PSE&G Public Service Electric and Gas Company

80 Park Plaza, Newark, NJ 07101 / 201 430-8217 MAILING ADDRESS / P.O. Box 570, Newark, NJ 07101

Robert L. Mittl General Manager
Nuclear Assurance and Regulation

June 6, 1985

Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Bethesda, MD 20814

Attention: Mr. Walter Butler, Chief
Licensing Branch 2
Division of Licensing

Gentlemen:

HOPE CREEK GENERATING STATION
DOCKET NO. 50-354

The New Jersey Department of Environmental Protection (NJDEP) has recently relieved Public Service Electric and Gas Company (PSE&G) from Condition 13 (see Attachment 1) of the Hope Creek Generating Station CAFRA Permit (74-014) which required a chlorination methods effects study (see Attachment 2). The NJDEP has concurred with PSE&G's belief that more efficient acceptable technological methods developed since the permit was issued in 1976 have made further study of chlorine residual levels and alternate methods for chlorine residual reduction unnecessary.

In light of this recent development, PSE&G requests that the Nuclear Regulatory Commission (NRC) accept this NJDEP position as fulfillment of HCGS Construction Permit Condition 3.E.1 (see Attachment 3). This condition requires PSE&G to conduct similar chlorine residual level and alternate methods for chlorine residual reduction studies.

Should you have any questions in this regard, please contact us.

Very truly yours,

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C D. H. Wagner
USNRC Licensing Project Manager

A. R. Blough
USNRC Senior Resident Inspector

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13) Prior to and after initiation of power operation, PSE&G shall initiate an on-going study of proposed chlorination methods to assure that there will be acceptable chlorine residuals in the station effluent under the full range of conditions anticipated during operation of the station and shall submit this study to the Department for approval of these methods as soon as possible but in no case subsequent to the initiation of installation of the methods proposed by PSE&G. 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 be investigated. (Paragraph 92)

14) PSE&G shall continue the NRC biocide monitoring program for the Hope Creek installation (construction permit, United States Atomic Energy Commisssion, Docket No. 50-354 & 50-355) and use both continuous laboratory and in situ bio-assay approaches to recore short- and long-term effects on the aquatic biota. PSE&G shall obtain DEP approval for this program, insofar as it deals with discharges from the Hope Creek installation. (Paragraph 93)

15) PSE&G shall monitor the ambient water for copper and other heavy metals which may be present in various discharge waters to insure that concentrations in the ambient waters (outside the mixing zone) do not exceed the limits specified as biologically protective for marine species in the National Academy of Science publication Water Quality Criteria - 1972. However, as an alternative to monitoring ambient water quality, PSE&G may demonstrate by calculations that such concentrations will not be exceeded; such a demonstration shall be by methods of analysis specified by DEP's Division of Water Resources. PSE&G shall institute an immediate remedial program if such concentrations are exceeded. In addition PSE&G shall measure the heavy metal content of representative species of shellfish in the facility's vicinity. (Paragraph 94)

16) Within six months of the effective date of this permit PSE&G shall design a pre-operational and operational monitoring program to evaluate the

Attachment 2

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON

DIVISION OF COASTAL RESOURCES

PLEASE ADDRESS REPLY TO:
CN 401
TRENTON, N.J. 08625

May 1, 1985

Public Service Electric and Gas
Attn: James A. Shissias, General Manager
Environmental Affairs
80 Park Plaza T10C
Newark, NJ 07101

RE: Hope Creek Generating Station
CAFRA Permit No. 74-014-5

Dear Mr. Shissias:

In August 1984 you requested that certain condition requirements of the CAFRA permit be deleted because of more efficient acceptable technological methods that have been instituted over the last eight years.

The need to study proposed chlorination methods to assure acceptable chlorine residuals in the station effluent is not necessary, since dechlorination is now an U.S. EPA acceptable method of effective residual reduction within established standards. Monitoring will insure that the EPA requirements of 0.2 mg/liter average and 0.5 mg/liter maximum free available chlorine for intermittent discharges is achieved and maintained. It is agreed that onsite pilot-scale studies will not provide significant additional useful information.

Effluent monitoring results will be submitted to the Division of Water Resources as required by the NJPDES Permit NJ 0025411 and any additional study in that regard is deemed unnecessary by this Division. In addition, we are in receipt of your 1984 Annual Radiological Report which provides data on aquatic systems sampling and satisfies permit compliance with Item 123 of the CAFRA Opinion #20.

I hope this response clarifies the Division's position to rescind the need to further study chlorine residual levels and alternative methods for chlorine residual reduction.

Sincerely,

John R. Weingart
Director

JRW/DCJ/dr
cc: Steve Whitney
Darryl Jennus

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;