

DETAILS

1. Persons Contacted

Licensee Employees

- R. B. Starkey, Plant General Manager
- *W. Crawford, Manager, Operations and Maintenance
- *J. Curley, Manager, Technical Support
- *F. Lowery, Operations Supervisor Unit 2
- R. Chambers, Maintenance Supervisor Unit 2
- *F. Gilman, Senior Specialist, Regulatory Compliance
- *C. Wright, Specialist, Regulatory Compliance
- *S. Zimmerman, Manager, Planning and Scheduling
- *J. Young, Director, Corporate QA/QC
- *M. Page, Engineering Supervisor
- *D. Baur, Project QA/QC Specialist

Other licensee employees contacted included technicians, operators, mechanics, security force members, and office personnel.

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on January 8, 1982 with those persons indicated in paragraph 1 above. The licensee acknowledged the violations as stated.

3. Licensee Action on Previous Inspection Findings

(Closed) Unresolved item 81-32-02. This item concerns issues identified in Inspection Report 50-261/81-32. Resolution of these items is discussed in paragraph 9.

(Closed) Severity Level V Violation 81-07-08. This item dealt with the licensee's failure to make termination exposure reports to the NRC within the required time. The inspector interviewed licensee personnel and reviewed Revision 10 to Health Physics Procedure - 9. Based on this review, the inspector determined that the licensee had completed the corrective actions stated in CP&L's response letter dated July 30, 1981.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Plant Operations Review

The inspector periodically during the inspection interval reviewed shift logs and operations records, including data sheets, instrument traces, and records of equipment malfunctions. This review included control room logs,

auxiliary logs, operating orders, standing orders, jumper logs and equipment tagout records. The inspector routinely observed operator alertness and demeanor during plant tours. During abnormal events, operator performance and response actions were observed and evaluated. The inspector conducted random off-hours inspections during the reporting interval to assure that operations and security remained at an acceptable level. Shift turnovers were observed to verify that they were conducted in accordance with approved licensee procedures. The inspector had no further comments.

6. Technical Specification Compliance

During this reporting interval, the inspector verified compliance with selected limiting conditions for operation (LCO's) and reviewed results of selected surveillance tests. These verifications were accomplished by direct observation of monitoring instrumentation, valve positions, switch positions, and review of completed logs and records. The licensee's compliance with selected LCO action statements were reviewed as they happened.

7. Plant Tour

The inspector conducted plant tours periodically during the inspection interval to verify that monitoring equipment was recording as required, equipment was properly tagged, operations personnel were aware of plant conditions, and plant housekeeping efforts were adequate. The inspector determined that appropriate radiation controls were properly established, excess equipment or material was stored properly, and combustible material was disposed of expeditiously. During tours the inspector looked for the existence of unusual fluid leaks, piping vibrations, pipe hanger and seismic restraint abnormal settings, various valve and breaker positions, equipment clearance tags and component status, adequacy of firefighting equipment, and instrument calibration dates. Some tours were conducted on backshifts. The inspector performed major flowpath valve lineup verifications and system status checks on the following systems:

- a. selected containment isolation valves
- b. Containment Spray System
- c. Boration paths

No violations or deviations were identified.

8. Physical Protection

The inspector verified by observation and interview during the reporting interval that measures taken to assure the physical protection of the facility met current requirements. Areas inspected included the organization of the security force, the establishment and maintenance of gates, doors and isolation zones in the proper condition, that access control and

badging was proper, that search practices were appropriate, and that escorting and communications procedures were followed.

9. Power Operated Relief Valves (PORV's) and Block Valve Issues

This inspection closes unresolved item 81-32-02 identified as a result of the partial depressurization event of November 30, 1981.

- a. The inspector was concerned that inadequate controls on modifications and maintenance to the PORV's contributed to their leakage and removal from service. The inspector determined that the PORV spring tension was reduced about May, 1979 following the replacement of valve internals. Modification-480, which changed the internals was reviewed. The safety review done as part of the modification stated that the new plug, stem, and cage assembly would give the modified valve a faster opening time and quicker flow response. Although no documentation exists, it appears the spring tension was reduced to allow the PORV's to meet the two second opening design specification. This spring tension change was not treated as a plant modification as required by Administrative Instruction Section 6 of the licensee's Plant Operating Manual. Failure to implement the modification procedures is a violation (50-261/81-36-01).

Additionally, the inspector noted that in recent PORV testing following resetting of the spring tensions to the original design value, the PORV's met the opening time requirements. Thus reducing the spring tension may not have been necessary at all.

- b. The inspector was concerned that PORV leakage (with the block valves open) may have exceeded Technical Specification limits on reactor coolant system pressure boundary leakage. A review of daily leakage measurement data indicated that leak rates were within Technical Specification limits before the block valves were shut on plant heatup. At normal plant operating temperature and pressure, the leak rates were determined with the block valves closed, so no information exists.
- c. The inspector was concerned that modification of the PORV's springs and continued operation with the valves leaking and the block valves closed did not receive the required Plant Nuclear Safety Committee (PNSC) review and approval. The PORV's form part of the reactor coolant system pressure boundary as defined in 10 CFR 50.2. Through document review and discussions with the licensee, the inspector determined the following. The modification, as discussed in a. above, was not handled in accordance with licensee procedures and therefore was not reviewed by the PNSC. The licensee stated that the PNSC had reviewed the issue of operating with PORV leakage and with the block valves shut and had found it acceptable. That review apparently was not documented. During the 1980 refueling outage the spring adjustment was determined to be responsible for PORV leakage. This determination did not

precipitate any new PNSC review. Failure to review the PORV modification and resolve its deficiencies and potential safety concerns constitutes part of the violation of paragraph 9.a. (50-261/81-36-01).

Additionally, the inspector reviewed the licensee's administrative controls on operation with the PORV's leaking and the block valves shut. The plant operating manual was reviewed, and the inspector determined that no special guidance existed for operations personnel, although they were cognizant of the valve conditions and status. A review of plant procedures revealed:

1. Abnormal Procedure-19, Malfunction of Reactor Coolant System Pressure Control, assumed automatic opening of the PORV's at 2335 psig on high system pressure. This feature had been defeated at power since 1978.
2. Operating Procedure-30, Pressurizer Pressure and Spray Control, indicated the block valves should remain open. The abnormal PORV and block valve condition had existed for nearly four years without the licensee providing operator guidance on block valve usage. Technical Specifications require that such procedures be established and implemented, and failure to do so is a violation (50-261/81-36-02).

As discussed in inspection report 50-261/81-32, the licensee has since implemented Standing Order 17 to provide operator guidance on the use of the PORV block valves.

10. Independent Inspection

The inspector noted on past plant tours that the gas analyzer (GA) has been out of service for several months. Therefore, a review of licensee corrective actions was made. FSAR section 11 describes the GA as being used to sample tanks which discharge to the waste gas vent header and to the waste gas decay tank (WGDT) being filled. The samples are automatically analyzed to determine their hydrogen and oxygen content. There should be no significant oxygen content in any of the tanks, and an alarm warns the operator of increasing oxygen content to prevent formation of an explosive mixture.

A review of maintenance work requests and auxiliary operators' logs revealed the following:

- a. The GA was last overhauled and placed in working order on October 12, 1980. During the period from October 12 - December 16, 1980, the GA was out of service six times (35 days total). The vacuum pump coupling sheared three times sequentially and water was found in the sample lines. Between December 16, 1980 and November 20, 1981, the GA has never been in service for more than two eight-hour shifts for a total

operating time of twenty-four hours. Discussion with licensee representatives indicated that no compensatory measures to monitor for explosive gas mixtures had been instituted.

- b. Work requests were not written to report the GA out of service on its failure in March, 1981. Repairs completed on April 14, 1981 indicated the GA was operational, but it was not returned to service. The next work request stating the GA was out of service was written in September 1981. When the GA was returned to service on November 19, 1981, it operated for sixteen hours before failing and indicated explosive mixtures in several tanks. The inspector concludes that the gas analyzer has suffered from inadequate repairs and inconsistency on returning it to service. Management attention to the corrective actions being implemented appears inadequate.

Discussions with operational personnel indicated that water in the piping has frequently caused GA problems in the past. One method by which this water apparently enters the piping is when a containment phase A isolation occurs. During these events sealing water is injected between the sample line containment isolation valves to the Pressurizer Relief Tank (PRT) and the Reactor Coolant Drain Tank (RCDT). There may be other sources of water in the lines (such as overflowing tanks), or the automatic water traps may be performing inadequately.

Procedures were also reviewed to ascertain guidance provided on the importance of GA operation. OP-34, Waste Disposal - Liquid, requires operators to nitrogen purge the RCDT if hydrogen concentration approaches 4% on the GA. OP-35, Waste Disposal - Gas, requires operators to nitrogen purge the WGDT's if hydrogen concentration approaches 4% on the GA. OP-28, Charging and Volume Control, requires the operator to use the GA to monitor Volume Control Tank hydrogen and oxygen and take corrective action to maintain oxygen below 5 volume percent. OP-37, PRT Control, requires operators to vent the PRT if oxygen concentration approaches 4%. From the above, it is obvious that the gas analyzer is presently the only equipment available to monitor and warn operators of explosive mixtures in tanks containing radioactive gases. Failure to maintain the GA or provide compensatory measures poses a safety hazard, which is required to be identified and reviewed by the Plant Nuclear Safety Committee (PNSC). Failure to perform such a review is a violation (50-261/81-36-03). Corrective action in response to the violation should also discuss the steps taken to restore the GA to service and maintain it operational.

11. Licensee Event Report (LER) Followup

The inspector reviewed the following LER's to verify that the report details met license requirements, identified the cause of the event, described appropriate corrective actions, adequately assessed the event, and addressed any generic implications. Corrective action and appropriate licensee review of the below events was verified. The inspector had no further comments.

LER	Event
81-21	Inoperable Control Rods
81-23	'A' Safety Injection Pump Trip
81-24	Heat Tracing Failure
81-25	'B' Emergency Diesel Generator Failure to Start
81-28	'C' Steam Generator Low Level Trip Bistable Inoperable
81-30	'B' Emergency Diesel Generator Rheostat Failure

12. Review of IE Circulars and Notices (IEC's and IEN's)

The inspector verified that IE Circulars and Notices had been received onsite and reviewed by cognizant licensee personnel. Selected applicable IE Circulars and Notices were discussed with licensee personnel to ascertain the licensee's actions on these items. The inspector also verified that IE Circulars and Notices were reviewed by the Plant Nuclear Safety Committee in accordance with facility administrative policy. Licensee action on the following IE Circulars and Notices were reviewed by the inspector and are closed. N/A indicates applicable to Boiling Water Reactors only.

IE Circulars	IE Notices
81-08	81-07
81-11 (N/A)	81-11 (N/A)
	81-12 (N/A)
	81-16 (N/A)

13. Outstanding Items Review

(Closed) Inspector Followup Item 81-33-02. This item concerned the practice of cleaning the automatic voltage control rheostats on emergency diesel generators. The inspector verified the licensee investigated the practice and found it acceptable. The inspector had no further questions.

(Closed) Inspector Followup Item 81-20-02. This item concerned the licensee's need to revise the Chloride Titration Procedure, CP-8, to record the standardization, blank, and sample data. The inspector reviewed Revision 1 to CP-8 and found that the Chloride Log now requires recording of this data.

(Closed) Open Item 81-19-04. This item concerned an administrative limit that had not been proceduralized. The inspector reviewed Revision 25 to procedure OP-34 and found that the limit had been incorporated.

(Closed) Open Item 81-26-08. This item concerned discrepancies found between the licensee's procedures and as-built alarm setpoints. The licensee has reviewed and corrected the applicable Annunciator and Precautions, Limitation, and Setpoints Procedures. A spot check of other procedures found no discrepancies, and corrective action appears adequate.

14. Annual Emergency Drill

During the period December 14-15, 1981, the inspector participated in the preparation for, monitoring of, and critiquing of the Robinson emergency drill. This portion of the inspection is documented in IE Inspection Report 50-261/81-28.

15. TMI Action Item Review

TAP No. II.K.3.12, NUREG 0737. This item concerns the anticipatory reactor trip on turbine trip feature. Review of the CP&L letter dated June 27, 1980 confirmed that the Robinson 2 anticipatory trip is in conformance with this item without modification. This item is closed.