

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION V

Report No. 50-344/81-05

Docket No. 50-344 License No. NPF-1 Safeguards Group _____

Licensee: Portland General Electric Company

121 S. W. Salmon Street

Portland, Oregon 97204

Facility Name: Trojan

Inspection at: Rainier, Oregon

Inspection conducted: February 2-27, 1981

Inspectors: *John D. Malmros* 3/27/81

M. H. Malmros, Senior Resident Inspector Date Signed

G. W. Johnston 3/27/81

G. W. Johnston, Resident Inspector Date Signed

Approved By: *Daniel M. Sternberg* 3/27/81

D. M. Sternberg, Chief, Reactor Projects Section 1,
Reactor Operations Projects Branch Date Signed

Summary: Inspection on February 2-27, 1981 (Report No. 50-344/81-05)

Areas Inspected: Routine inspections of plant operations, surveillance testing, physical security, maintenance, and followup on Licensee Event Reports and TMI Action Plan commitments. The inspection involved 185 inspector-hours by the NRC Resident Inspectors.

Results: Three apparent items of noncompliance were identified relating to failures to follow procedures. (Each item Severity Level V - Paragraph 6.) No deviations were identified.

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DETAILS

1. Persons Contacted

- *C.P. Yundt, General Manager
- *R. P. Barkhurst, Manager, Operations & Maintenance
- C. A. Olmstead, Manager, Technical Services
- J. D. Reid, Manager, Plant Services
- D. R. Keuter, Operations Supervisor
- D. W. Swan, Maintenance Supervisor
- R. P. Schmitt, Engineering Supervisor
- M. A. Bell, Chemistry Supervisor
- T. O. Meek, Radiation Protection Supervisor
- R. E. Susee, Training Supervisor
- D. L. Bennett, Control & Electrical Supervisor
- M. R. Snook, Quality Assurance Supervisor (Acting)
- T. F. Bracy, Security Supervisor
- H. E. Rosenbach, Material Control Supervisor

The inspectors interviewed and talked with other licensee employees during the course of the inspection. These included shift supervisors, reactor and auxiliary operators, maintenance personnel, plant technicians and engineers, and quality assurance personnel.

*Denotes those attending the exit interviews.

2. Operational Safety Verification

During the month, the inspectors observed and examined activities to verify the operational safety of the licensee's facility. The observations and examinations of those activities were conducted on a daily, weekly, or monthly basis.

On a daily basis, the inspectors observed control room activities to verify the licensee's adherence to limiting conditions for operations as prescribed in the facility technical specifications. Logs, instrumentation, recorder traces, and other operating records were examined to obtain information on plant conditions, trends, and compliance with regulation. On the occasions when a shift turnover was in progress, the turnover of information on plant status was observed to determine that all pertinent information was relayed to the oncoming shift.

During each week, the inspectors toured the accessible areas of the facility to observe the following items:

- a. General plant and equipment conditions.
- b. Maintenance requests and repairs.
- c. Fire hazards and fire fighting equipment.

- d. Ignition sources and flammable material control.
- e. Conduct of activities as per the licensee's administrative controls and approved procedures.
- f. Interiors of electrical and control panels.
- g. Implementation of the licensee's physical security plan.
- h. Radiation protection controls.
- i. Plant housekeeping and cleanliness.
- j. Radioactive waste systems.

The inspectors toured the areas in the Control Building that are affected by construction modifications. The tours were conducted to determine that construction noise was not interfering with normal communications, and that excessive dust, dirt, or debris would not affect operations of essential electrical equipment.

Each week, the inspectors verified the operability of a selected emergency safety features (ESF) train. This was done by direct visual verification of the correct position of valves, availability of power, cooling water supply, system integrity, and general condition of the equipment. ESF trains verified to be operable during the month included auxiliary feedwater, high head safety injection, and emergency diesel generators.

The licensee's equipment clearance control was examined weekly by the inspectors to determine that the licensee complied with technical specification limiting conditions for operation, with respect to removal of equipment from service. Verification was achieved by selecting one safety-related system or component weekly and verifying proper breaker, switch, and valve positions, both for removing the system or components from service and returning it to service.

During each week, the inspectors conversed with operators in the control room, and other plant personnel. The discussions centered on pertinent topics relating to general plant conditions, procedures, security, training, and other topics aligned with the work activities involved. Two groups were the subject of observation during shift turnover-the control room operators and security personnel at the main gate.

The inspectors examined the licensee's nonconformance reports to confirm the deficiencies were identified and tracked by the system. Identified nonconformances were being tracked and followed to the completion of corrective action.

Log of jumpers, bypasses, caution, and test tags were examined by the inspectors. No jumpers or bypasses appeared to have been improperly installed or removed, or to have conflicted with the technical specification. Radiation protection controls were verified by the inspectors to be implemented by observing portions of area surveys being performed, and examining radiation work permits currently in effect to see that prescribed clothing and instrumentation were used and were available.

Radiation protection instruments were also examined to verify operability and calibration status.

During the month of February there were several incidents that occurred within the facility which resulted from an apparent failure to follow the procedures in the Plant Operating Manual. Specific incidents examined by the inspectors were as follows:

- a. Failure to follow AO 3-18 "System Pressure Tests".

The steam generator pressure test procedure (performed on February 5, 1981, to identify leaking steam generator tubes) was prepared without including the overpressure protection required by AO 3-18. A manual valve pressure relief path, in addition to the pressure relief valve (atmospheric steam dump valve) was not included in the system pressure test procedure. As a result of not having a manual pressure reduction path identified in the procedure, low level contamination of the facade area occurred when the operator used the atmospheric dump valve to reduce system pressure. Appropriate precautions indicating that the steam generator water would contain small amounts of radioactivity as a result of primary to secondary leakage during previous operation were not in the procedure.

- b. Failure to close drain valve on reactor coolant filter.

As a result of failing to close the drain valve upon returning the reactor coolant filter following replacement in accordance with OI 6-5, "Replacement of Radioactive Filter", low pressure let down reactor coolant rapidly filled the auxiliary building drain tank and drain piping. This resulted in a backup of the drain system to the drain in the BIT room which resulted in a release of coolant and gas to the auxiliary building. The open drain valve was immediately recognized by the operators as the cause of increasing radioactivity levels in the auxiliary building. The valve was shut and the release was terminated. This event occurred on February 20, 1981.

- c. Failure to secure auxiliary building ventilation fans upon a high level alarm.

On February 20, 1981, when radioactivity levels increased to the high level alarm point on the process radiation monitor, the operator failed to secure the ventilation fans as required by ONI-12, "High Activity-Radiation Monitoring". The cause of the high alarm condition is identified in item b., above.

Each of the above incidents resulted in negligible releases of radioactivity to the facility and environment. The apparent problem of procedural compliance, as indicated above, was discussed with licensee representatives during the month.

Three items of noncompliance related to failures to follow procedures were identified. No deviations were identified.

3. Maintenance

Maintenance activities, including both preventive and corrective maintenance, were observed by the inspectors during the month. Observations by the inspectors verified that proper approvals, system clearances and tests of redundant equipment were performed, as appropriate, prior to maintenance of safety-related systems or components. The inspectors verified that qualified personnel performed the maintenance using appropriate maintenance procedures. Replacement parts were examined to determine the proper certification of materials, workmanship and tests. During the actual performance of the maintenance activity, the inspectors checked for proper radiological controls and housekeeping, as appropriate. Upon completion of the maintenance activity, the inspectors verified that the component or system was properly tested prior to returning the system or component to service. During the month, maintenance activities associated with the boron injection tank recirculation pump, steam generator tube plugging, and the replacement of a source range instrument drawer were observed.

No items of noncompliance or deviations were identified.

4. The surveillance testing of safety-related systems was witnessed by the inspectors. Observations by the inspectors included verification that proper procedures were used, test instrumentation was calibrated and that the system or component being tested was properly removed from service, if required by the test procedure. Following completion of the surveillance tests, the inspectors verified that the test results met the acceptance criteria of the technical specifications and were reviewed by cognizant licensee personnel. The inspectors also verified that corrective action was initiated, if required, to determine the cause for any unacceptable test results and to restore the system or component to an operable status consistent with the technical specification requirements. Surveillance tests witnessed during the month were associated with the following systems: power range nuclear instrumentation, and Incore/Excore calibration.

No items of noncompliance or deviations were identified.

5. Licensee Event Report (LER) follow up

The circumstance and corrective action described in LER Nos. 81-01 and 81-02 were examined by the inspectors. The inspectors found that each LER had been reviewed by the licensee and reported to the NRC within the proper reporting interval. Corrective action for each event reported was as follows:

LER 81-01 (Closed): The control power circuit to the ventilation supply fan was checked by licensee personnel for shorts, grounds, or overcurrent conditions. No faults could be found that would have blown the fuse, and the fan tested satisfactorily after the fuse was replaced.

LER 81-02 (Closed): The licensee identified boric acid crystallization in the valve packing of the RCS common sample isolation valve as the cause of the binding. Initial correction action was to flush the valve stem with demineralized water. This reduced the friction and allowed the valve to operate freely. The licensee is investigating a change of packing material as long term corrective action.

No items of noncompliance or deviations were identified.

6. TMI Action Plan-Procedures and Staffing

The inspectors examined the licensee's implementation of procedures and staffing requirements as prescribed in the TMI Action Plan clarification document NUREG-0737. The specific methods and means by which the licensee implemented the requirements were described in the licensee's written responses to NRR and reflected in changes to facility programs and procedures. The specific items examined by the inspectors included the following:

- a. I.A.1.1. Long Term STA Staffing (Closed): The licensee has trained and provided a permanent staff of Shift Technical Advisors (STA). Each STA is a degreed engineer and has completed the Westinghouse STA Training Program. The fully qualified STA's were initially assigned shift responsibility during the last week of December, 1980.
- b. I.C.5 Procedure for Operating Experience Feedback (Closed): The licensee has implemented Administrative Order (AO No. 9-4), "Operating Experience Review Program." The procedure was found to be responsive to the requirements of NUREG 0737 and was fully implemented by December 22, 1980.
- c. I.C.6 Verification of Operating Activities (Open): The inspectors verified the information contained in the licensee's response to NRR dated December 23, 1980. The specific methods for independent verification of the current performance of operational activities will be fully implemented in revised licensee procedures by April 31, 1981. The proposed procedure revisions have been discussed with licensee personnel and have been found to contain the following essential elements.
 - (1) The facility locked valve list which contains those valves necessary for proper operation of safety related equipment and establishment of system flow paths will be independently verified to be properly positioned by qualified personnel following each major outage or when equipment is taken out of service and returned to service for maintenance purposes.

- (2) Locked facility valves that must be manipulated during the performance of periodic surveillance testing will be independently verified by requiring verification sign-offs within the applicable surveillance procedure.
- (3) The installation of clearance tags by operations personnel which are installed for equipment protection and personnel safety during maintenance activities are independently verified to be properly installed by qualified maintenance personnel prior to the start of maintenance on the system or component.
- (4) Control board walkdowns in the control room by licensed operators and the Shift Technical Advisor provides routine verification each shift of the proper status of systems and components which have indication available to show the operability status. The inspectors will evaluate this area in more detail following implementation of the procedures on or about April 31, 1981.

No items of noncompliance or deviations were identified.

7. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) on March 3, 1981. During this meeting, the scope and findings of the inspection were summarized by the inspectors. The apparent items of noncompliance described in Paragraph 2 were discussed.