

Public Service  
Electric and Gas  
Company

**E. C. Simpson**  
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**SEP 29 1998**

LR-N98423  
LCR H97-10

United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

Gentlemen:

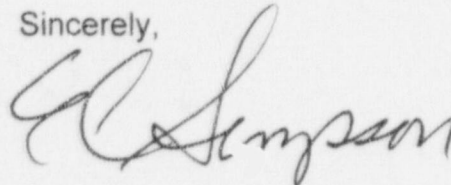
**SUPPLEMENT TO A REQUEST FOR CHANGE TO TECHNICAL SPECIFICATIONS  
SAFETY RELIEF VALVE SETPOINT TOLERANCES  
HOPE CREEK GENERATING STATION  
FACILITY OPERATING LICENSE NPF-57  
DOCKET NO. 50-354**

On April 28, 1998, via letter LR-N97117, Public Service Electric & Gas (PSE&G) Company transmitted License Change Request (LCR) H97-10 to the NRC to request a revision to the Technical Specifications (TS) for the Hope Creek Generating Station. Specifically, LCR H97-10 requested, in part, a revision to the Safety Relief Valve (SRV) tolerance acceptance limits contained in the TS. On August 6, 1998, the NRC issued a Request for Additional Information (RAI) associated with that LCR. The NRC questions contained in the RAI, as well as PSE&G's responses, are contained in Attachment 1 of this letter.

PSE&G has determined that the information contained in the attachment to this letter does not alter the conclusions reached in the 10CFR50.92 No Significant Hazards analysis previously submitted with LCR H97-10. In accordance with 10CFR50.91(b)(1), a copy of this submittal has been sent to the State of New Jersey.

Should you have any questions regarding this request, please contact James Priest at 609-339-5434.

Sincerely,



A001/1

Affidavit  
Attachment

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PDR ADOCK 05000354  
P PDR

SEP 29 1998

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C Mr. H. Miller, Administrator - Region I  
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U. S. Nuclear Regulatory Commission  
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USNRC Senior Resident Inspector - HC

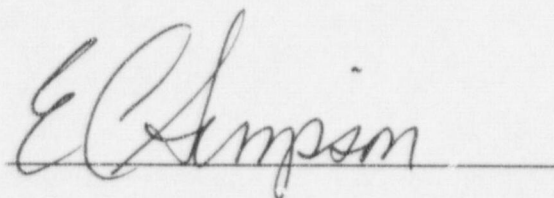
Mr. K. Tosch, Manager IV  
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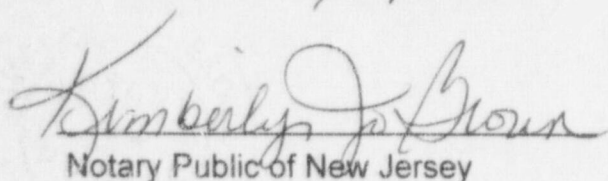
STATE OF NEW JERSEY )  
  ) SS.  
COUNTY OF SALEM        )

E. C. Simpson, being duly sworn according to law deposes and says:

I am Senior Vice President - Nuclear Engineering of Public Service Electric and Gas Company, and as such, I find the matters set forth in the above referenced letter, concerning Hope Creek Generating Station, Unit 1, are true to the best of my knowledge, information and belief.

  
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Subscribed and Sworn to before me  
this 29th day of September, 1998

  
Notary Public of New Jersey

My Commission expires on June 16, 2003



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

RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION

1. In Licensee Event Report (LER) 97-024, the licensee reported the setpoint performance for the plant Target Rock 2-Stage safety/relief valves (SRVs). Several as-found setpoint values were much in excess of the  $\pm 1\%$  tolerance in the current technical specifications (TS) and the  $\pm 3\%$  tolerance proposed by the licensee. The LER states that platinum ion-beam implanted pilot disks were installed in 7 of the 14 SRVs and that the effectiveness of this modification would be evaluated following Cycle 8. If the evaluation of the 7 platinum ion-beam implanted disks indicates that they are ineffective, what additional corrective actions would be necessary to assure that the SRVs will operate within the  $\pm 3\%$  tolerance? If the evaluation of the disks indicates they are effective in reducing the setpoint drift to within  $\pm 3\%$ , is it planned that the new disks would be installed in all 14 SRVs?

Evaluation of the effectiveness of the platinum ion-beam implanted discs is an ongoing process at Hope Creek and also within the industry. The lead plant utilizing platinum ion-beam implantation has performance data spanning three operating cycles, which has demonstrated significant reductions in corrosion induced bonding. PSE&G believes that the success established by this procedure at the lead plant provides a high level of assurance that as found pilot assembly setpoint test results will not exhibit the classic corrosion bonding phenomena experienced at Hope Creek. Since PSE&G believes that platinum ion-beam implantation will effectively reduce SRV setpoint drift resulting from corrosion bonding, Hope Creek is planning on installing the remaining complement of platinum ion-beam implanted disks during the next refueling outage (RF08), such that all 14 SRVs will have platinum ion-beam implanted disks. Reuse of the seven platinum ion-beam implanted disks currently installed is planned, provided that machining is not required to recondition the surface. If machining is necessary, then re-installation of stellite disks may be required since re-application of the platinum ion coating may not support the outage schedule. PSE&G believes that additional corrective actions to address corrosion bonding induced SRV setpoint drift are not necessary.

In addition, the Hope Creek SRV overpressure relief design utilizes a Low-Low set function, which cycles two SRVs at reduced setpoints (1017 and 1047 psig) utilizing Automatic Depressurization System (ADS) channel logic and air actuators force to open the valves. The function of this design feature and logic

is similar in nature to the "pressure switch" proposal approved in LTR NEDC-32121, "Pressure Switch/Transmitter for Two Stage Target Rock Safety/Relief Valve". The design of the SRV Low-Low set function provides additional assurance that the safety limits established in TS would not be exceeded. Therefore, PSE&G believes that additional actions to address SRV setpoint drift are not necessary.

- 2. Uncertainties of analysis parameters should be accounted for in the safety analyses used to bound limits defined by the plant TS. Provide a discussion of the SRV setpoint testing instrument accuracy and how this source of uncertainty is accounted for in the licensee's safety analysis associated with the proposed TS SRV setpoint tolerance.**

SRV as-found setpoint testing is performed in accordance with approved vendor procedures that meet the requirements of ASME/ANSI OM-1987, "Operation and Maintenance of Nuclear Power Plants". This standard specifies, in section 1.4.1.2, a testing uncertainty for SRV set pressure of +2% to -1% at the pressure level of interest, with an overall combined accuracy not to exceed +1% to -2% of the indicated (measured) set pressure. NWS Technologies and other vendors performing setpoint testing for SRVs typically use instruments with an accuracy of  $\pm 0.15\%$  to ensure ASME/ANSI criteria are met. This equates to a potential instrument inaccuracy of approximately 1.7 psi for any SRV, which is a small fraction of any of the SRV setpoints. For example, 1.7 psi is approximately 0.15% of the 1108 psig SRV setpoint and is well within the  $\pm 3\%$  (or approximately 33 psi) as-found testing tolerance associated with this TS change.

The safety analyses that were performed to justify the  $\pm 3\%$  TS acceptance limit did not specifically account for setpoint testing instrument inaccuracy. Bounding safety analyses were performed, which justified an as-found condition of  $\pm 3\%$  around the nominal setpoints. The safety analyses directly utilized an input assumption of  $\pm 3\%$  or an analytical input assumption of a more bounding absolute setpoint in order to justify the proposed  $\pm 3\%$  TS acceptance limit. Since the proposed TS require the SRVs be adjusted to within  $\pm 1\%$  ( $\pm 11$  psig) tolerance prior to reinstallation in the plant, an approximate 2% (22 psig) margin to the TS acceptance limit is ensured. However, the setpoint testing instrument inaccuracy will be accounted for in the acceptance criteria of the surveillance procedures used to determine the as-found SRV setpoint. Therefore, PSE&G concludes that instrument accuracy is appropriately accounted for and that the safety analyses performed will remain bounding.