

U. S. NUCLEAR REGULATORY COMMISSION

REGION I

		050272-850708
		050272-850729
Report Nos.	50-272/85-18 <u>50-311/85-20</u>	050311-850706 050311-850707
Docket Nos.	50-272 <u>50-311</u>	050311-850708 050311-850711 050311-850720
License Nos.	DPR-70 <u>DPR-75</u>	050311-850723

Licensee: Public Service Electric and Gas Company
80 Park Plaza
Newark, New Jersey 07101

Facility Name: Salem Nuclear Generating Station - Units 1 and 2

Inspection At: Hancocks Bridge, New Jersey

Inspection Conducted: August 1, 1985 - August 31, 1985

Inspectors: T. J. Kenny, Senior Resident Inspector
R. W. Borchardt, Resident Inspector

Reviewed by: *D. F. Limroth*
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9/9/85
date

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9/9/85
date

Inspection Summary:

Inspections on August 1, 1985 - August 31, 1985 (Combined Report Numbers 50-272/85-18 and 50-311/85-20)

Areas Inspected: Routine inspections of plant operations including: followup on outstanding inspection items, operational safety verification, maintenance observations, surveillance observations, ESF system walkdown, calibration program, review of special reports, licensee event followup, and TMI Items. The inspection involved 177 inspector hours by the resident NRC inspectors.

Results: This report does not contain any items of concern with respect to NRC requirements. It does however document the licensee's identified items of concern with regard to plant operations. The report also documents the current status of NUREG 0737 TMI Lessons Learned.

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DETAILS

1. Persons Contacted

Within this report period, interviews and discussions were conducted with members of licensee management and staff as necessary to support inspection activity.

2. Followup on Outstanding Inspection Items

(Closed) Follow Item 272/82-22-02; 311/82-21-02: Evaluate Need for Master List to Control the Calibration of Technical Specification (TS) Related Instruments. The scheduling of safety related instrument and gauge calibration is controlled by the Inspection Order (IO) Program and the station computer scheduling system. The plant staff conducted a detailed review of TS during the development of these systems to ensure that all TS surveillance requirements would be met. As changes are made to the TS the staff then updates the IO program as applicable. The inspector verified that selected safety related instruments and gauges were properly covered by the station calibration program (see paragraph 7). This item is closed.

3. Operational Safety Verification

3.1 Documents Reviewed

- Selected Operators' Logs
- Senior Shift Supervisor's (SSS) Log
- Jumper Log
- Radioactive Waste Release Permits (liquid & gaseous)
- Selected Radiation Exposure Permits (REP)
- Selected Chemistry Logs
- Selected Tagouts
- Health Physics Watch Log

3.2 The inspectors conducted routine entries into the protected areas of the plants, including the control rooms, Auxiliary Building, fuel buildings, and containments (when access is possible). During the inspection activities, discussions were held with operators, technicians (HP & I&C), mechanics, supervisors, and plant management. The purpose of the inspection was to affirm the licensee's commitments and compliance with 10 CFR, Technical Specifications, and Administrative Procedures.

(1) On a daily basis, particular attention was directed to the following areas:

- Instrumentation and recorder traces for abnormalities;

- Adherence to LCO's directly observable from the control room;
 - Proper control room shift manning and access control;
 - Verification of the status of control room annunciators that are in alarm;
 - Proper use of procedures;
 - Review of logs to obtain plant conditions; and,
 - Verification of surveillance testing for timely completion.
- (2) On a weekly basis, the inspectors confirmed the operability of selected ESF trains by:
- Verifying that accessible valves in the flow path were in the correct positions;
 - Verifying that power supplies and breakers were in the correct positions;
 - Verifying that de-energized portions of these systems were de-energized as identified by Technical Specifications;
 - Visually inspecting major components for leakage, lubrication, vibration, cooling water supply, and general operating conditions; and,
 - Visually inspecting instrumentation, where possible, for proper operability.
- (3) On a biweekly basis, the inspectors:
- Verified the correct application of a tagout to a safety-related system;
 - Observed a shift turnover;
 - Reviewed the sampling program including the liquid and gaseous effluents;
 - Verified that radiation protection and controls were properly established;
 - Verified that the physical security plan was being implemented;
 - Reviewed licensee-identified problem areas; and,

- Verified selected portions of containment isolation lineup.

3.3 Inspector Comments/Findings:

The inspectors selected phases of the units' operation to determine compliance with the NRC's regulations. The inspectors determined that the areas inspected and the licensee's actions did not constitute a health and safety hazard to the public or plant personnel. The following are noteworthy areas the inspector researched in depth:

1. Unit 1

Unit 1 operated at 100% power throughout this report period with the exception of minor power reductions to perform surveillance testing.

2. Unit 2

- a. Unit 2 operated at 100% power throughout this report period with the exception of those periods discussed below.

The licensee declared an unusual event at 9:14 p.m. on August 1, 1985 and began to place the unit in hot standby, when an action statement relating to RWST minimum water level could not be satisfied within the one hour prescribed by Technical Specifications. The cause of the decreasing water level in the RWST has been attributed to a faulty valve lineup which allowed RWST water to flow to the CVCS holdup tank. The tank was brought back to level specification and chemistry results were satisfactory at 12:45 a.m. on August 2. The licensee terminated the unusual event and began to increase reactor power. The results of an investigation by the licensee and a followup by the resident inspector identified the following.

- The faulty lineup was brought about when the normally closed discharge valve from the primary drains tank transfer pump to the RWST was opened to provide a path for the primary drains tank pump discharge. This would allow isolating the normal discharge path to the CVCS holdup tank, which was to be tagged out for valve maintenance.
- It is not PSE&G company policy to tag valves in the open position, and therefore the valve change to the RWST was not included in the valve tagout for maintenance. However, it was included in the off normal valve list within the computer.

- When the maintenance job was completed all valves except the RWST valve were returned to normal as per the tagout. When this was completed there was a path from the RWST to the waste holdup tank thus the water flowed from the RWST to the holdup tank and caused the low level.

The inspector has had discussions with the licensee as to the need to include valves that are opened to be treated as part of the system tagout to preclude a similar event from taking place. The licensee is considering this need and the resident inspector will follow up when the licensee issues guidance.

At 1:35 p.m. on August 8, 1985 Salem Unit 2 tripped from 100% power due to the P-7 turbine trip. (Turbine trip caused by reactor trip breaker "open" indication) The trip occurred when surveillance testing was being performed on the reactor trip breakers (RTB). Several systems did not function as required. (1) No. 22 auxiliary feed pump (AFP) did not start because the "B" train was blocked and in test due to breaker surveillance, (2) No. 23 AFP (steam driven) started and came up to speed but the speed demand was such that the pump output pressure could not overcome steam generator (SG) pressure. The operator manually started No. 22 AFP and fed SG's per procedure, (3) because of erratic operation of the power operated relief valves "A" SG safety valve lifted. The licensee subsequently determined that: (1) the cause of the reactor trip breaker opening was a loose wire on terminal #11 (under voltage coil) in the upper portion of the reactor trip breaker housing assembly. The licensee demonstrated the trip for the resident inspectors. (2) The steam driven feed pump would have delivered water to the two steam generators that were not receiving water, because #22 motor driven feed pump did not start, if the operator had waited for it to come up to speed (56-58 seconds). The operator started #22 auxiliary feed water pump 18 seconds into the incident. (3) The safety lifting was at the desired set point, and lifted because the main steam stop was shut by the operator (permitted by procedure on rapid cooldowns). The power operated relief valves were operating within design and were subsequently tested by the licensee who determined that the instrumentation associated with them is of a slower reaction time than required for this scenario. The licensee has brought the vendor (Westinghouse) into the plant to perform evaluations to determine where improvements can be made to enhance the valves performance. The unit was returned to service on August 10, 1985.

An unusual event was declared and a unit shutdown commenced at 3:12 a.m. on August 27, 1985 due to having both component cooling heat exchangers (CCHX) inoperable. The 21 CCHX was out of service for maintenance on the temperature control valve when the 22 CCHX service water (SW) isolation valve failed to a closed position. Attempts by maintenance personnel to jack the valve open failed to adequately restore flow and the 22 CCHX was declared inoperable. The unit was in Mode 2 at 4:45 a.m. and Hot Standby at 4:50 a.m. At 8:20 a.m. the 21 CCHX was returned to service and the unusual event was terminated.

The unit was taken critical at 5:03 a.m. on August 28, 1985 after completion of repairs to the 22 Component Cooling Heat Exchanger (CCUX) Service Water outlet isolation valve. The valve malfunction has been attributed to a vibration induced failure which caused the valve actuator to separate from the valve stem. The subject valve is a 20 inch manually operated butterfly valve. During the unit startup both CCHX's were in service and no abnormal vibrations were observed.

The licensee management has formed a study panel to investigate why Unit 2 is experiencing more plant malfunctions than Unit 1. The thrust of the group will be to investigate causal links, if any. They will also be investigating the recent number of service water related malfunctions. The resident inspector witnessed the approach to critical.

During the unit startup on August 28, 1985 the licensee experienced difficulties with the operation of the 22 Steam Generator main steam line isolation valve (22MS167) while opening the valve hydraulically. The problem was identified to be a faulty opening directional solenoid for the hydraulic pump and bypass valve. The solenoid was replaced and 22MS167 was tested satisfactorily including emergency closure timing. While the problem with 22MS167 was being investigated the reactor was being maintained at approximately 2% power. During this hold period a safety valve on the 22 Steam Generator (22MS14) lifted for approximately 2 minutes while Tave was 550 degrees (corresponding to 1045 psi). The required lift setting is 1100 psig \pm 1%. At 9:11 p.m. on August 28 the unit was shutdown to Mode 3 and the lift setpoint for 22SM14 was adjusted to 1106 psig. 22MS14 was declared operable at 11:30 p.m. and a reactor startup commenced at 11:40 p.m. August 28, 1985. The reactor was critical at 3:18 a.m. August 29, 1985 and the unit was on line at 8:06 a.m. The unit was at 100% power at the close of this inspection period.

No violations were identified.

4. Maintenance Observations

- a. The inspectors observed portions of various safety-related maintenance activities to verify that redundant components were operable, these activities did not violate the limiting conditions for operation, required administrative approvals and tagouts were obtained prior to initiating the work, approved procedures were used or the activity was within the "skills of the trade," appropriate radiological controls were properly implemented, ignition/fire prevention controls were properly implemented, and equipment was properly tested prior to returning it to service.

During this inspection period the following activities were observed:

- No. 13 Charging Pump Seal Leak repair per work order 85-07-26-069-1.
- No. 23 Charging Pump Speed Increaser Repair per work order 85-08-13-016-3

No violations were identified.

5. Surveillance Observations

During this inspection period, the inspector reviewed in-progress surveillance testing as well as completed surveillance packages. The inspector verified that the surveillances were performed in accordance with licensee approved procedures and NRC regulations. The inspector also verified that the instruments used were within calibration tolerances and that qualified technicians performed the surveillances.

The following surveillance was reviewed in depth with portions of the procedure witnessed by the inspector.

Procedure M3Q-2 Unit 1	Semi-Annual Inspection of Unit 1 Reactor Trip Bypass Breaker A (3-24Y7269-B)
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Procedure M3Q-2 Unit 1	Semi-Annual Inspection of Unit 1 Reactor Trip Breaker A (Serial Number 02YN201-1)
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During the performance of M3Q-2 on the Unit 1 "B" bypass reactor trip breaker the shunt trip clearance was found to be .018 inches which is less than the minimum acceptable value of .032 inches. Incident report No. 85-209 and deficiency report No. SMD-3644 were written to document this finding and the required notifications were made. Work order 85-08-05-051-8 was written to replace to the shunt trip coil mounting screw and retap the screw hole. After completion of corrective maintenance, the applicable portions of M3Q-2 were satisfactorily reperformed.

The inspector witnessed portions of maintenance procedure M3Q-2, "Reactor Trip and Reactor Trip Bypass Air Circuit Breaker Semi-Annual Inspection Lubrication and Testing". During the performance of this test, the Westinghouse DB-50 reactor trip breaker (RTB) 1A (serial number 02YN201-1) failed to meet the trip bar force acceptance criteria of step 9.4.2d. The maximum acceptable trip bar force is 885 grams and RTB 1A required a trip bar force in excess of 1160 grams. The surveillance test was immediately stopped and NRC notifications made per the Event Implementation Classification Guide section 17, 10 CFR 50.72, and Technical Specification 3.3.1.

On August 29, 1985 a Westinghouse technical representative inspected the breaker and determined that no maintenance was required other than lubrication. The trip mechanism pins, bearing points, and latch surfaces were lubricated with 53701 GW Molybdenum Disulfide. The breaker was then retested and the trip bar force measurement averaged approximately 700 grams. The licensee completed the surveillance test and returned RTB 1A to service on August 30, 1985.

No violations were identified.

6. Engineered Safety Feature (ESF) System Walkdown

The inspectors verified the operability of the selected ESF system by performing a walkdown of accessible portions of the system to confirm that system lineup procedures match plant drawings and the as-built configuration, to identify equipment conditions that might degrade performance, to determine that instrumentation is calibrated and functioning, and to verify that valves are properly positioned and locked as appropriate. The Unit 2 Auxiliary Feedwater System was inspected.

No violations were identified.

7. Calibration Program

An inspection was conducted of the licensee's programs for calibration of instruments and gauges used to satisfy Technical Specification requirements and for the control and issuance of measuring and test equipment (M&TE). During the course of this inspection the following documents and references were reviewed.

- 10 CFR 50 Appendix B, Quality Assurance Criteria
- Technical Specifications
- ANSI 18.7 - 1976 Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants
- Maintenance Procedure A-9 Control and Calibration of Measuring and Test Equipment (M&TE)

- Administrative Procedure (AP)-10 Inspection Order Program
- AP-20 Non-Conformance Program
- AP-22 Measuring and Test Equipment Control Program
- Individual component history files
- M&TE Issuance and Inventory Records

The inspector determined that the licensee's procedures and programs were in compliance with the applicable regulations and industry standards. A representative sample of instruments and gauges installed in safety related systems was selected by the inspector for a detailed review of:

- compliance with TS surveillance requirements including frequency
- the accuracy and content of completed test documentation relating to the chosen instrument
- surveillance procedure technical content
- test equipment usage, and
- qualification of individuals performing surveillance testing and calibration.

The licensee's system for control and calibration of M&TE was inspected through a review of:

- Master Equipment List
- Test Equipment Signout Log
- Test Equipment History Files and the
- Calibration Recall Program.

The inspector selected various M&TE instruments that had been used on safety related systems and verified that they were in calibration at the time of use, and that their use was traceable back to the test or surveillance procedure. In addition, the inspector verified that the M&TE calibration records were up to date and that the calibration standards were traceable to national standards.

No violations were identified.

8. Review of Periodic and Special Reports

Upon receipt, the inspectors reviewed periodic and special reports. The review included the following: inclusion of information required by the NRC; test results and/or supporting information consistent with design predictions and performance specifications; planned corrective action for resolution of problems, and reportability and validity of report information. The following periodic reports were reviewed:

- Unit 1 Monthly Operating Report - July 1985
- Unit 2 Monthly Operating Report - July 1985

9. Licensee Event Report Followup

The inspector reviewed the following LER's to determine that reportability requirements were fulfilled, immediate corrective action was taken, and corrective action to prevent recurrence had been accomplished in accordance with Technical Specifications.

Unit 1

LER 85-007 No. 14 Waste Gas Decay Tank - Inadvertent Release
of Contents

On July 8, 1985 an inadvertent release was made from the No. 14 waste gas decay tank. This release was caused by seat leakage through valve 1WG41 (Tank Vent Control Valve) during a leak check of the waste gas analyzer system. Although a pre-release sample was not obtained as required by Technical Specifications (TS) the release was monitored by the plant vent monitors, and the release was determined to be within TS limits. The licensee has revised the leak rate procedure to require a pre-release waste gas tank sample to be obtained prior to leak rate testing. The inspector has no further questions at this time.

LER 85-008 Service Water Leak Inside of Containment

This report was made in accordance with IE Bulletin 80-24 and was a result of a minor service water leak inside of containment. There was no accumulation of water inside of containment and no equipment was damaged. The inspector has no further questions.

Unit 2

LER 85-011 Reactor Trip from 33% - High-High Level No. 21
Steam Generator/Turbine Trip

During the unit startup on July 7, 1985 a reactor trip occurred from thirty-three percent power due to a turbine trip which in turn was caused by a high-high water level in the 21 steam generator. The root cause of this event was a personnel error and is discussed in Inspection Report 311/85-17. This event was cited as a violation for failure to follow procedures.

LER 85-012 Reactor Trip from 10% Due to Low-Low Water Level in
 No. 23 Steam Generator

During the unit startup on July 8, 1985 the reactor tripped due to a low-low water level in the No. 23 steam generator. This event is discussed in Inspection Report 311/85-17 and was a result of a lack of coordination between the operators and the supervisors in the control room. The inspector witnessed a session of the simulator command and control training which is intended to help improve control room communications. The inspector has no further questions.

LER 85-013 2B Diesel Generator Test Failure

During routine surveillance testing on July 6, 1985 the operator initiated a diesel shutdown after receiving a generator field ground alarm. The licensee determined that no generator ground condition existed and the alarm was due to a malfunctioning field ground relay. Because (1) the field ground relay provides only an alarm function and not an automatic shutdown and (2) the diesel generator was in an operable status at all times this event was classified as a non-valid test failure in accordance with Regulatory Guide 1.108. The field ground relay was readjusted and satisfactorily tested. The diesel generator surveillance test was then satisfactorily completed. The inspector has no further questions.

LER 85-014 2B Diesel Generator Test Failure Due to Fuel Oil
 Leak

On July 11, 1985 a fuel oil leak developed on the number 3L cylinder during post maintenance surveillance testing of the 2B diesel generator. The licensee entered the appropriate action statement, performed corrective maintenance, and satisfactorily retested the 2B diesel. This was the first diesel generator test failure in the last one-hundred valid tests. The inspector has no further questions.

LER 85-015 Reactor Coolant System Unidentified Leakage Greater
 Than T/S Limit

On July 20, 1985 the unit was shutdown due to a reactor coolant system leak rate calculation which measured greater than 1 GPM. This event is discussed in Inspection Report 311/85-17.

LER 85-016 Boric Acid Tanks and Boron Injection Tank Boron
Concentration Below Specifications

On July 23, 1985 the licensee determined that the Boric Acid Storage Tanks (BAST) and Boron Injection Tank (BIT) boron concentrations were below the minimum required value of 20,000 ppm. The cause has been determined to be a malfunctioning check valve (2CV173) located between the boric acid blender and the BAST's and BIT. This malfunctioning valve allowed the BAST's and BIT to be diluted during reactor coolant system dilution operations. The unit was shutdown and the boron concentration returned to allowable values in all tanks. Because 2CV173 did not leak during subsequent testing no further corrective actions were required. The licensee continued to monitor boron concentration in these tanks on an increased frequency and verified that 2CV173 was operating correctly. Once satisfied that boron concentrations were stable the normal TS sampling frequency of at least once per 7 days was initiated. The inspector has no further questions.

10. Status of TMI Action Plan Requirements In Accordance With
NUREG-0737

The inspector conducted a review of the licensee's compliance with the TMI Action Plan Requirements of NUREG-0737. The review consisted of in-plant inspections, and a review of previous inspection reports, correspondence, and Safety Evaluation Reports.

The inspectors also reviewed the following generic letters, which are related to NUREG-0737 and concluded that where required the licensee responded in a timely manner to the letter.

	<u>Issued</u>	<u>Subject</u>
81-10	2/18/81	III.A.1.2 & 0696
81-17	3/5/81	III.A.1.2 & 0696
81-25	6/15/81	III.A.2
81-29	7/7/81	I.A.3.1
81-36	10/29/81	II.D.1
82-02	2/8/82	I.A.1.3
82-04	No Date	I.C.5
82-05	3/17/82	ALL
82-08	4/15/82	I.C.5
82-10	5/5/82	I.A.1.3.1 & II.K.3.18
82-12	6/15/82	I.A.1.3
82-16	10/20/82	ALL
82-28	12/10/82	II.F.2, 3, 4
82-33	12/17/82	Supplement to 0737

83-04	2/1/83	Supplement to 0737
83-10a	2/8/83	II.K.3.5
83-14	3/17/83	Letter 82-12
83-16	3/24/83	1.C.5
83-37	10/24/83	II.F.2, 3, 4
85-12	6/28/85	II.K.3.5

The results of this review are documented in Tables 1 and 2 of this inspection report. These tables are intended to provide the latest status of the TMI Action Plan Requirements applicable to Salem 1 and 2 with the exception of items I.D.1, II.B.3, II.F.1, II.D.3.3, III.A.1.2, III.A.2.2 which are being tracked by Region I specialist inspectors. Those documents listed under the reference heading provide information the inspector utilized to determine the status of each action item.

11. Exit Interview

At periodic intervals during the course of the inspection, meetings were held with senior facility management to discuss the inspection scope and findings. An exit interview was held with licensee management at the end of the reporting period. The licensee did not identify 2.790 material.

TABLE 1

SALEM UNIT 1 (DN 50/272) TMI ACTION PLAN REQUIREMENT STATUS

Item	Shortened Title	References	Comments
I.A.1.1	Shift technical advisor	Inspection Report 272/80-23 311/80-04 272/81-04 Letter Starostecki to Eisenhut June 14, 1983	This item is closed. The shift technical advisor has now become part of the shift complement. He is part of the shift complement and maintains a Senior Operators license. This was enacted under the current rule on STA's - Liden to Varga June 14, 1983
I.A.1.2	Shift supervisor responsibilities	Inspection Report 50-272/80-23 50-311/80-07	This item is closed.
I.A.1.3	Shift manning	Inspection Report 272/80-23 311/80-07 Letter Varga to Schneider November 11, 1981	This item is closed. Although modified since the closeout, Administrative Procedure AP-5 retains the necessary directions to meet the intent of NUREG 0737
I.A.2.1	Immediate upgrade of RO & SRO training and qualifications	Inspection Report 272/81-05 Letter Varga to Uderitz May 4, 1984	This item is closed. The licensee has incorporated segmented training since the closeout of this item. Letter Varga to Uderitz documents NRR concurrence in this practice. The licensee currently does retraining in accordance with accepted practices.
I.A.2.3	Administration of training programs		This item is closed.
I.A.3.1	Revise scope & criteria for licensing exams		This item is closed.
I.C.1	Short-term accident & procedure review	Inspection Report 272/80-07 272/80-23 272/80-32 272/81-04 311/81-09 311/80-03 311/80-16	This item is open. See Inspection Report 272/85-15 for status of open items. All other items are closed.

I.C.2	Shift & relief turnover procedures	Inspection Report 272/80-23 311/80-07	This item is closed.
I.C.3	Shift supervisor responsibility	Inspection Report 272/80-23 311/80-07	This item is closed.
I.C.4	Control-room access	Inspection Report 272/80-23 311/80-07	This item is closed.
I.C.5	Feedback of operating experience	Inspection Report 272/81-04 272/81-27	This item is closed.
I.C.6	Verify correct performance of operating activities	Inspection Report 272/81-04	This item is closed.
I.D.2	Plant-safety parameter display		This item is open. See Inspection Report 272/85-15 for status of open items.
II.B.1	Reactor-coolant system vents		This item is open. See Inspection Report 272/85-15 for status of open items.
II.B.2	Plant shielding	Inspection Report 272/82-06	This item is closed.
II.B.4	Training for mitigating core damage	Inspection Report 272/80-20 272/81-05 272/81-27	This item is closed.
II.D.1	Relief & safety-valve test requirements	Letter Varga to McNeill June 17, 1985	This item is open. The letter asks for information from the licensee because insufficient information was provided to complete the review. The letter further states the licensee should reply in 60 days.
II.D.3	Valve position indication	Inspection Report 272/80-23 272/80-16	This item is closed.
II.E.1.1	Auxiliary feedwater system evaluation	Inspection Report 272/81-14	This item is closed.

II.E.1.2	Auxiliary feedwater system initiation and flow	Inspection Report 272/81-14 Letter Varga to Schneider June 16, 1981	This item is closed. Letter June 16, 1981 NRR asks for additional technical specifications to address manual initiation of AFW from the control room. The licensee complied and Amendment 56 added this requirement.
II.E.3.1	Emergency power for pressurizer heaters	Inspection Report 272/80-23	This item is closed.
II.E.4.1	Dedicated hydrogen penetrations	Inspection Report 272/80-23 Letter Varga to Schneider August 24, 1981	This item is closed.
II.E.4.2	Containment isolation dependability	Inspection Report 272/80-23 272/80-32 272/81-14 Bulletin 80-06	This item is closed.
II.F.2	Instrumentation for detection of inadequate core-cooling	Inspection Report 272/80-23	This item is open. See Inspection Report 272/85-15 for the status of the remaining open items.
II.G.1	Power supplies for pressurizer relief valves, block valves, & level indicators	Inspection Report 272/80-23	This item is closed.
II.K.1	IE Bulletins	Inspection Report 272/79-28 Bulletin 79-06	This item is closed.
II.K.2	Orders on B&W plants	NRR Letters - Varga to Uderitz June 18, 1984 January 30, 1984 Varga to Schneider October 1, 1984	By these letters NRR closes out the applicable items.
	Only II.K.2.13.B 17.B 19.B Apply to Salem		
II.K.3	Final recommendations, B&O task force		This item is open Refer to Inspection Report 272/85-15 for status of open items.

Applicable Items to Salem:

1	Letter Varga to Uderitz October 6, 1985	This item is closed.
2	Letter Varga to Uderitz October 6, 1985	This item is closed.
3	Letter Starostecki to Eisenhut January 14, 1985	This item is open.
5	See comment section	This item is open pending technical specification submittal.
9	Inspection Report 272/81-05	This item is closed.
10	Letter Varga to Schneider August 24, 1981	This item is closed.
12	Letter Varga to Schneider August 24, 1981	This item is closed.
17		This item is closed.
25	Inspection Report 272/85-15	This item is closed.
30	Letter Varga to McNeill June 17, 1985	This item is closed.
31	Letter Varga to McNeill June 17, 1985	This item is open. Analysis due to NRR in one year from letter date.
III.D.1.1	Primary coolant outside containment	Inspection Report 272/80-20 This item is closed.
III.D.3.4	Control-room habitability	Inspection Report 272/85-15 This item is closed.

TABLE 2

SALEM UNIT 2 (DN 50-311) TMI ACTION PLAN REQUIREMENT STATUS

Item	Shortened Title	References	Comments
I.A.1.1	Shift technical advisor	T.S. 6.2 Inspection Report 311/80-04 311/81-05 SER Supplement 4 Part II	This item is closed. The STA position is being filled by one of the on-shift supervisors who has received all required training and meets the educational qualifications.
I.A.1.2	Shift supervisor responsibilities	SER Supplement 4 Part II - Inspection Report 311/80-07	This item is closed.
I.A.1.3	Shift manning	SER Supplement 5 Letter Varga to Schneider November 5, 1981 - T.S. 6.2	This item is closed. The inspector has verified that the requirements of this item are delineated in the station Administrative Procedures and are being satisfied in practice. There is an ample number of licensed operators to preclude excessive use of overtime.
I.A.2.1	Immediate upgrade of RO & SRO training & qualifications	Inspection Report 311/81-06	This item is closed.
I.A.2.3	Administration of training program	T.S. 6.4 - NRC Letter Denton to all licensee's dated March 28, 1980	This item is closed. No documentation was required.
I.A.3.1	Revise scope & criteria for licensing exams		This item is closed. No documentation was required.
I.B.1.2	Evaluation of organization & management	SER Supplement 4 Part II - Inspection Report 311/80-07	This item is closed.
I.C.1	Short-term accident & procedure review	SER Supplement 4 Part II SER Supplement 5 Licensee condition 2.C(24)(b) to DPR- 75 - Inspection	This item is open. See Inspection Report 311/85-17 for outstanding items.

Report 311/81-27

I.C.2	Shift & relief turnover procedures	SER Supplement 4 Part II - Inspection Report 311/80-07	This item is closed.
I.C.3	Shift supervisor responsibility	SER Supplement 4 Part II - Inspection Report 311/80-07	This item is closed.
I.C.4	Control-room access	SER Supplement 4 Part II - Inspection Report 311/80-07	This item is closed.
I.C.5	Feedback of operating experience	SER Supplement 4 Part II - Inspection Report - 311/80-07	This item is closed. This item is discussed as part of TMI Action Item I.B.1.4 - Operating Experience Evaluation Capability.
I.C.6	Verify correct performance of activities	Inspection Report 311/81-05	This item is closed.
I.C.7	NSSS vendor review of procedure	SER Supplement 4 Part II	This item is closed.
I.C.8	Pilot monitor of selected emergency procedures for NTOLs	Licensee condition 2C.(24)(b) Inspection Report 311/81-27	This item is closed.
I.D.2	Plant-safety-parameter display console		This item is open. See Inspection Report 311/85-17
I.G.1	Training during low-power testing	SER Supplement 4 Part II SER Supplement 5	This item is closed.
II.B.1	Reactor-coolant-system vents		This item is open. See Inspection Report 311/85-17
II.B.2	Plant shielding	License Condition 2.C.(25)(c) SER Supplement 5 Inspection Report 311/82-05	This item is closed.
II.B.4	Training for mitigating core damage	Inspection Report 311/80-16 311/81-06 SER Supplement 4 Part II - Inspection	This item is closed. SER Supplement 4 closed the low power portion of this item.

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II.D.1	Relief & safety-valve test requirements	SER Supplement 4 Part II (See II.D.2) SER Supplement 5 - Letter Varga to McNeill June 17, 1985	This item is open. NRR has requested additional information to complete their evaluation.
II.D.3	Valve position indication	SER Supplement 4 Part II - Inspection Report 311/80-18 (open item 80-18-02 Environmental Qualification)	This item is closed.
II.E.1.1	Auxiliary feed-water system evaluation	Licensee conditons 2.C.(24)(c) 2.C.(14) - Letter Varga to Uderitz September 20, 1982	This item is closed. DCR 2EC-125B installed auxiliary feedwater storage tank level indications and alarms.
II.E.1.2	Auxiliary feed-water system initiation and flow	SER Supplement 4 Part II - Inspection Report 311/80-18 NRC Letter Tedesco to Mittl June 12, 1981	This item is closed.
II.E.3.1	Emergency power for pressurizer heaters	Inspection Report 311/80-18	This item is closed.
II.E.4.1	Dedicated hydrogen penetrations	SER Supplement 4 Part II	This item is closed. This item is not applicable to Salem Unit 2.
II.E.4.2	Containment isolation dependability	Inspection Report 311/80-18 311/81-11 - IE Bulletin 80-06	This item is closed.
II.F.2	Instrumentation for detection of inadequate core-cooling	Inspection Report 311/80-18 SER Supplement 4 - No Restriction thru 100% Power	This item is open. See Inspection Report 311/85-17 for status of remaining open items.
II.G.1	Power supplies for pressurizer relief valves, block valves, & level indicators	SER Supplement 4 Part II - Inspection Report 311/80-18	This item is closed.
II.K.1	IE Bulletins	SER Supplement 4 Part II	This item is closed.

II.K.2	Orders on B&W plants	NRR Letters: Varga to Uderitz June 18, 1984 January 30, 1984 Varga to Schneider October 1, 1984	This item is closed.
II.K.3	Final recommendations, B&O task force	SER Supplement 4 Part II	See Inspection Report 311/85-17.
	1		This item is closed.
	2		This item is closed.
	3		This item is open.
	5		This item is open.
	9	Letter Varga to Schneider August 24, 1981	This item is closed.
	10	Letter Varga to Schneider August 24, 1981	This item is closed.
	12	Letter Varga to Schneider August 24, 1981	This item is closed.
	17		This item is closed.
	25	Letter Varga to Uderitz July 6, 1982 - Inspection Report 311/85-17	This item is closed.
	30	Letter Varga to McNeill June 17, 1985	This item is closed.
	31	Letter Varga to McNeill June 17, 1985	This item is open. Plant specific analyses due to NRR June 17, 1986.
III.A.1.	Emergency preparedness, short term	SER Supplement 4 Part II - SER Supplement 6	This item is closed.
III.D.1.	Primary coolant outside containment	SER Supplement 5	This item is closed.
III.D.3.	Control-room habitability	SER Supplement 5	This item is closed.