



Portland General Electric Company

David W. Cockfield Vice President, Nuclear

July 27, 1987

Trojan Nuclear Plant  
Docket 50-344  
License NPF-1

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

Dear Sir:

Response to Request for Additional Information on  
the Detailed Control Room Design Review

Attached for your review is Portland General Electric Company's response to the Nuclear Regulatory Commission's request for additional information relative to the Detailed Control Room Design Review for the Trojan Nuclear Plant.

We would be pleased to discuss any questions or comments you may have regarding these responses.

Sincerely,

Attachment

c: Mr. John B. Martin  
Regional Administrator, Region V  
U.S. Nuclear Regulatory Commission

Mr. R. C. Barr  
NRC Resident Inspector  
Trojan Nuclear Plant

Mr. David Kish, Director  
State of Oregon  
Department of Energy

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RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION CONCERNING  
THE DETAILED CONTROL ROOM DESIGN REVIEW

- Reference 1. Nuclear Regulatory Commission (NRC) to Portland General Electric Company (PGE), "Meeting Summary Regarding the March 17-18, 1987 Meeting on the Safety Parameter Display System (SPDS) and Detailed Control Room Design Review (DCRDR)", Dated June 25, 1987.
2. PGE to NRC Letter, "Detailed Control Room Design Review", Dated March 2, 1987.
3. Topical Report PGE-1041, "Detailed Control Room Design Review Summary Report", Volumes 1 and 2.

Reference 1 provides a summary of a meeting held between PGE and NRC staff members on the DCRDR and SPDS. Reference 1 requested clarification of several Human Engineering Discrepancy (HED) corrective actions. The following provides the requested clarifications:

HED 250

HED 250 noted the tachometer for the diesel auxiliary feedwater (AFW) is labeled as inaccurate. It also noted that the diesel water temperature and oil pressure meters were missing.

This HED was cancelled and was removed from PGE-1041 by Amendment 1 once PGE determined the remote shutdown panel was beyond the scope of the DCRDR.

HED 403

HED 403 noted operator complaints that during day shift the Assistant Control Operator had the responsibility of taking care of equipment tagouts. At times, this created a heavy work load and detracted from other operational duties.

To resolve this HED, a member of Trojan Operations has been assigned full time to the day shift or other heavy maintenance periods to process clearance (tagout) requests. This work is performed outside of the control room by an operator who has no other on-shift responsibilities.

#### HED 410

HED 410 noted the steam generator main feedwater bypass controls are manual. The operation of the valves is difficult and has resulted in numerous reactor trips.

PGE is participating in the Westinghouse Owners Group (WOG) Trip Reduction and Assessment Program (TRAP). Several portions of the WOG-TRAP are directly associated with relaxing steam generator level trip setpoints during the critical part of reactor startup when the main feedwater bypass controls are in use.

The WOG and NRC are currently working to jointly resolve generic issues related to these programs. Upon completion, PGE intends to evaluate all recommendations and implement those most beneficial to Trojan. As previously discussed with the NRC reviewer, it is expected that the exact nature of the modifications and completion dates will not be known for quite some time. The NRC will be notified once final resolution is determined.

#### Training

The NRC staff expressed concern during the March 1987 meeting that classroom lectures were the only means used to train operators on Plant changes related to HED resolution.

It was explained at that time that several methods are utilized in familiarizing operational crews with all Plant changes. The exact methods used depend upon whether the change is physical or procedural, and the degree of theoretical understanding or practical application required. Examples of various training methods are:

1. SPDS - Initial indoctrination was performed with classroom lectures by vendor personnel followed by hands-on-performance at an SPDS station in the Technical Support Center. This included stepping through a workbook requiring the operator to perform those SPDS functions applicable to the operator's needs. In addition, the annual simulator training program was altered to provide for use of a SPDS similar to Trojan's.
2. Upgraded Emergency Operating Procedures (EOPs) - Initial implementation of EOPs based upon Revision 1 to the Westinghouse Emergency Response Guidelines included classroom training by vendor personnel, validation of Plant-specific EOPs at the simulator, walk-throughs of EOPs in the control room, and use by the operating crews at the simulator prior to EOP approval. Current knowledge of the EOPs, including recent changes, is assured by their use during annual simulator training, and onsite instruction provided by the Licensed Operator Requalification Program.



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3. On-Shift Training - Operating crews perform walk-throughs on various procedures. For example, HED 434 indicated some operators had difficulty paralleling across breakers. The use of incoming versus running voltage indication on Panel C-11 was noted as especially confusing. This issue was resolved by on-shift operating crews simulating various synchronizing evolutions on Panel C-11.

#### Schedule

The implementation dates for HED corrective actions remain as stated in References 2 and 3. With the exception of HED 51 (noted below), commitment dates have been met. PGE will submit an amendment to Reference 3 detailing final corrective actions taken for all HEDs once the annunciator system upgrade is complete.

HED 51 requires replacement of the handwritten scale on the Containment Purge Vent Flow recorder with a printed scale. The printed scale is on order from the vendor, but has not been received. Therefore, the implementation date of June 1, 1987 was not met. PGE expects to receive this scale in the near future and install it as soon as practicable.