

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

REGION V

Report No. 50-344/80-31
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: December 1-31, 1980

Inspectors: *Dennis G. Willett for* 1-16-81
M. H. Almros, Senior Resident Inspector Date Signed

Dennis G. Willett for 1-16-81
G. W. Johnston, Resident Inspector Date Signed

Approved by: *D. M. Sternberg* 1/16/81
D. M. Sternberg, Chief, Reactor Project Date Signed
Section 1, Reactor Operations and Nuclear
Support Branch

Summary:

Inspection on December 1-31, 1980 (Report No. 50-344/80-31)

Areas Inspected: Routine inspections of plant operations, surveillance testing, physical security maintenance, committee activities, audit, and follow-up on Licensee Event Reports and Headquarter requests. The inspection involved 172 inspector-hours by the NRC Resident Inspectors.

Results: No items of noncompliance or deviations were identified.

DETAILS

1. Persons Contacted

- *C. P. Yundt, General Manager
- R. P. Barkhurst, Manager, Operations & Maintenance
- C. A. Olmstead, Manager, Technical Services
- D. F. Kielblock, 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
- J. D. Reid, Quality Assurance Supervisor
- T. F. Bracy, Security Supervisor
- H. E. Rosenbach, Material Control Supervisor

The inspector also 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 regulations. 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

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, safety injection, boric acid injection tank, and feedwater isolation.

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.

Logs 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 specifications. 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.

No items of noncompliance or 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 BIT recirculation pumps, diesel generators, and the service water strainers were observed.

No items of noncompliance or deviations were identified.

4. Surveillance

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: incore flux mapping, control rods, core thermocouple mapping, and reactor coolant system chemistry.

No items of noncompliance or deviations were identified.

5. Review and Audit

The activities of the Plant Review Board were examined by the inspectors. PRB meeting minutes were examined for the last 12 months and found to meet the frequency requirements with the proper quorum of members. Timely reviews were made of potentially reportable occurrences, and those found to meet reporting requirements were reported. The inspector attended two PRB meetings, in both cases the members present were either regular members or qualified designated alternates. Items discussed included several potentially reportable occurrences and a request for design change. The inspector followed the progress of two audits performed by facility quality assurance personnel. Audit Nos. 80-25 and 80-28 were found to have been performed in accordance with facility procedures by properly qualified personnel.

No items of noncompliance or deviations were identified.

6. Licensee Event Report (LER) Followup

The circumstances and corrective action described in LER Nos. 80-21, 80-22, 80-23 and 80-24 were examined by the inspectors. The inspectors found that each LER has 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 80-21 (Closed): During the conduct of a temporary plant test on the main steam isolation valves, the "C" MSIV failed to fully close in response to a closing signal, no steam flow was present at this time. With the introduction of steam flow, the valve subsequently closed. The licensee is pursuing permanent corrective action in response to a previous LER (LER 80-05) to overcome the problem of mechanical binding on the valve stem.

LER 80-22 (Closed): This report was submitted to meet requirements in IEB Bulletin 79-01B to submit an LER describing all safety-related electrical equipment not meeting the required environmental qualifications in the bulletin. The equipment described in the LER as not meeting IEB 79-01B requirements will be replaced during the coming refueling outage in April. The inspectors will followup on the change out of equipment during a followup examination of IEB 79-01B.

LER 80-23 (Closed): The licensee has established a test which will be run on each feedwater isolation valve to verify the proper orifice size for venting the air operator upon valve closure. The proper size orifice will then be installed replacing the manual throttle vent valve on each feedwater isolation valve. The testing and installation of the orifices will be done during the refueling outage scheduled to commence in April 1981.

LER 80-24 (Closed): The licensee is processing design change no. RDC 80-106 which will provide annunciator indication that the auxiliary feedwater pump is not ready for auto-start should control power be lost. The design change is scheduled for installation during the next facility outage.

No items of noncompliance or deviations were identified.

7. Followup on Headquarters Identified Items

The inspectors examined licensee activities as specified in the following temporary instructions with the findings as indicated.

a. Temporary Instruction 2515/43 - TMI Action Plan Inspection Requirements - Hardware Changes

The inspectors examined the licensee's implementation of TMI hardware changes which were to be completed during 1980. The facility modifications were found to have been completed on schedule and were consistent with the description of the changes as described in licensee letters to NRR regarding TMI modifications. The specific modifications examined by the inspectors included the following:

1. Direct Indication of Relief and Safety Valve Positions (II.D.3)
2. Auxiliary Feedwater System Initiation and Flow Indication (II.E.1.2)
3. Reliability of Power Supplies for Natural Circulation (II.E.3.1)
4. Containment Isolation Dependability (II.E.4.2)
5. Power Supplies for Pressurizer Relief Valves, Block Valves and Level Indication (II.G.1)

b. Temporary Instruction 2515/46 - Survey to Determine Existence of Adequate Emergency Procedures for Coping with ATWS Events at Operating Power Reactors

The inspectors reviewed the following licensee procedures which were deemed pertinent to the inspection requirements in the TI.

Administrative Order AO-1-4 - Operation and Maintenance Responsibilities
Off Normal Instruction ONI-1 - Reactor Trip
Off Normal Instruction ONI-7 - Reactor Control Malfunction
Off Normal Instruction ONI-10 - Emergency Boration
General Operating Instruction GOI-2 - Plant Startup from Hot Standby to Power Operation
Emergency Instructions EI's 0 through 11 - All plant emergency procedures dealing with LOCA, LOF, etc.

Based on an examination of the above procedures, the following findings were made by the inspectors.

1. The operators are charged with the responsibility to take immediate action, including tripping the reactor, in the event operating limitations are exceeded.
 2. The operators when verifying actions in the procedures will, for any action that has not automatically taken place, manually initiate the action.
 3. If all control rods do not fully scram, the operator must emergency borate the reactor an additional 100 ppm for each control rod not fully inserted.
 4. For a rod control system malfunction where the operator is not able to move the control rods to maintain control of the reactor, the operator must trip the reactor.
 5. The operator must emergency borate the reactor to maintain the control rods above the minimum insertion limit.
 6. The operator has complete authority to emergency borate the reactor as described in items 3 and 5 above.
- c. Temporary Instruction 2515/no number - TI for IE Bulletin 80-24, Prevention of Damage Due to Water Leakage Inside Containment

The inspectors reviewed the information contained in the licensee's response to the bulletin dated January 6, 1981. The licensee indicated that the Trojan facility has no open cooling water systems inside of the containment. For the two closed cooling water systems inside containment (chilled water and component cooling water) the licensee indicated no leakage had been identified with these systems since initial facility operation.

No items of noncompliance or deviations were identified.

8. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) on December 11 and 31, 1980. During these meetings, the inspectors summarized the scope and findings of the inspection.