



**PSE&G** Public Service  
Electric and Gas  
Company

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Robert L. Mittl General Manager  
Nuclear Assurance and Regulation

February 4, 1985

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

Attention: Mr. Hugh L. Thompson, Jr., Director  
Division of Licensing  
Office of Nuclear Reactor Regulation

Gentlemen:

DESIGN VERIFICATION ACTIVITIES  
HOPE CREEK GENERATING STATION  
DOCKET NO. 50-354

Your letter of December 5, 1984, requested that we present any plans we have for assuring that Hope Creek has been designed in accordance with FSAR commitments. This is in response to that request and confirms our January 10, 1985, telephone conference with members of the NRC staff on this subject.

Throughout the design and construction of Hope Creek, Public Service Electric and Gas Company (PSE&G) has been deeply involved in all phases of the project. Engineering, construction, and quality assurance personnel of the PSE&G Engineering and Construction Department have, throughout the course of the project, injected their considerable experience and expertise into performing extensive independent overviews of those architect-engineer activities. In addition, some of the audits and activities related to design verification activities are listed below:

- o Hope Creek has a proven General Electric BWR 4/5 NSSS system.
- o Bechtel Power Corporation, the architect-engineer for Hope Creek, is the most experienced and successful A/E in the nuclear industry, particularly with BWR plants.

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- o INPO conducted an audit of Hope Creek in July 1982, over a two week period. The audit took place in Bechtel offices in San Francisco, PSE&G offices in Newark, and at the Hope Creek jobsite. The audit team reviewed design processes, calculations, design interfaces, and adherence to regulatory commitments. There were no significant findings as a result of this audit.
- o In October 1982, an INPO Self-Initiated Examination (SIE) of Hope Creek was performed. This audit was conducted by a team of approximately 20 engineers over a two week period in San Francisco, Newark, and Hope Creek. This audit reviewed design input documents, specifications and procedures, adherence to PSAR commitments, and design change control programs. There were no significant findings as a result of this audit.
- o Region 4 of the NRC conducted an unannounced audit in Bechtel engineering offices in San Francisco in March 1983. This audit reviewed design interfaces, design verification, and adherence to appropriate sections of the Code of Federal Regulations. There were no findings regarding Hope Creek.
- o INPO conducted an NTOL audit of Hope Creek in June 1984. This audit covered a three week period in San Francisco and Hope Creek. INPO audited control of the design process, design interfaces, verification processes, design change processes, and adherence to FSAR and regulatory commitments. There were no significant findings, and four good practices were identified.
- o In August 1984, NRC Region 4 conducted another audit in Bechtel engineering offices in San Francisco. This audit reviewed pipe break and structural analyses. There were no findings regarding Hope Creek.
- o PSE&G quality assurance and engineering personnel have conducted several technical audits of Hope Creek throughout the design process to assure that Hope Creek was being designed in accordance with PSAR and FSAR commitments.

- o PSE&G personnel participate in plant walkdowns to assure the plant is constructed in accordance with FSAR commitments.
- o A Commitment Tracking System has been established to identify all FSAR commitments to the proper PSE&G organization. This system is in place and is updated with each FSAR amendment.
- o PSE&G engineering personnel are currently involved in a programmatic calculation review as part of the program to turn over calculations to PSE&G.
- o NRC Region I has conducted, and will continue to conduct, inspections of Hope Creek to assure construction adheres to FSAR requirements.

PSE&G firmly believes that programs have been in place throughout the design and construction of Hope Creek to assure the plant is designed and constructed in accordance with FSAR commitments. This conviction is supported by the several NRC and INPO audits of the design and construction process, all of which resulted in no significant negative findings.

To further assure PSE&G Management that Hope Creek is designed and constructed in accordance with FSAR commitments, PSE&G decided to have an Independent Design Verification performed by an outside contractor, even though it is not required by regulations. This decision was made in August 1984. Subsequently, an IDVP Work Scope Document was prepared by an independent consultant and the contract to perform the IDVP has been awarded to Sargent and Lundy.

Details of the Hope Creek IDVP will be discussed with your staff at our February 12, 1985, meeting. Should you have any further questions, please contact us.

Very truly yours,





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      USNRC, Chief Licensing Branch 2  
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