

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-344/82-26

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: August 9 - September 3, 1982

Inspectors: Dennis J. Willett FOR 9-15-82
M. H. Malmros, Senior Resident Inspector Date Signed

Date Signed

Date Signed

Approved by: R T Dodds 9/16/82
R. T. Dodds, Chief, Reactor Projects Date Signed
Section 1, Reactor Projects Branch No. 1

Date Signed

Summary: Inspection on August 9 - September 3, 1982 (Report 50-344/82-26)

Areas Inspected: Routine inspection of plant operations, surveillance testing, maintenance, refueling activities, security, and follow-up on Licensee Event Reports and previous inspection findings. The inspection involved 116 inspector-hours by the NRC Senior Resident Inspector.

Results: One item of noncompliance related to safety injection system actuation logic inoperability was identified (paragraph 6 - Severity Level III).

DETAILS

1. Persons Contacted

- *C. P. Yundt, General Manager
- *C. A. Olmstead, Manager, Operations and Maintenance (Acting)
- R. P. Schmitt, Manager, Technical Services (Acting)
- J. D. Reid, Manager, Plant Services
- *D. R. Keuter, Operations Supervisor
- D. W. Swan, Maintenance Supervisor
- A. S. Cohlmeier, Engineering Supervisor (Acting)
- G. L. Rich, Chemistry Supervisor
- T. O. Meek, Radiation Protection Supervisor
- R. E. Susee, Training Supervisor
- D. L. Bennett, Control and Electrical Supervisor
- P. A. Morton, Quality Assurance Supervisor
- R. W. Ritschard, Security Supervisor
- H. E. Rosenbach, Material Control Supervisor
- J. K. Aldersebaes, Manager, Nuclear Maintenance and Construction

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 inspection period, the inspector 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 biweekly basis.

On a daily basis, the inspector 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 operation 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 inspector 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 in accordance with 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 licensee's equipment clearance control was examined weekly by the inspector 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 component from service and returning it to service.

During each week, the inspector 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. Shift turnover by licensed personnel was observed by the inspector.

The inspector examined the licensee's nonconformance reports to confirm the deficiencies were identified and tracked by the system. It appeared that 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 inspector. No jumpers or bypasses appeared to have been improperly installed or removed or to have conflicted with the technical specifications. Implementation of radiation protection controls was verified by observing portions of area surveys being performed, and by examining radiation work permits currently in effect to see that prescribed clothing and instrumentation were available and used. Radiation protection instruments were also examined to verify operability and calibration status.

Each week the inspector verified the operability of a selected engineered 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 inspection period included the off-site and on-site electrical distribution system, and the safety injection system.

The facility refueling outage was completed during the month of August 1982. Plant heatup was commenced on August 18, with criticality for Cycle 5 operations occurring on August 21. Operation at full power was achieved on August 28, 1982.

No items of noncompliance or deviations were identified.

3. Surveillance

The surveillance testing of safety-related systems was witnessed by the inspector. Observations by the inspector 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 inspector verified that the test results met the acceptance criteria of the technical specifications and were reviewed by cognizant licensee personnel. The inspector 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 inspection period were associated with the emergency diesel generator, pressurizer and main steam safety valves, and the reactor coolant system.

During this period, the inspector observed selected portions of the zero power physics testing and power escalation testing accomplished as part of the plant startup from the completed refueling outage. These tests were accomplished in accordance with facility procedures, PET-13-1, "Reload Cycle 5 Startup Low Power Physics Tests," and PET 13-2, "Reload Cycle 5 No Load and at Power Tests." The results of the startup physics tests were within the acceptance criteria of the required parameters. The core performance was in excellent agreement with all values used in the safety analysis (Reload Safety Evaluation dated June, 1982) for the Cycle 5 core and as described in Westinghouse document WCAP-10135, "The Nuclear Design and Core Management of the Trojan Nuclear Power Plant Cycle 5."

No items of noncompliance or deviations were identified.

4. Maintenance

Maintenance activities involving preventive and corrective maintenance were observed by the inspector during the inspection period. Observations by the inspector confirmed that proper approvals, system clearances, and tests of redundant equipment were performed, as appropriate, prior to maintenance of safety-related systems or components. The inspector 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 inspector checked for proper radiological controls and housekeeping, as appropriate. Upon completion of the maintenance activity, the inspector verified that the component or system was properly tested prior to returning the system or component to service. During the inspection period, maintenance activities observed were associated with the centrifugal charging pumps, the loose parts monitor, the 125-volt DC battery, and fire barrier maintenance.

Throughout the refueling outage which was completed during August, 1982, the inspector has followed the maintenance associated with main steam safety valves and the repair of the surge line following removal of a thermal sleeve. These maintenance activities were satisfactorily completed as evidenced by completion of the reactor coolant system integrity test and the verification of main steam safety valve lift set points as part of the startup test program.

No items of noncompliance or deviations were identified.

5. Refueling Activities

The facility refueling outage was completed during August 1982. The inspector, as part of the routine inspection program, verified that systems and components which were disassembled during the outage, were reassembled and returned to service in accordance with facility procedures. Specific observations by the inspector included cold and hot control rod drive testing accomplished in accordance with the facility procedures, PICT 16-1, "Hot Rod Drop Test Measurements," and PICT 16-4, "Cold Rod Drop Time Measurements," and testing of modified control power circuits for the emergency diesel generator in accordance with the facility procedure, POT 12-2, "Loss of Off-site Power Diesel Automatic Start and Auxiliary Feed-water Automatic Start."

No items of noncompliance or deviations were identified.

6. Licensee Event Report (LER) Follow-up

The circumstances and corrective action described in LERs 82-12 and 82-15 were examined by the inspector. The inspector found that each report had been reviewed by the licensee and reported to the NRC within the proper reporting interval. The corrective actions for each event were as follows:

LER 82-12- (Closed): The licensee's action of properly reinstalling the snubber was verified by the inspector. Additionally, discussions with maintenance personnel regarding the subject of pipe support/snubber disassembly

verified that appropriate training has been accomplished to emphasize the significance of the work plan and the maintenance procedural controls to assure that pipe supports/snubbers are disassembled and installed under strict procedural controls requiring management approval.

LER 82-15 (Open): The licensee reported on August 20, 1982, that the automatic actuation of the safety injection system for both trains A and B had been blocked for a period of approximately 43 hours while in Modes 4 and 3 which require that the automatic actuation of the safety injection system be operable in accordance with Technical Specification 3.3.2.1. The operability of the automatic actuation logic for safety injection had been verified on August 17, 1982, as part of the completion of the plant startup checkoff list for minimum conditions for hot shutdown (GOI-1B). However, the control operator had the instrument technicians block both trains of safety injection from automatic initiation on August 18, 1982. This action was taken with the plant in Mode 5 and was done as a precautionary measure to preclude the inadvertent operation of the safety injection system while testing certain systems and components prior to entering Mode 4. The blocking of train A and train B automatic actuation of the safety injection system was indicated on the plant status panel by the appropriate lights. The blocking of the safety injection system was not logged nor was a train outage form completed by the control operator at the time it was taken out of service on or about 4:00-4:30 p.m. on August 18, 1982. As a result, the plant was heated up and entered Mode 4 at 4:57 p.m. on August 18, 1982, and Mode 3 at 9:22 p.m. on August 18, 1982, and operated in Mode 3 until it was recognized by the operations supervisor on August 20, 1982, at approximately 11:30 a.m., that the automatic block of the safety injection system was in effect which was in noncompliance with the technical specification requirements. The safety injection system automatic actuation feature was made operable by resetting the reactor trip breakers. Corrective action to preclude recurrence of this event has been to reemphasize the use of train outage forms in accordance with the facility procedure, AO-3-14, "Safety-Related Equipment Outages," for the control of safety-related equipment. This item will remain open pending resolution of the apparent item of noncompliance (82-26-01).

One item of noncompliance was identified by the licensee as described above. No deviations were identified.

7. Follow-up on Previous Inspection Findings

(Closed) Noncompliance (82-12-01-and 02): The inspector verified that facility design change (RDC 82-13) had been installed. Testing of the modified emergency diesel control power circuits was accomplished using facility procedures for testing the emergency diesel under simulated loss of off-site power conditions with and without a safety injection signal present. The tests demonstrated satisfactory operation of the emergency diesels independent of the alignment of the normal or alternate power supplies for the vital busses, Y-11, Y-12, Y-13, and Y-14. These tests were completed in accordance with the test procedure, TPT No. 50, "EDG Control Modification RDC 82-13 Acceptance Test," (Rev. 0- Train A) (Rev. 1-Train B). Additional corrective action taken by the licensee to preclude recurrence has consisted of reviews of open facility design changes to assure a completion priority consistent with the design changes effect on plant safety.

No items of noncompliance or deviations were identified.

8. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) on August 16 and September 3, 1982. During these meetings, the inspector summarized the scope and findings of the inspection. The item of noncompliance described in paragraph 6 was discussed with the following comments made by licensee representatives:

- a. The significance of the event has been made known to all licensed operators and special emphasis has been placed on the use of AO-3-14 for all safety-related equipment outages.
- b. The event was discussed at a meeting of all shift supervisors on September 1, 1982.