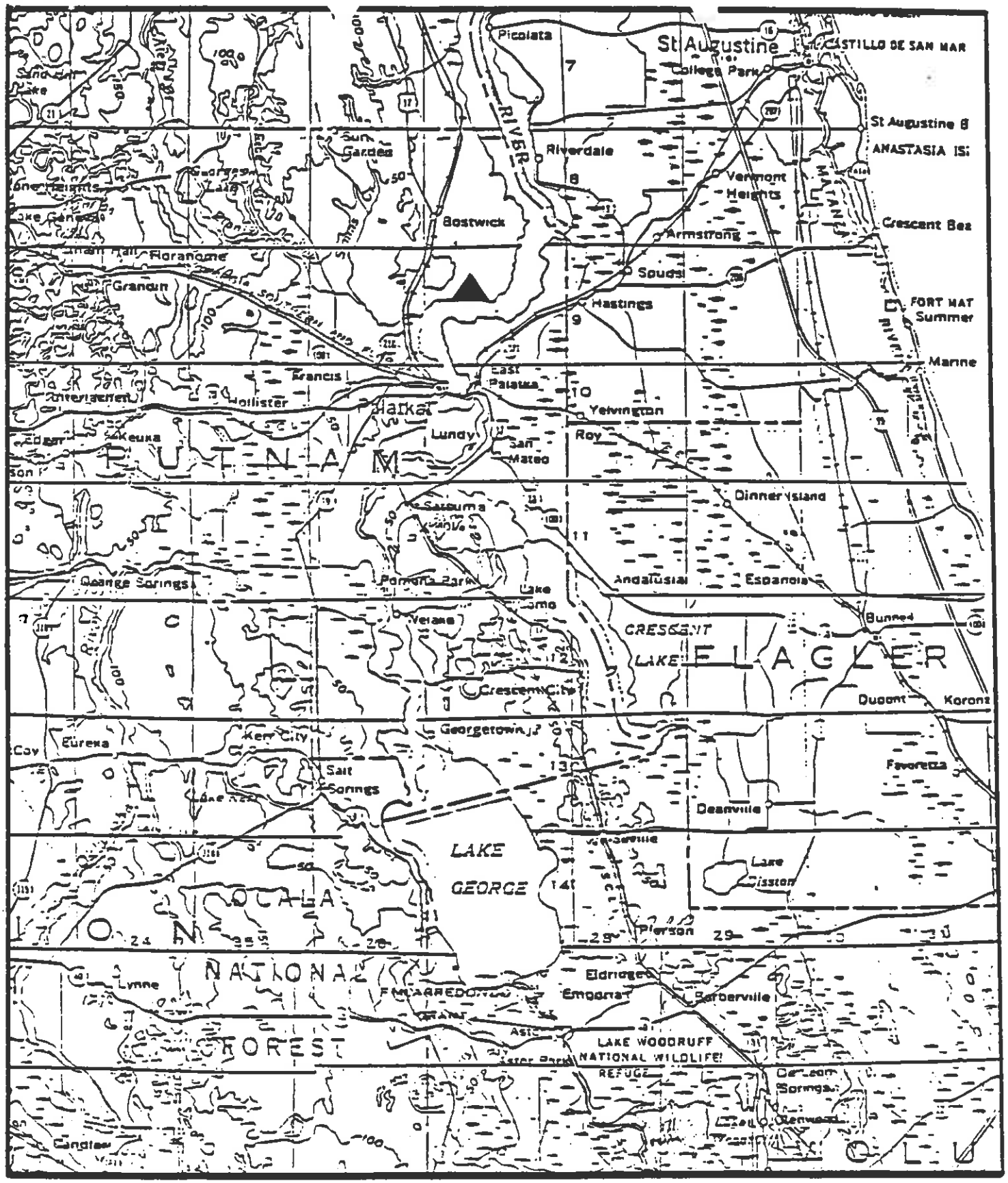
Larry Keesey, Esquire
Department of Community Affairs
2470 Centerview Drive
Tallahasse, Florida 32399-2100

Lynne C. Capeheart, Esquire
Sieera Club
1601 NW 35th Way
Gainesville, Florida 32605

Board of County Commissioners
Post Office Box 1374
Palatka, Florida 32077

Henry Dean, Esquire
St. Johns River Water
Management District
Rt. 2, Box 695
Palatka, Florida 32077

Hamilton S. Oven, Jr., P.E.
Administrator, Siting
Coordination Section
Division of Air Resources
Management



▲ FIGURE 1: Location of Ambient Air Quality Monitoring Station

Exhibit A

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	
	Monthly	Quarterly	Monthly	Yearly	Monthly	Quarterly
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

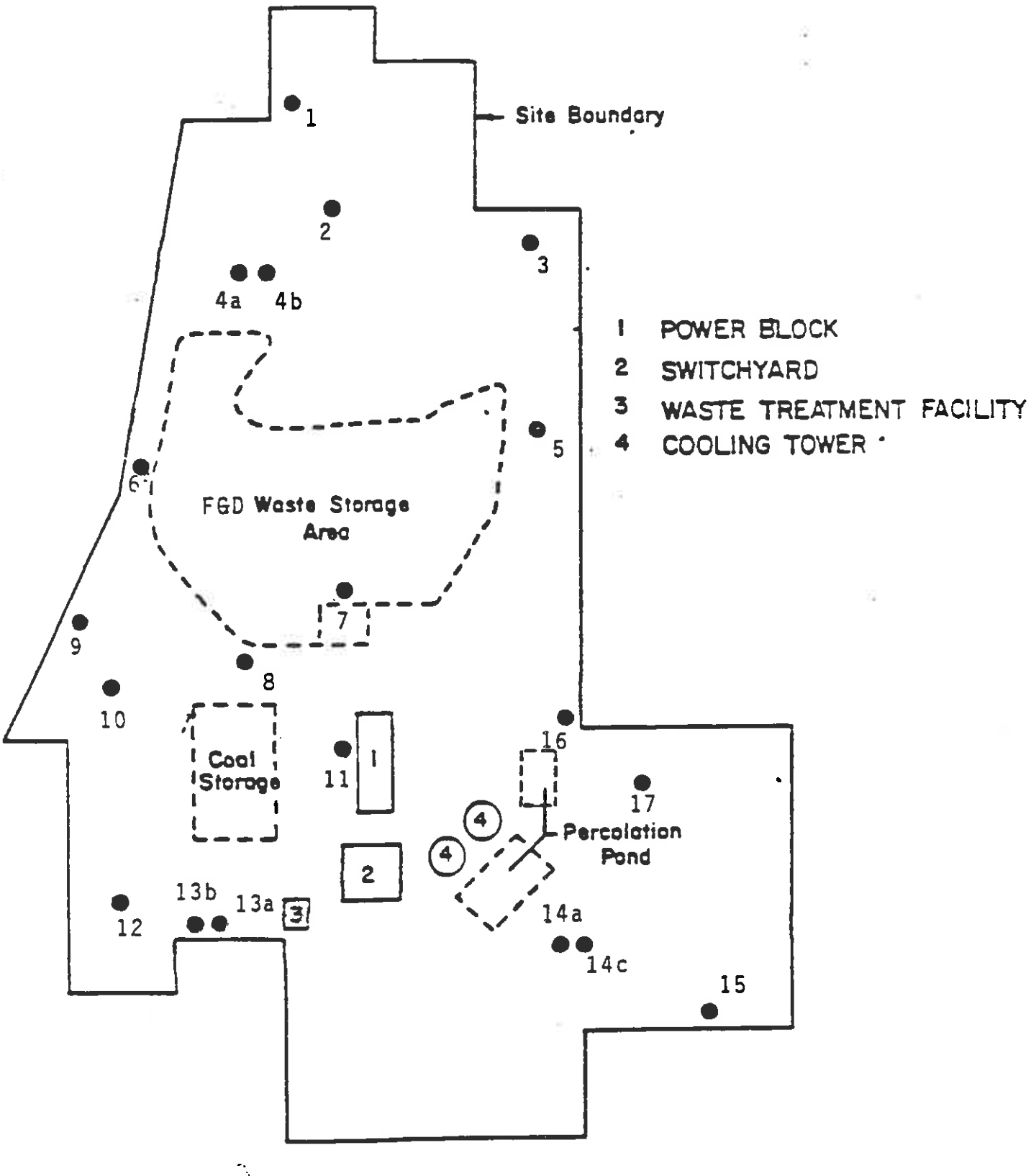


Figure 3 Monitor Well Location Map

Exhibit D

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 utiliz 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.

ATTACHMENT 1

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 reclaimation and future land use

SECI
4-27-79

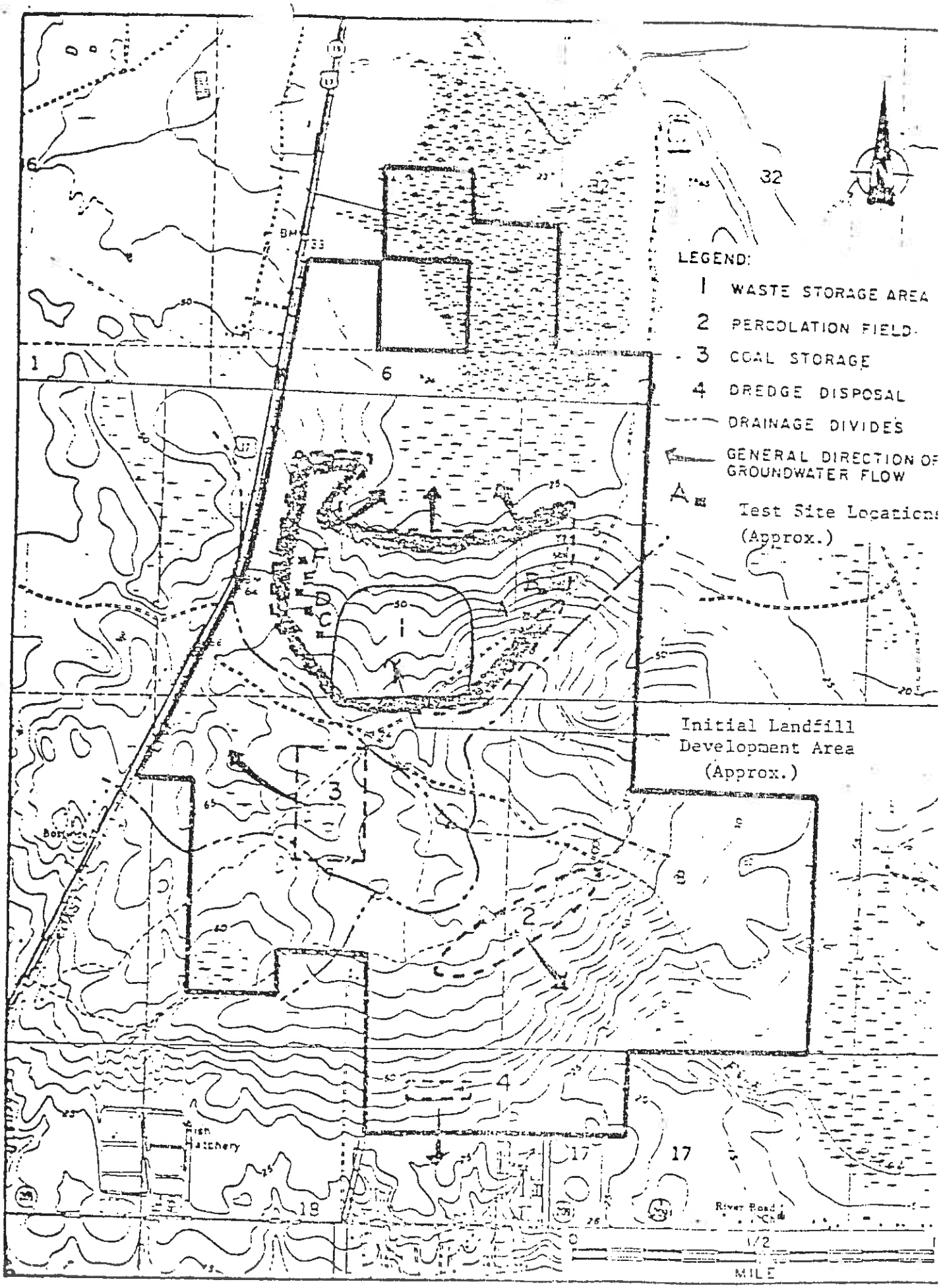
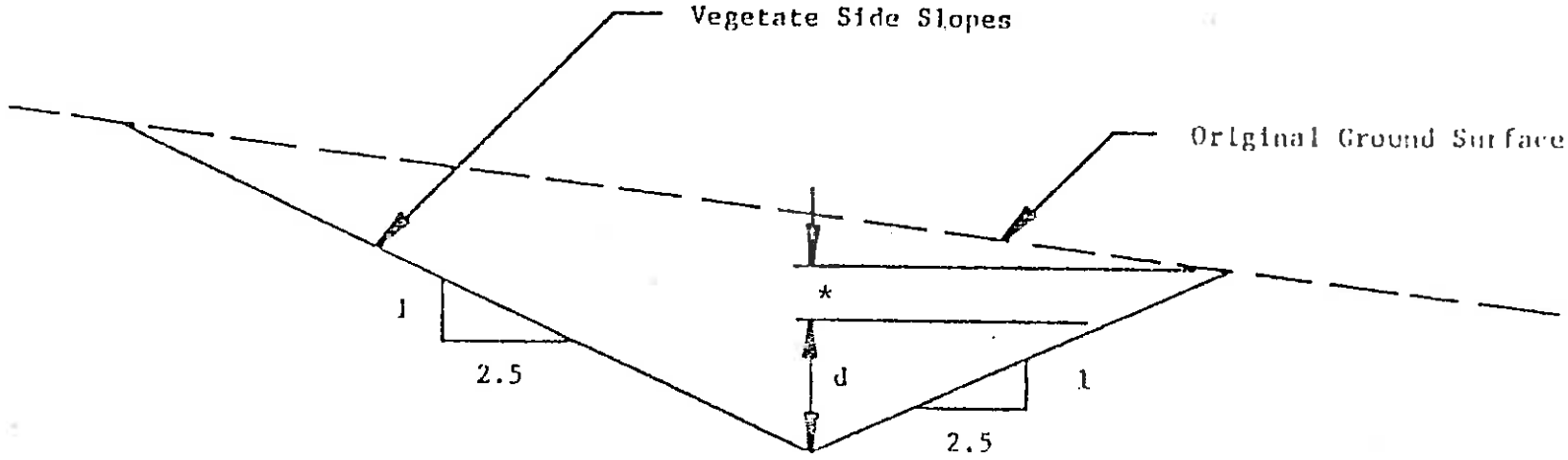


Figure A

FGD SLUDGE AND ASH DISPOSAL SITES



d = Flow Depth

* = Freeboard, 1'-0 min.

Figure B

TYPICAL CROSS SECTION

DIVERSION CHANNEL
NO SCALE

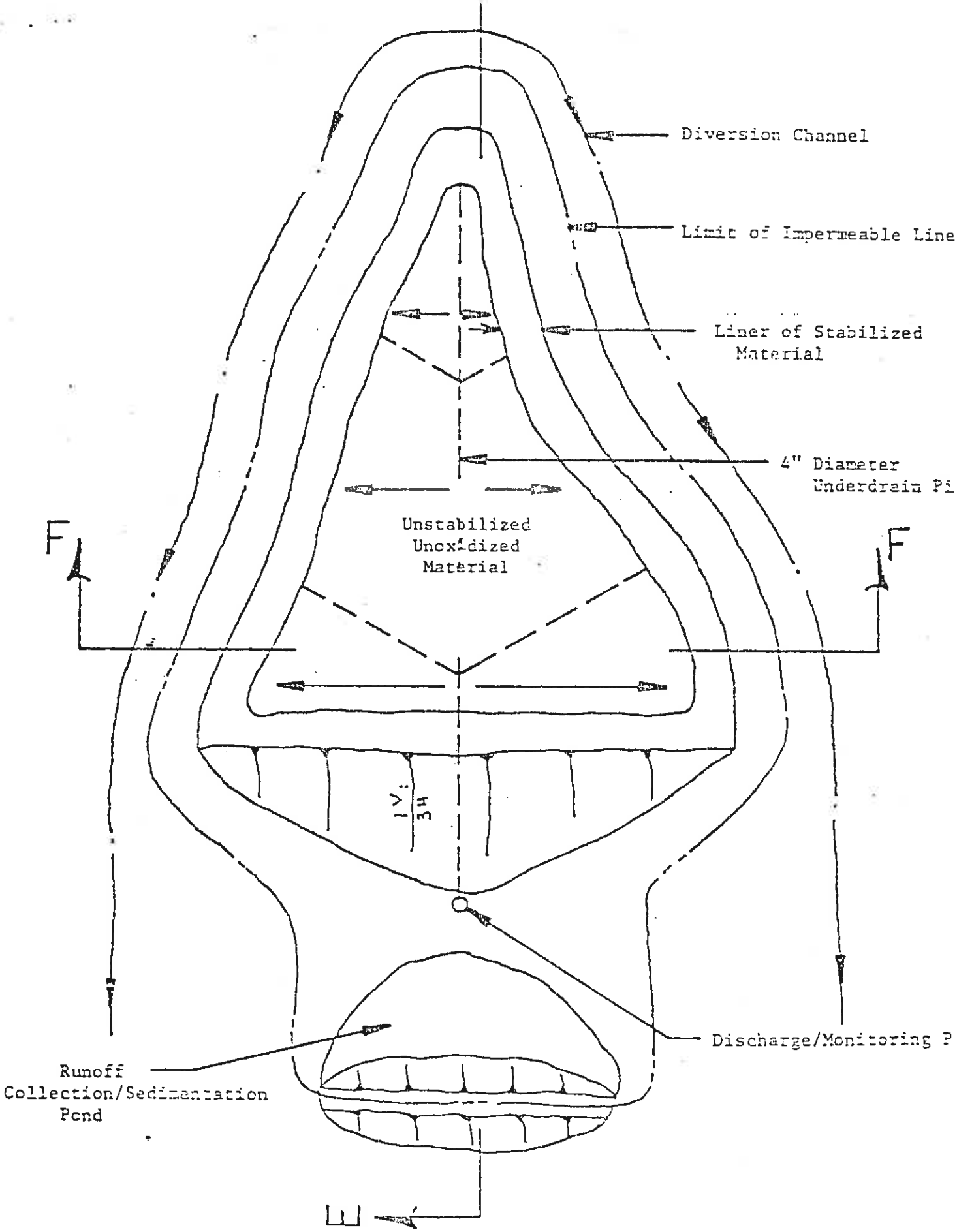


Figure C
TEST SITE C
SITE PLAN
NO SCALE

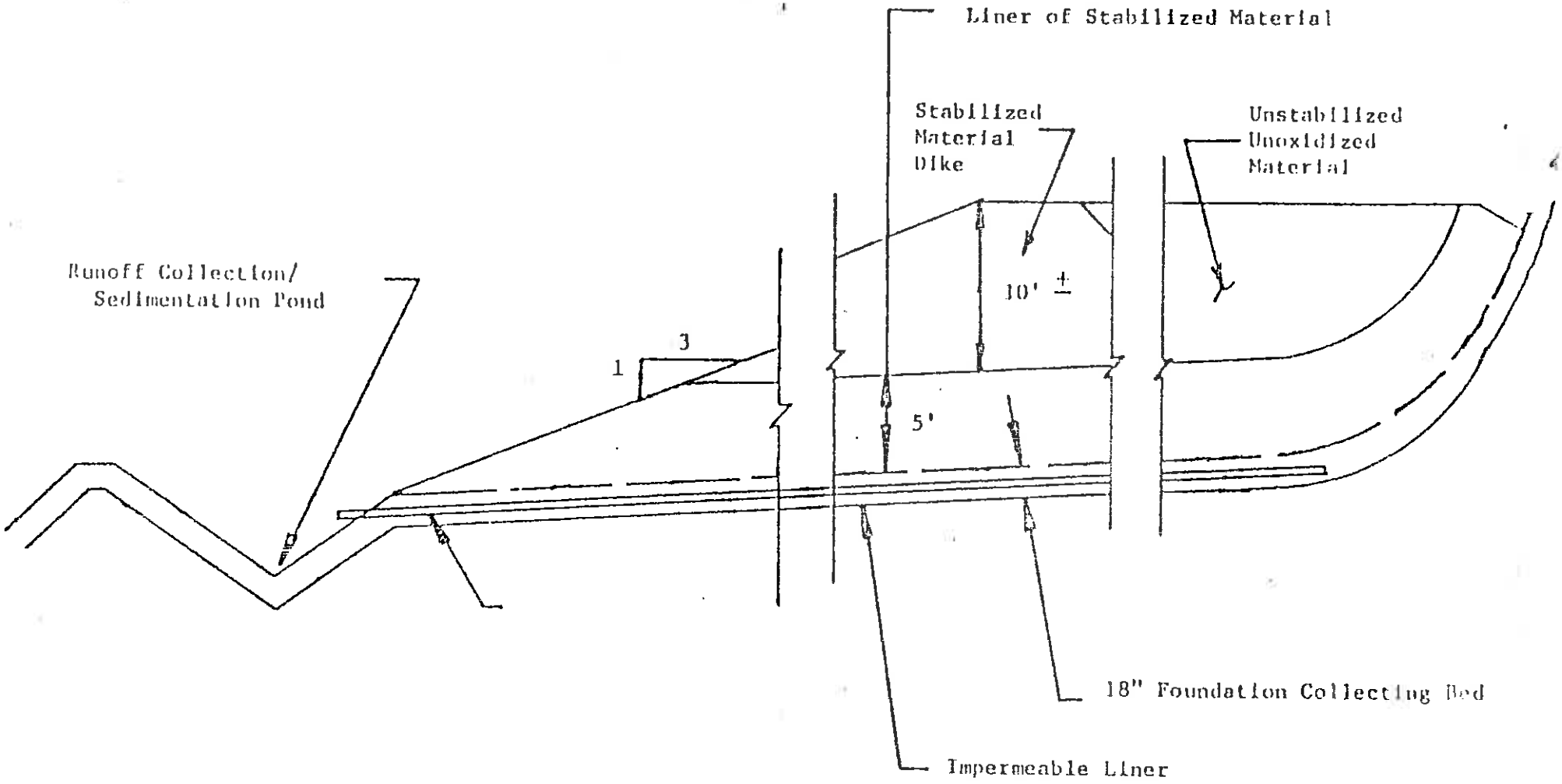


Figure D

SECTION EE

TYPICAL CROSS SECTION

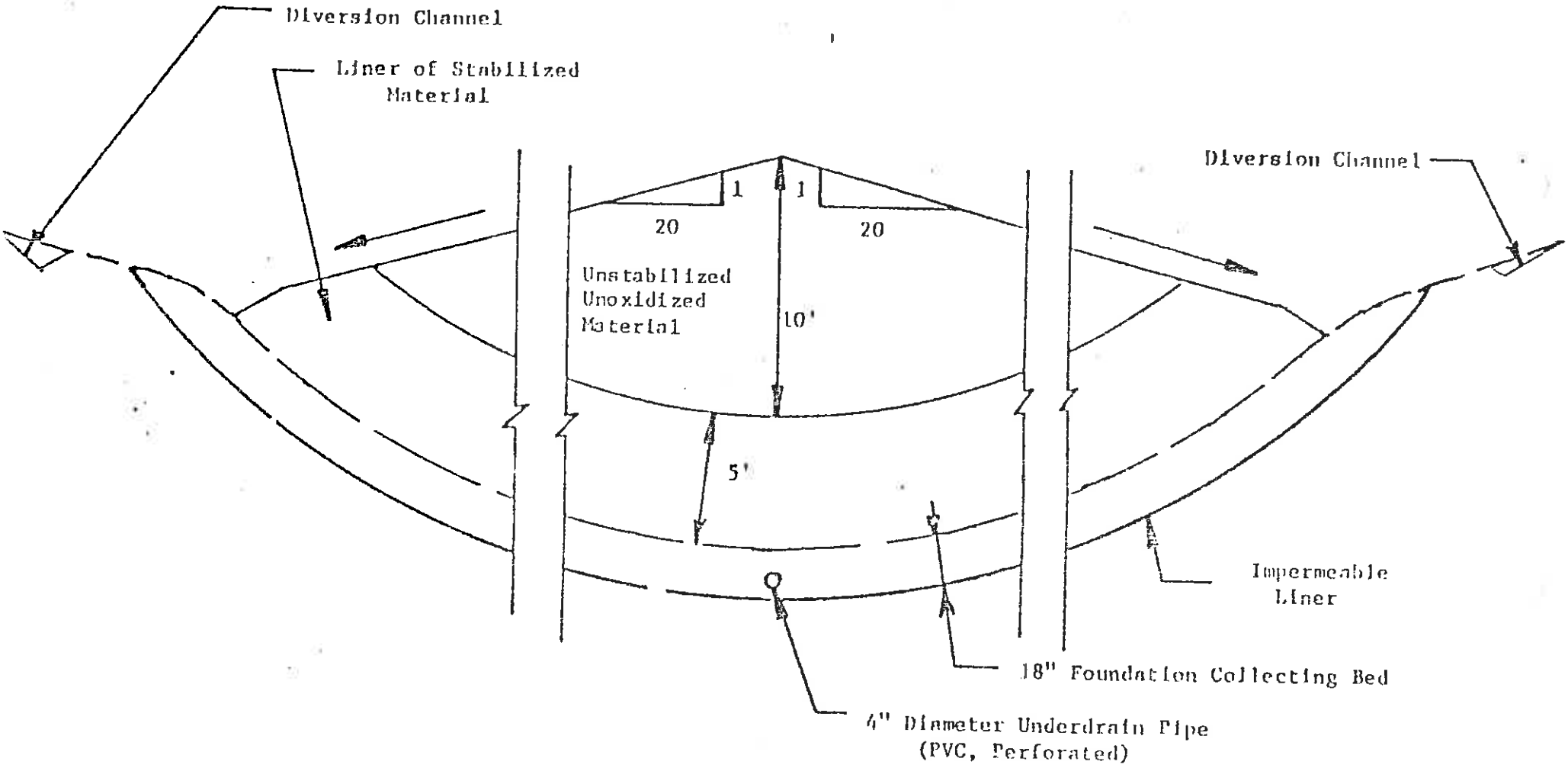


Figure E

SECTION FF

TYPICAL CROSS SECTION

NO SCALE