State of New Jersey
Department of Environmental Protection and Energy
Division of Environmental Safety, Health and Analytical Programs
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Scott A. Weiner
Commissioner

Gerald P. Nicholls, Ph.D.
Director

August 17, 1992

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Gentlemen:

Subject: Hope Creek Generating Station
Docket No. ~~50-219~~ 50-354
Facility Operating License Amendment LCR 91-02

On November 25, 1991 Public Service Electric and Gas Company (PSE&G) submitted a revised application to amend Appendix A of its Operating License for the Hope Creek Generating Station. This revised amendment request, it approved, would:

1. Increase the total allowable leak rate through the main steam isolation valves (MSIVs) from 46 to 800 standard cubic feet per hour.

2. Delete the MSIV Sealing System.

3. Exclude MSIV leakage from the acceptance criteria of 10 CFR 50, Appendix J, for overall integrated containment leak rate measurements.

4. Exclude main steam line piping, main steam drain line piping and valves, and the condenser from the seismic requirements of 10 CFR 100, Appendix A.

The New Jersey Department of Environmental Protection and Energy's Bureau of Nuclear Engineering (BNE) reviewed this amendment request in accordance with the requirements of 10 CFR 50.91(b). This request, if approved, represents a major change in the licensing and design bases for Hope Creek in that non-safety related equipment will be relied on to function in place of safety related equipment following a design basis accident. This change will also result in higher releases of radioactivity following a design basis accident.

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Hope Creek is the lead plant for the BWR Owners' Group which has jointly participated in developing this amendment request. Approval of this amendment request will result in other Boiling Water Reactor licensees requesting the same increase in allowable MSIV leakage, including GPU Nuclear for the Oyster Creek plant which is also located in New Jersey.

For these reasons, the BNE has reviewed this request in detail. We have specific comments where further action, information or justification is needed from PSE&G. These are compiled in Attachment 1.

We request a meeting with appropriate NRR Headquarters staff to discuss our comments. We also plan to attend any meetings held between NRC and PSE&G on this subject. Mr. Suren Singh of my staff will be the point of contact on this amendment request. Suren can be reached at (609) 987-2039.

Sincerely,

For JL

Kent W. Tosch

Jill Lipoti, Ph. D.
Assistant Director
DEPE Radiation Protection Programs

Attachment
c: K. Tosch
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Project Manager
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Senior Resident Inspector
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Manager, Licensing and Regulation
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BNE COMMENTS ON PSE&G LICENSING CHANGE REQUEST 91-02
FOR HOPE CREEK GENERATING STATION

1. Hope Creek is one of only two BWRs in the U.S. where a positive pressure is used to control leakage through the MSIVs. This is accomplished by pressurizing the sections of pipe between the inboard and outboard valves and between the outboard valves and the main steam stop valves to a pressure above that of the reactor vessel. Since most BWRs operate a leakage control system (LCS) at a negative pressure, much of the justification contained in the GE report, NEDC-31858P, is based on a negative pressure LCS. We believe the operating and maintenance experience with positive pressure systems should be provided. The possibility of improving the performance and reliability of a positive pressure LCS must be thoroughly considered before eliminating the system.

2. The change request proposes use of the main steam line, drain lines and the condenser as a leakage collection system. We have the following concerns with this approach:

   a. These non-safety related components have been in service for 6 years. The effects of age-related degradation such as corrosion and erosion on these components must be investigated.

   b. These components are assumed functional in the safety analysis proposed by PSE&G. Therefore, appropriate surveillances and limiting conditions for operation must be added to the technical specifications to assure continued operability of these components.

   c. The change request states that the proposed leakage collection method is consistent with the philosophy of protection by multiple leak-tight barriers. However, no leak inspection or inservice inspection program of the steam line, drain line, drain line valves, or condensers is proposed.

   d. Leakage from fittings and valve stem packing will become a pathway for an unmonitored release of radioactivity. This must be considered in the dose calculations.

e. The results of the verification of the seismic adequacy of these components should be provided for review as part of the 10 CFR 100 exemption request. A field walkdown to assess the fall-down potential of other components onto the main steam line, drain line, valves, and condenser should be performed and documented. An analysis of the consequences of any relevant fall-down should be provided.

f. Although the isolated condenser method of leak control is described as a passive method, control room operator action is required to open drain valves. These valves and their motor operators must be demonstrated to be capable of operating in a post accident environment.

g. The motor operated valves (MOVs) needed to operate in the drain lines must be added to the MOV Program required by Generic Letter 89-10.

3. Further information on the assumptions included in the off-site dose calculations is needed. Is it assumed that all material is held-up for 23 hours and then released instantaneously? Or, is it assumed that the material is released at a constant rate? Or, is some material held-up and some released at a constant rate? Table 1 of the LCR shows the calculated doses resulting from a maximum MSIV leak rate of 200 scfh. Is this a 200 scfh leak per steam line?

4. The need for upgraded or additional radiation monitors in the Turbine Building or elsewhere must be addressed.

5. The change will result in an increased dose to maintenance personnel working on the main steam system or condenser. This should be quantified.

6. If this change is implemented, some plant areas will have higher post accident radiation levels. Post accident access requirements into these areas must be assessed. Equipment that must remain functional in these higher radiation areas must be evaluated.