Public Service
Electric and Gas
Company

Stanley LaBruna

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Public Service Electric and Gas Company P.O. Box 236, Hancocks Bridge, NJ 08038 609-339-1200

NLR-N91144

FEB 03 1992

Reference: LCR 89-13

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

Gentlemen:

REQUEST FOR AMENDMENT
FACILITY OPERATING LICENSE NPF-57
HOPE CREEK GENERATING STATION
DOCKET NO. 50-354

Public Service Electric and Gas Company (PSE&G) hereby transmits an application to amend Appendix A of Facility Operating License No. NPF-57 in accordance with 10CFR50.90. This amendment request will eliminate the main steam line isolation and automatic reactor shutdown functions of the main steam line radiation monitor in Technical Specification Tables 2.2.1-1, 3.3.1-1, 3.3.2-2, 4.3.1.1-1, 3.3.2-1, 3.3.2-3, and Bases Section 2.2.1.6.

A description of the requested amendment, supporting information and analyses for the change, and the basis for a no significant hazards consideration determination are provided in Attachment 1. The Technical Specification pages affected by the proposed change are marked-up in Attachment 2.

We have determined that the Hope Creek facility is specifically bounded by the assumptions and justifications in General Electric Company Licensing Topical Report, NEDO-31400A, "Safety Evaluation for Eliminating the Boiling Water Reactor Main Steam Line Isolation Valve Closure Function and SCRAM Function of the Main Steam Line Radiation Monitor" and a BWR Owners Group letter (BWROG 89-31) which provided answers to specific NRC questions regarding the topical report. The NRC has issued their Safety Evaluation Report dated May 15, 1991 accepting this NEDO document for referencing by licensees in their amendment requests.

Upon NRC approval of this proposed change, PSE&G requests that the amendment be made effective on the date of issuance, but implementable within 180 days to provide sufficient time for associated physical plant modifications and amendment-related administrative activities.

A001

Additionally, pursuant to the requirements of 10CFR50.91(b)(1), PSE&G has provided a copy of this amendment request to the State of New Jersey.

Should you have any questions regarding this request, we will be pleased to discuss them with you.

Sincerely,

Attachments
Affidavit

C Mr. T. T. Martin, Administrator
USNRC Region I

Mr. S. Dembek
USNRC Licensing Project Manager

Mr. T. P. Johnson
USNRC Senior Resident Inspector

Mr. K. Tosch, Chief,
Bureau of Nuclear Engineering
New Jersey Department of Environmental Protection

REF: NLR-N91144

STATE OF NEW JERSEY)
) SS.
COUNTY OF SALEM)

Stanley LaBruna, being duly sworn according to law deposes and says:

I am Vice President - Nuclear Operations of Public Service Electric and Gas Company, and as such, I find the matters set forth in our letter dated FEB 03 1992, concerning the Hope Creek Generating Station, are true to the best of my knowledge, information and belief.

S. LaBruna

Subscribed and Sworn to before me
this 3 day of February, 1992

Elizabeth J. Kidd
Notary Public of New Jersey

ELIZABETH J. KIDD
Notary Public of New Jersey
My Commission Expires April 25, 1995

My Commission expires on

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATIONS AND BASES CHANGE

PROPOSED CHANGE TO THE TECHNICAL SPECIFICATIONS
FACILITY OPERATING LICENSE NPF-57
HOPE CREEK GENERATING STATION
DOCKET NO. 50-354

ref: LCR 89-13

DESCRIPTION OF THE CHANGE

As shown on the marked-up Technical Specifications pages in Attachment 2, change Technical Specification Table 2.2.1-1, Bases Sections 2.2.1.5 and 2.2.1.6, and Tables 3.3.1-1, 3.3.1-2, 4.3.1.1-1, 3.3.2-1, 3.3.2-3 as follows:

1. Table 2.2.1-1 Delete FUNCTIONAL UNIT 6, "Main Steam Line Radiation - High, High#" by inserting the phrase, "This item intentionally blank" and remove footnote "#" (regarding hydrogen injection test).

2. Bases Section B2.2.1.5 Delete the reference to high steam line radiation.

3. Bases Section B2.2.1.6 Delete item 6 on page B 2-8, "Main Steam Line Radiation - High" by inserting the phrase, "This item intentionally blank"

4. Table 3.3.1-1 Delete FUNCTIONAL UNIT 6, "Main Steam Line Radiation - High, High" by inserting the phrase, "This item intentionally blank", and replace ACTION 5 (which is associated only with FUNCTIONAL UNIT 6) with a statement that "This ACTION is deleted" (which will maintain the correct ACTION numbering in the Table for the other FUNCTIONAL UNITS).

5. Table 3.3.1-2 Delete FUNCTIONAL UNIT 6, "Main Steam Line Radiation - High, High" by inserting the phrase, "This item intentionally blank".

6. Table 4.3.1.1-1 Delete FUNCTIONAL UNIT 6, "Main Steam Line Radiation - High, High" by inserting the phrase, "This item intentionally blank", and, at the end of the Table, replace footnote (i), which is associated only with FUNCTIONAL UNIT 6, with a statement that "This ACTION is deleted" (which will maintain the correct ACTION numbering in the Table for the other FUNCTIONAL UNITS).

7. Table 3.3.2-1 Modify the column titled VALVE ACTUATION GROUPS OPERATED BY SIGNAL for TRIP FUNCTION 3, MAIN STEAM LINE ISOLATION AS FOLLOWS:

   FUNCTION 3.b. - delete "1,", leaving only valve group 2, and change the required ACTION 21 to ACTION 28.

8. Table 3.3.2-1 Modify the column titled VALVES CLOSED BY SIGNAL for TRIP FUNCTION 3, MAIN STEAM LINE ISOLATION AS FOLLOWS:

   FUNCTION 3.b. - delete "1 (as above),", leaving only valve group 2.

9. Table 3.3.2-3, Modify the RESPONSE TIME for TRIP FUNCTION 3.b. to read "$\leq 13^{(a)}$ **". This eliminates the response time and (*) notation for the MSIVs only.

REASON FOR THE CHANGE

Eliminating the main steam line radiation monitor (MSLRM) isolation of the main steam lines and automatic reactor shutdown features, as described in the BWR Owners Group licensing topical report (LTR) NEDO-31400A, dated July 9, 1987, the USNRC's Safety Evaluation Report (SER) for that document, and in this request will result in reduced potential for unnecessary reactor shutdowns caused by spurious MSLRM actuation trips and will increase plant operational flexibility.

JUSTIFICATION FOR THE CHANGE

The NRC staff has concluded that removal of the MSLRM trips that automatically shut down the reactor and close the MSIVs is acceptable and that Licensing Topical Report (LTR), NEDO 31400A may be referenced in support of our amendment request provided that:

* the assumptions with regard to input values made in the generic analysis of the LTR are bounding for the plant,

* reasonable assurance that significantly increased radioactivity levels in the main steam lines will be expeditiously controlled to limit both occupational and environmental releases is provided, and

* the MSLRM and offgas radiation monitor setpoints are standardized at 1.5 times the nitrogen-16 background dose rate at the monitor locations and should either or both exceed their alarm setpoint, the reactor coolant will be promptly sampled to determine activity levels and the possible need for additional corrective actions.

Attachment 2 addresses PSE&G's compliance with the above conditions which, coupled with our participation in the BWROG MSLRM activities, justifies our use of the subject LTR in support of this request.

While not specifically addressed in the LTR, the main steam line drain valves, HV-F016 (Inboard), HV-F019 (Outboard), and HV-F067A thru D, are also currently isolated with the MSIVs on receipt of a MSL Radiation High - High signal. These valves provide a two phase flowpath from the eight MSIV's before-seat drains to the main condenser and are normally open during plant operation. This is essentially the same flow path as the MSIVs which, upon approval of this requested change, will not close on MSL Radiation High - High.

Since these valves do not involve any significant difference in fission product pathway from that of the MSIVs, deletion of their isolation is consistent with elimination of the MSIV isolation function for MSL Radiation High - High. All other isolation actuations associated with MSL Radiation function remain intact under this requested change.

10CFR50.92 SIGNIFICANT HAZARDS CONSIDERATION ANALYSIS

The operation of Hope Creek Generating Station (HCGS) in accordance with the proposed change will not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed amendment does not involve a physical or procedural change to any structure, component or system that significantly affects the probability or consequences of any accident or malfunction of equipment important to safety previously evaluated in the Updated Final Safety Analysis Report (UFSAR). The proposed amendment will involve a change to reactor protection and isolation actuation systems circuitry that will remove the automatic reactor shutdown and main steam line isolation valve (MSIV) closure functions of the main steam line radiation monitor (MSLRM).

As demonstrated in Attachment 3, the methods, procedures and assumptions used to perform the generic analyses in NEDO 31400A are bounding for the Hope Creek Generating Station with regard to input values. PSE&G has also provided, in the attachment, reasonable assurance that significantly increased levels of radioactivity in the main steam lines will be controlled expeditiously to limit both occupational and environmental exposures. Finally, the MSLRM and offgas radiation monitor setpoints are set at 1.5 times* the nitrogen-16 background dose rate at the monitor locations and should either or both exceed their alarm setpoint, the reactor coolant will be promptly sampled to determine activity levels and the possible need for additional corrective actions. These actions, coupled with the analyses in the LTR, ensure that there will be no significant increase in the probability or consequences of previously evaluated accidents.

* The offgas pre-treatment radiation monitor alarm is set at 1.5 times background or 10 mr/hr, whichever is greater. This 10 mr/hr caveat has been found necessary to eliminate numerous spurious alarms (with their attendant distractions of the control room operators) due to current background levels so low (4 to 5 mr/hr) that minor circuit noise or changes in offgas flowrate can initiate an alarm. The 10 mr/hr alarm setpoint corresponds to .05% of the limit of 330 millicuries/second as specified in TS 3.11.2.7. It is in accordance with this TS that the offgas radiation monitor alarm is set. Historically, as a point of reference, one leaking fuel pin has produced several thousand mr/hr levels on the offgas radiation monitor at HCGS. Therefore, the current alarm set point of 10 mr/hr provides a conservative margin. As background levels increase with plant age, the 10 mr/hr alarm will eventually be supplanted by the 1.5 times background alarm setpoint.

The operation of Hope Creek Generating Station (HCGS) in accordance with the proposed change will not create the possibility of a new or different kind of accident from any previously evaluated.

Other than the circuitry modifications required to accomplish the removal of the subject MSLRM reactor shutdown and MSIV isolation functions, analyzed in the LTR, no changes to the physical plant or to the manner in which the plant is operated are introduced by the requested change. Therefore, the change introduces no possibility for any new or different kind of accident.

The operation of Hope Creek Generating Station (HCGS) in accordance with the proposed change does not involve a significant reduction in a margin of safety.

The analyses in the LTR demonstrate that removal of the automatic reactor shut down and main steam line isolation valve (MSIV) closure functions of the main steam line radiation monitor (MSLPM) does not change the conclusions in the UFSAR that the calculated radiological release consequences of the bounding control rod drop accident will not exceed the acceptable dose limits specified in 10 CFR 100 and the SRP (See Dose Comparison Tables 2a & 2b of Attachment 3). This, along with the additional actions described in Attachment 3, ensure that there is no significant decrease in any margin of safety.

Conclusion:

Based upon the above, we have determined that this proposed change does not involve a Significant Hazards Consideration.