U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-354/85-66

Docket No. 50-354

License No. CPPR-120

Licensee: Public Service Electric and Gas Company

80 Park Plaza -17 C

Newark, New Jersey 07101

Facility Name: Hope Creek Generating Station

Inspection At: Hancocks Bridge, New Jersey

Inspection Conducted: December 30, 1985-January 3, 1986

Inspectors: M. Dev

M. Dev, Reactor Engineer
QAS, OB, Division of Reactor Safety

2.6.86
date

R. Winters

R. Winters, Reactor Engineer
QAS, OB, Division of Reactor Safety

2/6/86
date

Approved by: P. K. Eapen

Dr. P. K. Eapen, Chief
Quality Assurance Section, OB, DRS

2/7/86
date

Inspection Summary: Routine, unannounced inspection conducted on December 30, 1985- January 3, 1986 (Inspection Report No. 50-354/85-66).

Areas Inspected: Licensee's action on previous NRC concerns related to Salem ATWS Event Follow up Items, required by Generic Letter (GL) 83-28, QA records and Measuring and Test Equipment. The inspection involved 63 inspection hours by two region based inspectors.

Results: No violations were identified.

DETAILS

1.0 Persons Contacted

*C. Allen, Technicial Staff Engineer
W. Allen, Preop Test Record Supervisor
*A. Barnabei, Principal QA Engineer
N. Champion, Startup QA Engineer
F. Cielo, Principal Engineer
*E. Cretsinger, Testing Engineer
*D. Distel, Licensing Engineer Staff
*R. Donges, Lead QA Engineer
*J. Duffy, Site Engineering Staff
*N. Dyck, Response Coordination Team Chairman
C. Fresh, MT&E Startup Group Lead
*R. Griffith, Principal QA Engineer
A. Indico, Project Startup Director
S. La Bruna, Assistant General Manager
S. Maginnis, Senior Staff Engineer
*M. Metcalf, Principal QA Engineer
A. Meyers, Senior Staff Startup Engineer
*J. Nichols, Technical Manager
L. Rice, Planning & Scheduling
T. Robbins, I&C Supervisor Operations
L. Stone, Staff Engineer, MEL

U.S. NRC

*R. Borchardt, Senior Resident Inspector

*Denotes those present at the exit interview.

2.0 Licensee's Action on Previous NRC Concerns

(Closed) Inspector Follow Item (50-354/84-SB-01):

This item requires verification of adequacy and completeness of the licensee's response to the Generic Letter 83-28, pertaining to SALEM ATWS Event followup.

This inspection reviewed the licensee's planned and completed actions relative to the Generic Letter action items 3.1.1, 3.1.2, 3.2.1, 3.2.2 and 4.5.1 (see Attachment 1 for References). This review completes the actions assigned to NRC:Region I in this regard.

Based on this inspection it was determined that the licensee has completed Action Items 3.1.1, 3.1.2, 3.2.1, 3.2.2 and 4.5.1 required by GL 83-28. This inspector Follow Item is closed.

(Closed) Violation 84-29-01

Control of measuring and test equipment (M&TE) to assure traceability of use. The corrective actions for this violation were reviewed during NRC Inspection 50-354/85-45 and all concerns except the usage traceability and the effectiveness of QA audits for M&TE were closed.

During this inspection the inspector reviewed the records associated with the Differential Pressure gauge (HC-I&C-0447) and verified that prior uses of this gauge were documented in a traceable manner. The inspector also examined the records of a review by the startup group of the use of calibrated instruments and verified that usage traceability has been maintained. Since NRC inspection 50-354/85-45, the instrument usage records have provided better traceability. In addition, the use of an Instrument List, as part of preoperational tests, has provided a cross check for instrument usage.

This violation is closed.

3.0 QA Records

To verify the effectiveness of the implementation of the licensee's records program established in accordance with 10 CFR 50, Appendix B, Hope Creek Nuclear Generating Station FSAR, Section 17.2, and the Nuclear Quality Assurance Department Manual, the inspector reviewed records of preoperational and startup tests, preventive maintenance activities and On and Offsite Safety Review Committee Minutes.

In the area of Preoperational test, the inspector reviewed the related test procedures and the results of the following tests.

PTP-BE-1 Rev. 0 - Reactor Core Spray
PTP-BD-1 Rev. 0 - Reactor Core Isolation Cooling
PTP-SE-2 Rev. 1 - Neutron Monitoring Intermediate Range

The procedures and test results were well documented. Test exceptions, deviations and changes were documented, and additional work required to complete the testing was clearly defined. The actions required to disposition test exceptions, deviations and changes were in progress. The packages reviewed were acceptable for QA records.

During the review of the records for PTP-BD-1 Rev. 0, Reactor Core Isolation Cooling System the inspector noted that eight relays required maintenance due to dirty contacts during performance of this test. The relays were Agastat Type Model EG PDC-750 with 125 volt direct current (VDC) coil

and Model FG PBC 750 with 24 VDC Coil. The inspector subsequently visited the relay room and verified that cleanliness controls were in effect. The relay-room as well as the internal parts of the cabinets were clean. The licensee has adequately corrected previously identified construction related cleanliness problems.

No violations were identified.

4.0 Measuring and Test Equipment (M&TE)

To verify the effectiveness of the implementation of the licensee's M&TE program established in accordance with Criterion XII of 10 CFR 50 Appendix B the inspector examined the method used for controlling calibration of instruments installed in the plant. As systems are turned over from the contractor (Bechtel) to the licensee startup group (PSSUG) instrument are calibrated by PSSUG Instrument and Control Section. At this time a label is placed on the instruments indicating the identification number, date calibrated and the identification of the technician performing the calibration. The inspector observed that five instruments (E41-K600-2, E41-K600-3, ISK-TDS-299, IST-TS-0289, and E51-N600) had labels indicating that the calibration interval had expired. Further investigation on the status of these instruments showed that these instruments had been internally turned over to the Operations Group (OPS). OPS had recalibrated ISK-TDS-299, IST-TS-0289, and E51-N600 and open Inspection Orders were issued for recalibration of E41-K600-2 and E41-K600-3. These Inspection Orders are automatically generated by computer based on calibration due dates. The system assures that all instruments requiring calibration are identified in order to perform the calibration in a timely manner. This is the reason for eliminating calibration labels on turned over instruments. However, disposition of the prior calibration labels is an Unresolved Item (50-354/85-66-01), pending licensee's action to assure that no erroneous information exists on the instruments and that the calibration program and the station procedures are consistent with commitments of the FSAR Section 17.2.

The inspector noted that protective relays on 4160 volt safety-related buses did not have calibration identification. The following relays were chosen and their calibration status were examined:

a. BS 7-8 Breaker Failure Relay 50BF78
b. Station Service Transformer Ground Over Current Relay 51-NTR-BX501
c. Station Service Transformer Differential Relays 87T-BX503-A,B, and C.

Protective devices such as these relays are used throughout the Public Service Electric and Gas (PSE&G) system. The PSE&G corporate policy assigns the responsibilities to the cognizant organizations for performing initial inspection, maintenance, repair and calibration of these devices. Initial inspection and test are performed by the Research and Test subsidiary prior to installation. Subsequent maintenance and calibration are performed by

the Transmission and Distribution Department. Recalibration is scheduled based on the maintenance history of the relay type and proposed Technical Specification requirements. After servicing the relay cases are sealed with a wire crimped seal bearing the technician's identification.

No violations were identified.

5.0 Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items or violations. An Unresolved item is discussed in paragraph 4.

6.0 Management Meetings

Plant management was informed of the scope and purpose of the inspection at an entrance interview conducted on December 30, 1985. The findings of the inspection were periodically discussed with plant representatives during the course of the inspection. The exit interview was conducted on January 3, 1986 (see paragraph 1 for attendees) at which time the findings of the inspection were presented.

At no time during this inspection was written material provided to the applicant by the inspectors.

ATTACHMENT 1

References

1. SA-AP.ZZ-009(Q), Control of Station Maintenance, Rev 4

2. SA-AP.ZZ-010(Q), Station Preventive Maintenance Program, Revision 3

3. SA-AP.ZZ-012 (Q), Technical Specification Surveillance Responsibilities, Revision 0

4. SA-AP.ZZ-015(Q), Station Safety Tagging Program, Revision 4

5. SA-AP.ZZ-030(Q), Station Response and Commitment Control Program, Revision 0

6. SA-AP.ZZ-040(Q), Master Equipment List, Revision 1

7. SA-AP.ZZ-047(Q), Operation Experience Evaluation, Revision 2

8. SA-AP.ZZ-048(Q), Station Performance and Reliability Monitoring, Revision 1

9. SA-AP.ZZ-050(Q), Station Retest Program (Draft)

10. IC-CC.BB-027(Q), Channel Calibration: Nuclear Boiler - Division 1, Channel A1/A, B21-N680A, Low Reactor Vessel Level (3) Trip, Revision 0

11. IC-CC.BB-035(Q), Channel Calibration: Nuclear Boiler - B21-N678A, High Reactor Pressure, Revision 0

12. IC-FT.BB-015(Q), Functional Test: Nuclear Boiler - Division 1, Channel A1/A, B21-N680A, Low Reactor Vessel Level (3) Trip, Revision 0

13. IC-FT.BB-019(Q), Functional Test: Nuclear Boiler - Division 1, Channel A1, C71-N650A, High Drywell Pressure, Revision 0

14. IC-FT.BB-023(Q), Functional Test: Nuclear Boiler - Division 1, Channel A1, B21-N678A, High Reactor Pressure, Revision 0

15. IC-FT.BB-031(Q), Functional Test: Reactor Recirculation System - Channel A, Positioner SOO1A, MG Set A Scoop Tube Electrical and Mechanical Stop, Revision 0

16. OP-AP.ZZ-108(Q), Removal and Return of Equipment to Service, Revision 0

17. OP-FT.SB-001(Q), Back Up Scram Valve Functional Test - 18 Months (Draft)

18. SEI 2.1, Component Functional Classification, Revision 0

19. SEI 2.7, System Analysis Group - Response to Nuclear Industry Documents Coordinated by Response Coordination Team, Revision 0

20. SEI 5.1, Hope Creek Master Equipment List, Revision 3

21. SEI 5.3, Review and Control of Vendor Documents and Technical Manuals, Revision 1

22. SEI 5.10, Hope Creek Master Equipment List Input/Update, Revision 1

23. VPN-LEP-03, Commitment Management, Revision 1

24. M3-POP-003, Response Coordination Team, Revision 0

25. Project Manual, Engineering and Construction Department, Section 1.6, Response coordination Procedure, Revision 1

26. Hope Creek Generating Station (HCGS) Technical Specification, Section 3/4.3.1 Reactor Protection System Instrumentation, Surveillance Requirements, Issued September 30, 1985

27. HCGS Response to NRC Generic Letter 83-28, Dated December 17, 1984

28. HCGS Response to NRC Generic Letter 83-28, Dated February 28, 1985

29. HCGS Response to NRC Generic Letter 83-28, Dated May 21, 1985

30. HCGS FSAR Section I.C.5, Feedback of Operating Experience, Amendment 11, Dated July, 1985

31. U.S. NRC NUREG 1000, Section 3.1.2.5, General Electric RTS (Reactor Trip System) Design

32. Technical Specification/Surveillance Procedure System Cross Reference Matrix Report, Dated December 11, 1985