March 24, 1983

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Docket No. 50-219
LS05-83-03-042

Mr. P. B. Fiedler
Vice President and Director
Oyster Creek Nuclear Generating Station
Post Office Box 388
Forked River, New Jersey 08731

Dear Mr. Fiedler:

SUBJECT: DELETION OF WATER QUALITY TECHNICAL SPECIFICATIONS

Oyster Creek Nuclear Generating Station

The Commission has issued the enclosed Amendment No. 66 to Provisional Operating License No. DPR-16 for the Oyster Creek Nuclear Generating Station. This amendment consists of changes to the Technical Specifications in response to your application dated February 11, 1983.

The amendment deletes Section 2.0, 3.0 and 4.0 of the Appendix B Environmental Technical Specifications (ETS) which pertain to the non-radiological water quality-related requirements, as required by the Federal Water Pollution Control Act Amendments of 1972, and renumbers those parts of existing Section 4.0 containing technical specifications imposed as part of an agreement among the licensee, NRC staff and intervenors in the FTOL proceeding to deal with intervenor concerns regarding marine borers. The latter technical specifications, approved by the Atomic Safety and Licensing Board and affirmed by the Appeal Board in the FTOL proceeding, are not being deleted from the license.

Your basis for the requested deletion of water quality limits and monitoring programs is that these aquatic requirements are now under the jurisdiction of the U.S. Environmental Protection Agency (EPA) as established by the Federal Water Pollution Control Act Amendments of 1972. Therefore, water quality conditions in existing reactor operating licenses should be removed as a matter of law where the licensee holds, as you do, an effective National Pollutant Discharge Elimination System (NPDES) permit.

We concur in the deletion of the aquatic requirements and will rely on the NPDES permit system which is administered by EPA for regulation and protection of the aquatic environment. However, the NRC staff still wishes to remain informed about any changes in your NPDES permit and any

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violations of this permit. Accordingly, as discussed with your staff, you have agreed to provide NRC with a copy of any changes to the NPDES discharge permit and any permit violations requiring notification to the permitting agency at the time this information is reported to or received from the permitting agency. This information is to be submitted to the appropriate Regional Administrator with a copy to the Director, Office of Nuclear Reactor Regulation.

Please confirm this commitment in writing within 30 days of receipt of this letter.

We have determined that the deletion of these water quality requirements is a ministerial action required as a matter of law, and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR §51.5(d)(4) that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Since the amendment applies only to deletion of water quality requirements, we have concluded that: (1) the amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, does not involve a significant reduction in a margin of safety, and therefore, does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

A copy of the Notice of Issuance is also enclosed.

Sincerely,

Original signed by

Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing

Enclosures:
1. Amendment No. 66 to License No. DPR-16
2. Notice of Issuance

cc w/enclosures:
See next page

*SEE PREVIOUS TISSUE FOR CONCURRENCE

OFFICE	DL: ORB #5*	DL: ORB #5	OELD*	DL: ORB #5*	DL: ORB #2*	DL: AD/MQE*	DL: AD/SA
SURNAME	HSmith:cc	JLombardo	RGran	DCrutchfield	KEccleston	WJohnston	FMiraglia
DATE	2/17/83	3/22/83	3/14/83	3/24/83	2/28/83	3/2/83	3/24/83

Please confirm this commitment in writing within 30 days of receipt of this letter.

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Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
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3/10/83 - Amend & FR Notice only

OFFICE	DL: ORB #5*	DL: ORB #5*	OELD	DL: ORB #5	DL: ORB #2*	DL: AD/MQE*	DL: AD/SA
SURNAME	HSmith:cc	JLombardo	J.R.GRAY	DCrutchfield	KEccleston	WJohnston	FMiraglia
DATE	2/17/83	2/18/83	3/14/83	3/22/83	2/28/83	3/2/83	

NRC FORM 318 (10-80) NRCM 0240 OFFICIAL RECORD COPY USGPO: 1981—335-960

We have determined that the deletion of these water quality requirements is a ministerial action required as a matter of law, and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR §51.5(d)(4) that an environmental impact statement or, negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

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A copy of the Notice of Issuance is also enclosed.

Sincerely,

Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing

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1. Amendment No. to
   License No. DPR-16
2. Notice of Issuance

cc w/enclosure:
See next page

*SEE PREVIOUS TISSUE FOR CONCURRENCE

OFFICE	DL: ORB #5*	DL: ORB #5*	OELD	DL: ORB #2 KTF	DL: ORB #5	DL: AD/SA	DE [illegible]
SURNAME	HSmith:cc	JLombardo		KEccleston	DCrutchfield	FMiraglia	W JOHNSTON
DATE	2/17/83	2/18/83	/ /83	2/28/83	/ /83	/ /83	3/2/83

NRC FORM 318 (10-80) NRCM 0240 OFFICIAL RECORD COPY USGPO: 1981—335-960

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A copy of the Notice of Issuance is also enclosed.

this needs to go back

Sincerely,

Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing

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1. Amendment No. to License No. DPR-16
2. Notice of Issuance

cc w/enclosures:
See next page

OFFICE	DL: ORB #5	DL: ORB #5	OELD	DL :ORB #5	DL: AD/SA		
SURNAME	HSmith:cc	JLombardo		DCrutchfield	FMiraglia		
DATE	2/17/83	2/18/83	/83	/83	/83		

cc
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J. B. Lieberman, Esquire
Berlack, Israels & Lieberman
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Deputy Attorney General
State of New Jersey
Department of Law and Public Safety
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Trenton, New Jersey 08625

Mayor
Lacey Township
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Forked River, New Jersey 08731

U. S. Environmental Protection
Agency
Region II Office
ATTN: Regional Radiation Representative
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New York, New York 10007

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Resident Inspector
c/o U. S. NRC
Post Office Box 445
Forked River, New Jersey 08731

Commissioner
New Jersey Department of Energy
101 Commerce Street
Newark, New Jersey 07102

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

GPU NUCLEAR CORPORATION

AND

JERSEY CENTRAL POWER AND LIGHT COMPANY

OYSTER CREEK NUCLEAR GENERATING STATION

DOCKET NO. 50-219

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 66
License No. DPR-16

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by GPU Nuclear Corporation and Jersey Central Power and Light Company (the licensees) dated February 11, 1983, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C(2) of Provisional Operating License No. DPR-16 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 66, are hereby incorporated in the license.. GPU Nuclear Corporation shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 24, 1983

ATTACHMENT TO LICENSE AMENDMENT NO. 66

PROVISIONAL OPERATING LICENSE NO. DPR-16

DOCKET NO. 50-219

Replace the following pages of the Appendix B Technical Specifications with the enclosed pages as indicated. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

REMOVE	INSERT
Title Page	Title Page
i - iv	i - iv
v	--
1-1 through 1-15	1-1 through 1-5
2-1 through 2-19	2-1 through 2-13
3-1 through 3-29	3-1 through 3-12
4-1 through 4-18	4-1 through 4-10

APPENDIX B

TO FULL-TERM OPERATING LICENSE

ENVIRONMENTAL TECHNICAL SPECIFICATIONS

FOR

OYSTER CREEK NUCLEAR GENERATING STATION

DOCKET NO. 50-219

OCEAN COUNTY, NEW JERSEY

JERSEY CENTRAL POWER & LIGHT COMPANY

GPU NUCLEAR CORPORATION

November, 1978*

*Issued to the ASLB on this date; issued by License Amendment No. 37, June 6, 1979.

TABLE OF CONTENTS

Amendment No. ~~56~~, 66

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

The bases, which provide technical support for the OCETS, are included for informational purposes in order to clarify the intent of the specification. These bases are not part of the OCETS nor do they constitute limitations or requirements on the licensee.

1.0 DEFINITIONS

Accuracy

Refers to the deviation of a result obtained by a particular method from the value accepted as true.

Actual Damage

The damage incurred by a wooden test panel by marine borers burrowing in or on the submerged device.

Annually

Annually is once per calendar year at intervals of twelve calendar months plus or minus 30 days.

Calibration

An instrument or device calibration shall be the adjustment, as necessary, of the output such that it responds, with the necessary range and accuracy, to known values of the parameter which the instrument sensor, or device monitors. The calibration shall encompass all aspects of the circuit, including the sensor, indicating control features, alarm, and/or trip functions.

Creosoted Panels

Creosoted Panels are wooden test panels that have been pressure treated with creosote to 20 pounds per square inch as a chemical deterrent to woodborer attack.

Discharge Canal

The discharge canal is the body of water that flows between the discharge outlet and Barnegat Bay via Oyster Creek.

Gonadal Ripeness

The state of readiness to release viable gametes as determined by histological analysis of the sexual organs of a woodborer.

Isopod Borers

See definition of marine borer.

Marine Borer

Saltwater organisms that, as part of their natural life cycle, spend their adult stage living and burrowing into wood. In the Oyster Creek study area there are molluscan borers and isopod borers. Molluscan borers are members of the Phylum Mollusca, Class Pelecypoda, which is comprised of bivalves such as the clam. They are commonly called shipworms. Isopod borers are members of the Phylum Arthropoda, Class Crustacea. These borers are small, appear as shrimp-like organisms, and are commonly called gribbles.

Monthly

Monthly is once every calendar month at intervals of 30 days, plus or minus 6 days.

Potential Damage

By the use of wooden test panels and a semi-quantitative assessment of the actual damage done to them by woodborers, an estimate of the damage to an actual wooden structure of similar characteristics (treated or untreated) that is near the test panel location.

Quarterly

Quarterly is once during each sucessive three month period of the calendar year, counting from January 1, at intervals of 13 weeks plus or minus 14 days.

Reproductive State

See the definition of gonadal ripeness.

Survival Rate

For a particular species, the survival rate is the percentage of live individuals out of the total number of individuals of that species entrained or impinged.

Thermal Plume

The thermal plume is the portion of the discharge canal, Oyster Creek, and Barnegat Bay with temperature elevated 0.8°C (1.5°F) over ambient due to the flow from the Oyster Creek Nuclear Generating Station.

Treated Wood

See the definition for creosoted panels.

Untreated Wood

Wood, usually used for piling or bulkheading in the marine environment, that has not been chemically processed or treated to resist woodborer attack.

Woodborer

See definition of marine borer.

Woodborer Settling

Settling refers to the behavior of a woodborer larva as it matures into an adult. This behavior is characterized by the attachment onto a piece of wood (the new home for the organism) from its open water larval habitat. This attachment, and the subsequent initial boring activity into the wood, is termed settling.

Wooden Test Panel

Lengths of soft wood planking (usually treated or untreated pine) that are placed in strategic station locations in a study area for monitoring purposes. Monitoring involves checking periodically for attack by woodborers.

2.0 ENVIRONMENTAL MONITORING

2.1 Nonradiological Monitoring

Table 2-1 provides a summary of aquatic nonradiological monitoring programs. For the purposes of Section 2.1, meteorological data include, as a minimum, the following information: air temperature, wind direction, and an estimate of wind speed.

2.1.1 Biotic - Aquatic

A. Impingement of Organisms

(1) Conventional Traveling Screens

Objective

The objective of the impingement program, prior to the installation of the fish return system and the sampling pool, is to determine the species composition and abundance of fin and shellfish which become impinged on the circulating water intake screens.

TABLE 2-1 OCETS - NONRADIOLOGICAL SURVEILLANCE

Program	Parameter	Frequency	Gear	Sampling Station	Water Quality
A. Impingement of organisms					
Before sampling pool installation	Species composition and abundance	Two 12 hr. periods a week	Pit sampler	Screen wash pit	T, Sal, pH, DO, meteorology station flow and heat rejection
After sampling pool installation	Species composition and abundance; Condition (LDD) of sample of impinged organisms	Eight 3-minutes samples a week or fourteen 3 minutes samples a week depending on screen rotation	Dip net	Pool	Same
B. Winter Kill	species composition and abundance	When intake water temperature below 8.5°C (47.3°F)	visual Inspection	Shores of discharge canal and lower reaches of Oyster Creek	continuous temperature record throughout the 24-hour period after reaching cold shutdown

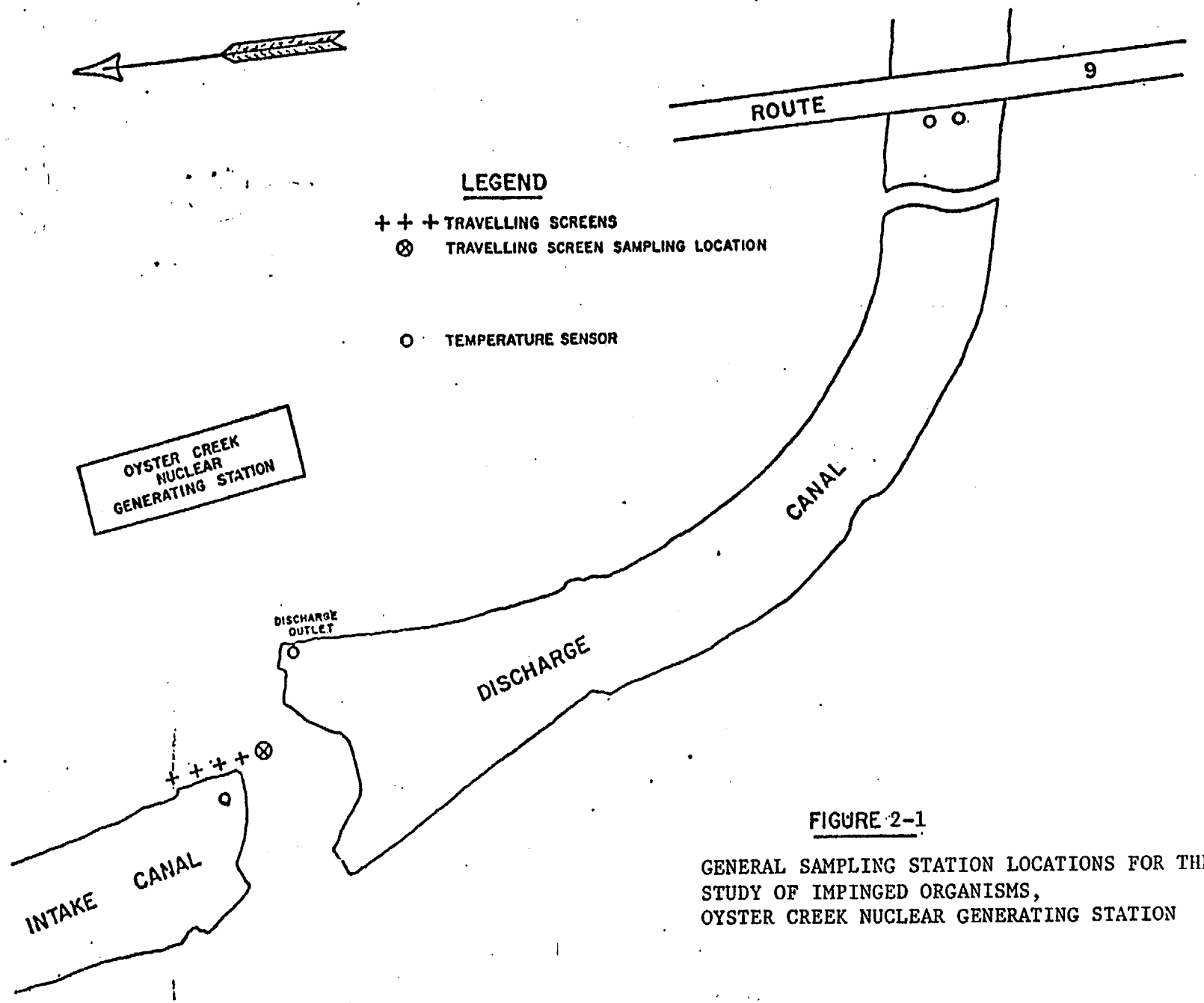
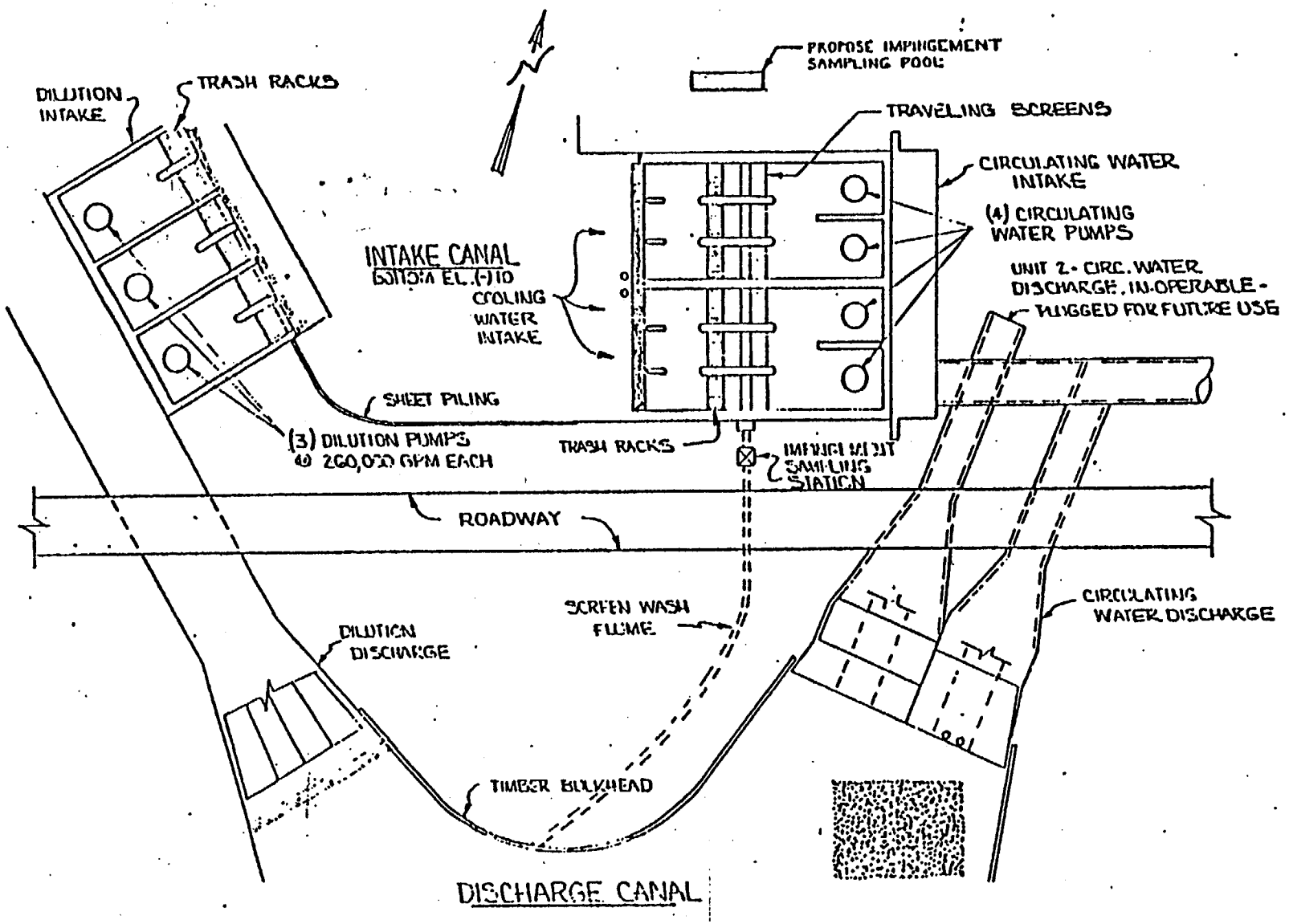


FIGURE 2-1

GENERAL SAMPLING STATION LOCATIONS FOR THE STUDY OF IMPINGED ORGANISMS, OYSTER CREEK NUCLEAR GENERATING STATION



LEGEND

X IMPINGEMENT SAMPLING AREA

o TEMPERATURE PROBE LOCATIONS

FIGURE 2-2

APPROXIMATE SAMPLING STATION LOCATIONS FOR THE STUDY OF IMPINGED ORGANISMS AT OYSTER CREEK NUCLEAR GENERATING STATION

Specifications

Species composition and abundance of fin and shellfish impinged on the circulating water intake screens shall be determined for two 12-hour periods per week at least one of which shall include the period of greatest anticipated impingement (2 hours after sunset). Exact time of the sampling will vary seasonally; however, a minimum of two 12-hour samples per week shall be collected. When algae or detrital load in the intake water cause frequent unscheduled screen washes, subsampling within sampling periods is permitted.

For each period, records shall be kept of the number of screen washes which occurred and the number sampled. Total number and total weight (or estimated total number and estimated total weight if subsampling is performed) shall be determined for each taxa for each sampling period.

Water quality measurements (temperature, salinity, pH, and dissolved oxygen) of the intake water shall be taken during each sampling period. Sampling equipment shall conform to those presented in Section 3.1.4. Meteorological, and station cooling water flow and heat rejection data will be recorded for each sampling period.

Weekly and annual estimates of the number and weight of impinged organisms shall be calculated and compared with those of previous years. The significance of any differences will be discussed.

(2) Fish Return System

Objective

The objective of the impingement monitoring program is to (1) determine the species composition and (2) quantify the numbers of fin and shellfish which become impinged on the circulating water intake screens; as well as (3) quantify survival rates of fin and shellfish after impingement on the circulating water intake screens.

Specification - Continuous Screen Operation

The impingement monitoring program described in this specification shall be initiated upon: (1) completion of the fish return system and the sampling pool and (2) written notification to the NRC one month prior to the anticipated change to the new sampling procedure. This specification only applies during intentional continuous slow speed rotation of all circulating water intake traveling screens.

Species composition and abundance of fin and shellfish shall be determined and recorded from at least four three-minute screen wash samples during each of two 12-hour sampling periods a week at least one of which shall include the period of greatest anticipated impingement (2 hours after sunset). Condition shall be determined after at least a 30-minute wait and based on the following criteria:

Live: Swimming vigorously, no apparent orientation problems, behavior normal.

Damaged: Struggling or swimming on side, apparent orientation problems, behavior abnormal or indication of severe abrasions or lacerations.

Dead: No vital life signs, no body or opercular movement, no response to gentle probing.

The following shall be reported by species for each 12 hour sampling period: total number, catch weight, and percent survival. Estimates of the total number and total weight of each species impinged per week shall be determined.

Water quality (temperature, salinity, pH, and dissolved oxygen) of the intake water shall be taken during each 3 minute sample. Sampling equipment shall conform to those presented in Section 3.1.4. Meteorological, and station

cooling water flow and heat rejection data shall be recorded before and after each 12 hour sampling period.

Data analysis shall assess statistical significance of difference in data due to date, time of day, water quality, meteorological conditions, station cooling water flow, and heat rejection.

Specification - Automatic or Intermittent Screen Operation

The impingement monitoring program described in this specification shall be initiated upon: (1) completion of the fish return system and the sampling pool and (2) written notification to the NRC one month prior to the anticipated change to the new sampling procedure. Monitoring, as prescribed by this specification, shall be conducted if the circulating water intake screens are being operated intermittently (either tripped by differential pressure across the screens, a timer, or operated manually).

During each of the two 12-hour sampling periods per week, one of which shall include the period of greatest anticipated impingement (2 hours after sunset), at least

seven three-minute screen wash samples shall be taken. Each of the seven samples shall be taken by diverting a minimum of three minutes flow of screen wash water to the holding chamber. All fin and shellfishes collected for each sample shall be identified to the lowest practical taxanomic level and the number of specimens recorded for each species. Condition shall be determined from the first sample after at least a 30-minute wait and based on the following criteria:

Live: Swimming vigorously no apparent orientation problems, behavior normal.

Damaged: Struggling or swimming on side, apparent orientation problems, behavior abnormal or indication of severe abrasions or lacerations.

Dead: No vital life signs, no body or opercular movement, no response to gentle probing.

Survival by species shall be calculated from each 3 minute sample. Number and catch weight by species shall be determined from the sample by extrapolating the time between screen washes and used to estimate total number and total weight by species impinged per week.

Water quality (temperature, salinity, pH, and dissolved oxygen) of the intake water shall be taken during each 3

minute sample. Sampling equipment shall conform to those presented in Section 3.1.4. Meteorological, station cooling water flow and heat rejection data shall be recorded before and after each 12 hour sampling period.

Data analysis shall assess statistical significance of difference in data due to date, time of day, water quality, meteorological conditions, station cooling water flow, and heat rejection.

Reporting Requirements

The results of this program shall be submitted in February of each year covering 12 months of sampling and four months of data analysis.

Bases

The magnitude of loss and the potential impact to the aquatic ecosystem in the vicinity of the power station resulting from impingement of fin and shellfish on the traveling screens is not precisely known nor is it determinable on a theoretical basis alone.

The Final Environmental Statement for the OCGS dated December 1974 identified impingement of fin and shellfish as a potentially significant environmental impact. Sampling of fin and shellfish collected on the traveling screens will ensure that a reasonable estimate of the number of organisms impinged on the intake structure will be obtained.

OCGS is modifying the structural and operational method of returning aquatic organisms to the discharge canal. When this system is operational, data on species composition, abundance and biomass, and condition (live, dead or damaged) shall be collected to determine the impingement impact reduction associated with the modifications.

B. Fish Kill Monitoring Program

Objective

The objective of this program is to determine the species composition, abundance and distribution of station-induced fish kills due to winter shutdowns.

Specifications

After each Station shutdown, when the intake water temperature is below 8.5°C (47.3°F), visual inspections for

fish shall be made along the shores of the discharge canal and the lower reaches of Oyster Creek within 24 hours of the initiation of the shutdown in accordance with the procedures prepared by the licensee per Section 4.4. A continuous temperature record shall be maintained through the 24-hour period after reaching cold shutdown.

Reporting Requirements

For planned shutdowns with the temperature of the intake water below 8.5°C (47.3°F) the NRC Region I office will be notified at least 24 hours in advance of such shutdown. This notification shall not be given for unplanned, automatic, or manual station trips.

If the shutdown results in greater than 100 fish killed and/or stressed, this event shall be reported to the NRC in accordance with Section 4.5,2.

The results of this program shall be submitted in February of each year covering the preceding 12 months of sampling and four months of data analysis.

Bases

The Final Environmental Statement for the Oyster Creek Nuclear Generating Station documents cold shock fish kills

associated with rapid temperature decreases caused by plant shutdown during the winter.

Station shutdown during winter months are, on occasion, unavoidable. Due to the physical configuration of the station and the discharge canal, some mortality to organisms will undoubtedly be experienced during winter shutdowns.

Mortality information associated with a winter shutdown, when combined with the results of the impingement monitoring, will provide the empirical bases on which to judge the impact of OCGS operations on Barnegat Bay, Oyster Creek and Forked River.

3.0 SPECIAL MONITORING AND STUDY ACTIVITIES

3.1 Woodborer Monitoring Program

3.1.1 Introduction

Objective

The primary objective of this program is to determine the contribution of Station operation to the marine borer-caused activity in Oyster Creek, Forked River, Barnegat Bay and adjacent influent streams. The activity will be related to the potential damage to structural wood. The secondary objective is to determine whether any remaining resident marine borer population in the Oyster Creek discharge canal is contributing significantly to marine borer-caused damage in Barnegat Bay, especially after removal of the preponderance of the untreated wood in the discharge canal, which harbored a woodborer population.

Most of the nonstructural, untreated wood in the discharge canal has been made inaccessible to marine borer settlement by removal or burial. Most of the structural, untreated wood has been removed. This should have a direct effect on the woodborer population by removing adult shipworms which can release larvae and removing suitable habitat for larval settlement. The effects of the wood removal on the woodborer population shall be evaluated during the program.

The program shall attempt to establish any incremental increase in the rate of destruction to wood in Oyster Creek, Forked River, Barnegat Bay and adjacent influent streams due to the operation of the station over that rate of wood destruction which occurs and has occurred in the Bay historically. It must be recognized that, since the wood test panel method is being used, the potential for damage to "real" structures and the actual damage to the test panels will be reported. This method, pioneered by the W. F. Clapp Labs., has long been used as an index to woodborer damage.

Approach

The Oyster Creek Woodborer Monitoring Program is comprised of three allied studies: wooden exposure panel study, woodborer developmental (gonadal ripeness) study, and the water quality study. Data from all three studies shall be analyzed together. The data shall be subjected to statistical and graphic analysis. Methods of analysis appropriate for data summary and hypothesis testing shall be employed.

The data obtained from the wooden exposure panels, woodborer developmental and water quality studies will provide information on the amount of potential destruction caused by the woodborers released and surviving in specific areas of Barnegat Bay in relation to the plant operation.

Action

The quarterly reports shall be sent to the NRC within 75 days following each quarter of the study and the annual report be submitted within 150 days of the end of the calendar year.

3.1.2 Wooden Exposure Panel Study

Objective

To determine the following: a) presence of borers, b) survival of borers, c) quantity and size of borers, d) species identification of borers, e) sexual identification of borers, and f) amount of destruction to the wooden panel. The study will include molluscan and isopod borers.

Requirement

Exposure panel arrays have been set out at 17 stations (see Figure 3-1). The sites are located near the generating station, within the reaches of the thermal plume, and at points that are only influenced by normal changes in temperature and salinity (Table 3-1). The last mentioned areas shall serve as control sites. All arrays have been placed near existing wooden structures and are completely accessible from land.

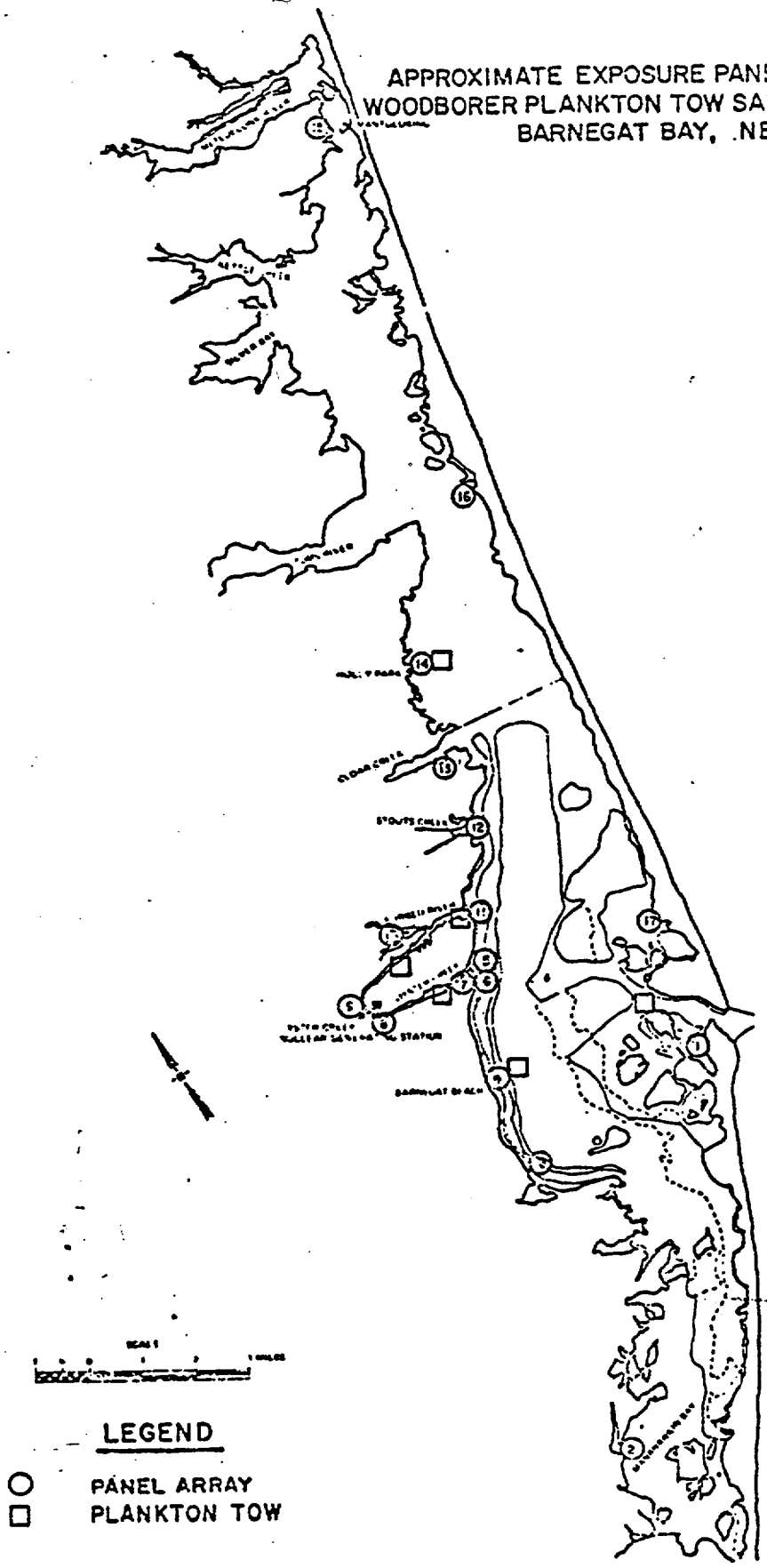


FIGURE 3-1

Amendment No. 66

TABLE 3-1

EXPOSURE PANEL ARRAYS
BARNEGAT BAY, NEW JERSEY

Site No.	Site*	Structure to be Used for Suspension of Rack**	Approximate Latitude and Longitude
1	Barnegat Coast Guard Station Barnegat Inlet	Finger Pier	Lat. 39° 45.8'N Lo. 74° 06.5'W
2	Ashton Marina 1450 Bay Ave. Manahawkin, N.J.	Bulkhead	Lat. 39° 40'N Lo. 74° 13'W
3	Iggie's Marina East Bay Ave. Barnegat, N.J.	Bulkhead	Lat. 39° 45'N Lo. 74° 12.5'W
4	Liberty Harbor Marina Washington Ave. Waretown, N.J.	Bulkhead	Lat. 39° 47'N Lo. 74° 11'W
5	Mouth of Oyster Creek Lagoon (Compass Road)	Pier	Lat. 39° 48.5'N Lo. 74° 10.3'W
6	Oyster Creek #1 Lagoon (inshore end) Private Residence	Pier	Lat. 39° 48.5'N Lo. 74° 10.9'W
7	Barnegat Marine Service Center Dock Avenue Sands Pt. Harbor Waretown, N.J.	End of Dock	Lat. 39° 48.5'N No. 74° 11.1'W
8	Oyster Creek R.R. Bridge Discharge Canal	Cross Member R.R. Bridge	Lat. 39° 48.7'N Lo. 74° 12'W

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TABLE 3-1 - Continued

Site No.	Site*	Structure to be Used for Suspension of Rack**	Approximate Latitude and Longitude
9	Forked River South Branch Intake Canal	Cross Member R.R. Bridge	Lat. 39° 49.2'N Lo. 74° 12.2'W
10	Teds Marina Bay Avenue Forked River	Pier	Lat. 39° 50.1'N Lo. 74° 11.6'W
11	Forked River (near mouth) 1413 River View Dr. Private Residence	Bulkhead	Lat. 39° 49.7'N Lo. 74° 10'W
12	Stouts Creek 1273 Capstan Dr. Private Residence	Pier	Lat. 39° 50.5'N Lo. 74° 08.8'W
13	Rocknak's Yacht Basin Seaview Avenue Lanoka Harbor, N.J.	End of Pier	Lat. 39° 52'N Lo. 74° 09'W
14	Dicks Landing Island Drive Bayville, N.J. (Holly Park)	Pier	Lat. 39° 54'N Lo. 74° 08.1'W
15	Winter Yacht Basin Inc., Rt. 528 at Mantoloking Bridge W. Mantoloking, N.J.	Pier	Lat. 40° 02.5'N Lo. 74° 03.5'W
16	Berkely Yacnt Basin J. Street Seaside Park, N.J.	Pier	Lat. 39° 55.9'N Lo. 74° 04.9'W

Site No.	Site*	Structure to be Used for Suspension of Rack**	Approximate Latitude and Longitude
17	Island Beach State Park	Pier	Lat. 39° 47.1'N Lo. 74° 05.9'W

* The sampling locations are permanent unless vandalism or revocation of permission occurs. Under such an occurrence, a new station will be utilized as close as possible to the original.

**All exposure panel racks will be suspended where there is a minimum water depth at mean low water of at least three feet. Racks to be hung with nylon line from existing structures so the bottom panels are close to, but not touching the bottom.

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Each exposure panel array shall consist of seven 10" x 3-1/2" x 3/4" untreated soft-wood panels and two creosoted panels attached to a metal frame. The panels shall be submerged and replaced in sequence so that, after the initial cycle is completed, a long-term exposure panel submerged for six months and a short-term exposure panel submerged for one month will be obtained monthly. Each exposure panel retrieved shall be returned to the laboratory and examined microscopically in order to ascertain the information detailed in the objective above.

The short-term panel (one month) provides data as to whether or not woodborer settling occurs during the month and, if so, the number and size of the organisms involved. This information is used in the establishment of the breeding season.

All untreated panels shall be seasoned for two weeks in saltwater before being placed on the array. The two treated panels on each array shall be creosote treated to 20 lbs., seasoned in saltwater for two weeks, and exposed for the duration of the study. They shall be used to assess any damage to treated wood caused by the isopod borer, Limnoria tripunctata, which is not deterred in its attack by creosoted wood. Monthly inspections of these treated panels shall be made for evidence of crustacean borers.

Through microscopic technique, a given test panel shall be analyzed using dissecting needles, etc. and rated as to the amount of damage (heavy, moderate,light) incurred due to woodborers. This evaluation

is based upon a consistent set of damage evaluation criteria specifically designed to yield damage estimates that are directly relatable to the amount of wood missing. The criteria used at the Oyster Creek Station follows the Clapp Laboratory index of damage.

Action

See Section 3.1.1

3.1.3 Woodborer Developmental Study

Objective

Determine reproductive state of woodborers from the various array station regions of the study area in order to determine any differential in status due to a station effect.

Requirement

A representative sample of woodborer adults that are collected in the test panels retrieved during a particular monthly sampling period shall be microscopically/histologically examined to ascertain the developmental status of the teredinid reproductive structures. This information shall be used to determine if the molluscan populations inhabiting Oyster Creek and the thermal plume area have a prolonged breeding cycle.

Action

See Section 3.1.1

3.1.4 Water Quality Study

Objective

Describe physico-chemical environment of each array and plankton station at time of every sampling.

Requirement

Salinity (accuracy of ± 10%), water temperature (accuracy of ± 0.45°C (± 0.81°F) between 5° and 25°C (41-77°F) and ± 0.65°C (± 1.17°F) between 25° and 45°C (77-113°F)), dissolved oxygen (accuracy of ± 0.2 ppm) and pH (accuracy of ± 0.2 pH units) shall be measured or determined at each array station on a monthly basis. The instrument is calibrated before each daily use.

Action

See Section 3.1.1

Bases

The FES of OCGS identified the proliferation of woodborers in Oyster Creek and Barnegat Bay as a potentially significant impact of OCGS operation. Recent studies by JCP&L suggest a lack of correlation of OCGS operation and woodborer abundance. The woodborer monitoring program will allow future assessment of the marine borer related impacts.

3.2 Unusual or Important Environmental Events

Environmental Monitoring Requirement

Unusual or important events are those that cause potentially significant environmental impact or that could be of public interest concerning environmental impact from station operation. The following are examples: on-site plant or animal disease outbreaks; unusual mortality of any species protected by the Endangered Species Act of 1973; fish kills in the vicinity of the site; unusally high impingement mortality episodes.

This special requirement shall commence with the date of issuance of the OCETS and continue until approval for modification or termination is obtained from the NRC in accordance with Subsection 4.5.3.

Action

Should an unusual or important event occur, the licensee shall make a non-routine prompt report to the NRC in accordance with the provisions of Subsection 4.5.2.

Bases

Prompt reporting to the NRC of unusual or important events as described above is necessary for responsible and orderly regulation of the nation's system of nuclear power reactors. The information provided may be useful or necessary to others concerned with the same environmental resources. Prompt knowledge and action may serve to alleviate the magnitude of the environmental impact.

4.0 ADMINISTRATIVE CONTROLS

This section describes administrative and management controls established by the Applicant to provide continuing protection to the environment and to implement the environmental technical specifications.

4.1 Responsibility

Corporate responsibility for implementation of the Oyster Creek Environmental Technical Specifications and for assuring that plant operations are controlled in such a manner as to provide continuing protection of the environment has been assigned by the Office of the President to the Vice President and Director Oyster Creek.

The responsibility for conducting the studies as set forth in Section 2.1 (Non-Radiological Surveillance) and all of Section 3.0 (Special Surveillance Programs) rests with the GPUNC Manager, Environmental Controls.

Administrative measures are defined in Section 4.3 which provide that the individual or group responsible for auditing or otherwise verifying that an activity has been correctly performed is independent of the individual or group responsible for performing the activity.

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4.2 Organization

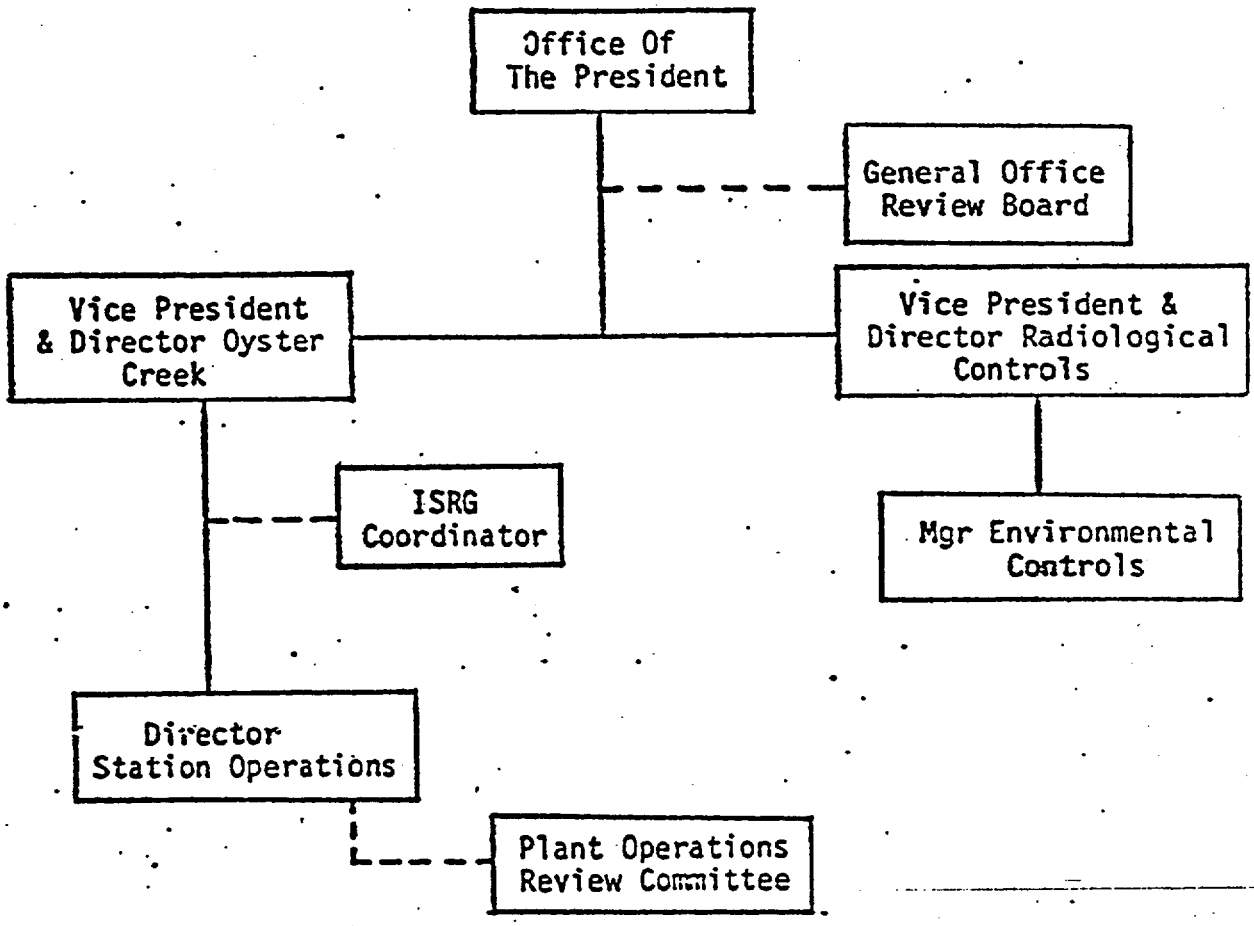
The organization of the personnel responsible for implementation, audit, and review of the OCETS is shown in Figure 4-1.

4.3 Review and Audit

Independent audit and review functions for environmental matters are the responsibility of the GPUNC Manager, Environmental Controls. This department reports directly to the Vice President and Director Radiological & Environmental Controls and is independent of line responsibility for the operation of the plant. The independent reviews and audits of the OCETS will be carried out by personnel from the Environmental Controls Department or by other personnel from GPUNC, GPUSC, outside contractors or consultants at the request of the Environmental Controls Department.

When individuals in the Environmental Controls Department of GPUNC perform any function relating to the OCETS other than independent audit and review, the Vice President and Director of Oyster Creek will ensure that an independent review and audit of that work is performed by another individual in the Environmental Controls Department or some other who is not directly responsible for the specific activity being reviewed and audited.

The audits and reviews will be performed as required or requested but in no case less than yearly. The results of all reviews and audits will be documented in reports directly to the Vice President and Director Oyster Creek.



Legend: _____ Direct Responsibility

-------- Advisory Capacity

FIGURE 4-1

ORGANIZATION FOR THE IMPLEMENTATION OF
THE ENVIRONMENTAL TECHNICAL SPECIFICATIONS

Independent audits and reviews will encompass:

A. Coordination of the OCETS with the safety technical specifications to avoid conflicts and maintain consistency.

B. Compliance of station activities and operations with the OCETS.

C. Adequacy of the programs and station procedures which are involved in ensuring the plant is operated in accordance with the OCETS.

D. The proper functioning in accordance with the responsibilities listed in Section 4.1 of the OCETS.

E. Proposed changes to the OCETS and the evaluation of the impacts resulting from the changes.

F. Proposed written procedures, as described in Section 4.4.1 and 4.4.3 and proposed changes thereto which affect the environmental impact of the plant.

G. Proposed changes or modifications to plant systems or equipment and a determination of the environmental impact resulting from the changes.

H. Adequacy of the procedures described in Section 4.4.2 and the results obtained and conclusions drawn from the monitoring programs and special studies involved in the OCETS.

I. Adequacy of investigations of violations of the OCETS and adequacy of and implementation of the recommendations to prevent recurrence of the violations.

4.4 Procedures

4.4.1 Detailed written procedures, including applicable check lists and instructions, will be prepared and adhered to for all activities involved in carrying out OCETS. Procedures shall include sampling, data recording and storage, instrument calibration, measurements, analyses and actions to be taken when limits are approached or exceeded. Testing frequency of any alarms will be included. These frequencies, if not specified in the OCETS, will be determined from experience with similar instruments in similar environments and from manufacturers' technical manuals.

4.4.2 Procedures will be prepared for assuring the quality of environmental monitoring and surveillance program results, including analytical measurements. These procedures will document the monitoring and surveillance programs in terms of policy directives, responsible individuals or groups, purchased services and audits and will include systems that will identify and correct deficiencies, investigate anomalous or suspect results and review and evaluate program results and reports.

4.4.3 In addition to the procedures specified in Section 4.4.1, the plant standard operating procedures for systems which directly interact with the outside environment will include provisions to ensure the plant and its systems and components are operated in compliance with the OCETS.

4.5 Plant Reporting Requirements

4.5.1 Routine Reports

A. Annual Environmental Operating Report

A report on the non-radiological environmental surveillance programs for the previous 12 months of operation shall be submitted to the Office of Inspection and Enforcement (with copy to the Director of Nuclear Reactor Regulation) as a separate document within 90 days after January 1 of each year (except as otherwise specified in the OCETS). In the event that some results are not available within the 90-day period, the report will be submitted noting and explaining the reasons for the missing data. The missing data shall be submitted as soon as possible in a supplementary report. The report shall include summaries, analyses, interpretations and statistical evaluation of the results of the environmental monitoring required by the non-radiological environmental monitoring activities (Section 2), and the special monitoring study activities (Section 3) for the report period, including a comparison with preoperational

studies, operational controls (as appopriate) and previous environmental monitoring reports, and an assessment of the station operation on the environment. If harmful effects or evidence of irreversible damage are suggested by the monitoring or special programs, the licensee shall provide a more detailed analysis of the data and a proposed course of action to alleviate the problem.

The Annual Report shall also include a summary of:

1) All OCETS noncompliances and the corrective action taken to remedy them.
2) Changes made to state and federal permits and certificates which pertain to the requirements of OCETS.
3) Changes in station design which could involve an environmental impact.
4) Changes in ETS.

4.5.2 Non-Routine Environmental Operating Reports

A prompt report shall be submitted in the event that an Unusual or Important Environmental Event occurs (as specified in Section 3.2). Such an occurrence will be reported within 24 hours by telephone, telegraph, or facsimile transmission to the Office of Inspection and Enforcement and within 30 days by a written report to the Director of the Office of Inspection and Enforcement (with copy to the Director of Nuclear Reactor Regulation).

The written report and, to the extent possible, the preliminary telephone, telegraph, or facsimile report shall (a) describe, analyze, and evaluate the occurrence, including the extent and magnitude of the impact, (b) describe the cause of the occurrence, and (c) indicate the corrective action, if necessary, taken (including any significant changes made in the procedures) to preclude repetition of the occurrence should the occurrence be station related.

4.5.3 Change in Environmental Technical Specifications

A. A report shall be made to the NRC prior to implementation of a change in plant design, in plant operation, or in procedures described in Section 4.4, only if the change would have a significant adverse effect on the environment or involves an environmental matter or question not previously reviewed and evaluated by the NRC. The report shall include a description and evaluation of the changes and a supporting benefit-cost analysis.

B. Request for changes in environmental technical specifications shall be submitted to the Director of Nuclear Reactor Regulation for review and authorization. The request shall include an evaluation of the environmental impact of the proposed change and a supporting benefit-cost analysis.

C. Changes or additions to required Federal, and State permits and certificates for the protection of the environment that pertain to the requirements of OCETS shall be reported to the NRC within 30 days. In the event that the licensee initiates or becomes aware of a request for changes to any of the water quality requirements, limits or values stipulated in any certification or permit issued pursuant to Section 401 or 402 of the Federal Water Pollution Control Act (PL 92-500) which is also the subject of an OCETS reporting requirement, NRC shall be notified concurrently with the authorizing agency. The notification to the NRC shall include an evaluation of the environmental impact of the revised requirement, limit or value being sought.

If, during NRC's review of the proposed change, it is determined that a potentially severe environmental impact could result from the change, the NRC will consult with the authorizing agency to determine the appropriate action to be taken.

4.6 Records Retention

4.6.1 Eighty (80%) percent data recovery annually for each environmental monitoring requirement is considered satisfactory for the purposes of the OCETS. The variability and uncertainty of environmental conditions demand allowance for some missed data in order to preclude an excessive reporting burden. This provision for missed data does not permit deliberate omission of sample collection or analyses but rather is meant to cover data missed due to

circumstances beyond the control of the licensee, its representative or subcontractor. Records of the reasons for all missed data shall be retained with the data reports.

4.6.2 Records and logs relative to the following areas will be retained for the life of the plant.

A. Records and drawings detailing plant design changes made to systems and equipment as described in Section 4.5.3.

B. Records of all environmental surveillance data.

4.6.3 All other records and logs relating to the environmental technical specifications will be retained for five years following logging or recording.

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-219

GPU NUCLEAR CORPORATION AND

JERSEY CENTRAL POWER AND LIGHT COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO PROVISIONAL OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 66 to Provisional Operating License No. DPR-16, issued to GPU Nuclear Corporation and the Jersey Central Power and Light Company (the licensees), which revised the Technical Specifications for operation of the Oyster Creek Nuclear Generating Station (the facility). The amendment is effective as of its date of issuance.

The amendment deletes the Appendix B Environmental Technical Specifications (ETS) which pertain to the non-radiological water quality-related requirements, as required by the Federal Water Pollution Control Act Amendments of 1972.

The application for amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of the amendment.

For further details with respect to this action, see (1) the application for amendment dated February 11, 1983, (2) Amendment No. 66 to License No. DPR-16, and (3) the Commission's letter of transmittal. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. and at the Local Public Document Room, 101 Washington Street, Toms River, New Jersey 08753. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 24 day of March 1983.

FOR THE NUCLEAR REGULATORY COMMISSION

Dennis M. Crutchfield

Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing