

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	Docket 50-344
PORTLAND GENERAL ELECTRIC COMPANY)	
et al)	(Control Building Proceeding)
)	
(Trojan Nuclear Plant))	

TESTIMONY OF BART D. WITHERS

My name is Bart D. Withers. My title is Superintendent, Trojan Nuclear Plant. A statement of my qualifications is attached. In this testimony I describe the capability of the Plant to function and the Plant staff to respond properly immediately following a seismic event.

Earthquakes would affect the Plant by producing ground motions which would cause Plant buildings and equipment to be stressed by induced vibration. Seismic instrumentation at the Plant measures and records acceleration, frequency, and duration in the vertical, horizontal transverse, and horizontal longitudinal directions. This instrumentation is described in Mr. Christensen's testimony.

The Trojan Plant has an emergency procedure identifying the actions to be taken in response to seismic instrumentation actuation and other indications that an earthquake has occurred. This procedure directs the operator to immediately shut down the Plant if an earthquake has occurred and the peak shock annunciator panel has alarmed. As a result of the NRC's May 26, 1978 Order for Modification of License, the annunciation setpoints of the Peak Shock Annunciator Panel were reset to correspond to response accelerations for an OBE level of 0.11g peak horizontal ground acceleration. In addition, the emergency procedure was supplemented to require that, in the event that an earthquake occurs which exceeds this level, the Plant shall be brought to a cold shutdown condition and

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inspected to determine the effects, if any, of the earthquake. Operation will not resume under these circumstances without prior NRC approval.

A seismic event approaching the magnitude of the 0.11g OBE would be felt by Plant personnel both inside the various Plant buildings and outside. The Peak Shock Annunciator Panel provides immediate indication to the operator that the acceleration has exceeded the OBE level and an immediate Plant shutdown is required. The triaxial time-history recording peak accelerograph will confirm the seismic event.

Both during and immediately following any seismic event, the Plant operators would first utilize installed Plant instrumentation to determine the overall Plant status as well as the presence of any abnormal conditions. For example: pressure indications would be used to verify the integrity of various systems; the level indication of the sumps within the various rooms and buildings of the Plant would further indicate the presence of any abnormal situation in these areas; humidity readings within the Containment would identify the presence of any leak from reactor coolant or steam systems; and vibration readings on large rotating equipment would indicate movement of major support structures.

Trojan technical personnel would immediately be called to the Plant to process the recorded information, including the seismic acceleration time-history to permit a detailed evaluation of the seismic event. Plant management and corporate management personnel would be advised of the event.

While the Plant is being brought to cold shutdown following a seismic event exceeding the OBE level, actions would be taken to assess the overall Plant status and the presence of any abnormal conditions. First priority would be given to responding to any indications of abnormal conditions. The Plant operators would then be directed to conduct an overall inspection of the Plant. The integrity of various systems and components would be verified by a quick inspection of all areas of the Plant. After completing this immediate expedited inspection of the entire facility, the Plant staff would commence a more detailed inspection with emphasis given to any problems identified in the preliminary

inspection. Those systems required to cool down the reactor plant will be inspected first, to be followed by inspection of systems containing radioactive materials. This detailed inspection would focus on pipe hangers and seismic restraints, foundations of large tanks and components, wall penetrations where piping passes from one building to another, and the surface of walls and floors for indications of cracking or movement.

With the Plant safely shut down and cooled to the cold shutdown condition, the Plant management would proceed with a comprehensive program to evaluate the effects of the seismic event. The evaluation program would be reviewed and approved by the Plant Review Board (PRB) and the Nuclear Operations Board (NOB) to ensure its adequacy. Generation Engineering and other outside assistance, as required, would be requested to assist in carrying out the requirements of the approved evaluation program.

For any seismic occurrence, reporting to regulatory agencies would be done in accordance with the Technical Specifications and the facility license. As previously noted, if the peak horizontal ground acceleration were to exceed 0.11g, operation would not resume without prior NRC approval.

NAME: B. D. Withers

TITLE AND DUTIES: Trojan Plant Superintendent - Manages Trojan Nuclear Plant; administers and enforces Company, Plant and regulatory agency policies and requirements in order to assure safety, security, efficiency and continuity of services in Plant operation and maintenance.

EDUCATION: Idaho State U. - BS in Chemistry (1956); Naval Reactor Prototype Training, Idaho Falls, Idaho, AlW (1963), S5G (1972); Westinghouse PWR Simulator Training (1974).

PROFESSIONAL
AFFILIATIONS: PE - California.
American Nuclear Society.

EXPERIENCE: Phillips Petroleum - Chemist (1956-1958); Westinghouse Electric Corporation - Chemist (1958-1962); Engineering Officer of the Watch at Naval Prototype Reactor Plant (1962-1964); Shift Supervisor Navy Prototype (1964-1967); Operations Manager Navy Prototype (1967-1969); Bettis Atomic Power Laboratory - Manager, Operations Evaluation (1969-1971); Staff Management in Naval Core Manufacturing (1971-1972); Plant Manager, S5G Prototype (1972-1973); Portland General Electric Company - Assistant Superintendent, Trojan (1974-1977); Superintendent, Trojan (1977-).