NOV 4 1974

Docket Nos. 50-354
and 50-355

Public Service Electric & Gas
Company
ATTN: Mr. F. W. Schneider
Manager of Engineering
80 Park Place
Newark, New Jersey 07102

Gentlemen:

Pursuant to an Initial Decision issued by the Atomic Safety and Licensing Board, the Atomic Energy Commission has issued Construction Permits CPPR-120 and CPPR-121. These permits authorize the construction of the Hope Creek Generating Station, Units 1 and 2.

In addition to the conditions contained in these permits, Public Service Electric and Gas Company (PSE&G) and the staff agreed during the course of the proceeding that:

> "No concrete shall be poured until PSE&G has obtained from the Delaware River Basin Commission an approval of the water supply features of the proposed facility which is not conditioned on the construction of the proposed Tocks Island reservoir and is otherwise acceptable to the regulatory staff."

We assume that you will honor that commitment, although it has not been identified by the Atomic Safety and Licensing Board as a requirement in the Construction Permits.

A copy of the Initial Decision, Construction Permits CPPR-120 and CPPR-121, and a related notice which has been forwarded to the Office of the Federal Register for filing and publication are enclosed.

Where the conditions of paragraph E of the enclosed construction permits require PSE&G to conduct a study, to make an evaluation, to submit a program, schedule, or report, or to make a demonstration with respect to an environmental matter prior to operation of the facility, for which no express submittal time is fixed, such study, evaluation, program, schedule or report shall be submitted as part of its "Applicants' Environmental Report-Operating License Stage", if not theretofore submitted.

Sincerely,

Original signed by
D. B. Vassallo

R. C. DeYoung, Assistant Director
for Light Water Reactors Group 1
Directorate of Licensing

LB

OFFICE					
SURNAME					
DATE					

Enclosures & cc: See next page

Enclosures:
1. Initial Decision
2. Construction Permits
   CPPR-120 & CPPR-121
3. Federal Register Notice

cc w/enclosures:
Fred Broadfoot, Esq.
Public Service Electric & Gas Co.
Assistant General Counsel
80 Park Place
Newark, New Jersey 07101

cc: Troy B. Conner, Jr., Esq.
Conner, Hadlock & Knotts
1747 Pennsylvania Avenue, N.W.
Washington, D. C. 20006

Mr. John Boettger, Project Manager
Public Service Electric & Gas Co.
80 Park Place
Newark, New Jersey 07101

Honorable William Gural
Deputy Attorney General
State of New Jersey
1100 Raymond Boulevard
Newark, New Jersey 07102

Richard Fryling, Jr., Esq.
Public Service Electric & Gas Co.
80 Park Place
Newark New Jersey 07101

William Horner, Esq.
67 Market Street
Salem, New Jersey 08079

Dr. John K. LaMarsh
68 North Chatsworth Avenue
Larchmont, New York 10538

F. Michael Parkowski, Esq.
Deputy Attorney General
Tatnall Building
Dover, Delaware 19901

OFFICE➤						
SURNAME➤						
DATE➤						

cc: Mr. N. C. Vasuki, Director
Division of Environmental Control
Tatnall Building
Dover, Delaware 19901

Honorable William F. Hyland
Attorney General
State of New Jersey
State House Annex
Trenton, New Jersey 03601

Mr. Paul Arbesman
Environmental Protection Agency
26 Federal Plaza
New York, New York 10007

Mr. Sheldon Meyers
ATTN: Jack Anderson
Office of Federal Activities
Environmental Protection Agency
Room 535 West Tower, Waterside Mall
401 M Street, S.W.
Washington, D. C. 20460

Colonel William Barnes
Executive Director of Civil Works
Office of the Chief of Engineers
Corps of Engineers
Department of the Army
Forrestal Building, Room 4-0060
10th & Independence
Washington, D. C. 20314

Mr. Bruce Blanchard
Office of Environmental Projects
Review
Department of Interior
Room 5321
18th and C Streets, N.W.
Washington, D. C. 20242

Honorable David A. Fogg
Mayor, Lower Alloways Creek
Township
Salem County, New Jersey 08079

OFFICE ➤						
SURNAME ➤						
DATE ➤						

NOV 4 1974

cc: Mr. Warren D. Hodges, Director
Department of State Planning
301 West Preston Street
Baltimore, Maryland 21201

Executive Director
Delaware River Basin Commission
P. O. Box 360
Trenton, New Jersey 08603

Wilmington Metropolitan Area Planning
& Coordinating Council
4613 Robert Kirkwood Highway
Wilmington, Delaware 19808

Local News Editor
Sunbeam Daily
93 5th Street
Salem, New Jersey 08079

Mrs. Richard Horner, Jr.
Box 23
Hancocks Bridge, New Jersey 08038

Mr. Richard E. Griffith
Bureau of Sport Fisheries &
Wildlife
John W. McCormack Post
Office and Courthouse
Boston, Massachusetts 02109

Honorable Harrison A. Williams
United States Senate
Congress of the United States

bcc: JRBuchanan, ORNL
TBAbernathy, DTIE
ARosenthal, ASLAB
Chairman,ASLBP

DISTRIBUTION:

Docket Files (2)
AEC PDR (2)
Local PDR (2)
LWR 1-2 Files
HWilchins, OGC
EP-3 Reading File
L Reading File
RO (3)
NDube
MJinks (w/2 encl per docket)
RCDeYoung
ABraitman, OAI
MMaigret
PRiehm
GLear
SKari
WMiller, DR:OA
DRMuller, L:EP
BJYoungblood, L:EP-3
FJMiraglia, L;EP-3
GWilliams, L:EP-3
RPurple
LWR 1 Branch Chiefs
ACRS (16)
BScharf (w/18 cys)

Page one retyped and rewritten per OGC request.

OAI
11/ /74

	L:EP					
OFFICE ➤	FJMiraglia:agc BJYoungblood	L:LWR 1-2	L:LWR 1-2&OR	OGC	L:AD:LWR-1	L:RP
SURNAME ➤	DRMuller	MMaigret PRiehm	GLear WRButler	H. WILCHINS	RCDeYoung	AGiambusso
DATE ➤	11/ /74	11/4 /74	11/4/74	11/4 /74	11/4/74	11/ /74

CHECKLIST FOR ISSUANCE OF CONSTRUCTION PERMIT

Applicant Public Service Electric & Gas Co. Docket No. 50-354/355

Facility Hope Creek Generating Station, Units 1 & 2

Project Manager Pete Riehm Licensing Assistant Madelyn Maigret

		Date
Initial Decision or Order		October 25, 1974
Safety Review:	Newbold Island:	December 17, 1971
L Safety Evaluation	Hope Creek(Suppl. #3)	January 17, 1974
ACRS Letter		February 12, 1974
Environmental Review:		
Final Environmental Statement		February 1974
Published in Federal Register		February 19, 1974
Notifications Required by Act & Commission Rules*:	Relocation to Hope Creek:	
State Official		December 5, 1973
Local Official		December 5, 1973
FPC		December 5, 1973
State Regulatory Agencies		December 5, 1973
Water Quality Certification: 401 Type		
Submitted by Applicant		May 8, 1974
Transmitted to EPA		October 9, 1974
Antitrust Review:		
Attorney General's Advice Published in Federal Register		September 4, 1971
Hearing and/or Decision	Not to hold a Hearing	September 4, 1971
License Fee:		
Amount $ 958,600 Paid		October 29, 1974
Public Announcement (to be released):	Copy attached	NOV 5 1974
Issuance Package: OGC Concurrence		
1. Permit		November 4, 1974
2. Federal Register Notice		November 4, 1974
3. Letter to Applicant		November 4, 1974
4. Information Report		November 4, 1974

*Date initial application forwarded

CHECKLIST

PRESS RELEASE

AEC ISSUES CONSTRUCTION PERMITS FOR HOPE CREEK GENERATING STATION IN NEW JERSEY

Permits ~~for~~ (authorizing) construction of the Hope Creek Generating Station, Units 1 and 2, in Salem County, New Jersey, were issued to Public Service Electric and Gas Company and Atlantic City Electric Company on _____ by the Atomic Energy Commission's Directorate of Licensing.

Issuance of the permits followed a public hearing on radiological health and safety and environmental impact matters and a favorable decision on October 25, 1974, by the Atomic Safety and Licensing Board.

In February 1970, Public Service applied to AEC for construction permits for the proposed Newbold Island Nuclear Generating Station, Unit 1 and 2, to be located on Newbold Island in Burlington County. Hearings were convened on that application. In November 1973, the company amended its application to relocate the proposed nuclear plants to Lower Alloways Creek Township, Salem County, and changed the name of the station to Hope Creek Generating Station, Units 1 and 2. The design of the plants was the same except for appropriate modifications to adapt the station to the Salem site. Further hearings were held on the amended application, resulting in the October 25 decision.

The facilities will be adjacent to the Salem Nuclear Generating Station now under construction. Each unit will use a boiling water reactor and each will have a net electrical capacity of about 1,067 megawatts.

#

~~Food~~

* This amended application (included the addition of) ~~[illegible]~~ another owner, the Atlantic City Electric Company.

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

PUBLIC SERVICE ELECTRIC & GAS COMPANY

AND ATLANTIC CITY ELECTRIC COMPANY

HOPE CREEK GENERATING STATION

UNIT 1

CONSTRUCTION PERMIT

Construction Permit No. CPPR-120

1. The Atomic Energy Commission (the Commission) having found that:

   A. The application for construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission, there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission, and all required notifications to other agencies or bodies have been duly made;

   B. Public Service Electric & Gas Company and Atlantic City Electric Company (the Applicants) have described the proposed design of the Hope Creek Generating Station, Unit 1 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and has identified the major features or components incorporated therein for the protection of the health and safety of the public;

   C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;

   D. Safety features or components, if any, which require research and development have been described by the Applicants and the Applicants have identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;

E. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

F. Public Service Electric & Gas Company is technically qualified to design and construct the proposed facility;

G. Public Service Electric & Gas Company and Atlantic City Electric Company are financially qualified to design and construct the proposed facility;

H. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and

I. After weighing the environmental, economic, technical, and other benefits of the facility against environmental costs and considering available alternatives, the issuance of a construction permit (subject to the conditions set forth herein) is in accordance with 10 CFR Part 50, Appendix D, of the Commission's regulations and all applicable requirements of said Appendix D have been satisfied.

2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities", and pursuant to the Initial Decision of the Atomic Safety and Licensing Board, dated October 25, 1974, the Atomic Energy Commission (the Commission) hereby issues a construction permit to the Applicants for a utilization facility designed to operate at 3293 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the Applicants and as more fully described in the evidence received at the public hearing upon that application. The facility, known as the Hope Creek Generating Station, Unit 1, will be located on the Applicants' site on Artificial Island in Lower Alloways Creek Township, Salem County, New Jersey.

3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55 of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the conditions specified or incorporated below:

   A. The earliest date for the completion of the facility is December 31, 1980 and the latest date for completion is May 31, 1981.

   B. The facility shall be constructed and located at the site as described in the application, in Lower Alloways Creek Township, Salem County, New Jersey.

   C. This construction permit authorizes the Applicants to construct the facility described in the application and the hearing record, in accordance with the principal architectural and engineering criteria and environmental protection commitments set forth therein.

   D. In view of the fact that the Attorney General has not recommended an antitrust hearing in this matter, that no antitrust issues have been raised by another in a manner according with the Commission's Rules of Practice, and that no finding has been made that an antitrust hearing is otherwise required [10 CFR Part 2, Section 2.104(d)], antitrust review of the application for this construction permit under Section 105c of the Atomic Energy Act of 1954, as amended, has been completed and a hearing thereon determined to be unnecessary.

   E. Applicants shall comply with the following additonal conditions:

      (1) Prior to initiation of power operation the Applicants shall conduct a study of proposed chlorination methods to assure that the use of these methods will result in acceptable chlorine residuals in the station effluent under the full range of conditions anticipated during operation of the station. Acceptable chlorine residuals currently recommended by the EPA for warm freshwater are less than 0.2 mg/liter for intermittent discharge not to exceed 2 hours per day or less than 0.01 mg/liter for continuous discharge. The study shall include an evaluation of the effects of variable ammonia and organic nitrogen concentrations, chlorine demand, temperature and pH on the concentrations of both free and combined chlorine residuals in the treated water. Alternative methods of reducing chlorine residuals shall also be investigated and these are to include, but not be limited to, optimizing chlorine dosage and time of dosage, sequential treatment of sections of each condenser, blowdown scheduling, and addition of reducing substances (e.g., SO_2) to the blowdown during periods of low chlorine demand in the bypass water;

(2) Prior to initiation of power operation, the Applicants shall complete a pre-operational ecological monitoring program as proposed in the Applicants' Environmental Report, with amendments;

(3) The Applicants will take those measures necessary to assure the availability of compensating water storage capacity at the time of initial power operation if such storage capacity is required by the Delaware River Basin Commission. A schedule identifying significant milestone dates to achieve this objective, developed in coordination with the Delaware River Basin Commission and based on the assumption that the Tocks Island project will not be constructed, shall be submitted to the Director of Licensing within six months after the issuance of construction permits for the station;

(4) If the operation of Salem Units 1 and 2 is found to cause significant adverse effects on the aquatic ecosystem due to passage of organisms through the cooling system, design modifications to prevent such adverse effects from operation of the Hope Creek Generating Station shall be considered and reported to the Commission;

(5) The Applicants shall demonstrate prior to initial power operation that the low drift goal of 0.002% for cooling tower operation and low salt deposition rate can be achieved and maintained throughout the life of the plant. A preoperational and operational monitoring program acceptable to the Regulatory staff shall be conducted to evaluate the effects of salt deposition on terrestrial life and structures;

(6) Prior to initiating construction of the Hope Creek-Tuckerton 500 kV transmission line facility, the Applicants shall amend their application and furnish an environmental assessment, acceptable to the Regulatory staff, to assure that the route selection and design of the proposed system appropriately considers environmental factors;

(7) The Applicants shall take the necessary mitigating actions, including those summarized in Section 4.6 of the Final Environmental Statement, during construction of the station and associated transmission lines to avoid unnecessary adverse environmental impacts from construction activities;

(8) A control program shall be established by the Applicants to provide for a periodic review of all construction activities to assure that those activities conform to the environmental conditions set forth in the construction permits;

(9) Before engaging in a construction activity which may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than that evaluated in the Final Environmental Statement, the Applicants shall provide written notification to the Director of Licensing;

(10) Applicants will, subject to approval of regulatory agencies, install an audible signal which shall:

a. Be clearly audible within a six-mile radius from the plant on a still day;

b. Be sufficiently distinctive so that they will not be confused with existing audible alarms;

c. Be testable at periodic intervals; and

d. Be operable by July 1, 1975.

It is understood that New Jersey Civil Defense or its successor agency will control utilization of such signal;

(11) Applicants shall monitor aquatic life in the Delaware River in the vicinity of the plant for a period of ten (10) years subsequent to July 1, 1975, unless subsequently modified by mutual agreement by the parties. Said monitoring shall be similar to the program that Ichthyological Associates have been heretofore conducting for the Applicants with the following conditions:

a. Nets sufficient to catch fish of all species up to 20 pounds in weight shall be used;

b. Reports of the monitoring and measuring of aquatic life, to be issued at no greater than annual intervals, shall be issued within six months of the close of the period to

which they pertain. The U. S. Atomic Energy Commission retains the right to require reporting at more frequent intervals;

c. The Applicants agree to monitor the impingement and entrainment of aquatic life at the plant throughout the lifetime of the Hope Creek facility. If, after consultation with the U. S. Fish and Wildlife Service, the Commission determines that such impingement or entrainment is excessive, corrective measures shall be instituted by the Applicants; and

d. Measurements of radioactivity in fish in the vicinity of the plant shall be made on a regular basis throughout the lifetime of the plant.

(12) Radiation monitoring as presently being conducted of various deep and shallow wells and the Salem Water Company facility near Quinton shall be continued throughout the lifetime of the plant, unless subsequently modified by mutual agreement to the parties;

(13) The Applicants shall provide seminars by a proper medical specialist for Salem County doctors at a time and place agreeable to the Salem County Medical Association and deemed adequate by the Salem County Medical Association to prepare Salem County doctors for emergency treatment of radiation injury or sickness.

(14) The Applicants shall distribute to each doctor in Salem County a brochure setting forth emergency treatment for radiation injury or sickness;

(15) The Applicants shall make payments to or arrangements with the Salem County Memorial Hospital to provide a treatment facility for victims of radiation accidents pursuant to AEC regulations. Such facility shall meet requirements deemed suitable by the Salem County Memorial Hospital;

(16) Copies of all reports called for by this agreeement and all environmental reports to all governmental agencies, federal, state or local, regarding the environment in Lower Alloways Creek Township shall be mailed or delivered to the Clerk of Lower Alloways Creek Township and Salem Public Library upon their issuance throughout the lifetime of the plant;

(17) Applicants shall monitor the performance of the plant cooling towers at reasonable intervals to evaluate the salt and chemical deposition rate and possible effects on the environment. If such deposition causes detrimental effects to the environment in Lower Alloways Creek Township or if the deposition rate or amounts exceed those that are deemed non-detrimental to human, plant or animal life, then remedial steps will be taken;

(18) If the plant, cooling towers, or transmission lines cause interference to or distortion of existing television reception, Applicants shall correct, at their own expense, the reception to the original condition by modification of antennas, improvements of receivers or other appropriate means;

(19) No concrete shall be poured for safety related structures until the Applicants have completed a study of the probability of interaction between river traffic and safety related plant features and applied the results of the study in the design and planned construction of the facility in a manner acceptable to the Regulatory staff;

(20) The foregoing conditions to the Construction Permits shall also become conditions of the Operating License, when issued, to the extent that performance of any of the foregoing conditions by the Applicants have not been completed or require continuing performance beyond the time of issuance of the Operating License, subject to the approval of an Atomic Safety and Licensing Board convened to decide matters in controversy at the Operating License Stage.

(21) If unexpected harmful effects or evidence of irreversible damage are detected during facility construction, the Applicants shall provide to the Regulatory staff an acceptable analysis of the problem and a plan of action to eliminate or significantly reduce the harmful effects or damage.

4. This permit is subject to the limitation that a license authorizing operation of the facility will not be issued by the Commission unless (a) the Applicants submit to the Commission the complete final safety analysis report, portions of which may be submitted and evaluated from time to time; (b) the Commission finds that the final design provides reasonable assurance that the health and safety of the public will not be endangered by the operation of the facility in accordance with procedures approved by it in connection with the issuance of said license; (c) the Commission finds that operation of the facility will be

in accordance with 10 CFR Part 50, Appendix D, of the Commission's regulations and all applicable requirements of said Appendix D were satisfied; and (d) the Applicants submit proof of financial protection and the execution of an indemnity agreement as required by Section 170 of the Act.

5. This permit is effective as of its date of issuance and shall expire on the latest completion date indicated in paragraph 3.A above.

FOR THE ATOMIC ENERGY COMMISSION

A Giambusso

A. Giambusso, Deputy Director
for Reactor Projects
Directorate of Licensing

Date of Issuance: NOV 4 1974

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

PUBLIC SERVICE ELECTRIC & GAS COMPANY

AND ATLANTIC CITY ELECTRIC COMPANY

HOPE CREEK GENERATING STATION

UNIT 2

CONSTRUCTION PERMIT

Construction Permit No. CPPR-121

1. The Atomic Energy Commission (the Commission) having found that:

   A. The application for construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission, there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission, and all required notifications to other agencies or bodies have been duly made;

   B. Public Service Electric & Gas Company and Atlantic City Electric Company (the Applicants) have described the proposed design of the Hope Creek Generating Station, Unit 2 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and has identified the major features or components incorporated therein for the protection of the health and safety of the public;

   C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;

   D. Safety features or components, if any, which require research and development have been described by the Applicants and the Applicants have identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;

E. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

F. Public Service Electric & Gas Company is technically qualified to design and construct the proposed facility;

G. Public Service Electric & Gas Company and Atlantic City Electric Company are financially qualified to design and construct the proposed facility;

H. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and

I. After weighing the environmental, economic, technical, and other benefits of the facility against environmental costs and considering available alternatives, the issuance of a construction permit (subject to the conditions set forth herein) is in accordance with 10 CFR Part 50, Appendix D, of the Commission's regulations and all applicable requirements of said Appendix D have been satisfied.

2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities", and pursuant to the Initial Decision of the Atomic Safety and Licensing Board, dated October 25, 1974, the Atomic Energy Commission (the Commission) hereby issues a construction permit to the Applicants for a utilization facility designed to operate at 3293 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the Applicants and as more fully described in the evidence received at the public hearing upon that application. The facility, known as the Hope Creek Generating Station, Unit 2, will be located on the Applicants' site on Artificial Island in Lower Alloways Creek Township, Salem County, New Jersey.

3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55 of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the conditions specified or incorporated below:

A. The earliest date for the completion of the facility is December 31, 1981 and the latest date for completion is May 31, 1982.

B. The facility shall be constructed and located at the site as described in the application, in Lower Alloways Creek Township, Salem County, New Jersey.

C. This construction permit authorizes the Applicants to construct the facility described in the application and the hearing record, in accordance with the principal architectural and engineering criteria and environmental protection commitments set forth therein.

D. In view of the fact that the Attorney General has not recommended an antitrust hearing in this matter, that no antitrust issues have been raised by another in a manner according with the Commission's Rules of Practice, and that no finding has been made that an antitrust hearing is otherwise required [10 CFR Part 2, Section 2.104(d)], antitrust review of the application for this construction permit under Section 105c of the Atomic Energy Act of 1954, as amended, has been completed and a hearing thereon determined to be unnecessary.

E. Applicants shall comply with the following additonal conditions:

(1) Prior to initiation of power operation the Applicants shall conduct a study of proposed chlorination methods to assure that the use of these methods will result in acceptable chlorine residuals in the station effluent under the full range of conditions anticipated during operation of the station. Acceptable chlorine residuals currently recommended by the EPA for warm freshwater are less than 0.2 mg/liter for intermittent discharge not to exceed 2 hours per day or less than 0.01 mg/liter for continuous discharge. The study shall include an evaluation of the effects of variable ammonia and organic nitrogen concentrations, chlorine demand, temperature and pH on the concentrations of both free and combined chlorine residuals in the treated water. Alternative methods of reducing chlorine residuals shall also be investigated and these are to include, but not be limited to, optimizing chlorine dosage and time of dosage, sequential treatment of sections of each condenser, blowdown scheduling, and addition of reducing substances (e.g., SO_2) to the blowdown during periods of low chlorine demand in the bypass water;

(2) Prior to initiation of power operation, the Applicants shall complete a pre-operational ecological monitoring program as proposed in the Applicants' Environmental Report, with amendments;

(3) The Applicants will take those measures necessary to assure the availability of compensating water storage capacity at the time of initial power operation if such storage capacity is required by the Delaware River Basin Commission. A schedule identifying significant milestone dates to achieve this objective, developed in coordination with the Delaware River Basin Commission and based on the assumption that the Tocks Island project will not be constructed, shall be submitted to the Director of Licensing within six months after the issuance of construction permits for the station;

(4) If the operation of Salem Units 1 and 2 is found to cause significant adverse effects on the aquatic ecosystem due to passage of organisms through the cooling system, design modifications to prevent such adverse effects from operation of the Hope Creek Generating Station shall be considered and reported to the Commission;

(5) The Applicants shall demonstrate prior to initial power operation that the low drift goal of 0.002% for cooling tower operation and low salt deposition rate can be achieved and maintained throughout the life of the plant. A preoperational and operational monitoring program acceptable to the Regulatory staff shall be conducted to evaluate the effects of salt deposition on terrestrial life and structures;

(6) Prior to initiating construction of the Hope Creek-Tuckerton 500 kV transmission line facility, the Applicants shall amend their application and furnish an environmental assessment, acceptable to the Regulatory staff, to assure that the route selection and design of the proposed system appropriately considers environmental factors;

(7) The Applicants shall take the necessary mitigating actions, including those summarized in Section 4.6 of the Final Environmental Statement, during construction of the station and associated transmission lines to avoid unnecessary adverse environmental impacts from construction activities;

(8) A control program shall be established by the Applicants to provide for a periodic review of all construction activities to assure that those activities conform to the environmental conditions set forth in the construction permits;

(9) Before engaging in a construction activity which may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than that evaluated in the Final Environmental Statement, the Applicants shall provide written notification to the Director of Licensing;

(10) Applicants will, subject to approval of regulatory agencies, install an audible signal which shall:

a. Be clearly audible within a six-mile radius from the plant on a still day;

b. Be sufficiently distinctive so that they will not be confused with existing audible alarms;

c. Be testable at periodic intervals; and

d. Be operable by July 1, 1975.

It is understood that New Jersey Civil Defense or its successor agency will control utilization of such signal;

(11) Applicants shall monitor aquatic life in the Delaware River in the vicinity of the plant for a period of ten (10) years subsequent to July 1, 1975, unless subsequently modified by mutual agreement by the parties. Said monitoring shall be similar to the program that Ichthyological Associates have been heretofore conducting for the Applicants with the following conditions:

a. Nets sufficient to catch fish of all species up to 20 pounds in weight shall be used;

b. Reports of the monitoring and measuring of aquatic life, to be issued at no greater than annual intervals, shall be issued within six months of the close of the period to

which they pertain. The U. S. Atomic Energy Commission retains the right to require reporting at more frequent intervals;

c. The Applicants agree to monitor the impingement and entrainment of aquatic life at the plant throughout the lifetime of the Hope Creek facility. If, after consultation with the U. S. Fish and Wildlife Service, the Commission determines that such impingement or entrainment is excessive, corrective measures shall be instituted by the Applicants; and

d. Measurements of radioactivity in fish in the vicinity of the plant shall be made on a regular basis throughout the lifetime of the plant.

(12) Radiation monitoring as presently being conducted of various deep and shallow wells and the Salem Water Company facility near Quinton shall be continued throughout the lifetime of the plant, unless subsequently modified by mutual agreement to the parties;

(13) The Applicants shall provide seminars by a proper medical specialist for Salem County doctors at a time and place agreeable to the Salem County Medical Association and deemed adequate by the Salem County Medical Association to prepare Salem County doctors for emergency treatment of radiation injury or sickness.

(14) The Applicants shall distribute to each doctor in Salem County a brochure setting forth emergency treatment for radiation injury or sickness;

(15) The Applicants shall make payments to or arrangements with the Salem County Memorial Hospital to provide a treatment facility for victims of radiation accidents pursuant to AEC regulations. Such facility shall meet requirements deemed suitable by the Salem County Memorial Hospital;

(16) Copies of all reports called for by this agreeement and all environmental reports to all governmental agencies, federal, state or local, regarding the environment in Lower Alloways Creek Township shall be mailed or delivered to the Clerk of Lower Alloways Creek Township and Salem Public Library upon their issuance throughout the lifetime of the plant;

(17) Applicants shall monitor the performance of the plant cooling towers at reasonable intervals to evaluate the salt and chemical deposition rate and possible effects on the environment. If such deposition causes detrimental effects to the environment in Lower Alloways Creek Township or if the deposition rate or amounts exceed those that are deemed non-detrimental to human, plant or animal life, then remedial steps will be taken;

(18) If the plant, cooling towers, or transmission lines cause interference to or distortion of existing television reception, Applicants shall correct, at their own expense, the reception to the original condition by modification of antennas, improvements of receivers or other appropriate means;

(19) No concrete shall be poured for safety related structures until the Applicants have completed a study of the probability of interaction between river traffic and safety related plant features and applied the results of the study in the design and planned construction of the facility in a manner acceptable to the Regulatory staff;

(20) The foregoing conditions to the Construction Permits shall also become conditions of the Operating License, when issued, to the extent that performance of any of the foregoing conditions by the Applicants have not been completed or require continuing performance beyond the time of issuance of the Operating License, subject to the approval of an Atomic Safety and Licensing Board convened to decide matters in controversy at the Operating License Stage.

(21) If unexpected harmful effects or evidence of irreversible damage are detected during facility construction, the Applicants shall provide to the Regulatory staff an acceptable analysis of the problem and a plan of action to eliminate or significantly reduce the harmful effects or damage.

4. This permit is subject to the limitation that a license authorizing operation of the facility will not be issued by the Commission unless (a) the Applicants submit to the Commission the complete final safety analysis report, portions of which may be submitted and evaluated from time to time; (b) the Commission finds that the final design provides reasonable assurance that the health and safety of the public will not be endangered by the operation of the facility in accordance with procedures approved by it in connection with the issuance of said license; (c) the Commission finds that operation of the facility will be

in accordance with 10 CFR Part 50, Appendix D, of the Commission's regulations and all applicable requirements of said Appendix D were satisfied; and (d) the Applicants submit proof of financial protection and the execution of an indemnity agreement as required by Section 170 of the Act.

5. This permit is effective as of its date of issuance and shall expire on the latest completion date indicated in paragraph 3.A above.

FOR THE ATOMIC ENERGY COMMISSION

A Giambusso

A. Giambusso, Deputy Director
for Reactor Projects
Directorate of Licensing

Date of Issuance: NOV 4 1974

UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NOS. 50-354 & 50-355

PUBLIC SERVICE ELECTRIC & GAS COMPANY AND

ATLANTIC CITY ELECTRIC COMPANY

NOTICE OF AVAILABILITY OF INITIAL DECISION OF THE ATOMIC SAFETY AND LICENSING BOARD FOR THE HOPE CREEK GENERATING STATION, UNITS 1 & 2

AND ISSUANCE OF CONSTRUCTION PERMITS

Pursuant to the National Environmental Policy Act of 1969 and the United States Atomic Energy Commission's regulations in 10 CFR Part 50, Appendix D, Section A.9 and A.11, notice is hereby given that an Initial Decision, dated October 25, 1974 by the Atomic Safety and Licensing Board in the above captioned proceeding authorizing issuance of construction permits to the Public Service Electric and Gas Company and Atlantic City Electric Company for construction of the Hope Creek Generating Station, Units 1 & 2, located on the Applicants' site on Artificial Island in Lower Alloways Creek Township, Salem County, New Jersey, is available for inspection by the public in the Commission's Public Document Room at 1717 H Street, N. W., Washington, D. C., and in the Salem Free Public Library, 112 West Broadway, Salem, New Jersey.

The Initial Decision is subject to review by an Atomic Safety and Licensing Appeal Board prior to its becoming final. Any decision or action taken by an Atomic Safety and Licensing Appeal Board in connection with the Initial Decision may be reviewed by the Commission.

The Initial Decision is also being made available at the Division of State and Regional Planning, Department of Community Affairs, P. O. Box 2768, Trenton, New Jersey 08625, and at the Wilmington Metropolitan Area Planning and Coordinating Council, 4613 Robert Kirkwood Highway, Wilmington, Delaware 19808.

Based upon the record developed in the public hearing in the above captioned matter, the Initial Decision modified in certain respects the contents of the Final Environmental Statement relating to the construction of the Hope Creek Generating Station, Units 1 & 2, prepared by the Commission's Directorate of Licensing. Pursuant to the provisions of 10 CFR Part 50, Appendix D, Section A.11, the Final Environmental Statement is deemed modified to the extent that the findings and conclusions relating to the environmental matters contained in the Initial Decision are different from those contained in the Final Environmental Statement. As required by A.11 of Appendix D, a copy of the Initial Decision, which modifies the Final Environmental Statement, has been transmitted to the Council on Environmental Quality and distributed to the Environmental Protection Agency and other interested agencies and persons.

Pursuant to the above mentioned Initial Decision, the Atomic Energy Commission (the Commission) has issued Construction Permits CPPR-120 and CPPR-121 to the Public Service Electric and Gas Company and Atlantic City Electric Company for construction of two boiling water nuclear reactors, known as the Hope Creek Generating Station, Units 1 and 2, each designed

for a rated power of approximately 3293 megawatts thermal with a net electrical output of approximately 1088 megawatts.

The Commission has made appropriate findings as required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the construction permits. The application for the construction permits complies with the standards and requirements of the Act and the Commission's rules and regulations.

The construction permits are effective as of their date of issuance. The earliest date for the completion of Unit 1 is December 31, 1980, and the latest date for completion is May 31, 1981. The earliest date for completion of Unit 2 is December 31, 1981, and the latest date for completion is May 31, 1982. Each permit shall expire on the latest date for completion of the facility.

In addition to the Initial Decision, copies of (1) Construction Permit Nos. CPPR-120 and CPPR-121; (2) the report of the Advisory Committee on Reactor Safeguards, dated February 12, 1974; (3) the Directorate of Licensing's Safety Evaluation, dated December 17, 1971; (4) Supplement No. 1 to the Safety Evaluation, dated May 17, 1973; (5) Supplement No. 2 to the Safety Evaluation, dated August 30, 1973; (6) Supplement No. 3 to the Safety Evaluation, dated January 17, 1974; (7) Supplement No., 4 to the Safety Evaluation, dated March 1, 1974; (8) the Preliminary Safety

Analysis Report and amendments thereto; (9) the Applicant's Environmental Report, dated March 31, 1971, and supplements thereto; (10) the Draft Environmental Statement, dated November 1973, and (11) the Final Environmental Statement, dated February 1974, are also available for public inspection at the above-designated locations in Washington, D. C., and Salem, New Jersey. Single copies of the Initial Decision by the Atomic Safety and Licensing Board, the construction permits, the Final Environmental Statement, and the Safety Evaluation may be obtained upon request addressed to the U. S. Atomic Energy Commission, Washington, D. C. 20545, Attention: Deputy Director for Reactor Projects, Directorate of Licensing, Regulation.

Dated at Bethesda, Maryland, this 4th day of November, 1974

FOR THE ATOMIC ENERGY COMMISSION

Walter R. Butler

Walter R. Butler, Chief
Light Water Reactors Project
Branch 1-2
Directorate of Licensing