



Portland General Electric Company

May 22, 1981

Trojan Nuclear Plant  
Docket 50-344  
License NPF-1

Mr. Darrell G. Eisenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Mr. Eisenhut:

In response to your Generic Letter 81-04 concerning emergency procedures and training for station blackout events, Portland General Electric Company has reviewed its current capability to mitigate a station blackout event. Our assessment of existing and planned procedures and training programs and response to that letter are provided as an attachment to this letter.

Sincerely,

Bart D. Withers  
Vice President  
Nuclear



Subscribed and sworn to before me this 22nd day of May 1981.

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Notary Public of Oregon

My Commission Expires August 9, 1983.

Attachment

- c: Mr. Lynn Frank, Director  
State of Oregon  
Department of Energy
- Mr. R. A. Clark, Chief  
Operating Reactors Branch No. 3  
Division of Licensing  
U. S. Nuclear Regulatory Commission

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PORTLAND GENERAL ELECTRIC COMPANY  
RESPONSE TO NRC GENERIC LETTER 81-04  
EMERGENCY PROCEDURES AND TRAINING  
FOR STATION BLACKOUT EVENTS

NRC Position

We request that you review your current plant operations to determine your capability to mitigate a station blackout event and promptly implement, as necessary, emergency procedures and a training program for station blackout events. Your review of procedures and training should consider but not be limited to:

- a. The actions necessary and equipment available to maintain the reactor coolant inventory and heat removal with only DC power available, including consideration of the unavailability of auxiliary systems, such as ventilation and component cooling.
- b. The estimated time available to restore AC power and its basis.
- c. The actions for restoring offsite AC power in the event of a loss of the grid.
- d. The actions for restoring offsite AC power when its loss is due to postulated onsite equipment failures.
- e. The actions necessary to restore emergency onsite AC power. The actions required to restart diesel generators should include consideration of loading sequence and the unavailability of AC power.
- f. Consideration of the availability of emergency lighting and any actions required to provide such lighting in equipment areas where operator or maintenance actions may be necessary.
- g. Precautions to prevent equipment damage during the return to normal operating conditions following restoration of AC power. For example, the limitations in the operating sequence requirements which must be followed to restart the reactor coolant pumps following an extended loss of seal injection water should be considered in the recovery procedures.

The annual requalification training program should consider the emergency procedures and include simulator exercises involving the postulated loss of all AC power with decay heat removal being accomplished by natural circulation and the steam-driven Auxiliary Feedwater System for PWR plants, and by the steam-driven RCI and/or HPCI and the safety relief valves in BWR plants.

PGE Response

- a, b. The Trojan plant does not presently have procedures in effect that specifically address these issues. Portland General Electric Company (PGE) is participating in the program described by the Westinghouse Owners Group regarding station blackout events in their letter OG-56 of April 9, 1981 to Mr. D. G. Eisenhut. The Westinghouse Owners Group has developed a comprehensive development program for emergency operating guidelines to comply with the requirements of NUREG-0737, Item I.C.1. This program will fully address the issues concerning emergency procedures and training for station blackout events noted in NRC Generic Letter 81-04. PGE will utilize the Westinghouse Owners Group guidelines in developing Plant-specific procedures and training programs to address the issues presented in Items a and b.
- c. Current practice involves action by offsite personnel in isolating and correcting faults in the offsite AC power supplies. Restoration of AC power following a loss of the grid would require coordination with the load dispatcher. Current procedures and training relative to Trojan switchyard operations are adequate. Special considerations relative to energizing buses and equipment will be incorporated in accordance with Item g.
- d. Procedures are in place which provide operators a means to identify onsite electrical system faults, assuming only one train of AC power is lost. Operators are directed to locate the fault and coordinate corrective maintenance of the faulty component. In developing a station blackout emergency procedure, PGE will include steps to direct the operator in identifying and restoring offsite power. These guidelines will incorporate current procedures for electrical system faults with procedures for other potential problems which are identified. They will consist primarily of a checklist of possible onsite equipment failures the operator should investigate in attempting to locate the cause of the power loss. Since faults of this type are generally unique problems, corrective action in most cases will be to initiate appropriate maintenance action.
- e, g. These issues will be addressed by the Westinghouse Owners Group procedural guidelines, which will be incorporated into the procedures to be developed by PGE.
- f. The Trojan plant has adequate emergency lighting to deal with a loss of all AC power. Measures to conserve the batteries will be developed as part of PGE's emergency instruction for loss of all AC POWER.

Mr. Darrell G. Eisenhut  
May 22, 1981  
Attachment  
Sheet 3 of 3

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The Westinghouse Owners Group Loss of All AC Power Guideline will be submitted to the NRC by September 1, 1981. An informational seminar will be conducted on or about October 1, 1981 to provide detailed discussion of the developed guideline with Westinghouse utility owner procedure and training personnel. Based on the above schedule, implementation of Plant-specific procedures and training programs for a loss of all AC power will occur in consonance with the implementation schedule of NUREG-0737, Item I.C.1.

This schedule is necessary to enable PGE to fully utilize the Westinghouse Owners Group procedural guidelines in developing Plant specific procedures for Trojan. Trojan's offsite electrical grid, composed of two independent sources fed by four separate transmission lines, has proven extremely reliable through over 5 years of operation. In light of this performance record, we feel that a short delay in implementation is justified. The schedule outlined above will ensure that the station blackout procedure which is developed will be as complete and technically sound as possible.

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