

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

REGION V

Report No. 50-344/79-12  
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: June 1-29, 1979  
Inspectors: B.H. Saulsbury 7/20/79  
for M. H. Malmros, Reactor Inspector Date Signed  
M.J. Pappas July 20, 1979  
G. W. Johnston, Reactor Inspector (June 1-3, 1979) Date Signed  
R.J. Rodden 7/20/79  
T. W. Hutson, Reactor Inspector (June 27, 1979) Date Signed  
Approved By: B.H. Saulsbury 7/20/79  
for D. H. Sternberg, Chief, Reactor Project Section 1 Date Signed  
Reactor Operations and Nuclear Support Branch

Summary:

Inspection on June 1-29, 1979 (Report No. 50-344/79-12)

Areas Inspected: Routine inspections of plant operations, maintenance, physical security, surveillance testing, organization and administration, radiological protection operations and IE Bulletin followup. The inspection involved 64 inspector hours by the NRC Resident Inspector and 27 inspector hours by regional office inspectors.

Results: No items of noncompliance or deviations were identified.

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## DETAILS

### 1. Persons Contacted

- \*B. D. Withers, Plant Superintendent
- \*F. H. Lamoureaux, Assistant Plant Superintendent
- R. P. Barkhurst, Operations Supervisor
- D. L. Bennett, Instrument & Control Supervisor
- C. J. Fleming, Administrative Supervisor
- D. F. Kielblock, Training Supervisor
- W. S. Orser, Engineering Supervisor
- J. C. Perry, Administrative Engineer
- L. W. Quinn, Chemistry Supervisor
- J. D. Reid, Quality Assurance Supervisor (Acting)
- C. A. Olmstead, Maintenance Supervisor
- T. D. Walt, Radiation Protection Supervisor
- S. T. Christensen, Manager of Generation Engineering
- C. B. Shaw, Staff Engineer-Nondestructive Examination

The inspectors 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. Plant Operations

#### a. Facility Logs and Operating Records

The inspector examined the log entries contained in the control room log and the shift supervisor's log for facility operations performed during June 1979. The log entries were found to have been made consistent with the requirements of the facility administrative orders and to accurately reflect the operational status of the facility. Facility logs were reviewed by applicable staff members, and operating orders issued by the operations supervisor did not conflict with the intent of the technical specification requirements. Sufficient information was contained in the control room log and the shift supervisor's log to identify potential problems and to verify compliance with technical specification reporting requirements and limiting conditions for operation.

#### b. Facility Tour and Observation of Operations

Tours of the facility were made by the inspector in the control building, reactor auxiliary building, fuel building, intake structure, and the turbine building. During the tours, assessments of equipment and plant conditions were made with the following observations:

- (1) Instrumentation for monitoring the status of the plant was operating.
- (2) Radiation controls were properly established.
- (3) Piping systems did not show any signs of excessive vibration or leakage.
- (4) Detailed system alignment and operability of engineered safety feature systems was verified by the inspector.
- (5) Control room observations verified that the facility manning was proper, and discussions with shift supervisors and control operators revealed that they were cognizant of the effect of annunciator alarms on plant operations. Shift turnovers were found to be performed in accordance with the administrative orders and good watchstanding practices.
- (6) Routine sampling of the steam generators for wet layup chemistry was observed by the inspector. The liquid samples were analyzed consistent with facility procedures.

No items of noncompliance or deviations were identified.

### 3. Physical Protection

Based on discussions with licensee representatives, observations, and examinations of facility procedures, the inspector verified that the measures employed for the physical protection of the facility were consistent with the requirements of the physical security plan, applicable administrative orders, and regulatory requirements. Specific aspects of physical protection examined by the inspector included the following:

- a. Protected area and vital area barriers were verified to be properly closed and locked.
- b. Personnel provided access to the protected and vital areas were properly authorized, identified and badged. Personnel, vehicles, and packages were searched as required by the physical security plan.
- c. Escorts were provided for personnel and vehicles when required inside the protected area.
- d. The security organization for each shift was found to be properly organized and manned.
- e. Shift turnover, shift routines, and communications were accomplished in accordance with the requirements of the physical security plan and applicable administrative orders.

4. Containment Integrated Leak Rate Test (CILRT)

The inspector reviewed licensee procedures for the containment integrated leak rate test (CILRT). This review was to ascertain whether the procedures were consistent with regulatory requirements and guidance, as stated in the following documents:

Appendix J to 10 CFR 50, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors."

American National Standard N45.4-1972, "Leakage Rate Testing of Containment Structures for Nuclear Reactors."

Regulatory Guide 1.68, "Preoperational and Initial Startup Test Programs for Water-Cooled Power Reactors."

Topical Report BN-TOP-1, Revision 1, "Testing Criteria for Integrated Leakage Rate Testing of Primary Containment Structures for Nuclear Power Plants," Bechtel Corporation.

The inspector witnessed selected portions of the CILRT. Twenty-five percent of the containment penetrations were selected at random and were observed to be lined up in accordance with the procedure. Other areas observed included minimum crew requirements; test prerequisites being met; special test equipment in service and calibrated; and proper plant systems in service.

The test was conducted at peak pressure ( $P_a=60.0$  psig) with an allowable leakage of 0.075 Wt./24 hours ( $0.75 L_a$ ,  $L_a=1.0$  Wt./24 hours). The test commenced with data being taken for 24<sup>a</sup> hours on May 31, 1979 at 1:45 p.m. and continued until 2:30 p.m. June 1, 1979. Following this period was a superimposed leak verification test with a period of 12 hours.

The licensee's preliminary result for the Type A test, which did not include Type B or C additions, was a total time leak rate which was less than the allowed acceptance criteria. All test parameters met applicable criteria for acceptance. The IE inspector's independent calculations, for the test period used by the licensee, indicated a mass point leak rate of about 0.0599 Wt./24 hours.

No items of noncompliance or deviations were identified.

5. Maintenance

Maintenance operations on the auxiliary feedwater system, containment isolation valves, nuclear instrumentation, incore flux monitoring system, and the containment spray system were witnessed by the inspector and verified to have been performed in accordance with established procedures and technical specification requirements. During the examination of maintenance activities related to the above components or systems, the inspector made the following observations:

- a. Maintenance requests had been properly prepared to provide the required administrative approval prior to initiating the work.
- b. The maintenance was performed by qualified members of the maintenance organization.
- c. System tagging operations and plant status controls properly indicated the performance of the maintenance activities.
- d. Applicable limiting conditions for operation as specified in the technical specifications were met during the above maintenance.

No items of noncompliance or deviations were identified.

6. Organization and Administration

The inspector examined the qualifications and experience of the individual who recently assumed the position of chemistry supervisor upon reassignment of the previous chemistry supervisor to a position in corporate headquarters. This change in assignments was effective May 14, 1979. The inspector found that the educational and experience background of the new chemistry supervisor met the qualification requirements for the position of chemistry supervisor as prescribed in the technical specifications and ANSI N18.1-1971, "Selection and Training of Nuclear Power Plant Personnel."

No items of noncompliance or deviations were identified.

7. Radiological Protection Operations

During tours of the facility, the inspector verified that the posting requirements of 10 CFR 19 and 10 CFR 20 were met. The inspector found the appropriate notices to workers properly posted for employee observation. All radiation control barriers were examined and found to be properly posted and to have been maintained consistent with facility procedures. Workers observed by the inspector were found to comply with the requirements of the radiological control barriers. Work performed within radiologically controlled areas was found to have been properly authorized in accordance with approved work requests and radiological work permits.

No items of noncompliance or deviations were identified.

8. IE Bulletin Followup

IE Bulletin No. 79-02: The inspector verified with licensee representatives that Revision 1 to IE Bulletin No. 79-02 had been received and that the revised information would be used in the program for verifying the adequacy of the installation of pipe support base plates using concrete expansion

anchor bolts. The onsite test program of anchor bolts has been completed, and deficient anchor bolts have been dispositioned in accordance with the requirements of the quality assurance program. A complete report will be submitted by the licensee in accordance with the reporting requirements of the bulletin.

IE Bulletin No. 79-06A: The licensee's response and corrective action as described in their letter of June 25, 1979, which provided amplifying information to their original response to the bulletin has been examined by the inspector. Specific areas examined by the inspector and resultant findings are as follows:

- a. License Amendment No. 41 has been issued which provides for the conversion of the pressurizer safety injection actuation signal from a coincident signal, requiring both low pressure and low level, to a safety injection signal solely based on two of three pressurizer pressure channels indicating low pressure.
- b. Modifications to facility instrumentation have been completed and tested in accordance with Design Change No. 79 042 which implements the safety injection actuation changes described in License Amendment No. 41.
- c. The valve lineups for engineered safety systems have been verified consistent with the system operating instructions and process and instrumentation diagrams.
- d. The locked valve list was reverified to reflect proper positioning of locked valves prior to the resumption of power operations upon completion of the Spring maintenance outage.

IE Bulletin No. 79-13

The inspector reviewed the radiographs taken between June 10 and June 13, 1979 of the Trojan Plant feedwater nozzle to reducer and reducer to pipe welds, the construction radiographs of the above welds, the ultrasonic testing records and notes, and the radiographic/ultrasonic report summary. The radiographs taken of the feedwater nozzle to reducer welds appeared to meet the requirements of IE Bulletin 79-13 and showed no code rejectable indications. Several areas on steam generator A and C nozzle to reducer welds (FW-145 and FW-150) were radiographed using a 10° angle from normal to the weld. These angle shots did not disclose any indications that were rejectable by code. The ultrasonic tests conducted to supplement the radiographic results noted showed several geometric reflectors due to nozzle and reducer weld prep (counterbore) and weld root crown. No ASME code rejectable indications were found. Telephone discussions with cognizant licensee personnel after the inspection conducted on June 27, 1979 indicated that a consultant from Westinghouse suggested additional radiography using a finer grain film over the area of the counterbore. Their additional radiography supplemented by

selected ultrasonic examination by the consultant supported the conclusion based on the original testing that no cracking is present in the feed-water nozzle to reducer welds. This Bulletin will remain open pending receipt and review of the required response.

9. Exit Interview

The NRC Resident Inspector met with licensee representatives (denoted in Paragraph 1) on June 15, 22 and 29, 1979. During these meetings, the inspector summarized the scope and findings of the inspection.

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