



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

December 2, 1999

LICENSEE: Florida Power & Light Company
FACILITY: St. Lucie Plant
SUBJECT: SUMMARY OF MEETING HELD AT ST. LUCIE PLANT ON
NOVEMBER 10, 1999, CONCERNING ENDANGERED SEA TURTLES

On November 10, 1999, a public meeting was held at St. Lucie Plant. The purpose of the meeting was twofold: 1) to hold the biannual meeting on the status of endangered species at St. Lucie Plant, and 2) to discuss re-initiation of consultation with the National Marine Fisheries Service, concerning Green Turtle (*Chelonia mydas*) mortalities.

Florida Power and Light Company (FPL) opened the meeting by reviewing the background of sea turtle issues at St. Lucie, the general location of the plant, and design of plant circulating water intake and discharge. There was a general discussion of the design of the plant intake structures in the ocean and their impact on sea turtles. FPL stated that they had the opportunity to re-review plant intake velocity cap design against possible alternatives during the last repair project and decided the current system was appropriate.

FPL then discussed the intake canal barrier nets, their size, location, and design. The primary turtle barrier is a large 5" sloped turtle net. The net is lowerable so that it may pass debris which, left unchecked, may cause net failure. The primary net was constructed in 1996 and has been lowered in order to pass jellyfish and drift algae. During the periods where the primary barrier net was lowered, the effectiveness of the turtle capture and return program was reduced. The participants discussed turtle capture history from 1976 to 1999. The trend showed the rate of turtle capture has increased steadily during the period with the exception of a large peak in 1995. Participants discussed how turtle mortalities are determined, counted, and reported.

Four regular turtle protection activities, beyond the continuing capture and release program, were also discussed. The combination of all of these activities represents the comprehensive FPL sea turtle program.

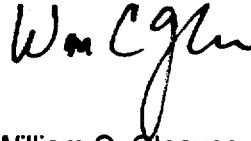
ACTIONS:

National Marine Fisheries Service (NMFS) said that they need a letter from the U.S. Nuclear Regulatory Commission requesting an increase in the number of incidental take allowed for green turtles (*Chelonia mydas*) for the balance of 1999.

PDR A Doc.

DF01

The letter should also request a re-initiation of a consultation on sea turtles, based on information to be provided in the March 2000 FPL environmental study, required by Item No. 7 of the terms and conditions of the NMFS Biological Opinion.



William C. Gleaves, Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-335 and 50-389

Enclosures: 1. Attendance Sheet
2. FPL handout, "Sea Turtle Meeting,
November 10, 1999"

cc w/enclosures: See next page

Florida Power and Light Company

ST. LUCIE PLANT

cc:

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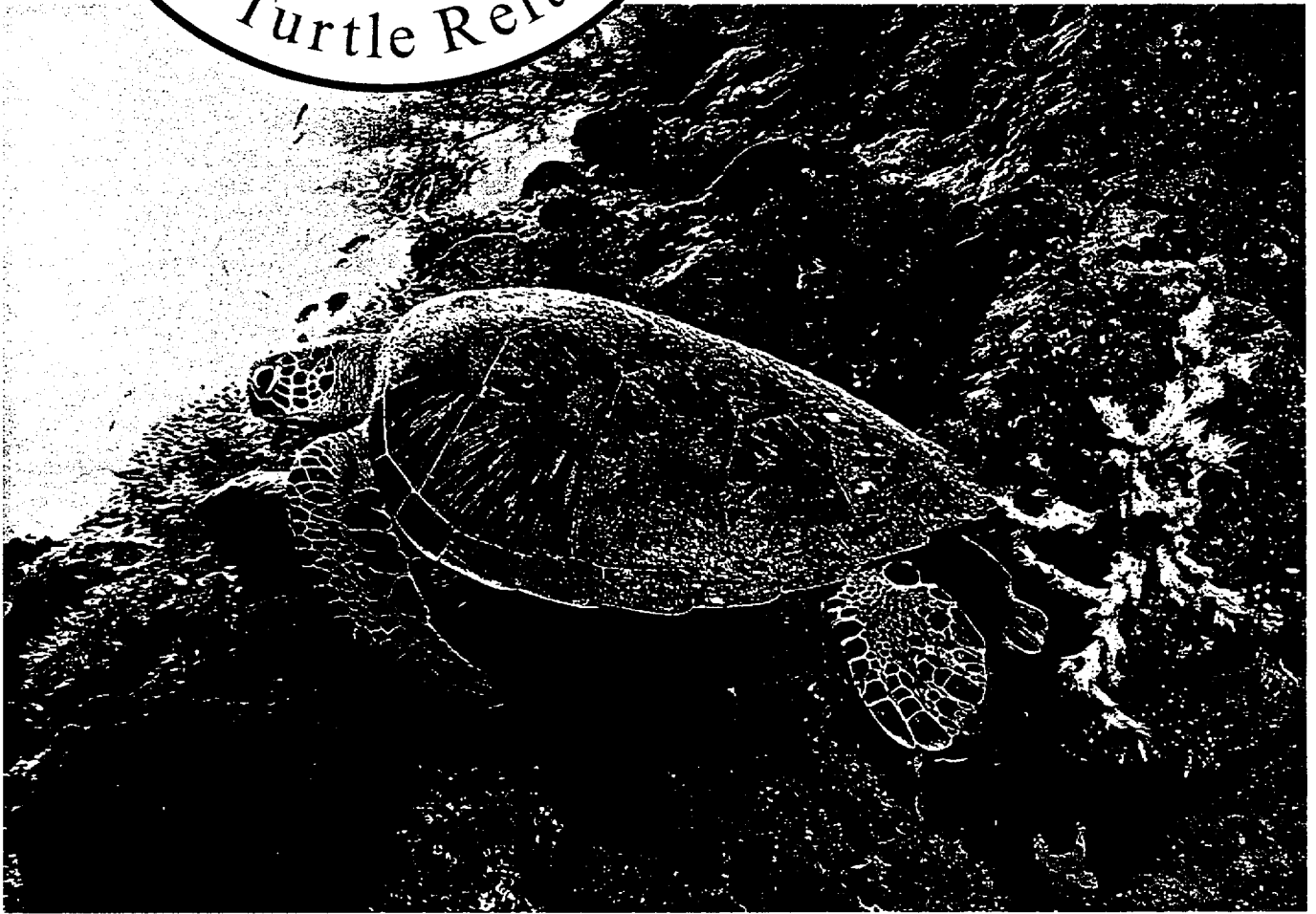
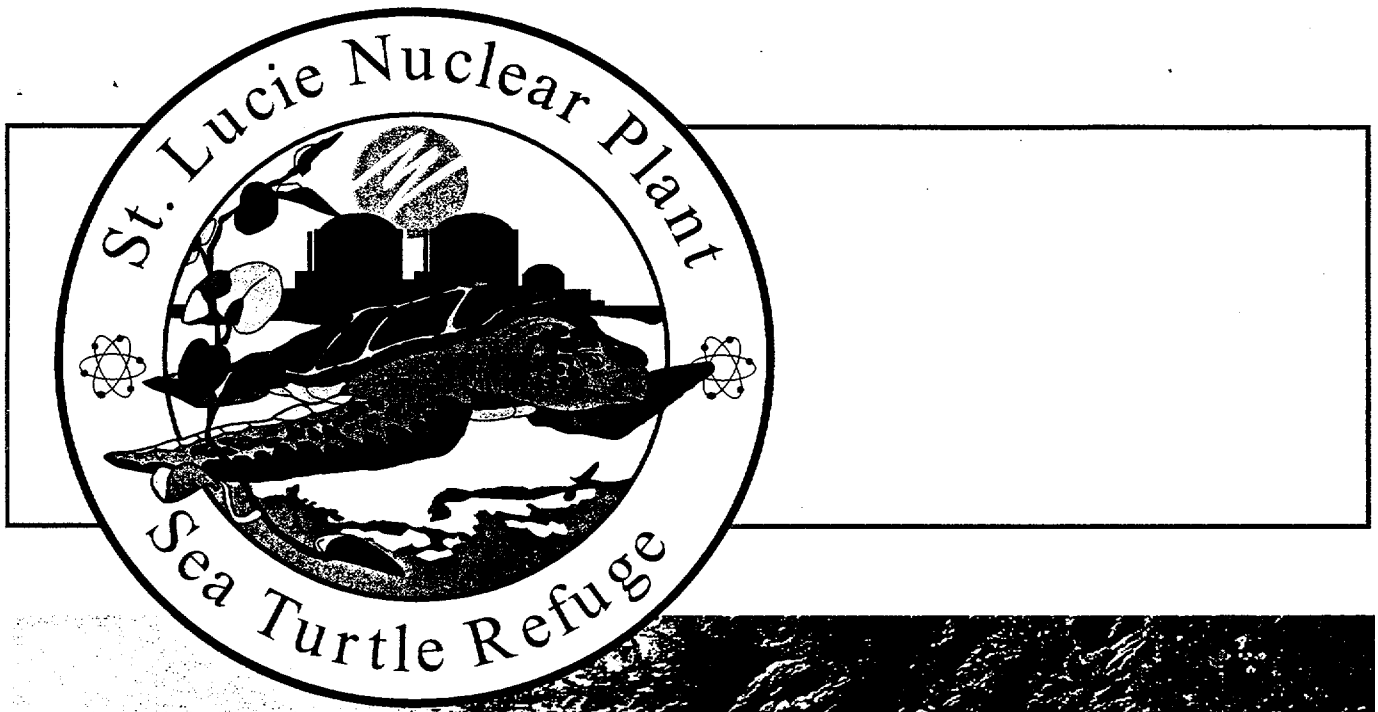
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George Madden
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NRC/FPL/NMFS SEA TURTLE MEETING
November 10, 1999

NAME	REPRESENTING	PHONE #
William Gleaves	NRC	301-415-1479
Winifred Perkins	Florida Power & Light Co.	561-691-7046
George Madden	FPL	561-467-7155
Jonathan Gorham	Quantum Resources/FPL	561-465-3550 x3312
Nick Whiting	FPL	561-467-7167
Jim Wilson	NRC	301-415-1108
Kim Leigh	NRC	301-415-2678
Bob Hoffman	NMFS	727-570-5312
Beth Morford	FWC	561-575-5407
Thierry Ross	NRC	301-464-7822



SEA TURTLE MEETING
NOVEMBER 10, 1999

**Meeting Agenda
St. Lucie Plant
November 10, 1999**

Purpose: To discuss the reinitiation of consultation with National Marine Fisheries Service (NMFS) and other information and developments regarding endangered and threatened species at St. Lucie Plant. The second part of the meeting is intended to satisfy the requirement for the biannual meeting, as discussed in the St. Lucie Plant Technical Specifications, Appendix B, "Environmental Protection Plan."

Agenda

0830 - 0835 Arrival at FPL Land Utilization Building (plant entrance "B") and introductions (FPL, NRC, NMFS, State of Florida)

0835 - 0945 Tour of FPL facilities; plant intake canal; plant screens; net structures; turtle recovery area. (All)

1000 - 1010 Start of Public Meeting; required announcements to General Public (NRC)

1010 - 1145 General discussion (All)

1145 - 1200 Conclusion of Public Meeting and schedule for future meetings

Topics

- "Take" Status Update
- Reinitiation of Consultation with NMFS
- Discussion Of Options
- Discussion of information and developments regarding endangered and threatened species at St. Lucie Plant

1200 - 1245 Lunch on site

1245 If business complete; depart site

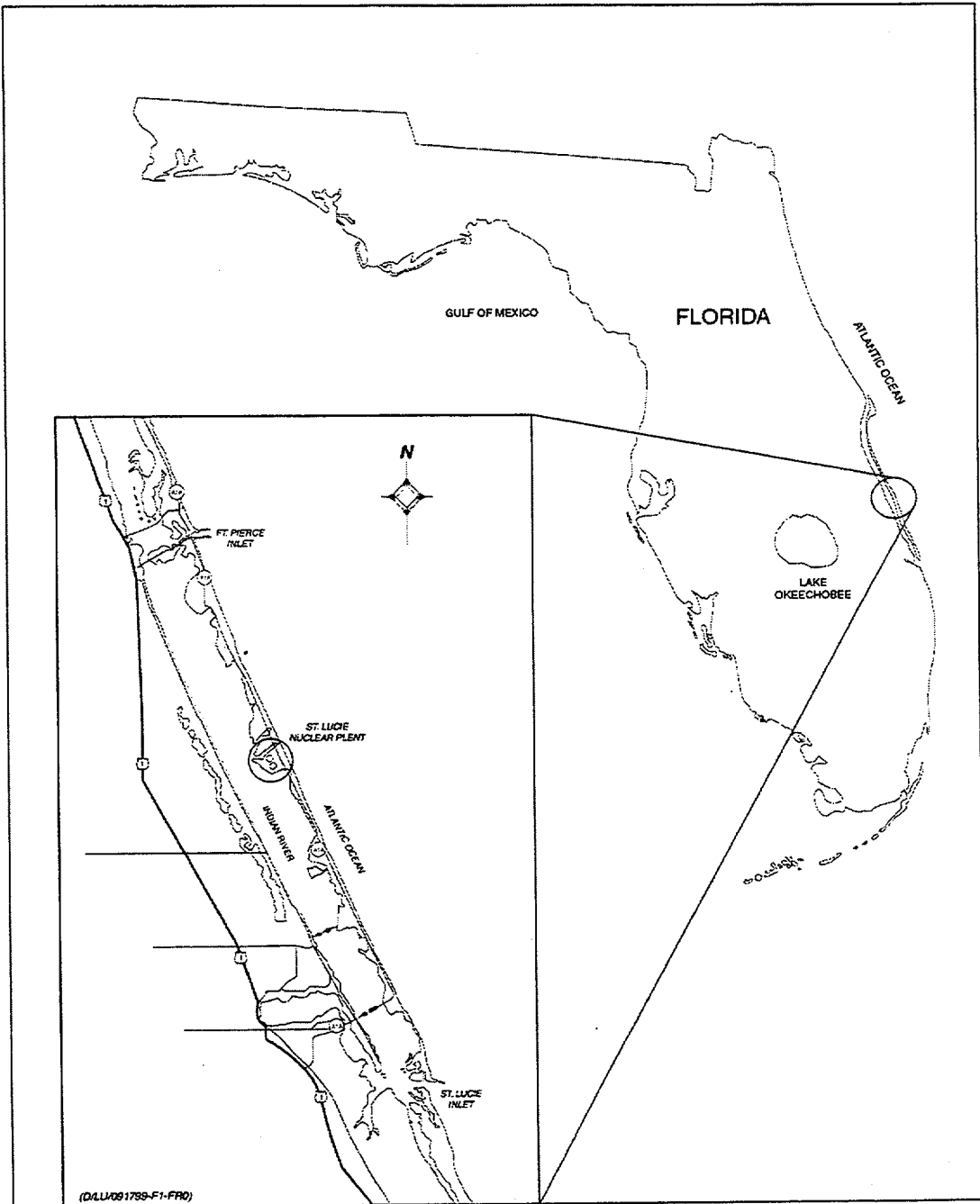


FIGURE 1. Location of the St. Lucie plant on the east coast of Florida. The plant is located on South Hutchinson Island, barrier island, and is about 7 miles (11.3 km) south of Ft. Pierce and about 7 miles (11.3 km) north of Stuart.

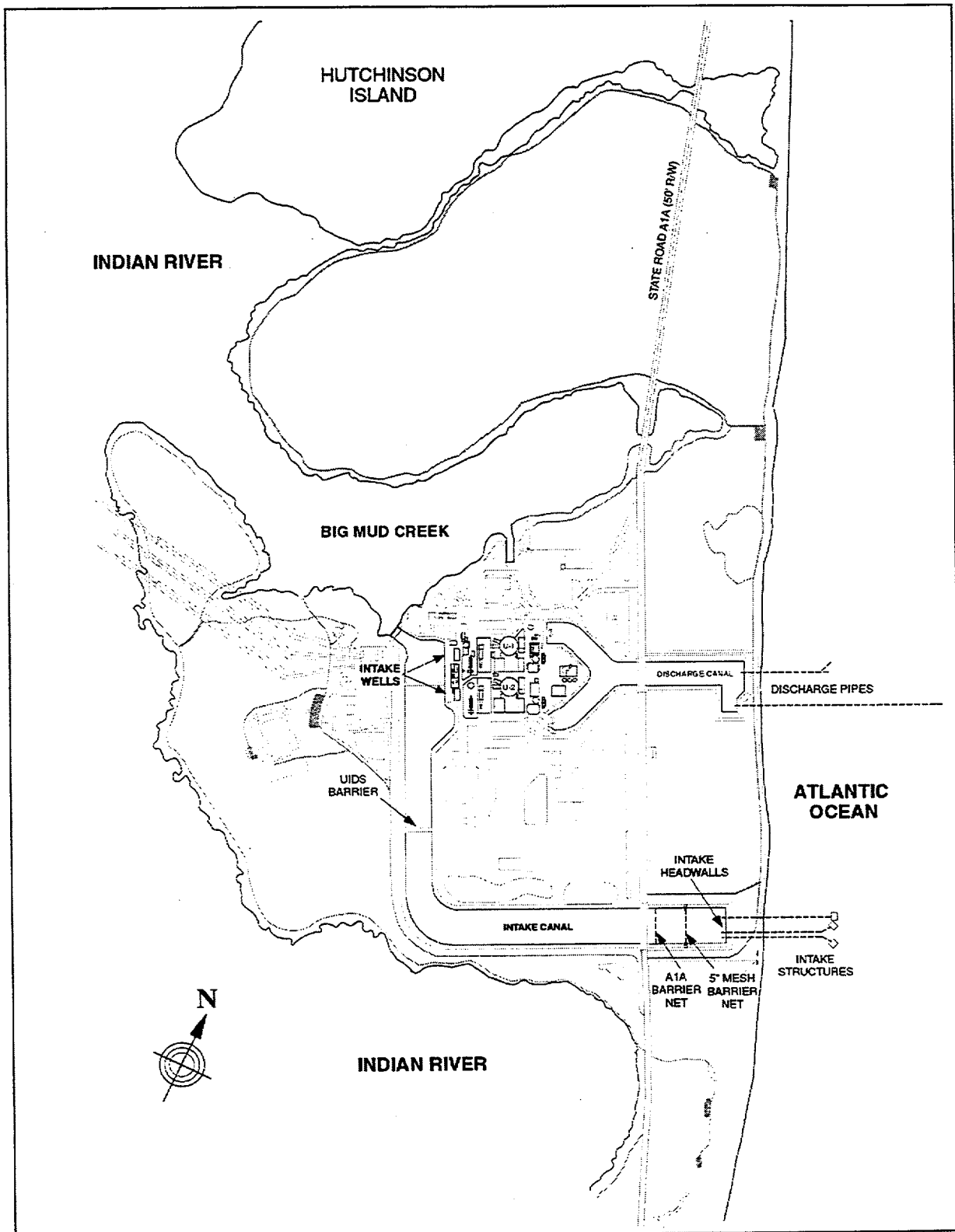
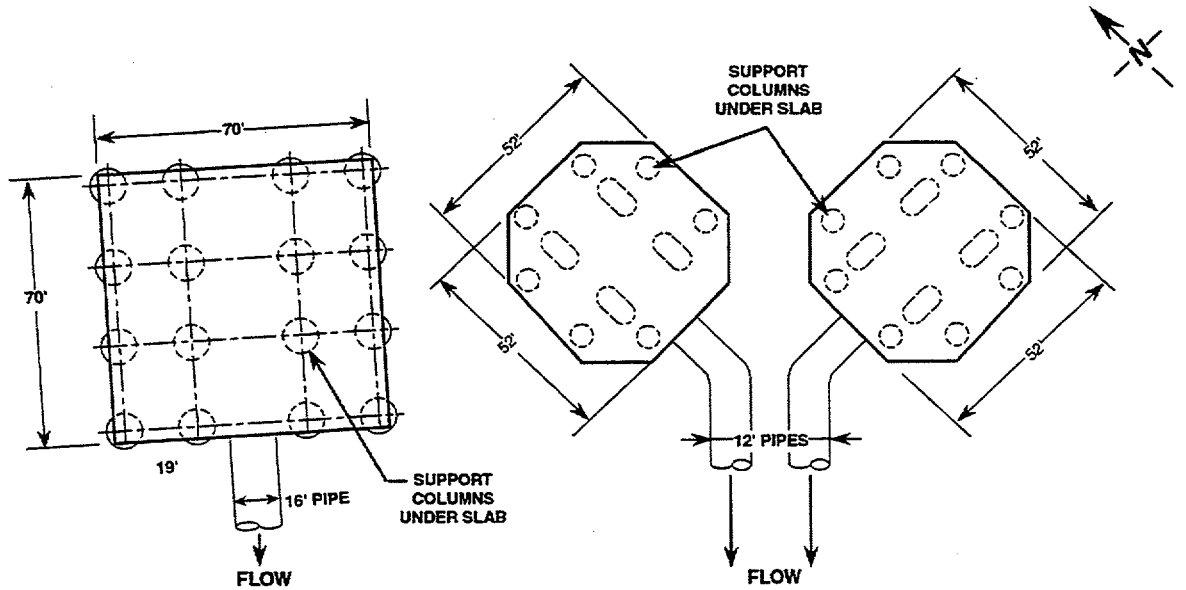


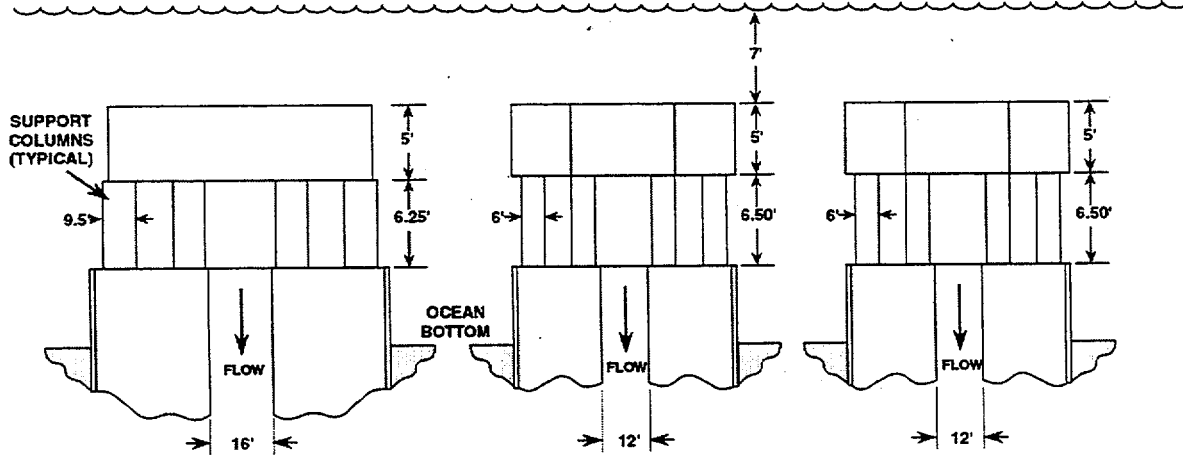
Figure 2. Design of the st. lucie plant showing the relationship between units 1 and 2 and the configuration of the cooling water intake and discharge system with key features labeled.

ST. LUCIE PLANT INTAKE VELOCITY CAPS



PLAN

LOW TIDE OCEAN LEVEL



ELEVATION

DRAWING NOT TO SCALE

(DLU:950425-F3-R0)

Figure 3. Diagram of the intake structures located 1200 feet (365 m) offshore of the shoreline at the St. Lucie Plant.

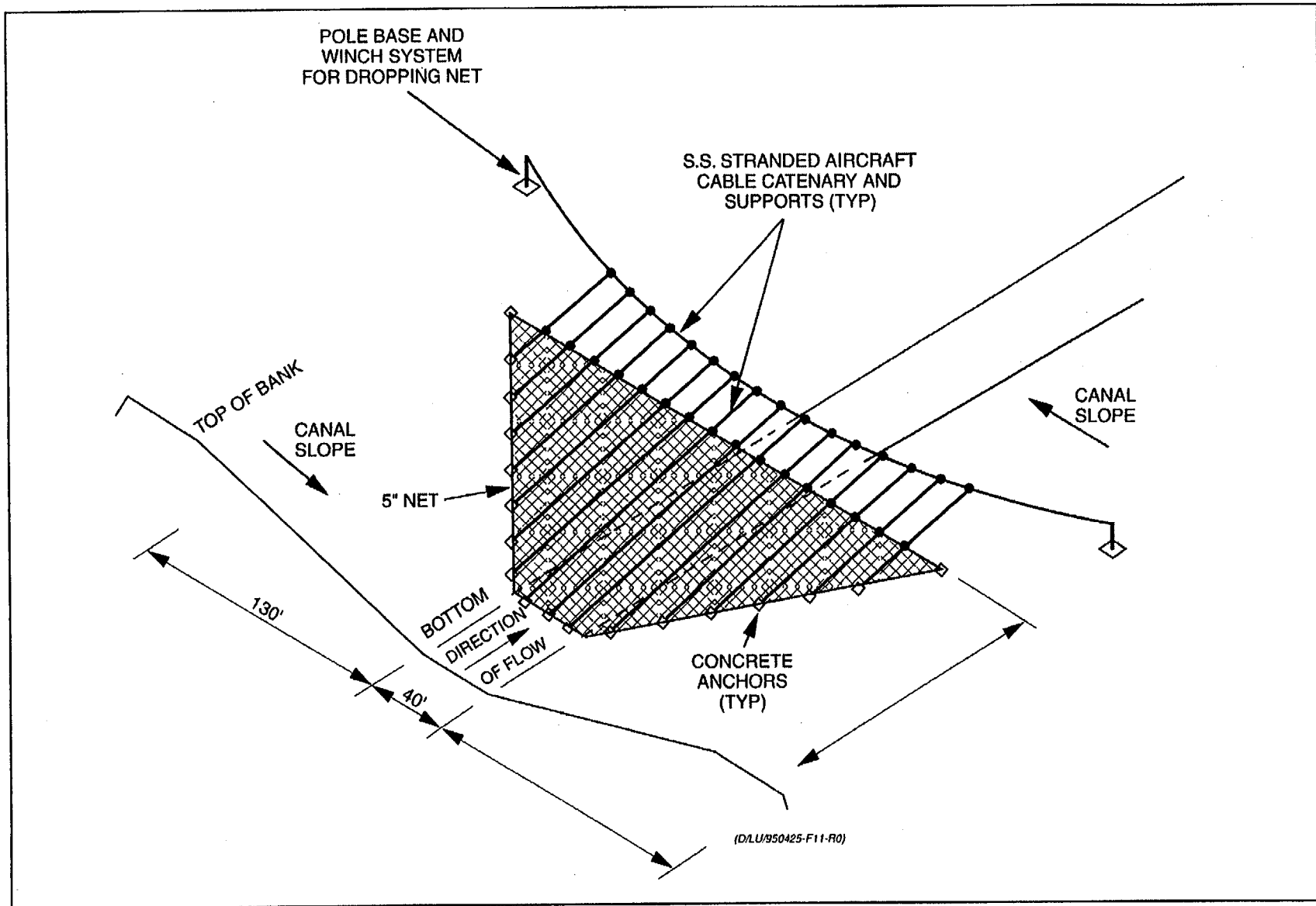


Figure 11. Conceptual design for a 5 inch (12.7 cm) square mesh barrier net to be installed in the intake canal of the St. Lucie Plant.

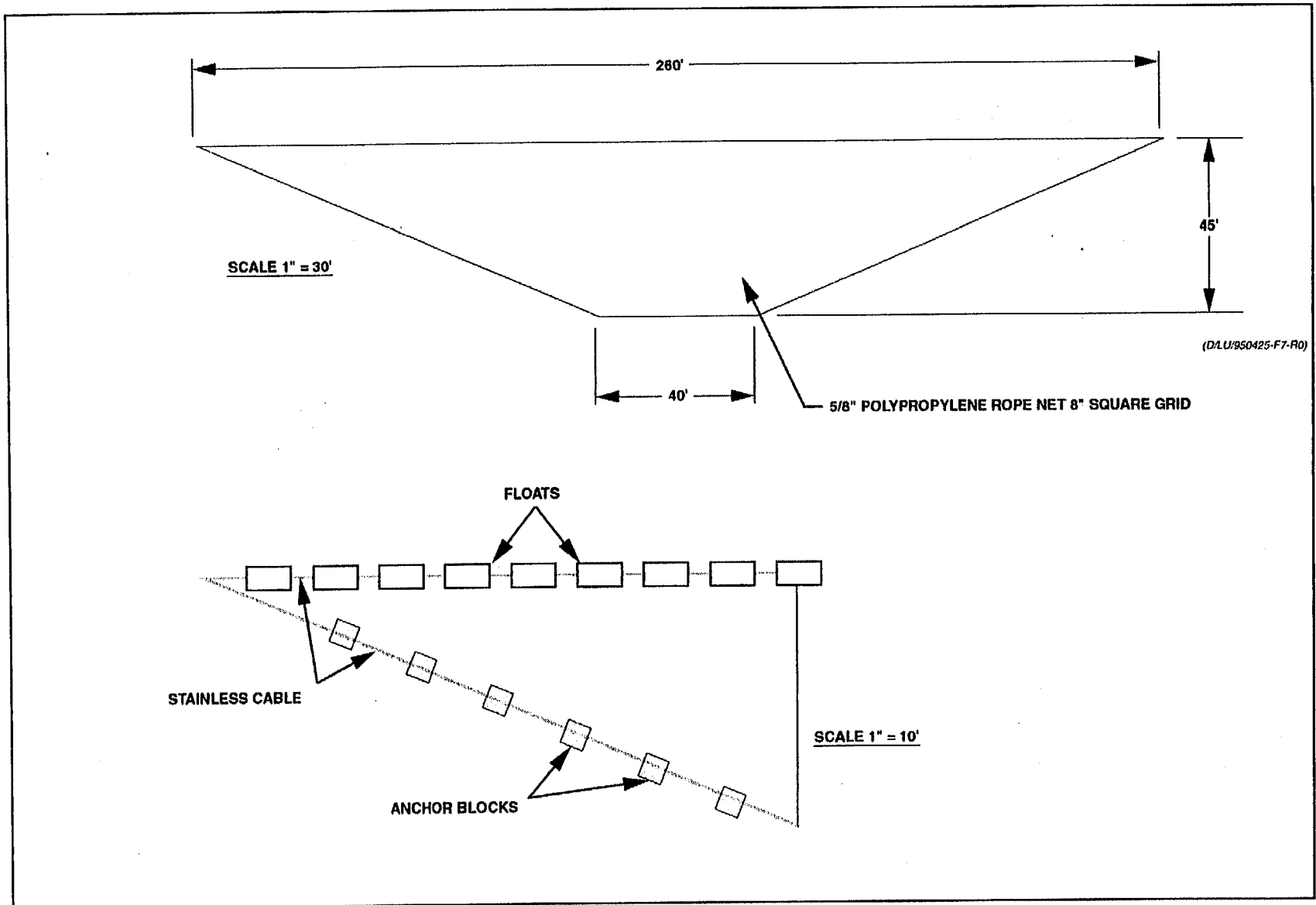


Figure 7. Diagram of the turtle barrier net used in the intake canal of the St. Lucie Plant. This net is located at the A1A bridge (see Figure 2)

**ST. LUCIE PLANT
UNDERWATER INTRUSION
DETECTION SYSTEM (TYPICAL SECTION)**

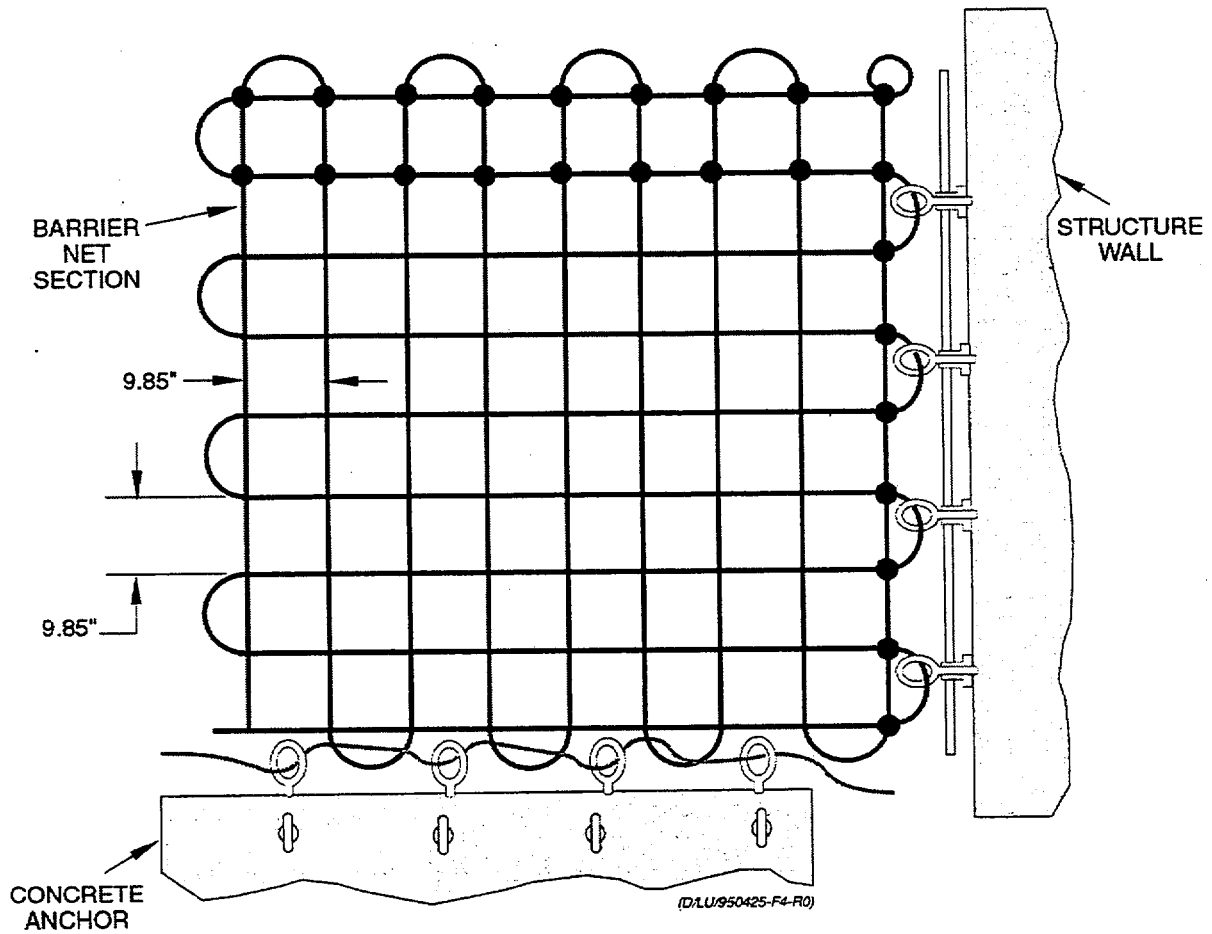


Figure 4. Diagram of the Underwater Intrusion Detection System at the St. Lucie Plant.

ST. LUCIE PLANT INTAKE WELL STRUCTURE (SIDE VIEW)

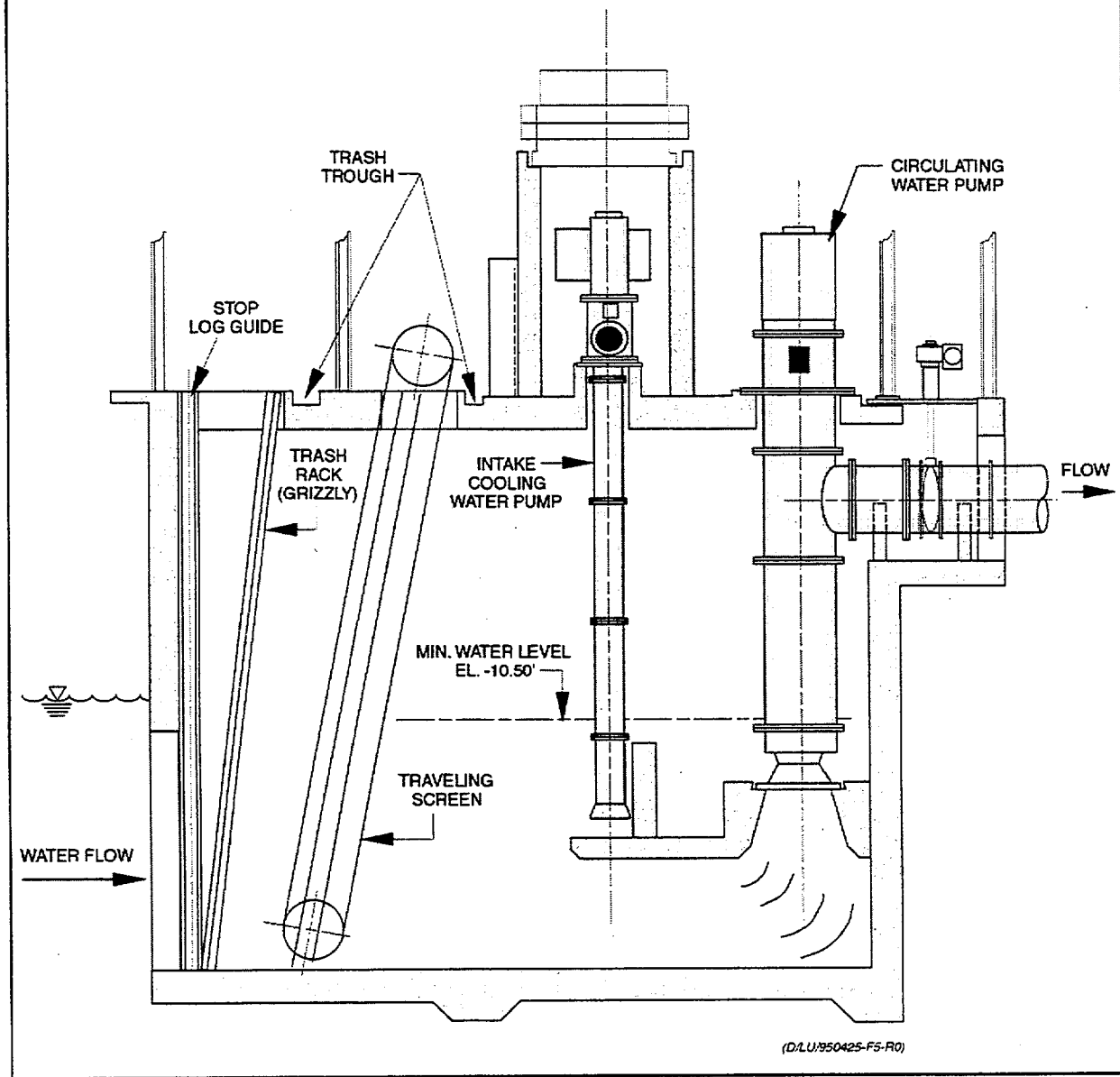
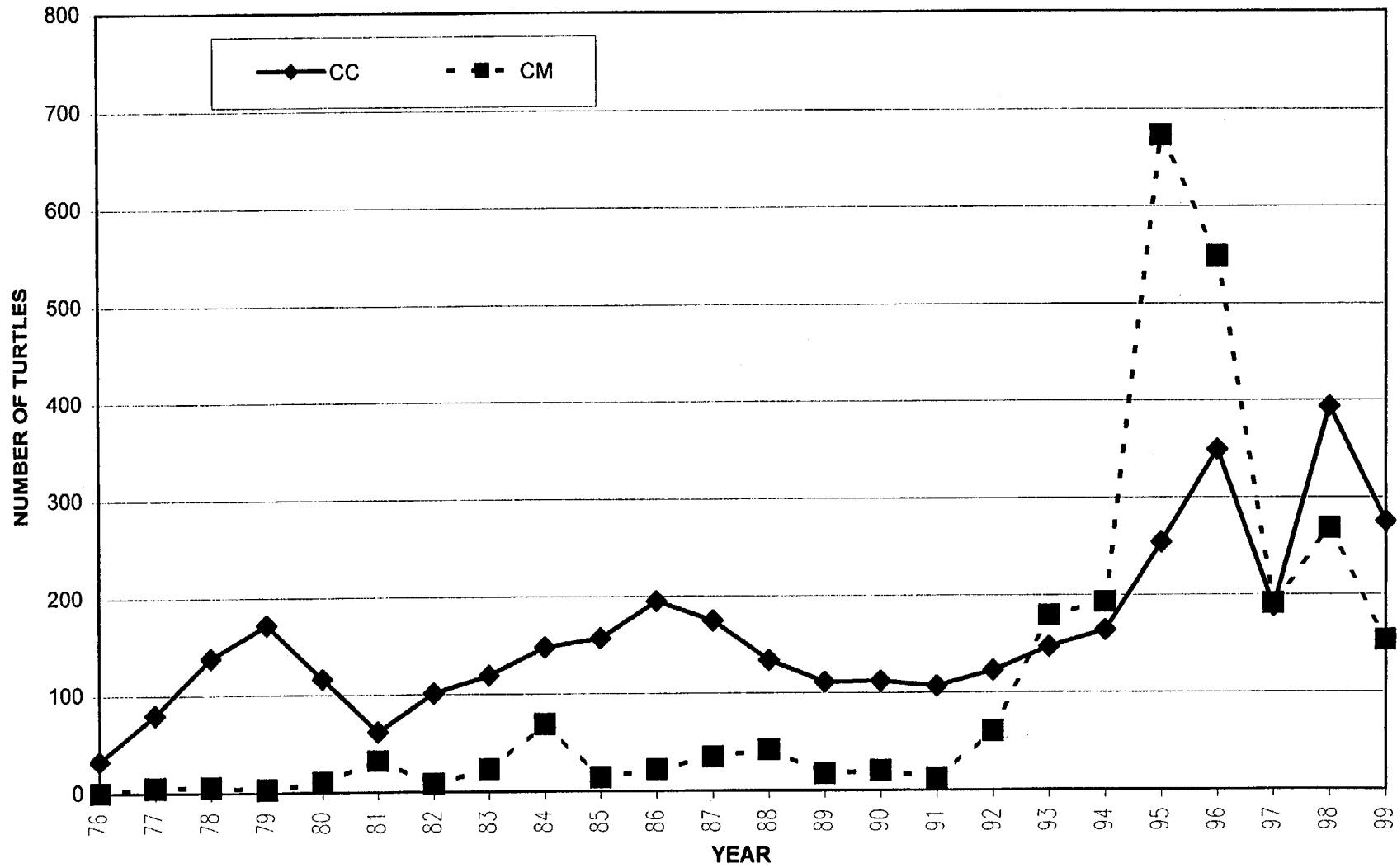


Figure 5. Diagram of an intake well at the St. Lucie Plant.

CANAL CAPTURES ST. LUCIE POWER PLANT, 1976 -1999*



* 1999 captures through October.

SEA TURTLES CAPTURED AT PSL - 1998

MONTH	GREEN	LOGGERHEAD	KEMPS RIDLEY	HAWKSBILL	LEATHERBACK	TOTAL
<i>Mortality Limit as per NMFS</i>	<i>3 or 1.5%, whichever is greater</i>	<i>2 or 1.5%, whichever is greater</i>	<i>1 or 1.5%, whichever is greater</i>	<i>1 or 1.5%, whichever is greater</i>	<i>1 or 1.5%, whichever is greater</i>	
JANUARY	25	36	0	0	0	61
FEBRUARY	58	28	2	0	0	88
MARCH	30	60	0	0	0	90
APRIL	20	47	0	0	0	67
MAY	35	29	0	1	0	65
JUNE	16	26	0	0	1	43
JULY	7	57	0	0	0	64
AUGUST	22	44	0	0	0	66
SEPTEMBER	10	17	0	0	0	27
OCTOBER	27	25 (1)	0	1	0	53 (1)
NOVEMBER	10	10	0	0	0	20
DECEMBER	9	13	0	0	0	22
TOTAL TO DATE	269	392 (1)	2	2	1	666 (1)

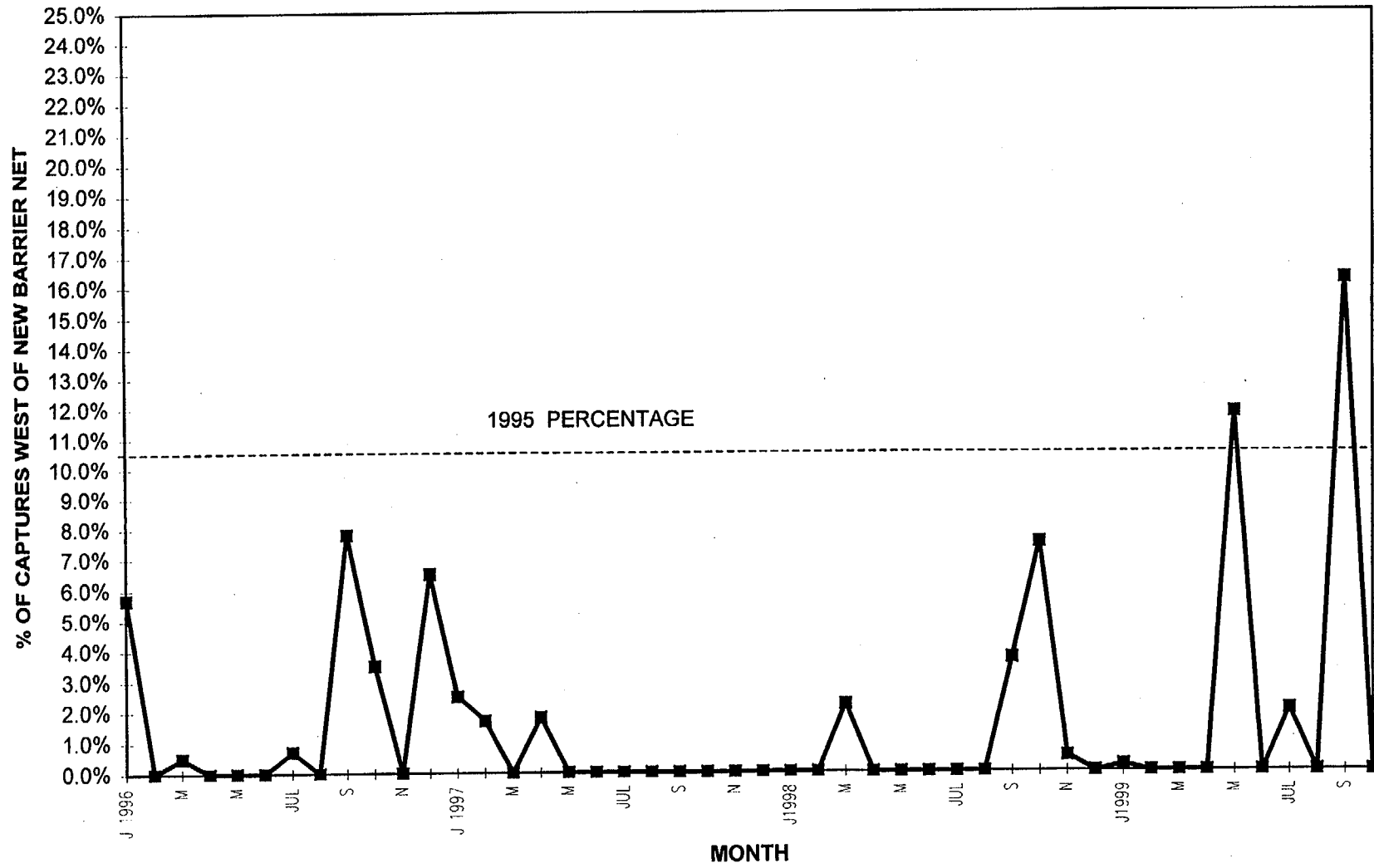
() Mortalities

SEA TURTLES CAPTURED AT PSL - 1999

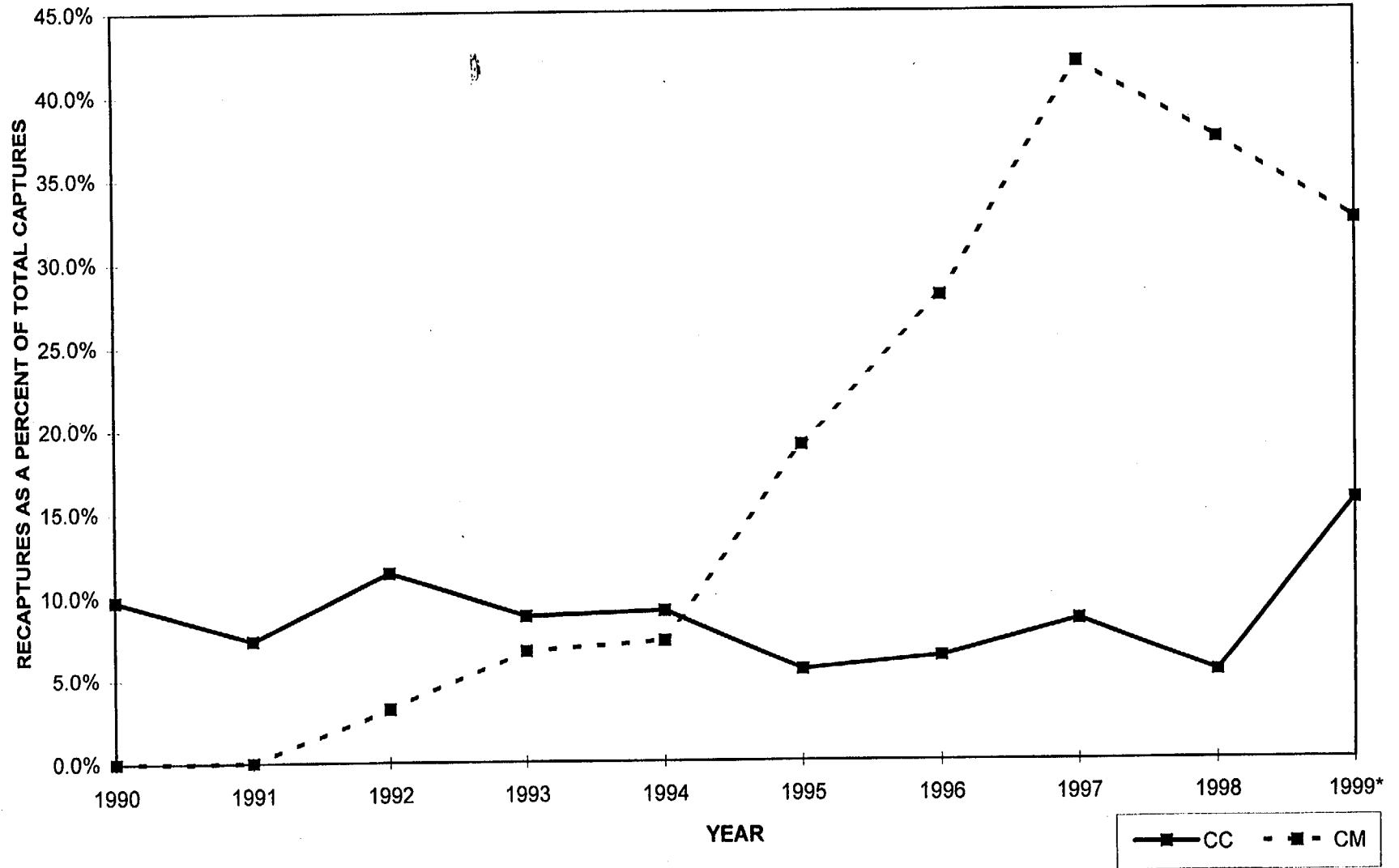
MONTH	GREEN	LOGGERHEAD	KEMPS RIDLEY	HAWKSBILL	LEATHERBACK	TOTAL
<i>Mortality Limit as per NMFS</i>	<i>3 or 1.5%, whichever is greater</i>	<i>2 or 1.5%, whichever is greater</i>	<i>1 or 1.5%, whichever is greater</i>	<i>1 or 1.5%, whichever is greater</i>	<i>1 or 1.5%, whichever is greater</i>	
JANUARY	17	38	0	0	0	55
FEBRUARY	12 (1)	24	0	0	0	36 (1)
MARCH	8	14	0	0	1	23
APRIL	7	26	0	0	0	33
MAY	12	39	0	0	0	51
JUNE	7	29	0	0	0	36
JULY	10	41 (1)	0	0	0	51 (1)
AUGUST	15	25	0	0	0	40
SEPTEMBER	39 (3)	28	0	0	0	67 (3)
OCTOBER	21	11	0	1	0	33
NOVEMBER						
DECEMBER						
TOTAL TO DATE	148 (4)	275 (1)	0	1	1	425 (5)

() Mortalities

BARRIER NET PERFORMANCE

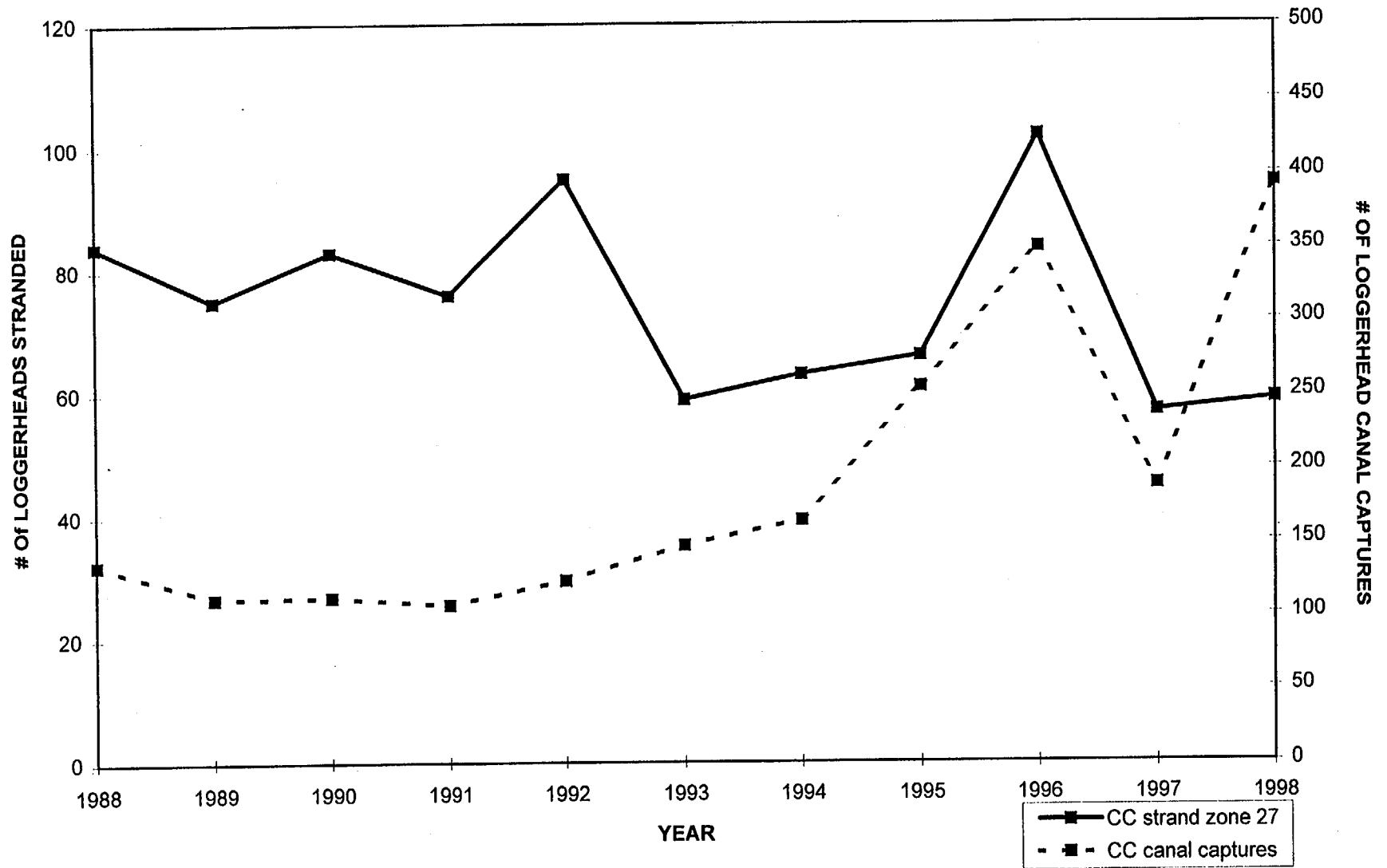


PERCENT RECAPTURES, INTAKE CANAL 1990 -1999*



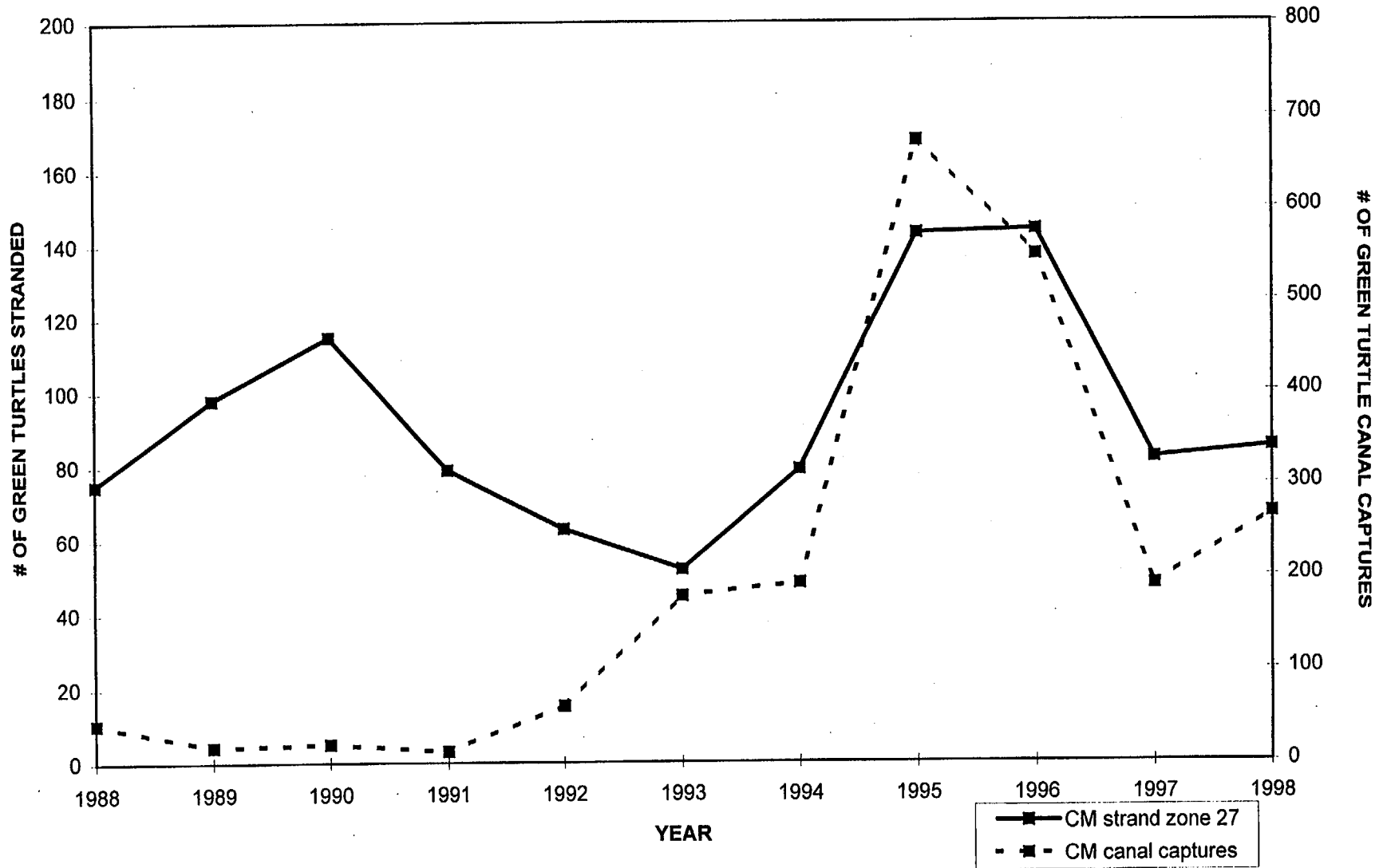
*1999 data through October.

LOGGERHEAD STRANDING* AND CANAL CAPTURE DATA 1988 - 1998



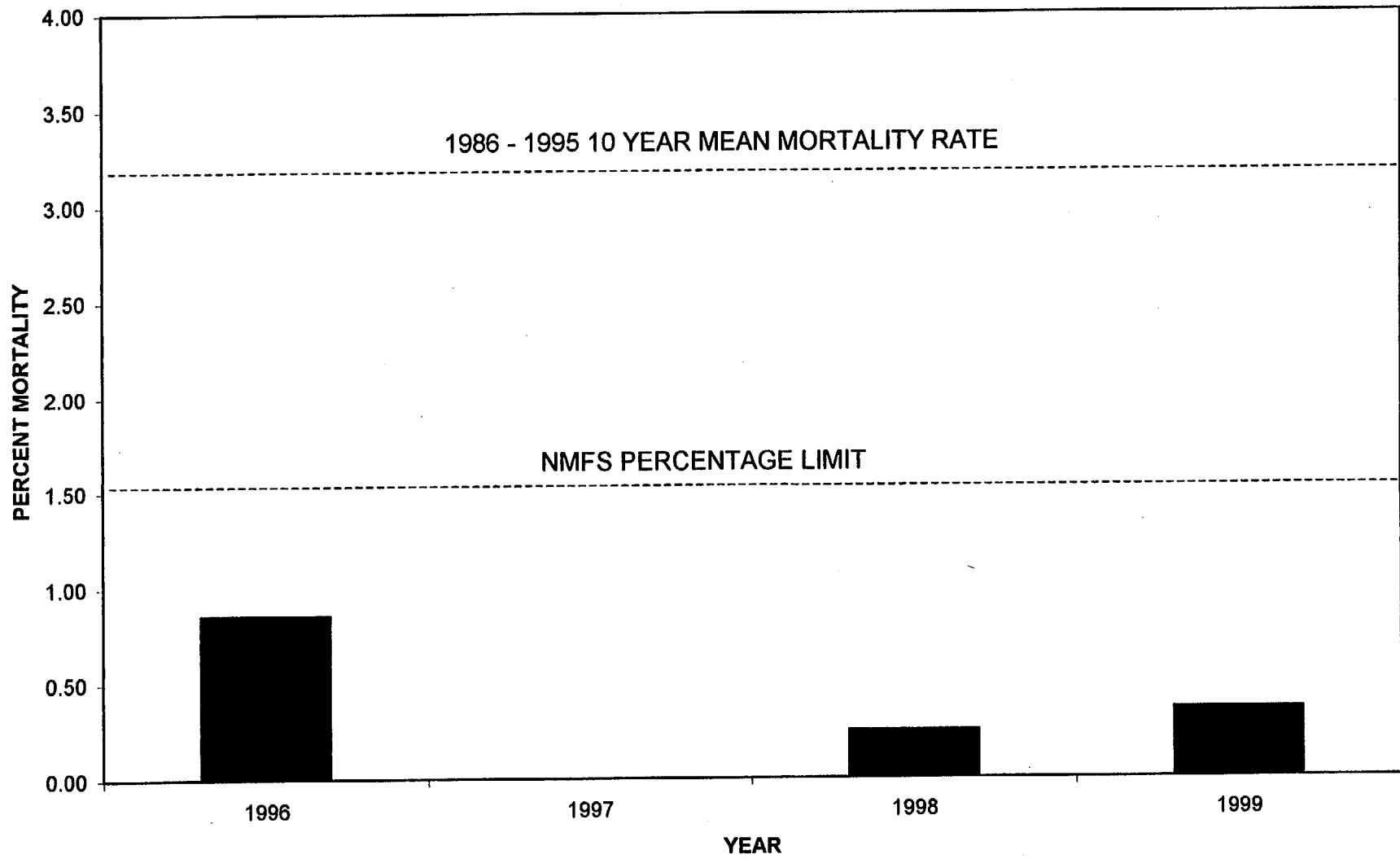
*Florida Fish and Wildlife Conservation Commission, Florida Marine Research Institute, Sea Turtle Stranding and Salvage Network Database, October 25, 1999.

GREEN TURTLE STRANDING* AND CANAL CAPTURE DATA 1988 - 1998



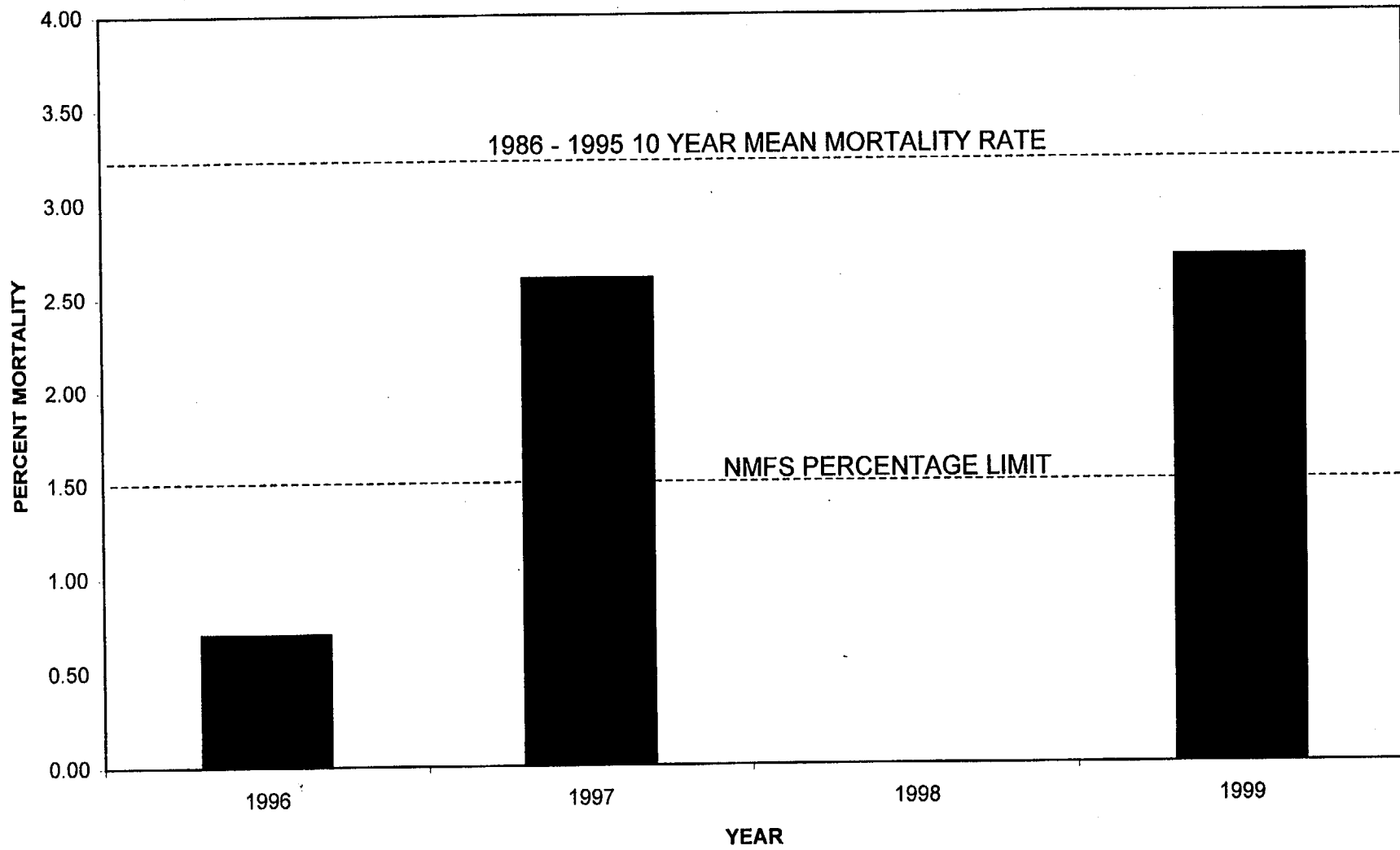
*Florida Fish and Wildlife Conservation Commission, Florida Marine Research Institute, Sea Turtle Stranding and Salvage Network Database, October 25, 1999.

LOGGERHEAD TURTLE MORTALITY RATES, 1996 - 1999*



* 1999 through October
OVERALL MORTALITY RATE = 0.415%

GREEN TURTLE MORTALITY RATES, 1996 - 1999*



* 1999 through October
OVERALL MORTALITY RATE = 1.1%

STATUS OF RELATED SEA TURTLE PROTECTION ACTIVITIES

1. Turtle Stranding and Salvage Network:

FPL responded to 20 sea turtle strandings in 1998 and 28 strandings to date in 1999 from the local area.

2. Public Service Turtle Walks:

FPL conducted a total of 52 public service turtle walks during the 1998 and 1999 nesting seasons. A total of approximately 2,200 members of the public attended these events.

3. Study to Elucidate the Effect of Various Factors on Turtle
Entrapment:

The study scope approved by NMFS is currently being conducted by Ecological Associates, Inc. The first progress report was completed October 11, 1999. Final report is due March 1, 2000.

The letter should also request a re-initiation of a consultation on sea turtles, based on information to be provided in the March 2000 FPL environmental study, required by Item no. 7 of the terms and conditions of the NMFS Biological Opinion.

Original signed by:
William C. Gleaves, Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-335 and 50-389

Enclosures: 1. Attendance Sheet
2. FPL handout, "Sea Turtle Meeting,
November 10, 1999"

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