

U.S NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 50-443/86-46

Docket No. 50-443

License No. CPPR-135 Priority -- Category A/B

Licensee: Public Service Company of New Hampshire  
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Manchester, New Hampshire 03105

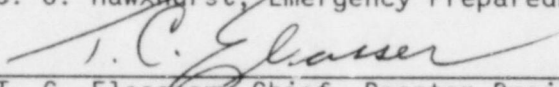
Facility Name: Seabrook Station, Unit 1

Inspection at: Seabrook, New Hampshire

Inspection conducted: July 8 - September 15, 1986

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Approved by:

  
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10/23/86  
Date

Summary: Inspection on July 8 - September 15, 1986 (Report No. 50-443/86-46)

Areas Inspected: Routine inspection by two resident inspectors and five region-based personnel of work activities, procedures, and records relative to building turnover activities; design and construction of selected portions of the primary component cooling & containment air purge systems; design change implementation on other as-constructed systems; the review of surveillance procedures, as-built verification activities and design calculations; an inquiry into an emergency preparedness exercise allegation; and the follow-up of licensee scheduled activities and controls for TMI Action Plan items. The inspectors also reviewed licensee action on previously identified items including 10 CFR 50.55(e) reports, and performed plant inspection-tours. The inspection involved 358 inspection-hours by seven NRC inspectors.

Results: An apparent violation was identified concerning the documentation of non-seismically mounted construction items in safety-related buildings (paragraph 2). Questions, currently unresolved, were also raised with respect to the Containment Air Purge system design, RHR flowrate test results, and the system of licensee controls for New Hampshire Yankee (NHY) piping and instrumentation drawings.

With respect to several previously identified construction deficiencies and open items, to include programmatic response to TMI Action Plan issues, licensee actions and corrective measures were verified to be either complete or in progress and properly directed.

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## DETAILS

### 1. Persons Contacted

W. B. Derrickson, Senior Vice President (NHY)  
J. DeVincentis, Director of Engineering (NHY)  
G. F. McDonald, Construction QA Manager, (YAEC)  
D. E. Moody, Station Manager (NHY)  
D. A. Maidrand, Assistant Project Manager (YAEC)  
D. G. McLain, Startup Test Group Manager (NHY)

Interviews and discussions with other members of the licensee and contractors' management and staff were also conducted relative to the inspection on items documented in this report.

### 2. Plant Inspection Tours

The inspectors observed work activities in-progress, completed work and plant status in several areas during general inspections of the plant. They examined work for any obvious defects or noncompliance with regulatory requirements or license conditions. Particular note was taken of the presence of quality control inspectors and quality control evidence such as inspection records, material identification, nonconforming material identification, housekeeping and equipment preservation. The inspectors interviewed craft personnel, supervision, and quality inspection personnel as such personnel were available in the work areas.

Specifically, the inspector examined the containment isolation valves for the primary component cooling water (PCCW) and steam generator blowdown (SB) systems. Installed conditions, to include power supplies, valve position indication, redundancy, and control room status lights, were confirmed to be in accordance with the containment isolation design system information described in the Seabrook FSAR, e.g., Section 6.2.4. The failure modes of both the electrical portion, i.e., solenoids, and the air supply for these pneumatic-operated valves were evaluated with respect to 10CFR50, Appendix A, General Design Criteria (GDC) 54, 56 and 57 and the design bases delineated in the FSAR. Selected portions of the piping penetrating containment through the subject PCCW and SB valves, and the instrument air tubing and train-related electrical wiring were field checked and verified to the details of the design drawings and isolation valve diagrams.

The inspector also discussed with licensee engineering and startup test personnel a problem identified at another nuclear facility with respect to 480 volt ac combination motor starters supplied by ITE Gould. The identified deficiency involved the installation of incorrect and improperly sized trip coils in the subject motor starters. The inspector reviewed the general test procedure (GT-E-32) utilized to check and dynamically trip test similar 480 volt combination starters installed at Seabrook. He noted that, in addition to the required instantaneous magnetic overcurrent trip and thermal overload relay tests, physical checks of the breaker coil amps and the trip coil cata-

log number are conducted for each 480 volt combination starter. These checks are documented and the actual amperage and catalog data are recorded and compared to the specified design requirements. The implementation of these physical checks and test controls appears to provide adequate assurance that the correct trip coils are installed in the subject motor starters.

During a plant inspection tour, the inspector noted that certain fireproofing seals in radiation shield walls were radiation-type seals (impregnated) and others were standard seals. He questioned the criteria used in determining which should be the radiation-type seals. It was determined that seals in direct line of sight from the radiation source shall be radiation-type and all others shall be the standard-type. He noted that several direct line-of-sight seals in the volume control tank (VCT) cubicle were the standard-type. Further discussion with a health physics supervisor revealed that seals in the overhead areas are not impregnated, but that all overhead areas in radiologically controlled areas (RCA) are considered contaminated and routine entry is not allowed. Access to these overhead areas is controlled by issuance of a radiation work permit (RWP). He furthermore indicated that all new employees are informed of the radiological hazards in overhead areas during their indoctrination training. The inspector reviewed the training material and noted that there was no mention of overhead radiological hazard controls in the basic lesson plans. Since the licensee subsequently agreed to modify the plans to specifically address this issue, the inspector had no further questions on this item.

While conducting an inspection tour of the control room complex, the inspector noted licensed operator requalification training in progress in the Technical Support Center. He reviewed the lesson plan and student handouts and observed a portion of the training intended to provide the operators with an overview of the final draft of the Seabrook Technical Specifications (TS). The inspector also noted that recent Licensee Event Reports generated by startup activities at the Millstone 3 plant were discussed and provided as handout training material. Two Seabrook Station Training Center instructors conducted this class, which was one in a series of requalification training sessions. Good instructor/student interaction was observed, particularly with respect to discussions on the intent of several TS requirements.

In regard to all of the above plant inspection tour and independent inspection items, no violations or unresolved safety questions were identified. However, one additional area of inspection, conducted during routine tours of the plant buildings, resulted in a finding, as discussed below.

The inspector noted several construction-related items still remaining within the service water cooling tower. These items were of a temporary nature. The most significant item was a temporary beam and chain hoist assembly suspended from the overhead building steel above the service water cooling tower valves and piping. Licensee review indicated that none of the items identified were being tracked by any work control program. Since the cooling tower building had been turned over to station staff, all NHY work control programs were in effect. The licensee was unable to provide any assurance, however,

that these items would have been removed from that location. Since the subject items were not seismically installed and the cooling tower is a seismic building, this temporary construction material should have been identified in some work program for removal. The above identified nonconforming condition is in violation of 10 CFR 50, Appendix B, Criterion XVI (86-46-01).

The Seabrook Station FSAR, Chapter 17.1.1.16 requires that measures be established to assure that conditions which could adversely affect quality and non-conformances be promptly identified and corrected. More specifically, FSAR Section 1.8 endorses Regulatory Guide 1.29 which specifies the requirements for non-safety items whose failure could affect safety-related equipment. NHY procedure ASP-5 specifies the building turnover acceptance criteria. One of these criteria is removal of all construction equipment and temporary installations. This violation was discussed with the Construction Quality Assurance Manager, Nuclear Quality Manager, Operations Manager and others in an exit meeting on September 16, 1986.

The inspector also questioned the status of unfinished Unit 2 service water piping located within the service water pumphouse in the broader context of what, if any, unfinished Unit 2 construction activities could impact the operability of Unit 1 equipment. Discussion with the NHY and UE&C Engineering staff indicated that a walkdown had been conducted in July, 1985 to identify which items had to be completed on Unit 2 to support Unit 1 operation. The inspector reviewed an internal memorandum (UE&C MM-2/373A dated August 21, 1985) which detailed those items in the service water pumphouse and cooling tower requiring additional work. Based on this review the inspector had no further questions.

An inspection in containment identified a fire protection hose reel whose swing arc allowed impact with seismic Category I instrumentation transmitters. The licensee evaluated the problem and agreed to provide a locking mechanism to prevent inadvertent motion which might damage the transmitters. Licensee review of this problem from the standpoint of seismic interaction revealed that no adverse impact would be anticipated during a seismic event. This hose reel and other non-problem hose reels were installed after a 1985/86 plant walkdown, conducted in accordance with Procedure TP-4 entitled "Review of Non-Safety Related Equipment, Systems and Supports Located in Safety-Related Buildings". That walkdown identified all similar seismic interaction problems prior to that date. All other design changes (ECAs) issued after the TP-4 walkdown were given an interdisciplinary review. Based on this fact and also that the anchors for the reels are seismically supported, the inspector had no further questions on this issue.

### 3. Licensee Action on Previously Identified Items

- a. (Closed) Construction Deficiency Report (CDR 81-00-10): Reduced slippage capacity of raceway support, bolted strut/nut fittings. Resolution of this item has been the subject of two previous Region I inspection reports (IR), 443/85-29 and 443/86-43. During the former inspection, licensee corrective action in those buildings which had been "closed-out"

as of the time frame of the inspection (November, 1985) was reviewed. In the latter inspection, additional licensee corrective measures in the balance of plant (BOP) buildings were examined in light of additional cable tray testing data and seismic raceway qualification by means of a combination of testing and analyses. In both cases, the licensee approach to the resolution of this CDR was noted to be an acceptable one.

Per the New Hampshire Yankee (NHY) final 10 CFR 50.55(e) report (SBN-1179 letter to Region I, dated August 21, 1986), all required modifications to the electrical support connections in seismic Category I buildings at Seabrook Station have been installed and inspected. The inspector confirmed the existence of inspection checklists for the subject cable tray supports and bracing. Licensee reinspections of these supports were accomplished to "as-constructed" drawings, certified by engineering personnel to meet the current design criteria. A sample check of the QC inspection criteria verified that the material, fittings and hardware had been installed in accordance with design requirements, to include consideration of the strut/nut fitting details.

The inspector's previous review (reference: above IRs) evaluated the scope and adequacy of licensee corrective action on this deficiency. This inspection has confirmed the completion of the identified corrective measures. This CDR is considered closed, as is the 10 CFR 21 Report submitted to the Office of I&E by United Engineers and Constructors on August 7, 1981 with respect to the same design deficiency.

- b. (Closed) Inspector Follow-up Item (85-32-24): Provide the basic data required for atmospheric dispersion calculations (15-minute averages), which includes a time history (analog or digital printout) of wind direction and speed at each level and temperature difference with height, in the control room and EOF.

The licensee indicated that the meteorological monitoring system will be capable of providing the above data in the control room as well as at each emergency response facility workstation (TSC, EOF, Shift Superintendent). The licensee's implementation timetable (June 4, 1986) indicates that all parameters are currently available (instantaneous values) at the above locations. Wind speed and direction, delta temperature, ambient temperature, dewpoint, and wet bulb temperature (current 15-min. average) data capability will be completed by fuel load; as well as archived 15-min. averages (one per hour for the previous 24 hours) for the basic dispersion calculations data. The inspector reviewed an example of the "user-defined group number 53" which provided the basic data needed for emergency response; also, the outline for the "Meteorological 24-hour history report", which appeared satisfactory. An actual inspection of implementation of this system will be conducted during a subsequent inspection.

Based upon the above review of the meteorological monitoring system capabilities, this Inspection Follow-up Item is closed.

- c. (Open) Unresolved Item (85-35-01): Piping and Instrumentation Drawings (P&ID). NRC Region I IR 443/86-34 expanded the scope of this item to include a review of the licensee's design drawing development process. Based on several concerns raised by the inspectors, the NHY Configuration Management Manager instituted a P&ID walkdown to confirm the accuracy of the NHY P&IDs. The program consisted of a comprehensive walkdown of over fifty major plant systems. The results of this walkdown indicated that while minor errors were found, no major or programmatic discrepancies exist. Additionally, the Design Department elected to complete the walkdown of all remaining systems. This will ensure that minor errors are also corrected. The licensee is also evaluating the benefits of periodic systems walkdowns. Licensee actions on this issue of P&ID accuracy appear to have been prompt and comprehensive.

In conjunction with the review of the licensee program to control and update P&IDs, the inspector conducted an as-built verification of the nuclear sample system (SS). This system has undergone significant modification as a result of problems encountered during hot functional testing (Refer to NRC Region I Inspection Reports 50-443/86-22 and 50-443/86-35). Review of the NHY sample system P&IDs, when compared to the as-built conditions revealed significant drawing errors. Discussion with the Engineering Staff indicated that the SS P&ID had recently been modified to reflect the latest design changes and were not yet complete. The P&IDs were subsequently finished and provided to the inspector for review. The review indicated that the changes had been incorporated.

At the present time the licensee plans to submit to NRR a change to all FSAR drawings. These updated NHY P&IDs will replace the currently used UE&C drawings. Liaison with NRR has been established by the licensee to coordinate the change submittal. This change will make the NHY drawings the official design P&IDs. Inspector review of the NHY drawings indicates that, although the drawings still have minor detail and drawing errors for which licensee corrective measures have been implemented as noted above, their layout and multi-layered approach makes them superior to the existing drawings from an operational standpoint. However, since the NHY final drawing verification and implementation program is still in progress, the inspector has requested the details of the schedule for completion of this program. Pending receipt of this information and further understanding of the status of the submittal of the NHY drawings as part of some future FSAR revision, this item remains open.

- d. (Closed) Unresolved Item (86-03-01): Request for exemption to 10 CFR 50, Appendix R, Section III.J with respect to emergency lighting. As documented in IR 50-443/86-03, the licensee had requested exemption for certain areas of the plant where implementation of the Appendix R criteria implied the installation of eight-hour battery-powered emergency lighting units.

Supplement No.5 to the Seabrook Station Safety Evaluation Report (NUREG-0896) was issued in July, 1986. As documented in the subsection on "Lighting and Communication" under section 9.5.1.4 of SSER No.5, the

NRC staff has noted the subject deviation requests and has concluded that "the lack of 8-hour battery-powered lights in (the requested) areas is an acceptable deviation from Section C.5.g of BTP CMEB 9.5-1". Based upon NRR acceptance of the licensee position with respect to the Appendix R exemption on emergency lighting, this issue is now resolved and this item is considered closed.

- e. (Closed) Construction Deficiency Report (CDR 86-00-07): Emergency core cooling system (ECCS) design deficiency. As discussed in the NHY final 10 CFR 50.55(e) report (SBN-1162 letter to Region I, dated July 18, 1986) on this CDR, the existence of an unanalyzed flow path for the cold leg recirculation phase of safety injection (SI), given failure of one residual heat removal (RHR) pump, was identified. Corrective measures consisted of a revised cold leg recirculation mode valve alignment which would provide acceptable system hydraulic and core cooling results with the implementation of procedural changes. These changes, as reflected in revised FSAR sections, were submitted to the NRC Office of NRR on August 19, 1986 (reference: SBN-1178).

The inspector reviewed the following Emergency (E), Emergency Supplement (ES), and Emergency Contingency Action (ECA) procedures affected by the required valve realignment and FSAR change and which have been revised accordingly.

- E-1 (Revision 01)
- ES-1.3 (Revision 01)
- ES-1.4 (Revision 01)
- ECA-0.2 (Revision 01)

The inspector also reviewed Preoperational Test 1-PT-8A, providing for RHR recirculation flow verification and establishing a retest of the ECCS system in both the cold and hot leg recirculation modes to confirm RHR pump flow within acceptable limits under the revised valve lineup conditions. The inspector witnessed the conduct of selected sections of 1-PT-8A, to include cold leg recirculation testing of the "B" train RHR pump and a retest of the "A" train RHR pump flow under test procedure field change No.4. The test results, to include the chronological log of events and the test critique, were reviewed, as were all field changes. No test exceptions were identified and QA witness of the testing in progress was verified.

With regard to the design deficiency reported as an unanalyzed cold leg recirculation flow path, the licensee has established procedural controls to assure that design basis RHR pump flow conditions are met and has tested the revised valve lineup. Corrective action per the final 10 CFR 50.55(e) report has been completed and this CDR is considered closed.

During the conduct of preoperational test 1-PT-8A, it was noted that hot leg recirculation flow measurements were taken, even though the revised procedures and valve alignment did not alter the hot leg flow path.

Acceptable flow rates were achieved in accordance with Westinghouse criteria provided by a new RHR pump suction pressure vs. flowrate curve. These criteria were part of a revised Westinghouse verification test procedure issued in July, 1986.

In reviewing the hot leg recirculation test results, the inspector noted flow rates closer to the upper limits of the acceptance criteria than those recorded for the exact same flow paths during the conduct of 1-PT-8 in June, 1985 (reference: Region I IR 443/85-20). Also, field change No.5 to 1-PT-8A deleted from the test acceptance criteria a requirement that hot leg flow from either RHR pump not exceed 4900 gpm. The 1-PT-8A test results documented hot leg flow from either pump to be above 4900 gpm while the original 1-PT-8 test had observed flow to be below 4900 gpm. While this is acceptable based upon the revised test acceptance criteria, the inspector questioned why the 4900 gpm limit had been deleted and why there appeared to exist an increase in hot leg flow rate from previous testing along the same flow paths.

After discussing these questions with the responsible startup test engineer, it was determined that since Westinghouse engineering data had provided the original and new acceptance criteria for the subject testing, Westinghouse review of the 1-PT-8A hot leg flow test results would be appropriate. Pending inspector review of Westinghouse concurrence with the test results and further discussion, if necessary, on the questions involving the increased flow rates, this issue remains unresolved (86-46-02).

- f. (Closed) Violation (86-14-01): Failure to maintain proper identification of plant equipment. This item was reviewed during Region I Inspection 50-443/86-36, based on licensee corrective actions described in NHY letter SBN-1115 dated June 13, 1986. Part (a) of this violation, with respect to an erroneous code data tag on a service water valve, was satisfactorily resolved and closed. Part (b) of this violation was reviewed at the same time, but left open pending licensee clarification of some contradictory information with respect to fan motor serial number duplication.

Subsequent to the conduct of Inspection 50-443/86-36, the licensee submitted additional information (NHY letter SBN-1132, dated June 20, 1986) in response to violation 86-14-01(b) to Region I. The inspector has reviewed the stated corrective action and supporting documentation. New correspondence from the Buffalo Forge Company and Westinghouse indicate the existence of a typographical error on the originally questioned fan motor test report. The Westinghouse Test Report (BU 02607, Item 43) was corrected on June 13, 1986.

In the matter of duplicate serial numbers, the licensee has stated that although the identified fan motor serial numbers are identical, the shop order numbers are different. This therefore not only provides traceability, but also is consistent with the manufacturer's sequential system



for serial number assignment. The inspector also reviewed a NHY station staff procurement procedure, PM3.1 (Revision 3), confirming the licensee position that the purchase of replacement and spare parts is by unique part number or catalog number, where available, or by general design specifications, where such a number is not available. Implementation of such controls would prevent misuse of any erroneous serial number in the procurement process.

Licensee corrective actions in response to this violation are complete and consistent with the information provided to Region I in letters dated June 13 and 20, 1986. This item is closed.

- g. (Closed) Inspector Follow-up Item (86-18-11): Completion of the installation of equipment within the control room. This follow-up item focused on the final installation, calibration and testing of the seismic monitoring (SM) instrumentation. The inspector examined the installation of all seismic monitors (transmitters, recorders, or switches) at their field locations. He checked Control Panel (CP-58) in the control room and verified both SM channel and computer point correspondence to the specific sensors listed in the "Final Draft" version of the Technical Specifications (TS).

Acceptance Test, 1-AT-31 (Revision 1), for the SM system has been completed and the test results reviewed and accepted. The inspector also confirmed that the surveillances for the triaxial time-history accelerographs have been completed and are repetitively scheduled in order to declare these components operable per TS requirements.

Installation of the SM system is complete and this item is closed.

- h. (Closed) Inspector Follow-up Item (86-18-16): Distribution of the interim public information letters on the Seabrook alert and notification system. The inspector reviewed a copy of the subject letter, providing basic information to the public with respect to siren activation and recommended actions. This letter was signed by the NHY Director of Emergency Preparedness on June 27, 1986 with a public mailing on June 30, 1986. Subsequently, the inspector noted a copy of this letter printed in a Rockingham County newspaper.

With the aforementioned distribution of these interim public information letters, this item is closed.

- i. (Open) Inspector Follow-up Item (86-18-33): Complete installation of the Public Emergency Alerting System (PEAS). Per NHY letter to NRR (SBN-1028, dated May 6, 1986), the licensee committed to the installation and testing of the Alert and Notification System sirens prior to fuel load. The inspector reviewed a portion of the Phase 1 System Test Package for the PEAS sirens and noted that the last siren was installed and tested on July 24, 1986 per the test requirements of GT-E-115, the "Electronic Outdoor Warning Siren Remote Station Initial Test and Energization Pro-

cedure". Additional general test (GT) procedures have been issued for the bi-monthly, quarterly, and annual conduct of siren system testing to assure continued operability and reliability of each siren unit.

With respect to one specific siren unit in Merrimac, MA. (MM-3), scheduled installation was cancelled because of litigation. The inspector reviewed licensee correspondence indicating that the deletion of Siren MM-3 is being analyzed for both technical adequacy and documentation as an amendment to required reports. The adequacy of the PEAS without MM-3 will be the subject of future NRC/FEMA inspection.

While the aforementioned siren testing has proceeded in accordance with the test requirements of GT-E-115, certain of the siren poles have been removed with the intent that they be reinstalled in deeper holes. The original installation was suspended at a certain depth because ledge (rock) was encountered. The reinstallation of the affected siren poles is currently in progress, as is an analysis of other poles to determine if further rework is required.

Pending completion of the reanalysis and rework, as applicable, of all siren poles installed to a questionable depth, and also pending the presentation to the NRC of evidence of satisfactory retesting of the sirens, as installed, this unresolved item remains open.

- j. (Closed) Inspector Follow-up Item (86-22-05): Process sampling system (SS) completion and testing. This item was reviewed during NRC Inspection 443/86-35, but kept open pending completion of licensee installation of the SS. During this inspection period, the inspector confirmed completion of the scheduled SS modifications and conduct of flow verification tests to the affected sample panels, i.e., CP-166A for primary system sampling and CP-166B for steam generator blowdown sampling. He reviewed the Acceptance Test (AT-10.1, 10.2, 10.3 and 10.4) results and noted closure of the test exceptions identified with respect to AT-10.2 and 10.3.

Completion of the SS rework and testing of the flow paths represent licensee conduct of those activities necessary to resolve this item for fuel load. In order to meet the commitments of FSAR Section 14, additional hot testing will be necessary. The inspector reviewed Station Operating Procedures, CN86-1-12 and CN86-1-9, which provide for acceptance testing of CP-166A and B for correct operability of these SS panels under hot conditions.

This inspector follow-up item is therefore closed.

- k. (Closed) Unresolved Item (86-28-01): Failure of Procedure RX1709 to Incorporate Technical Specification Requirements. TS 4.1.1.2 states in part, "...the predicted reactivity values shall be adjusted (normalized) to correspond to the actual core conditions prior to exceeding a fuel

burnup of 60 EFPD after each fuel loading". However, procedure RX1709, "Reactivity Anomalies Surveillance", Revision 00, which performs the surveillance, had not incorporated the 60 EFPD normalization period.

The licensee has revised RX1709 (Revision 01, dated July 16, 1986) and incorporated the requirement of normalizing predicted reactivity values, prior to exceeding a fuel burnup of 60 EFPD after each fuel loading, into the precautions section. The inspector reviewed the procedure and determined that based on the licensee's corrective action, this item is closed.

- l. (Closed) Unresolved Item (86-28-02): Procedure RX1704 Moderator Temperature Coefficient Values do not reflect Technical Specification requirements. TS 3.1.1.3 states in part, "the Moderator Temperature Coefficient (MTC) shall be less negative than  $-4.2 \times 10^{-4}$  delta K/K/degrees F for all rods withdrawn, EOL, rated thermal power condition...", and TS 4.1.1.3 states in part, "...the MTC shall be measured at any thermal power and compared to  $-3.3 \times 10^{-4}$  delta K/K/degrees F...". However, procedure RX1704, "Moderator Temperature Coefficient Surveillance", Revision 00, listed the values for the above MTC measurements as  $-5.6 \times 10^{-4}$  delta K/K/degrees F and  $-4.7 \times 10^{-4}$  delta K/K/degrees F respectively.

The licensee has revised RX1704 (Revision 01, dated July 14, 1986) to reflect the current MTC technical specification values. The inspector reviewed the procedure and determined that based on the licensee's corrective action, this item is closed.

- m. (Closed) Unresolved Items (86-09-07 & 86-28-04): Deficiencies in operating procedure, OP 10.2. These two items related to the programmatic control of independent verification, as specified in TMI Action Plan Item I.C.6. The overall issue of the adequacy of the licensee program with respect to I.C.6, to include the specific questions raised by these unresolved items, is addressed in detail in paragraph 4c of this report. These items are therefore administratively closed.
- n. (Closed) Unresolved Item (86-34-01): Safety system status lights on the Main Control Board (MCB). At the time this item was opened, the licensee had not yet implemented any method to identify the status of safety system valves or equipment, which are rendered inoperable by maintenance or testing.

Maintenance Procedure, MA 4.2, entitled "Equipment Tagging and Isolation" was revised to incorporate requirements to illuminate the Bypass/Inoperable status lights on the MCB when equipment is rendered inoperable due to maintenance testing. This item is therefore considered closed.

- o. (Closed) Unresolved Item (86-34-02): FSAR discrepancy on the Make-up System. This item related to a change made to a boric acid line which was not reflected in the FSAR. The licensee corrected the omission in FSAR Amendment 59. Additionally, the inspector reviewed a change to the

containment air purge (CAP) system and its associated revision to the FSAR discussion on this subject. The FSAR change appeared to be comprehensive with the exception of the affected FSAR P&ID. An issue with respect to the Seabrook P&IDs is being tracked separately under open item 85-35-01. Based on the above and upon a review of the NHY Design Control Manual (NYDC), the inspector has concluded that the subject FSAR discrepancy represented an isolated error which the licensee has now corrected. He has no further questions on this issue and considers this item closed.

4. TMI Action Plan Requirements (NUREG-0737)

a. (Closed) I.A.1.2 - Shift Supervisor Administrative Duties

This item requires that administrative functions that detract from or are subordinate to the management responsibility for ensuring safe operation of the plant are delegated to other operations personnel not on duty in the Control Room.

Included in the NHY shift organization are the shift superintendent (senior licensed supervisor on shift) and a unit shift supervisor (directly supervises control room operators). The shift superintendent (SS) performs administrative duties with respect to tagging and work control and the unit shift supervisor (USS) is kept informed of these activities to the extent that they affect plant operations. A shift clerk on day and swing shifts has been added to the control room complement to further assist in administrative matters. The Operations Manager has issued a memorandum to clarify the division of administrative responsibility between the SS and USS. This item is closed.

b. (Closed) I.C.5 - Procedures for Feedback of Operating Experience to Plant Staff

Each licensee must develop procedures to ensure that operational information pertinent to safety is continually screened and effectively transmitted to operational personnel. NRC Region I IR 50-443/85-35 identified that licensee measures to address item I.C.5 had not yet been implemented. Without an integrated program, inspection and review of this item for Safety Evaluation Report (SER) purposes was not possible (refer to paragraph 13.5.1 of SSER 4).

Subsequent NRC review has revealed that the licensee has developed an all-encompassing program to address NRC concerns. The two relevant programs are addressed in Chapter 12910 of the NHY Programs and Procedures Manual, entitled "Operating Experience Review Programs". The Industry Operating Experience Review Program covers such items as INPO and vendor supplied information. NRC communication such as NRR Generic Letters and IE Bulletins and Information Notices are handled in accordance with the NHY Production Reporting Manual (NPRE).

As a sample, the inspector reviewed licensee follow-up action to Generic Letter (GL) 85-13 entitled "Transmittal of NUREG-1154 regarding the Davis-Besse Loss of Main and Auxiliary Feedwater Event". Inspector inquiries revealed that the licensee had incorporated the applicable information of NUREG-1154 into both auxiliary operator and licensed operator training and/or retraining programs as directed by GL 85-13.

The other program is the In-House Operating Experience Review Program. This program consists primarily of review of Station Information Reports (SIR) and Licensee Event Reports (LER).

Both of these programs have been included in the NHY Integrated Commitment Tracking System (ICTS) and placed under the supervision of a Program Coordinator who reports to the Station Manager. The inspector reviewed those programs for adequacy and identified no concerns. SER Confirmatory Item 13.5.1, Administrative Procedures (I.C.5), and TMI Action Plan Inspection Item I.C.5 are hereby closed.

c. (Closed) I.C.6 - Verification of Correct Performance of Operating Activities

This item requires that procedures be established to ensure that an effective system of verifying correct performance of operating activities is provided as a means of improving the quality of normal operations. This item was reviewed in SSER No. 4 (Item 13.5.1), at which time it had not yet been implemented. It was therefore made an SER Confirmatory Issue.

The licensee included the subject of independent verification in the Seabrook Station Management Manual (SSMM). Although the SSMM discussed independent verification in general terms, this broad treatment left considerable allowance for variation between departments as to how the program would be implemented. Additionally, vague and conflicting wording in the policy appeared to reduce its effectiveness. I&C and Maintenance procedures individually addressed independent verification, while certain Operations Surveillance Procedures appeared to accomplish the verification process by several different methods. Other procedures did not address independent verification at all. The problem with the usage of different verification methods was also noted in Region I IR 50-443/86-27.

After additional discussion with the inspectors, the Operations Department issued procedure OP10.2 entitled "Independent Verification". This procedure provided administrative controls for the conduct of independent verification of systems and components which were safety-related. Included within the procedure were the valve lists which indicated, by system, each valve required to be independently verified. These lists were the subject of unresolved items 86-28-04 and 86-09-07 (reference: closed in paragraph 3m and discussed later in this paragraph).

Initial inspector review of OP10.2 and a detailed review of several systems on the valve list revealed apparent discrepancies in the method of implementation of the overall program. The inspector noted that certain problems were evident because of the lack of specific guidance and criteria in the basic SSMM document. Discussion with management personnel resulted in a licensee re-evaluation of the method by which independent verification is conducted, not only within the Operations Department, but throughout the Station.

The Operations Department's new approach is a three part program. First, new criteria and guidance were established utilizing not only experienced operations personnel, but also the NHY engineering staff. Once the criteria by which valves to be independently verified were established, the SSMM was modified to provide consistent programmatic guidance. The second phase involved re-issuance of OP10.2 and selection of the specific valves and systems using the criteria established above. While not yet complete, inspector review indicates that this second phase is well underway and will be complete prior to fuel load. The third phase is the actual implementation of the independent verification program which also will be functioning prior to fuel load.

Based on licensee commitments and the most recent review of the established program, the inspector has no remaining concerns with respect to the operating approach to independent verification. The resident inspectors will continue to monitor implementation as a matter of routine inspection effort.

The two previously identified unresolved items which dealt with independent verification, 86-09-07 and 86-28-04, involved the OP10.2 valve lists and nomenclature on those lists. The licensee has begun a comprehensive program to provide consistent nomenclature for all valves and when this is completed, the valve lists in OP10.2 will be updated. The licensee is tracking this activity on their Commitment Tracking System (ICTS/SAIL) and the inspector has no further questions on this issue.

The inspector also noted that the I&C Department has a Standard Practice Instruction concerning second party verification and that their Procedures Development Guidelines provide specific and consistent guidance on how I&C procedures will be written to ensure equipment is properly removed from and returned to service. Additionally, several procedures within the Seabrook Station Maintenance Manual (SSMM) discuss independent verification.

Procedure MA4.3 (Revision 3), entitled "Temporary Modification" specifies that both work performance and restoration of temporary modifications include independent verification. Activities under this procedure include lifting leads, installing jumpers, removing fuses, opening links, bypassing and blocking relays. Form MA4.3A entitled "Temporary Modification Request" has signature blocks for both work and restoration performance and verification as independent steps. Procedure MA4.2 (Revi-

sion 3) entitled "Equipment Tagging and Isolation" provides guidance which references OP10.2 concerning the responsibilities of shift supervisors with respect to restoration of equipment following release of a tagging order. Procedure MA4.4 (Revision 3) entitled "Temporary Setpoint Changes" also addresses independent verification of both work on and restoration of safety-related equipment. Form MA4.4A entitled "Temporary Setpoint Request" has similar sign off provisions to form MA4.3A described above. Procedure MA4.5 (Revision 0) entitled "Configuration Control During Maintenance" provides guidance on procedures to be used during troubleshooting and testing of safety-related equipment. It provides guidance on how independent verification shall be conducted. Also Form MA4.5A entitled "Configuration Modification Form" includes sign offs for independent verification both for the modification and its restoration.

Based upon the above review, the inspector concludes that independent verification has been effectively incorporated into both Maintenance and I&C procedures.

During the course of this inspection the inspector conducted a detailed review of both the licensee's proposed and approved procedures and documents. Numerous discussions with the licensee were conducted and liaison was maintained throughout the development of the final plan for Independent Verification. Item I.C.6 as an SER confirmatory item and for TMI Action Plan inspection purposes is closed.

d. (Closed) II.E.1.1 - Auxiliary Feedwater (AFW) System Evaluation

The licensee is required to perform a simplified AFW system reliability analysis to determine the potential for AFW system failure during various loss-of-main-feedwater transient conditions. The licensee is also required to perform a deterministic review of the AFW system and re-evaluate the system flow rate design bases and criteria.

The licensee transmitted to NRR (reference: SBN-313, dated August 26, 1982) the results of its reliability analysis of the AFW system (Seabrook refers to this system as the Emergency Feedwater System - EFW). The analysis concluded that the reliability of the EFW system met the criteria of the Standard Review Plan (SRP) section 10.4.9 only if the startup feedwater pump (a non-safety related pump which can supply water to the EFW system) is used as a backup to the system. As a result, there is an operability requirement for the startup feedwater pump in the Technical Specifications for the EFW system. Also, based on the reliability analysis, several design changes to the startup feedwater pump power supply and discharge piping were required for the system reliability to be deemed acceptable by the staff. One change consisted of installation of an additional circuit breaker in emergency bus 5 for the startup feedwater pump to allow for rapid transfer of its power supply

to an emergency power source. The other involved installation of motor operators, powered from emergency power and operable from the control room, on startup feedwater pump discharge valves FW-163 and FW-156.

The deterministic review of the EFW system was provided in FSAR section 6.8.1. The licensee's re-evaluation of the EFW flow rate design bases was transmitted to NRR on September 10, 1982 (reference: SBN-324, dated September 10, 1982).

The inspector reviewed the reliability analysis of the EFW system, FSAR section 6.8.1 and the licensee's evaluation of the EFW flow rate design bases. He physically verified that the design changes to the startup, feedwater pump power supply and discharge piping, committed to by the licensee to improve the system's reliability, were implemented.

Additional discussion of the emergency feedwater system design and safety evaluation not directly related to TMI Item II.E.1.1 are included below.

SSER No. 4, Section 6.8 discussed the modifications which were made to the EFW system following hot functional testing. Action was required by the staff to verify the design modifications and installation. The testing deficiencies which led to the required EFW modifications were first described in Region I IR 50-443/85-30. These EFW testing-related items were included in unresolved item 85-30-01. Other HFT deficiencies not related to EFW were also included in 85-30-01. Region I IR 50-443/86-13 provided detailed inspection results of the revised EFW design.

The unresolved item with respect to the EFW system remained open pending performance of the pre-critical hot functional testing. Additional inspection of the main steam supply and drain system for the EFW turbine was documented in IR 50-443/86-17, paragraph 6. Unresolved item 85-30-01 was further updated in NRC IR 50-443/86-19, paragraph 2.0. Continued on-site inspection resulted in administrative closure of unresolved item 85-30-01 in IR 50-443/86-37. The six sub-items were individually assigned new numbers for tracking purposes. Three items on EFW remain unresolved as follows (new numbers):

- 86-30-13, Water Hammer Problem in EFW Pump Turbine Steam Supply Line
- 86-30-15, EFW Recirculation Line Problem
- 86-30-16, EFW Pump Performance Problem

Resolution of these issues appears to have been addressed satisfactorily, but the items remain open pending actual hot testing. The 48-hour pump endurance runs were accomplished satisfactorily in accordance with PT14.2. Additional inspection of the EFW system was performed as documented in NRC Region I IR 50-443/86-12, paragraph 4c (TMI Item II.E.1.2).



Based on this documented history of review and inspection of the EFW system and that all known outstanding deficiencies are covered in unresolved items 86-30-13, 86-30-15, and 86-30-16, the staff has reasonable assurance that the EFW system will perform as designed. No additional evaluation is required prior to fuel load and SER item 6.8 is therefore closed. Region I will verify that EFW system performance criteria are met during the startup testing program and, in conjunction, will verify specific closure of the three outstanding items.

SER Section 7.3.2.11, Emergency Feedwater System, required that the FSAR and drawings be revised and equipment modification be made before fuel load. The above requirements have been met and item 7.3.2.11 is hereby closed.

Two additional EFW related topics were inspected as described below.

The inspector questioned the installation of Kerotest supplied check valves in the air supply line to the accumulator for 1-FW-V-395 in the EFW pump house. Liaison between the licensee and the supplier revealed that even though the valves have elastomer seats and no internal spring, sideways orientation of these valves is acceptable. The inspector had no further questions.

During a licensee presentation on the EFW system modifications proposed as a result of HFT, the inspector questioned the radiological impact of the new steam line condensate pot drain outlet lines which terminated in the MS/FW pipe chase sumps. Subsequently, the licensee performed an assessment of potential release paths from the EFW system. This study indicated that these areas could exceed airborne MPC limits under certain accident conditions and therefore, access to these areas would need to be controlled. The inspector reviewed the licensee's analysis and had no further questions.

In summary, the following EFW related items are closed:

- TMI Item II.E.1.1
- SER Item 6.8
- SER Item 7.3.2.11

## 5. Design Changes

### a. Primary Component Cooling Water (PCCW) System

A modification to the PCCW pump trip circuitry was made to add a trip on high cooling water temperature. The inspector reviewed in detail the design documents which implemented this change including the Design Change Notice (DCN) and Engineering Change Authorizations (ECA). He noted that the logic diagram differed from actual wiring as shown on the electrical schematic drawings. Discussion with NHY and UE&C engineering personnel indicated that the interdisciplinary review which was conducted by the

electrical and I&C groups failed to pick up the error. The error in the DCN had been noted by UE&C engineers, but not translated back into the logic diagram. The electrical schematic with which the design details were installed had been changed to reflect proper design criteria. Hardware, therefore, was installed properly, but the logic diagram had not been corrected. The licensee plans to correct the logic diagram and has placed increased emphasis upon the procedure by which known errors are communicated to the design engineers. Prior to implementation of the NHY design control program, memoranda were used to convey certain information, as was the case for this design. Since that time, a controlled form has been developed and is included in SM-PP-0000, the UE&C procedure which implements the NHY Design Control Program.

The inspector discussed the design development and history with the responsible licensee and contractor engineers and determined that the design process had been properly implemented for this change in all respects other than control of the Logic Diagram. Licensee actions to improve information flow under the NHY Design Control Program appears to adequately address this concern.

The inspector has no further questions at this time. Review and test results evaluation of the relevant preoperational test (1-PT-16.3) involving this modification are detailed in paragraph 6a of this report.

b. Containment Air Purge (CAP) System

The ventilation system for the radiation controlled area (RCA) was modified under Design Change Notice (DCN) 66/0032C. This change added a heating and ventilation unit (1-CAP-MM-726), consisting of a 4100 CFM supply fan (1-CAP-FN-179), an electric heating coil and associated duct work and dampers. Heating and ventilation unit 1-CAP-MM-726 is located in the overhead of the RCA tunnel just below the administration service building. This unit recirculates 100 CFM through the chemical drain tank room. Additionally, duct work and dampers were added to exhaust air from the primary auxiliary building (PAB) end of this space via the CAP air cleaning unit (1-CAP-F-40) on the 53'-0" elevation of the PAB. A modification was also required to allow the 15,000 CFM CAP pre-entry purge exhaust fan (1-CAP-FN-10) to run continuously to exhaust the RCA tunnel. This modification consisted of installing an additional balancing damper (1-CAP-DP-1013) between the exhaust and supply ducting for 1-FN-10 allowing 11,000 CFM recirculation flow and 4,000 CFM RCA tunnel exhaust flow.

The inspector reviewed the relevant drawings, work control paperwork and the FSAR change associated with this modification. Certain areas of the modified design were questioned in discussions with Operations, Engineering and Startup supervisors. The inspector's concerns involve the following:

- Procurement specifications of 1-CAP-DP-1013 for use as a control damper as well as a balancing damper.
- Operational controls to prevent pressurization of the RCA tunnel following trip of 1-CAP-FN-10.
- The design process which resulted in the installation of backdraft damper 1-CAP-DP-1052 in the duct from the RCA tunnel to 1-CAP-F-40.

Resolution of these three issues is still pending and is considered an unresolved item (86-46-03). Additionally, the pre-operational testing of these systems will be reviewed when results are finalized.

c. Safety Injection (SI) System

The inspector traced the piping configuration changes which were made to implement the design change which eliminated the boron injection tank (BIT) from the high-head injection flow path of SI.

Utilizing the NHY design P&ID (1-SI-D20447), the system was checked for construction completeness and consistency with the new design requirements. Where pipe lines had been eliminated, it was noted that the affected piping had been removed and existing branch lines capped or plugged, as appropriate. The BIT itself, however, remains in-place in its original location in the PAB with no connection to the SI system.

Certain sections of piping and other components, e.g., valves, flow orifices, were evaluated with regard to the UE&C design specifications, ASME classification, and the SI high-head system interface with the normal charging flow paths. The inspector specifically examined the weld at which the SI piping downstream of the BIT was connected to the Chemical and Volume Control (CS) piping upstream of the BIT. In this area of SI/CS interface, the inspector noted a discrepancy between the P&ID and field designation for a high-head flow measurement transmitter and tubing. Field markings indicated transmitter FT-917 to be part of the SI system, while the P&ID indicated it was a CS component. Discussion with licensee engineering personnel revealed that the NHY drawing "walkdown" process had identified this same error, the resolution of which is being addressed by Corrective Action Request (CAR) 86-016. The inspector had no further questions on this issue.

The inspector also examined certain field modifications and main control board (MCB) component status changes made with respect to the position indication of valve, SI-V-93. This valve is common to the intermediate-head SI recirculation flow paths from both "A" & "B" train pumps back to the RWST and was the subject of an SSER No. 4 discussion (Section 8.1) on the requirement to provide diverse valve position indication in accordance with Branch Technical Position BTP-PSB-18.

The inspector reviewed the applicable loop and logic diagrams, the electrical schematics and the wiring details for SI-V-93. He checked the installed stem-mounted limit switches and instrument cable runs from these switches, as well as the internal valve position limit switches. Instrumentation, status lights, and computer alarms on the MCB were observed and discussed with licensed operators to determine which indications/alarms are available to the operators for the valve position indication of SI-V-93. The inspector verified that the internal valve position limit switch provides signals to position indication lights and a closed status monitor light on the MCB. The stem-mounted limit switches on SI-V-93 provide Video Alarm System (VAS) signals to computer alarms that the valve is "not fully open" and that SI Trains A & B are "inoperable".

This configuration of MCB lights, alarms and signals for the position indication of SI-V-93 is consistent with commitments delineated in the FSAR and in a letter to NRR (SBN-1180, dated August 21, 1986) on the conformance of SI-V-93 to BTP-18.

The inspector has no further questions on this item.

d. Miscellaneous Design Details

The inspector reviewed Engineering Change Authorization (ECA) 19/115461C and examined in-process field modifications for the connection of the revised steam generator wet layup system to the feedwater (FW) system. The existing configuration of piping from the wet layup pump was traced to determine the branch connections and valve alignments necessary to tie in to both the steam generator blowdown (SB) system and the FW system.

Also, in conjunction with discussion in the FSAR (Section 15.0.8.1) regarding operator actions necessary to transfer the EFW pump water supply from the condensate storage tank (CST), the inspector confirmed the existence of such an alternate water source, i.e., fire protection water, from a design and construction configuration standpoint. He reviewed a YAEC memorandum on the alternate water source connection for the CST during natural circulation cooldown resulting from a fire. It was noted that by using an existing connection into the suction piping for EFW pump (P-37A), available fire hose could tie fire protection water from the preaction valve area into the EFW system supplying both the pump suction and the CST. While the administrative controls necessary for any contingency actions in supplying an alternate EFW source of water were not reviewed during this inspection, the design capability to provide such a flow path was verified. No further construction modifications are required to implement any such contingency actions.

The inspector also reviewed calculations used by the licensee to seismically qualify the new fuel storage vault. The SNM license issued to Seabrook Station contains a restriction to allow no more than twelve new

fuel assemblies to be stored in the new fuel storage racks, despite the design capacity for ninety assemblies. This restriction arose from incomplete design consideration in the original new fuel rack analysis of the potential for seismic amplification from the support points on one of the storage vault walls. Based upon a UE&C study and calculations of the actual configuration of the vault walls and the interaction with the new fuel racks at the support points, it was concluded that the original rack qualification as a seismic assembly remains valid. The inspector spot-checked the calculational data and assumptions and checked the design specification for the new fuel storage racks to confirm that procurement criteria were in line with such data and assumptions. He discussed the rack and wall qualification review with both YAEC engineering and QA personnel and determined that a license condition to restrict new fuel storage because of this seismic concern is no longer necessary.

While the licensee has no plans to request a revision to their Part 70 (SNM) license governing the storage of new fuel at the present time, the issuance of the Part 50 license is expected to reflect removal of the new fuel storage restriction.

With respect to all of the design changes, system modifications, calculations, and commitments that were inspected, as documented in the above subsections a, b, c, and d, during this reporting period, no violations were identified.

#### 6. Preoperational Testing

##### a. 1-PT-16.3, "PCCW System High Temperature Trip"

In conjunction with the review detailed in paragraph 5a of this report, the inspector reviewed 1-PT-16.3 including the final, as-accepted test results. There was one test exception which was appropriately dispositioned. Additionally, a problem discovered during the test relating to an incorrectly installed jumper was adequately resolved in accordance with Work Request (WR) 86W005275. The inspector had no questions with respect to conduct of this test.

##### b. 1-AT-30.3, "Verification of Containment Air Sampler (RM-6526) Location"

The inspector reviewed the acceptance test procedure and discussed with the test engineer the objectives, configuration of the test for the containment air sample line, and contingencies in place to relocate the sample suction point, if necessary. A portion of the test conduct was witnessed, and discussions were held with contractor personnel operating the sample equipment outside containment.

Based on a discussion with the test engineer at the conclusion of the test, the inspector determined that the helium tracer was identified at the sample station in an acceptable concentration and within an acceptable time frame. Additional measurements to test other sample suction points were therefore not necessary.

With regard to both of the above preoperational tests reviewed/witnessed, no violations were identified.

#### 7. As-Built Verifications

Detailed system walkdowns were conducted to verify the plant as-built conditions when compared to the design drawings. These walkdowns were performed in conjunction with the detailed review of NHY P&IDs (refer to paragraph 3c). The systems listed below were traced against their design details, as represented on the applicable drawings. Although some minor drawing errors were identified, the review indicated that these systems have been built in accordance with the design.

- Enclosure Air Handling (EAH)
- Containment On-Line Purge (COP)
- Containment Air Purge (CAP)
- PAB Air Handling (PAH)
- Nuclear Sample System (SS)
- Radiation Data Monitoring System (RDMS)
- Reactor Coolant System (RCS)
- Residual Heat Removal System (RHR)
- Chemical and Volume Control System (CVS)
- Safety Injection System (SI)

A design change relative to the CAP system is discussed further in paragraph 5b of this report.

No violations were identified.

#### 8. Procedures Review

The inspector witnessed performance of Operations Surveillance Procedure OX1408.03 entitled "Boric Acid Transfer Pump Flow and Valve Stroke Test". This is a TS Surveillance test performed to meet the requirements for in-service testing (ISI) of ASME Class 1, 2, and 3 components. The inspector noted that the operations and surveillance personnel responsible for conduct of the test were knowledgeable with respect to the procedure and equipment. They were also familiar with the use of the test equipment which was verified to be in calibration. Two non-intent changes were made to the surveillance procedure. These changes were handled in accordance with existing administrative controls.

In reviewing the procedure, however, the inspector questioned whether the acceptance criteria met the intent of the ASME Code Section XI for check valve testing. Specifically, the concern was whether the normal position of the subject check valves is "closed", as stated in the IST program description. The clarity of the procedural wording of the acceptance criteria was also questioned.

Subsequent review of this issue by the licensee revealed that a change to the method with which check valve leakage and closure is measured was warranted. The appropriate changes to the Pump and Valve Test Plan, the Test Control Manual, and individual surveillance procedures are currently in progress. Based upon the action being taken by the licensee, the inspector has no further concerns with the IST program at this time.

The inspector also reviewed the following procedures and conducted a walkdown of the procedural steps with a licensed senior operator:

- OX1401.02 "RCS Steady State Leak Rate Calculation" (Rev. 00)
- OX1401.03, "PORV Block Valve Operability Test" (Rev. 00)
- OX1408.01 "18 Month Emergency Boration Flow Test Surveillance" (Rev. 00)
- OX1423.11 "Control Room Makeup Air System 31 Day Surveillance" (Rev. 00)
- OX1423.12 "Control Room Makeup Air System 18 Month Surveillance" (Rev. 00)

These walkdowns, in conjunction with a detailed procedural review revealed certain inconsistencies similar to those described in paragraph 7c of NRC Region I IR 50-443/86-34. Additional NRC problems with operations procedures, as written, were identified and documented in paragraph 2.2 of NRC Region I IR 50-443/86-36.

Based upon the identification of a number of such inconsistencies and problems in the existing procedures, the licensee initiated a consistency review of fifty procedures, conducted by the Quality Assurance Department. Similar problems were identified and the licensee developed a Writer's Guide for surveillance procedures to primarily establish consistency among the different procedures. Experienced operators and startup supervisors were assembled into a team to re-write any deficient procedures in accordance with the new Writer's Guide. To date, 37% of all surveillance procedures have been placed into the review cycle. The licensee will have all procedures complete prior to declaring systems operable in accordance with the TS.

Based upon the comprehensive corrective action program initiated by the licensee in response to the identified procedural concerns, the inspector determined that appropriate surveillance procedures will be developed and implemented when required. Ongoing resident inspections will verify the adequacy of surveillance procedures and their usage.

No violations were identified.

9. Emergency Preparedness Exercise Allegation Follow-up

In a letter dated June 30, 1986 to Mr. Edward Thomas of the Federal Emergency Management Agency, a local citizen, Mr. J. P. Nadeau, reported an allegation that a serious deception by Public Service Company of New Hampshire (PSNH) had occurred during the February 26, 1986 emergency exercise. In summary, the allegation was that management employees were conscripted by upper-most management to pretend filling onsite emergency response positions during the February 26, 1986 emergency exercise, and that they were instructed to make false reports to FEMA regarding their participation in that exercise. As FEMA has no authority concerning the onsite emergency response, NRC Region I performed the follow-up on this allegation.

An inquiry was performed by the NRC Office of Investigations and representatives of the NRC Region I staff. Based on an interview with Mr. Nadeau, it was determined that an anonymous alleger had contacted him with this information. The alleger expressed a desire to remain anonymous, and in fact did not identify himself. Mr. Nadeau did indicate that the alleger identified the person referred to in the letter as "upper-most management" as Mr. Edward Brown, President of New Hampshire Yankee. Mr. Nadeau also indicated that the alleger did not indicate to him that any false reports were actually made to any federal agency, but only that management employees were coerced or conscripted to pretend filling positions during the February, 1986 exercise. The "deception" referred to in the letter apparently involved indicating that persons were qualified and available to be assigned to certain positions by having their names carried on a roster for those positions, when in reality they were not qualified or available.

Interviews were conducted with others who were present at the League of Towns Meeting of June 25, 1986 at which time this issue was apparently discussed, and follow-up performed on-site, in an attempt to determine if there was any indication of criminality or other violation of any federal requirements by New Hampshire Yankee. No such evidence has been identified.

The NRC has no concern over "conscripted" of employees by senior management to perform any legitimate task. No evidence was found of any illegitimate functions performed by anyone during the February, 1986 exercise. The key response personnel ("key" excludes messengers, clerks, typists, communicators, status board keepers, and others performing largely clerical functions) were observed closely during the exercise to evaluate their qualification to perform their emergency response function. In addition, the scope and depth of their training was evaluated extensively during an appraisal of New Hampshire



Yankee's readiness to implement their Emergency Plan (Emergency Preparedness Implementation Appraisal) completed during inspections performed in December, 1985, and April, 1986. No significant deficiencies were identified regarding anyone's qualifications to fill his or her designated position.

During the on-site follow-up, a series of events was reconstructed concerning New Hampshire Yankee's participation in the exercise, which may have been the basis of the anonymous allegation. On February 12, 1986, New Hampshire Yankee President Mr. Brown issued a memorandum establishing two meetings which were to be held on February 14, 1986. The stated purpose of the meetings was to solicit volunteers to be trained and provide to New Hampshire Civil Defense whatever assistance was needed by local communities during the exercise. The memo did indicate that no one was excused from attending one of the two meetings. Eleven employees subsequently did assist the state during the exercise, and others who volunteered and completed the requisite training were carried on a roster. In any event, nothing of an improper nature was identified.

This matter is considered closed.

10. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, violations,, or deviations. Unresolved items disclosed during this inspection are discussed in paragraphs 3e and 5b.

11. Management Meetings

At periodic intervals during the course of this inspection, meetings were held with senior plant management to discuss the scope and findings of this inspection. An exit meeting was conducted on September 16, 1986 to discuss the inspection findings during the period. During this inspection, the NRC inspectors received no comments from the licensee that any of their inspection items or issues contained proprietary information. No written material was provided to the licensee during this inspection.