

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

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Post Office Box 330
Manchester, New Hampshire 03105
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Inspector: Richard Laura, Resident Inspector
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Date

Inspection Summary:

This inspection report documents the results of an announced regional initiative inspection in the area of Temporary Modifications.

Results:

Two noncited violations were identified for the failure to perform 10 CFR 50.59 safety evaluations for changes made to systems described in the FSAR and the failure to report 10 CFR 50.59 safety evaluations as required by 10 CFR 50.59(b)(2). Two unresolved items were identified in the areas of procedural adherence and poor practices in the maintenance program. An executive summary follows.

EXECUTIVE SUMMARY

The temporary modification program was reviewed and found structured properly with a weakness in the implementation of 10 CFR 50.59 safety evaluations. The inspector identified a noncited violation with three examples of failure to perform a 10 CFR 50.59 safety evaluation for changes made to systems described in the FSAR to ensure unreviewed safety questions were not introduced. Subsequent evaluation found that no unreviewed safety questions were involved and the actual safety significance was low. The inspector considered this a programmatic weakness. The inspector identified a second non-cited violation concerning the failure to report four safety evaluations for temporary modifications to the NRC as required by 10 CFR 50.59(b)(2). Two of the four temporary modifications were still installed in the plant, but safety significance was low based on the continued availability of these records at the site.

The inspector identified an unresolved item in the area of procedural non-compliance regarding scaffolding installation and control of a fish count sump pump, two nonsafety related activities. These instances appear to reflect lapses in the corrective action program for assuring procedural compliance.

Several poor maintenance practices were observed and discussed with the maintenance supervisor. Since the scope of this inspection focused on temporary modifications and not maintenance, a balanced assessment could not be made and the poor maintenance practices are considered to be an unresolved item. Nevertheless, the observations included a poor personnel safety practice and a weakness in the review of equipment isolations, potentially significant concerns.

Effective housekeeping practices were evident based on the good material condition of the plant. The incorporation of good human factors in the control room layout was evident.

DETAILS

1. Control of Temporary Modifications (37700, 37702)

- a. The inspector reviewed the process for initiating, reviewing and implementing Temporary Modifications (TMs). Several TMs were reviewed to evaluate adherence to Maintenance Activity (MA) 4.3, TM procedure, and to evaluate the safety impact. An extensive plant walkdown was conducted by the inspector. There were 76 active TMs installed in the plant.
- b. A sampling of TMs were reviewed for proper 10 CFR 50.59 evaluations. Two TM evaluations were found deficient in that modifications were made to systems described in the FSAR and no 10 CFR 50.59 safety evaluations were performed to ensure the changes did not introduce an unreviewed safety question. A third example was identified in the area of taking computer alarm points out of scan for long periods of time without evaluating the operational impact.
 - 89TM0011, Provide reactor water make-up tank #12 (RWW-TK-12) with a nitrogen supply and water seals at the tank vent and overflow for oxygen control. This TM was installed on March 31, 1989. Figure 9.2-8 of the FSAR illustrates RWW-TK-12.
 - 89TM0009, Cross connect the demineralized water system with the water treatment system. This was installed in the plant on March 16, 1989. These systems are described in Section 9.2.3 and figure 9.2-5 in the FSAR. The change involves the use of a separate processing facility.
 - Control room alarm points 7795 and 7796 for low differential pressure between the containment enclosure area and the outside environment, and between the containment enclosure area and the primary auxiliary building were removed from service on May 9, 1988. These alarm points are described in Section 9.4.6.a of the FSAR. In an accident condition, these alarm points could alert the operator that although the emergency exhaust air cleaning units are running, an actual low differential pressure exists.

The three examples of failure to perform a 10 CFR 50.59 safety evaluation when making changes to a system described in the FSAR indicated a programmatic weakness. During interviews with station personnel, the inspector found a lack of understanding of the applicability of the 10 CFR 50.59 process. For example, several personnel indicated the 50.59 process does not apply to nonsafety related components/systems. The nuclear regulatory compliance manager agreed 10 CFR 50.59 safety evaluations should have been performed for the three

facility changes. In response to the inspector's concern preliminary safety evaluations were prepared by engineering personnel, which concluded no unreviewed safety questions were introduced. Based on this, the inspector concluded that the actual safety significance of these facility changes was low.

New Hampshire Yankee (NHY) management made the following commitments in response to the inspector's concerns:

- Perform a 100% review of all active TM 10 CFR 50.59 reviews to ensure there are no unreviewed safety questions.
- Establish the same review cycle for TM 10 CFR 50.59 evaluations as required for modifications which includes a more comprehensive review.

The inspector concluded that the the failure to perform a 10 CFR 50.59 safety evaluation for changes made to systems described in the FSAR would not be cited as a violation, based on the low safety significance. The NRC Enforcement Policy, in 10 CFR 2, Appendix C, V.A., permits Severity Level V violations, for which appropriate corrective actions are being taken, to not be cited. NON-CITED VIOLATION 50-443/90-05-01.

- c. Two safety evaluations were randomly selected (88TM0012, 88TM0034) to verify they were reported to the NRC as required by 10 CFR 50.59(b)(2), which requires the reporting of safety evaluations for changes made to the facility that do not involve an unreviewed safety question. It was determined that the safety evaluation for 88TM0012 was never reported. NHY regulatory compliance group performed a 100% audit of all active and removed TM safety evaluations and identified three others that went unreported. Two of the four TMs were installed in the plant. NHY stated the two safety evaluations of the TMs still installed (88TM012, 86TM066) will be submitted in the next annual report. The inspector concluded that these corrective actions were appropriate and acceptable. The safety significance of these unreported safety evaluations is minor because the changes did not involve an unreviewed safety question, the records were always available onsite for NRC review, and the four missed reports appeared to be isolated cases. No violation will be cited because these missed 10 CFR 50.59(b)(2) reports were classified as a Severity Level V violation with minor safety significance. The NRC Enforcement Policy, in 10 CFR 2, Appendix C, V.A., permits Severity Level V violations, for which appropriate corrective actions are being taken, to not be cited. NON-CITED VIOLATION 50-443/90-05-02.

- d. Maintenance Activity (MA) 4.3 requires a technical evaluation, 10 CFR 50.59 evaluation, SORC review and Station Manager approval for each TM. MA 4.3 specifies a periodic review be performed every 90 days of active TMs to minimize the total number installed in the plant. Many TMs have been installed for long periods of time in preparation for startup testing. No unauthorized TMs were identified by the inspector. Quality Assurance (QA) oversight of TMs was evident. QA report No. 89-A07-01 identified numerous examples of drawings that were not updated to reflect the installation or removal of TMs. This finding demonstrates good self-assessment capability. The total number of installed TMs appeared to be reasonable, and the program coordinator was sensitive to minimizing the length of installation.
- e. Overall, the TM program was structured properly and required the appropriate levels of review. TM program and quality assurance oversight was evident in the areas of drawing updates, labeling and periodic re-reviews. A weakness was identified in the areas of performing 10 CFR 50.59 safety evaluations and reporting per 10 CFR 50.59(b)(2).

2. Plant Walkdown Results (37700, 37702)

While inspecting the plant for unauthorized temporary modifications, the inspector identified concerns in the areas of procedural compliance and maintenance controls. The inspector noted the good material condition of the plant and concluded that housekeeping practices had been effective.

a. Procedural Compliance

The inspector identified two non-safety related activities that were not accomplished in accordance with procedural requirements. Portions of scaffolding erected around the circulating water pumps were not controlled per MA 4.10 tagging requirements. Step 4.2.7 specifies a warning sign be hung while scaffold is being removed. The inspector identified two scaffolds being removed that were not tagged.

A temporary sump pump system was installed in the fish count sump in the circulating water pumphouse discharging into the circulating water out flow and was treated as a mechanical temporary modification. A second sump pump system was installed adjacent to the previous one and was not treated as a TM. The inspector questioned why one was a TM and the other was not. The inspector was informed the second pump was probably installed under a generic pumping procedure.

Further review revealed neither Station Operating Procedure UN0599.047 (Installation of Temporary Pumps) nor Station Operating Procedure ON1090.02 (System Venting and Draining) was used to install and operate the temporary pumping system. The Operations manager stated these were new procedures (issued September 29, 1989 and November 27, 1989) that all crews had not yet been trained on. Further, operations personnel were made aware of the new procedures and it was their responsibility to learn as they perform the new procedures, if required prior to receiving the proper training.

The inspector was concerned that the requirements of the scaffold procedure and the installation and use of temporary sump pump operating procedures were not followed. These concerns about procedural non-compliance represent an unresolved item. UNRESOLVED ITEM 50-443/90-05-03.

b. The following poor maintenance practices were observed by the inspector during plant tours.

- MA 4.5 (Routine Maintenance Tasks) allows maintenance personnel to develop an isolation with no independent review for adequacy. The configuration modification form only requires independent verification for the application of the isolation (i.e., open slide links, lifted lead, etc.). MA 4.5 bypasses the equipment tagging procedure and thus eliminates several levels of review. The inspector considered the lack of independent review of isolation to be a poor practice which could lead to personnel injury or equipment damage.
- An I&C technician used a set of non-controlled electrical prints to independently verify the adequacy of isolation. The inspector considered the use of non-controlled prints for isolation purposes a poor practice.
- The inspector identified an improperly installed blank flange downstream of SW-V129 (service water train "A" drain line isolation). Only one of four securing bolts was installed and the blank was hanging down. Investigation revealed the blank was removed to support a maintenance activity and was not properly reinstalled on December 9, 1989. A specific procedural step did not cover the flange removal as the skills of the trade were sufficient to remove the flange. As corrective action, NHY reinstalled the flange and stated that a work request will be used to remove and reinstall flanges in the future as a method to control plant configuration. The inspector also noted that this deficiency was not noticed by plant management and personnel during their tours. The safety significance was minor because SW-V129 is a normally closed valve.

- An Instrument and Control (I&C) technician crawled under a safety guard installed over the emergency diesel generator engine main coupling to work in the same area on a temperature switch. The inspector identified that the diesel was lined up for automatic start and considered this a potential personnel safety hazard. Station management acknowledged this concern and initiated a full safety investigation. Subsequent investigation determined that the I&C technicians were working on the wrong switch. This incident demonstrates a lack of familiarity with plant equipment and poor personnel safety practice.

Though isolated, the inspector concluded that the use of uncontrolled prints, the lack of independent review of isolation for routine tasks, the loss of control of a safety related blank flange, and the practice of working on or around equipment which could automatically start represented potentially significant, programmatic problems. These poor maintenance practices will remain unresolved pending future inspection to provide a broader assessment of the maintenance program. UNRESOLVED ITEM 50-443/90-05-04.

3. Exit Meetings (30703)

At the conclusion of the inspection, a meeting was held with senior management to discuss the scope and findings of this inspection. Based on the NRC Region I review of this report and discussions held with New Hampshire Yankee representatives, it was determined that this report does not contain Safeguards or 10 CFR 2.790 information.