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April 15, 1994

Docket Nos. 50-245
50-336
B14805

Re: 10CFR2.201

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Millstone Nuclear Power Station, Unit Nos. 1 and 2
Reply to Notices of Violation
Inspection Report Nos. 50-245/93-32; 50-336/93-28; 50-423/93-29

In a letter dated March 7, 1994,⁽¹⁾ the NRC Staff transmitted Notices of Violation (NOVs) relating to NRC Inspection Report Nos. 50-245/93-32; 50-336/93-28; 50-423/93-29. The report discussed the results of the safety inspection conducted on November 17, 1993, through January 4, 1994, at Millstone Station. Based on the results of the Staff's inspection, seven violations were identified at Millstone Unit Nos. 1 and 2. The violations were cited at Millstone Unit No. 2 as a result of: (1) inadequate procedures for the use of containment radiation monitors as reactor coolant system leak detectors, (2) a mispositioned throttle valve that degraded high pressure safety injection flow, (3) inadequate system turnover following condensate storage tank modifications, (4) inadequate procedure for calibration of a tank level instrument, (5) failure to adequately compensate for uncertified technicians, and (6) failure to retain inservice inspections records. One violation was cited at Millstone Unit No. 1 for late licensee event reports. Although the Staff acknowledged that these violations are of minor significance, they expressed concern that most of the violations involve inadequacies in procedures and procedure adherence. The Staff requested that Northeast Nuclear Energy Company (NNECO) provide additional actions that we intend to take to address these procedural adherence problems site-wide.

(1) A. R. Blough letter to J. F. Opeka, "NRC Inspection Report Nos. 50-245/93-32; 50-336/93-28; 50-423/93-29," dated March 7, 1994.

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The Staff requested that NNECO respond within 30 days of the date of the letter transmitting the NOVs. However, during a discussion between NNECO and the Region I Staff on April 6, 1994, it was agreed that the response would be provided on April 15, 1994. Accordingly, Attachment 1 to this letter provides NNECO's reply to the NOVs on behalf of Millstone Unit Nos. 1 and 2, pursuant to the provisions of 10CFR2.201. Attachment 2 provides our response to the request for additional actions on procedural adherence.


If you have any questions regarding information contained herein, please contact us.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

FOR: J. F. Opeka
Executive Vice President

BY:


E. A. DeBarba
Vice President

cc: T. T. Martin, Region I Administrator
J. W. Andersen, NRC Acting Project Manager, Millstone Unit
No. 1
G. S. Vissing, NRC Project Manager, Millstone Unit No. 2
P. D. Swetland, Senior Resident Inspector, Millstone Unit
Nos. 1, 2, and 3

Docket Nos. 50-245
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Attachment 1

Millstone Nuclear Power Station, Unit Nos. 1 and 2

Reply to Notices of Violation

Inspection Report Nos. 50-245/93-32; 50-336/93-28; 50-423/93-29

April 1994

Millstone Nuclear Power Station, Unit Nos. 1 and 2

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Restatement of Violations:

During an NRC inspection conducted on November 17, 1993 through January 4, 1994, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure of NRC Enforcement Actions," 10 CFR Part 2, Appendix C, the violations are listed below:

- A. 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires that activities affecting quality be prescribed by documented procedures appropriate to the circumstances and be accomplished in accordance with those procedures. Those procedures shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

Unit 2 Technical Specification 4.4.6.2.a requires that reactor coolant system leakage be demonstrated to be within the limits of Technical Specification 3.4.6.2 by monitoring the containment atmosphere particulate radioactivity at least once per twelve hours. Operations Department Surveillance Procedure Form 2619A-1, "Control Room Daily Surveillance, Modes 1 and 2," step 18, and Form 2619A-2, "Control Room Daily Surveillance, Modes 3 and 4," step 20, were established pursuant to the above. Further, operating procedures OP-2383A, "Process Radiation Monitors Operations," and OP-2314B, "Containment and Enclosure Building Purge," contain alarm response actions for high containment airborne particulate and gaseous radioactivity conditions.

Contrary to the above, as of January 4, 1994, and September 14, 1993, respectively:

1. Procedure Form 2619A-1 and Form 2619A-2 did not contain quantitative or qualitative acceptance criteria for determining reactor coolant system leakage within the limits of Technical Specification 3.4.6.2; and,
2. Procedures OP-2383A and OP-2314B did not contain adequate, specific procedural direction for verification and mitigation of reactor coolant system leakage detected by the containment airborne particulate and gaseous radiation monitors.

This is a Severity Level IV Violation. (Supplement I)

- B. Unit 2 Technical Specification 6.8.1.c requires that written procedures covering surveillance activities of safety-related equipment be established and implemented. Surveillance Procedure SP 2604E, "High Pressure Safety Injection (HPSI) System Valve Operability Test," was written pursuant to the above.

Procedure SP 2604E, section 4.3.7 requires that the applicable HPSI valve be positioned to the "OPEN" mark on its valve position indicator disc. The valve position corresponding to the OPEN mark is the throttled position for that valve, which is set to ensure minimum HPSI flows during a small break loss of coolant accident.

Contrary to the above, from approximately November 10 to December 2, 1993, HPSI valve 2-SI-637 was not positioned to the OPEN mark. The valve was positioned 39 degrees in the closed direction from the required position.

This is a Severity Level IV Violation (Supplement I).

- C. 10 CFR Part 50, Appendix B, Criterion III, "Design Control," and Criterion V, "Instructions, Procedures, and Drawings," require that measures be established to correctly translate the plant design basis into specifications, drawings, procedures, and instructions; and that activities affecting quality are prescribed by documented instructions, procedures, or drawings.

Administrative Control Procedure ACP-QA-3.10, "Preparation, Review, and Disposition of Plant Design Change Records (PDCRs)," Steps 4.6.2 and 4.14.5, respectively, require that operations procedures must typically be updated before a design change is declared operational, and that the administrative items, including procedure changes, specified on Form B of each PDCR as being a requirement for declaring a system operational must be completed prior to system turnover.

Contrary to the above, when PDCR 2-079-92 modified the Unit 2 condensate storage tank support systems, operating procedure OP-2319B, "Condensate Storage/Surge System," was not changed prior to system turnover as evidenced by the following examples:

1. Plant modification PDCR 2-079-92, Revision 1, which changed the operating settings of the condensate storage tank relief valves contained in Figure 8.1 of procedure OP-2319B, was turned over for operation on

June 23, 1993. As of January 4, 1994, Figure 8.1 of procedure OP-2319B was not changed to reflect the revised relief valve settings.

2. Form B of PDCR 2-079-92, Revision 0, listed procedure OP-2319B, Revision 11, as the procedure affected by modifications to the condensate storage tank. On January 4, 1993, the condensate storage tank was turned over for operation while procedure OP-2319, Revision 11 was not approved for use until February 5, 1993.

This is a Severity Level IV Violation. (Supplement I)

- D. Millstone Unit 2 Technical Specification 6.8.1.a requires that written procedures be established, implemented, and maintained covering the activities contained in Appendix A of Regulatory Guide (RG) 1.33, dated February 1978. RG 1.33, "Quality Assurance Program Requirements (Operation)," Appendix A, Step 8.b.(1)(ff), requires specific procedures to be written for surveillance tests and calibrations affecting level instrumentation of water storage tanks.

Contrary to the above, since the beginning of plant operation, the procedure implemented for calibration of level instrument L-5280, which is used to warn operators of a TS minimum condensate storage tank level condition, was not adequate; in that, use of the procedure contributed to the miscalibration of condensate storage tank level switches since 1977.

This is a Severity Level IV Violation. (Supplement I)

- E. 10 CFR Part 50, Appendix B, Criterion II, "Quality Assurance Program," and Criterion V, "Instructions, Procedures, and Drawings," require that personnel performing activities affecting quality be trained as necessary to assure that suitable proficiency is achieved and maintained; and that activities affecting quality shall be prescribed by documented procedures, instructions, and drawings. Administrative Control Procedure ACP-QA-8.27, "Millstone Station Training and Qualification," and Instrumentation and Controls (I&C) procedure I&C-2450, "Unit 2 I&C Department Certification," were established pursuant to the above.

Procedure ACP-QA-8.27, Step 6.4.1.5, assigns line supervisors the responsibility for designating only qualified individuals to perform independent work activities. If plant conditions prevent the assignment of

qualified independent workers, the line supervisor shall document what special provisions were made to protect personnel and equipment, and to insure quality workmanship.

Procedure IC-2450, Step 6.11.2, requires the I&C supervisor to complete I&C Form 2450-6, "Justification for Use of Individual Not Having Documented Qualification," if training requirements cannot be satisfied when assigning personnel to perform independent work. Actions listed on I&C Form 2450-6 to be taken to ensure adequate completion of work include pre-job briefing, applicable procedure review, and/or increased supervision.

Contrary to the above, I&C personnel were assigned to perform independent work for which they were not formally qualified without the specific actions listed on I&C Form 2450-6 being completed, as evidenced by the following examples:

1. On July 14, 1993, surveillance procedure SP-2404AN, "Spent Fuel Pool Radiation Monitor Functional Test," was performed without a pre-job briefing.
2. On October 1, 1993, surveillance procedure SP-2404AV, "RBCCW Liquid Process Monitor Functional Test," was performed without a pre-job briefing or increased supervision.
3. On October 10, 1993, surveillance procedure SP-2410A, "Acoustic Valve Monitor Functional Test," was performed without a pre-job briefing.
4. On May 18, 1993, surveillance procedure SP-2404AS, "High Range Stack Radiation Monitor (RM-8168) Calibration," was performed without a pre-job briefing or applicable procedure review.

This is a Severity Level IV Violation. (Supplement I)

- F. 10 CFR 50.55(g), Inservice Inspection, requires the licensee to implement an inservice inspection (ISI) program for components of boiling and pressurized water-cooled nuclear power reactors that meets the requirements of the applicable ASME Boiler and Pressure Vessel Code. Code Section XI, Article IWA 6340 requires, in part, that ISI records and reports be maintained.

Unit 2 Technical Specification 6.8.1 requires that procedures covering station activities be established and

implemented. Procedure ACP-QA-9.09, "Management of ISI Programs" was established pursuant to the above.

Procedure ACP-QA-9.09 section 6.4 requires that ISI examinations, tests, replacement, and repairs conducted since submittal of the previous ISI summary report shall be included in an ISI summary report and submitted to the NRC within ninety (90) days of the completion of each refueling outage.

Contrary to the above, as of November 4, 1993:

1. ISI program test records for completed safety system leak tests (Procedures EN 21154, 21155, 21156, 21157, 21158, 21160, and 21161) were not maintained.
2. The ISI system leak tests (EN 21154, 21155, 21156, 21157, 21158, 21160, and 21161) completed during the fall 1990 refueling outage were not included in the ISI summary report submitted to the NRC on February 4, 1991.

This is a Severity Level IV Violation (Supplement I).

- G. 10 CFR 50.73(a) states, in part, that the licensee shall submit a License Event Report (LER) within thirty (30) days after the discovery of the event.

Contrary to the above, between March 13, 1992 and December 10, 1993, Unit 1 LER's 92-02, 92-18, 93-06 and 93-23 were not submitted within thirty (30) days after the discovery of the event.

This is a Severity Level V Violation (Supplement I).

1. Reason for the Violation (Violation A):

The cause is administrative program failure. The bases for Millstone Unit No. 2 Technical Specifications state that the Reactor Coolant System (RCS) leakage detection systems are consistent with the recommendations of the NRC Regulatory Guide 1.45. The systems and components have always been available, but no procedure guidance was provided to link the containment air process radiation monitors alarm response to indication of RCS leakage into the containment.

2. Corrective Steps Taken and Results Achieved (Violation A):

- 1) Applicable operating procedures have been enhanced. Specifically, the alarm response for high containment air process radiation refers the operator to the RCS leak abnormal operating procedure (AOP). The AOP has been revised to include high containment air process radiation as an entry condition.
- 2) Procedure changes have been approved which make the containment air process radiation monitors alarm setpoints variable. These changes will effectively increase the sensitivity of the radiation monitors, thus, enhancing the usefulness of the radiation monitors as an RCS leakage detection system by providing a quicker alarm indication of an RCS leak to containment.
- 3) The RCS leakage computer report has been revised to provide the containment sump leak rate based on a ten minute average, and the calculated ten minute average of the four containment radiation monitors at the beginning and end of the calculated interval.

3. Corrective Steps That Will Be Taken to Avoid Further Violations (Violation A):

Since there is no reasonably acceptable method of quantitatively determining RCS leak rate from a radiation monitor, applicable Final Safety Analysis Report (FSAR) and Technical Specification bases sections will be revised to clarify Millstone Unit No. 2's capability, consistent with Regulatory Guide 1.45.

4. Date When Full Compliance Will Be Achieved (Violation A):

NNECO considers that Millstone Unit No. 2's reactor coolant press : boundary leak detection system is operable, in compliance with the intent of the guidance provided in Regulatory Guide 1.45, and meets the current licensing bases.

Proposed changes to the Millstone Unit No. 2 Technical Specifications will be submitted for NRC review and approval by December 31, 1994, if appropriate. Following the Bases change or approval of the proposed changes to the Millstone Unit No. 2 Technical Specifications, the FSAR will be revised as appropriate.

5. Generic Implications (Violation A):

This NOV reply will be distributed to Millstone Unit Nos. 1 and 3 and the Haddam Neck Plant for their review. Actions will be evaluated based on applicability.

1. Reason for the Violation (Violation B):

As discussed in the inspection report, there have been several instances of high pressure safety injection (HPSI) valve mispositioning in the recent past. The causes of the previous events were a lack of training for personnel responsible for positioning the valves, inadequate position markings on the valves, and procedural shortcomings. Previous corrective actions that had been implemented include revising procedures to clarify methods, developing special tools to facilitate positioning, and incorporating this information into the scheduled safety injection system lecture. All shifts had not received the training prior to this event due to other training commitments. In addition, the need for more effective training was identified.

2. Corrective Steps Taken and Results Achieved (Violation B):

Upon discovery, the valve was immediately repositioned to its proper throttled position. The other Facility 1 HPSI valves were verified in the proper position. Millstone Unit No. 2 engineering personnel completed an analysis of the consequences of the as-found position of the HPSI valve and determined that the technical specification and FSAR design flows would have been met. Thus, the HPSI train was capable of satisfying its design safety function during the time the valve was mispositioned.

Additional actions that have been taken include the following:

- 1) All Operations Department personnel have attended previously developed training.
- 2) The markings on the valve indicating proper throttle position were color coded to enhance operator interface/performance.
- 3) Operating procedures have been enhanced to include the use of color coding.
- 4) Additional hands on, in the field, training has been provided to each shift concerning HPSI valve positioning, the procedure enhancements, and the valve markings.

3. Corrective Steps That Will Be Taken to Avoid Further Violations (Violation B):

NNECO believes that the actions described above will be sufficient to preclude recurrence.

4. Date When Full Compliance Will Be Achieved (Violation B):

HPSI system configuration was in full compliance, when the valve was repositioned to the proper throttle position.

5. Generic Implications (Violation B):

This NOV reply will be distributed to Millstone Unit Nos. 1 and 3 and the Haddam Neck Plant for their review. Actions will be evaluated based on applicability.

1. Reason for the Violation (Violation C):

The violation occurred because of management deficiencies and inadequate communication between engineering and operations personnel.

As discussed in the inspection report and a number of internal memoranda, there were several iterations on the proper setpoints for various condensate storage tank (CST) instruments due to: 1) a determination by engineering that setpoint calculations completed by a vendor were inadequate, 2) a request by the I&C department to calibrate the instruments to a common zero reference point for ease of calibration, and 3) another revision to the PDCR addressing tank response to vacuum conditions. These iterations were not successfully communicated to the groups responsible for revising the operating procedure. Additionally, one minor procedure change, concerning the tank breather valve setpoints, was overlooked by the Operations procedure writers. As a result, the operating procedure, revised at the end of the refueling outage, did not incorporate all of the changes associated with the PDCR. However, the procedures were revised to include the information needed to operate the system, i.e. alarm setpoints and associated operator actions. Certain informational changes were not incorporated until after the system was released for operation.

2. Corrective Steps Taken and Results Achieved (Violation C):

The operating procedures have been revised to incorporate changes associated with this PDCR. Project and System Engineers now verify that the necessary procedures have been revised and Plant Operations Review Committee approved prior to engineering release for operation.

3. Corrective Steps That Will Be Taken To Avoid Further Violations (Violation C)

The design control administrative procedures, including NEO 3.03, "Plant Design Change Records," are being revised to clarify roles, responsibilities, and expectations. The intent is to ensure that procedures are properly changed prior to release of PDCRs for operation. Additional inspections and signoffs are being added to the design change process.

4. Date When Full Compliance Will Be Achieved (Violation C):

Millstone Unit No. 2 is presently in full compliance. Full compliance was achieved on February 3, 1994 when OP2319B was approved which incorporates the as-tested relief ranges of the CST breather valves. Design control procedure changes will be implemented in conjunction with the Design Control Manual.

5. Generic Implications (Violation C):

This NOV reply will be distributed to Millstone Unit Nos. 1 and 3 and the Haddam Neck Plant for their review. Actions will be evaluated based on applicability.

1. Reason for the Violation (Violation D):

The cause of this violation is personnel error in recording the "desired" setpoint for the condensate storage tank (CST) low level annunciator as "increasing" rather than "decreasing," and the failure of Supervision to adequately review the calibration history to identify the error.

Since the low level annunciator is not considered safety-related, it is calibrated under IC-2435B, "Balance of Plant PM/Calibration - Shutdown," a general balance of plant calibration procedure. The specific device setpoints and calibration histories are not contained in IC-2435B, but rather in the instrument loop folder on Instrument and Controls (I&C) Form 3.02-1A (formerly 21003). A review of the calibration history shows that LC-5280C-1 and C-2, the divert valve solenoid control and the low level annunciator, respectively, were initially calibrated as part of "phase 1 testing" in June of 1974. These calibrations were performed correctly, with both devices set at 9.65 psi. The valve solenoid was set for 9.65 psi increasing while the low level alarm was set at 9.65 psi decreasing.

The switches were calibrated to the proper setpoints but with the increasing and decreasing indicators apparently swapped for each calibration subsequent to the initial calibration. The low level alarm was calibrated to the proper setpoint but in the increasing rather than decreasing direction. Similarly, the valve solenoid control was calibrated incorrectly in the decreasing direction. While the correct setpoint was used, the calibration of the low level alarm in the increasing rather than decreasing direction would result in miscalibration, typically on the order of 0.2 - 0.3 psi. As stated in the inspection report, the miscalibration is not enough to cause the setpoint to be below the Technical Specification minimum. Since the loop folder makes no mention of a change in the increasing and decreasing calibration requirements, it is concluded that the change on the data sheets from use of a ↓ arrow to an ↑ arrow and the failure of the Supervisor review to detect this mistake are personnel errors. Since typical practice in a calibration is to refer to the most recent desired and as-left results for a starting point, this error was repeated and went undetected until September 1993.

Although the instructions in the loop folder that are contained on the manufacturer's service instructions regarding "rotate adjustment screw clockwise to decrease actuation point of opposite switch" may appear confusing at

first, they do not appear to have contributed to the mistake for two reasons. First, if the technicians did not understand the meaning of the instructions and did not see the label inside the switch housing, and were in fact adjusting switch 1 when they believed they were adjusting switch 2, then the switches would not actually have been miscalibrated. Since it is clear that the only difference between the switches was the direction (increasing or decreasing) of applying the pressure source, then calibrating the wrong switch would "offset" the mistake made on the data sheets showing the incorrect arrow direction. Second, since adjustments were made periodically to the switches, if the incorrect adjustment screw was turned, no change in the setpoint would have been noticed. Thus, it seems reasonably certain that the switches were properly identified, although calibrated incorrectly.

The Inspection Report also states that there appears to be a Millstone Unit No. 2 I&C Department weakness in the program for identification and correction of instrument deficiencies. This is based on the fact that no Instrument Calibration Review (ICR) form was initiated. This effectively precluded review of the incident for root cause, etc. Although, as acknowledged in the Inspection Report, the proper technical reviews were performed, this was not documented and the Operations Shift Supervisor was not informed of the discovery. We agree that some formal reporting mechanism should have been used; in this case the Plant Information Report (PIR) process rather than the ICR process, would have been appropriate. Since the time of this event, the threshold for PIR initiation has been significantly lowered. This type of discovery (i.e., repeated miscalibration) would result in a PIR. Use of the PIR process would ensure that the appropriate departments were aware of the event and that the required follow-up actions (e.g., reportability evaluation, root cause, etc.) would be completed in a formal and timely manner.

2. Corrective Steps Taken and Results Achieved (Violation D):

Upon discovery in September 1993, both switches were properly calibrated. Additionally, the instrument loop folder was annotated to provide clarifying notes related to specific switch functions and labeling.

3. Corrective Steps That Will Be Taken to Avoid Further Violations (Violation D):

The instrument loop folders for similar devices will be reviewed to determine whether similar calibration data recording errors were made and to confirm that the unique switch arrangement did not result in confusion and/or miscalibration of other switches. Where appropriate, clarifying notes will be added to vendor instructions. This effort will be completed by June 30, 1994.

To determine if this was an isolated error, a sample of balance of plant instrument loop folders for instruments where setpoints are not specifically controlled and documented within a procedure will be reviewed to ensure that the correct setpoints have been maintained. This effort will be completed by June 30, 1994.

Finally, this violation will be discussed at a Millstone Unit No. 2 I&C Department meeting. This discussion will focus on the cause of the violation, the need for improved attention to detail in maintaining and calibrating non-safety-related instruments, and the importance of using the PIR process to formally evaluate this type of event. This will be completed by April 30, 1994.

4. Date When Full Compliance Will Be Achieved (Violation D):

The above noted additions to the instrument loop folder and proper calibration of the low level alarm were completed on September 24, 1993. Thus, full compliance was achieved as of that date.

5. Generic Implications (Violation D)

This NOV reply will be distributed to Millstone Unit Nos. 1 and 3 and the Haddam Neck Plant for their review. Actions will be evaluated based on applicability.

1. Reason for the Violation (Violation E):

The reason for the violation is a procedural deficiency. Instrumentation and Control Procedure IC-2450, "Unit 2 I&C Department Certification," does not provide guidance as to what is meant or required by use of the terms "pre-job briefing," "procedure review," or "increased supervision." Thus, what constitutes satisfactory completion of these "compensatory actions" is subject to individual interpretation.

A contributing factor is the current level of the technician qualification as indicated on the technician qualification matrix. As noted in the Inspection Report, there are a number of procedures for which no technician has fully documented qualification, and there are cases where only one or two technicians are qualified. As a result, it has been necessary to use Form 2450-6 more often than desired. In some cases, Form 2450-6 has been used for individual technicians who are the "subject matter experts" and the designated on-the-job training (OJT) Trainer/Evaluator for the specific procedure. These individuals do not have fully documented qualification because in some cases I&C and Training Department Management have not completed the documentation (validation) required to establish the individual's qualification. Thus, Form 2450-6 was at times viewed as a formality to compensate for this administrative condition. In these cases, it is clear that since the individual is technically qualified, a detailed pre-job briefing would add little value. As a result, some briefings consciously became "perfunctory." In the Supervisor's view, even this type of briefing met the requirements of IC-2450.

It should be noted that essentially every job assigned, whether to a fully qualified individual, or with use of a Form 2450-6, receives a pre-job briefing. The detail covered in the briefing can vary depending on the complexity of the assignment, the experience and qualification of the individual performing the work, and the potential significance associated with the assignment. In some cases, the briefing may be considered "perfunctory", as described in the notice of violation. While this may be the case, it is considered minimally acceptable since it adds little value to the process and creates the potential for different opinions regarding the adequacy of the briefing, between the person giving the briefing and the person receiving it. One of the most important work control requirements that is presently in the quality section of the annual General

Employee Training Program, presented by the Nuclear Training Department, and continually reinforced to the entire staff is that if an individual is not comfortable performing a task, they should: (1) stop the work; (2) place equipment in a safe condition; and (3) consult with Supervision. The lack of questions from the technician could be inferred by the Supervisor as agreement that the briefing was adequate.

The above discussion is provided not to contest the violation or its bases, or even to defend the adequacy or value of a "perfunctory" briefing, but rather to clarify that the individual Supervisors, who prepared the Form 2450-6's, believed that they had fulfilled the requirements of IC-2450. Additionally, the inspection report states that the affected surveillance tests and calibrations had been performed properly. Thus, we believe that the statement in the Inspection Report that these incidents are "safety significant because they involved line supervisors," is not an accurate assessment of the situation. We do agree that Form 2450-6 has been used more frequently than desirable, in part to compensate for difficulty in maintaining technician qualifications.

After the conclusion of Inspection 50-336/93-28, another issue arose concerning the use of Form 2450-6. Although this was a different issue, it shares a common contributing factor (the level of technician qualification). On March 3, 1994, a procedure was performed by a technician without fully documented qualification, and without a Form 2450-6 attached to the work order as required by IC-2450. The cause of this was a mistake in the work release process which passed the authorized work order directly from the Operations Department to the technician, without a pre-job Supervisory review. It is during this review, at the start of the day that the job is to be worked, that Form 2450-6 is initiated and attached to the work order. Again, this is a different issue than that which resulted in the violation, but one that is also at least partially caused by undue reliance on Form 2450-6. We believe the corrective actions described below, for the violation and other changes in the work control process, will prevent recurrence.

2. Corrective Steps Taken and Results Achieved (Violation E):

The Nuclear Training Department has provided training to the Millstone Unit No. 2 I&C Department on the requirements of IC-2450, the use of the qualification program, and the actions required to be taken to assign an individual without documented qualification. This action was completed in

training sessions on February 3, February 18, and March 30, 1994.

Additionally, Supervisors who assign work and utilize Form 2450-6 have been instructed that if "procedure review" or "pre-job briefing" is checked, then a formal, detailed briefing and section-by-section review of the procedure is to be performed when the job is assigned, regardless of the experience of the personnel assigned. If "increased supervision" is checked, a work observation is to be performed. This significantly reduces the potential for differing interpretations on satisfying the requirements of IC-2450.

3. Corrective Actions That Will Be Taken to Avoid Further Violations (Violation E):

This violation and corrective actions will be discussed at an I&C Department meeting to reinforce Supervisor and technician responsibilities related to IC-2450 and Form 2450-6. This action will be completed by April 30, 1994. IC-2450 will be revised to clarify in detail what is required for use of a Form 2450-6. The procedure revision will be completed by May 15, 1994.

Additionally, as previously mentioned, a contributing factor is the current state of the Millstone Unit No. 2 I&C qualification matrix, which necessitates use of a Form 2450-6 more often than desirable. While it may never be possible to eliminate use of a Form 2450-6 entirely, we believe that its use should be rare. The Millstone Unit No. 2 I&C Department and Nuclear Training Department have initiated actions to improve the OJT program and to complete the qualification requirements for the majority of the technicians and procedures. Since January 1, 1994, over 80 "Qs" have been added to the qualification matrix through OJT, validation, procedure performance, and/or classroom training. In the longer term, this will reduce the need to occasionally assign individuals to task without fully documented qualification. However, it will not diminish the importance of the compensatory actions that are required when a Form 2450-6 is used. These actions are not directly related to this violation and, as stated in the Inspection Report, will be reviewed further by the NRC Staff as part of unresolved item #50-336/93-28-08.

4. Date When Full Compliance Will Be Achieved (Violation E)

Actions have been taken to ensure that formal procedure reviews, pre-job briefings, and work observations take place if so indicated by a Form 2450-6. Thus, full compliance was achieved on March 28, 1994.

5. Generic Implications (Violation E):

This NOV reply will be distributed to Millstone Unit Nos. 1 and 3 and the Haddam Neck Plant for their review. Actions will be evaluated based on applicability.

1. Reason for the Violation (Violation F):

The HPSI and Low Pressure Safety Injection (LPSI) inspection records loss occurred because the Millstone Unit No. 2 Inservice Inspection (ISI) Coordinator, did not follow existing station procedures. Had the ISI Coordinator followed the requirement to submit ISI documentation to the Nuclear Documents Storage Facility, on an annual basis, the records would be retrievable.

The failure to include the examination results in the ISI Summary Reports submitted to the NRC on February 4, 1991, was part of a continuing oversight on the part of the Millstone Unit No. 2 ISI Coordinator. Discussions with this individual indicate that, in general, leakage tests and hydrostatic tests for Millstone Unit No. 2 were not reported in the summary reports submitted after each refueling outage.

Management review indicates that, while the failure to follow procedures is unacceptable, there were circumstances that contributed to this individual's errors. These circumstances include:

1. Heavy workload - This individual's work load included ISI coordination as well as department supervisory responsibilities during an extended refueling outage.
2. Unresolved Internal Audit - There was an unresolved Quality Services Department (QSD), renamed Quality and Assessment Services (QAS), audit deficiency concerning the adequacy of 1990 vintage leakage test procedures. QSD questioned whether the subject procedures conformed to American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code requirements. The Engineering Department personnel maintained that, while not optimal, the procedures did meet all specific ASME code requirements. Resolution of this audit deficiency caused the ISI Coordinator to hold, rather than process to completion, the subject leakage test documentation.
3. Absence of backup methods to verify test documentation - There was no typical or routine method of documenting the performance of inservice leak tests, other than the generation of a single data sheet. Thus, there were no alternate means to verify the performance of the leak tests.

2. Corrective Steps Taken and Results Achieved (Violation F):

On December 9, 1993, the PORC reviewed the available ISI test data, leakage tests performed by other departments, and other actions which provided assurance that the integrity of the affected system was maintained. After extensive review, including interviews with the ISI Coordinator and consultations with corporate personnel familiar with ASME requirements, the PORC concluded that, since the leakage tests were performed, the absence of the records did not impair the operability of the affected systems. A Non-Conformance Report was issued to document the loss of records.

To provide added assurance of the integrity of system piping, system leakage tests were scheduled for all the systems for which documentation could not be found. These examinations were completed, for all piping outside containment, on January 4, 1994. Piping inside containment will be examined during the next unit shutdown when the containment is accessible.

A review of other infrequently performed ISI surveillances from the period of 1990 through 1993 was conducted to verify that no other surveillance documentation was missing. The required surveillance documentation was available.

Subsequent to this series of events, Unit management reviewed the assessments and actions taken when the loss was initially discovered on November 4, 1993. This review indicated that, while the issue was identified by engineering management, the reviews were not as rigorous as ideally desired. Although the initial operability assessment was summarized at the daily meeting of Unit supervisors and managers, it was not subjected to the rigor of a PORC review.

3. Corrective Steps That Will Be Taken to Avoid Further Violations (Violation F):

The individual responsible for the records loss has been counseled concerning the need to comply with all procedures.

The recently completed Engineering Reorganization has provided additional personnel resources to the Programs (formerly ISI) Group. This has resulted in workload redistribution.

A full-time Supervisor, with no other responsibilities, has been temporarily assigned to the Programs Group. This is expected to provide the required oversight and continuity to assure group personnel are properly performing assigned tasks.

Revised leak test procedures now require the use of an Automated Work Order to authorize and document the performance of leak tests. This will provide an additional method of documentation retrieval.

The ISI Coordinator will assure future leak test information is included in the ISI Summary Report, submitted to the NRC after each refueling outage.

Unit Management has used the weaknesses identified in the early assessment of this event as a reminder to carefully review and document assessments which relate to system operability. In general, when such issues are raised at management meetings, a PORC meeting will be convened to provide complete review and improved documentation of the results of the review.

Engineering Management will assure that QAS audit findings are fully resolved. Lack of agreement between QAS and Engineering will be explored at appropriate management levels until complete resolution is achieved.

4. Time When Full Compliance Will Be Achieved (Violation F):

The individual involved was counseled and fully understands the requirement for procedure compliance.

The HPSI and LPSI leakage tests inside containment will be completed during the first available shutdown. It is anticipated that Millstone Unit No. 2 may be shutdown in April 1994.

5. Generic Implications (Violation F):

There are no generic implications to this violation.

Management considers this loss of documentation to be the performance of a single individual in a single circumstance. While other instances of lost documentation have occurred, the records reviews, required by station procedures, identify these situations within days of the loss. When possible, the test is reperformed. If the test cannot be reperformed, interviews with performance personnel or

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notations in other logs or records are available to verify that the test was performed. These methods provide adequate assurance that virtually all required documentation will be maintained properly.

Discussions with ISI Coordinators at other Northeast Utilities units indicate that leakage and hydrostatic tests are routinely included in ISI Summary Reports. Thus, this item is limited to Millstone Unit No. 2.

1. Reason for the Violation (Violation G):

Between March 13, 1992, and December 10, 1993, Licensee Event Reports (LER) 1-92-002, 1-92-018, and 1-93-023 were not submitted within 30 days from the discovery date, as required by 10CFR50.73(a). Documentation of the reasons for late submittal was contained within each respective LER. The LERs were submitted late due to the lack of an adequate tracking system for LER submittal.

LER 1-93-006 was listed as being submitted late. The event date was June 4, 1993, and the LER was postmarked to the NRC July 6, 1993. Thirty days from the event date is July 4, 1993, which was a National holiday that fell on Sunday. The following Monday, July 5, 1993, was the date that the holiday was observed by both the NRC and Northeast Utilities. Thus, NNECO was required to submit the LER to the NRC by July 6, 1993. Therefore, LER 1-93-006 was not submitted late.

2. Corrective Steps Taken and Results Achieved (Violation G):

Millstone Unit No. 1 has instituted improved administrative controls to track LER submittals. Due dates are entered into the Commitment Tracking System and reported to unit management each week.

This tracking mechanism includes identification of the responsible individual, and due dates for issuance of a draft LER for internal review, PORC review, and issuance to the Senior Vice President — Millstone Station for final approval. The latter date has been established as three days prior to the 30 day deadline. Additionally, responsible individuals receive weekly printouts from the commitment tracking system as a further reminder of LER due dates. These controls were implemented on January 1, 1994.

3. Corrective Steps That Will Be Taken to Avoid Further Violations (Violation G):

NNECO believes that implementation of the above administrative initiatives are sufficient to prevent recurrence.

4. Date When Full Compliance Will Be Achieved (Violation G):

NNECO has been in full compliance since submittal of LER 1-93-023.

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5. Generic Implications (Violation G):

There is no indication that there are generic implications to this violation.

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Attachment 2

Millstone Nuclear Power Station, Unit Nos. 1 and 2

Reply to Notices of Violation

Inspection Report Nos. 50-245/93-32; 50-336/93-28; 50-423/93-29

Additional Actions on Procedural Adherence

April 1994

Millstone Nuclear Power Station, Unit Nos. 1 and 2
Reply to Notices of Violation
Inspection Report Nos. 50-245/93-32; 50-336/93-28; 50-423/93-29
Additional Actions on Procedural Adherence

Background

It is our belief that the key to achieving performance excellence at Millstone Station is a cultural shift that focuses on:

1. Greater respect, trust, and teamwork among all personnel.
2. Shared expertise and collaborative work behavior between the units.
3. A healthy questioning attitude, including an open willingness to accept change and challenge established ways.
4. An atmosphere that fosters a no-fault attitude toward problem discovery and reporting. Integral to this atmosphere will be management's willingness to demonstrate receptivity to recommendations for change and performance improvement.
5. An acceptance of greater personal accountability on the part of all individuals.

We believe that a reduction in the various personnel related errors, including procedure non-compliances, will be a result of this cultural shift. The senior management changes that have occurred at the station and the ensuing change in management style that focuses on the importance of the individual worker as the ultimate key to the station's success, should help initiate the cultural shift. We acknowledge that implementing this cultural shift is a challenging and long-term effort, however, we are committed to its implementation because of the anticipated positive effects.

An integral element of the action associated with the cultural shift is the implementation of a self-assessment program at Millstone Station. While this program is mainly focused on the activities directly under the control of the Senior Vice President, Millstone Station, it is complemented by the programs being established by the other functional areas within the Nuclear Group.

A key objective of the self-assessment program is the ongoing and sustained performance improvement through objective and critical evaluation of our performance, and the implementation of thorough and effective corrective action.

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For 1994, the cornerstone of the self-assessment program will be horizontal and vertical assessments of Millstone Station performance.

The cultural shift is anticipated to further assist in the effectiveness of other initiatives which have also addressed procedural adherence issues, including:

- The STAR self-checking program was designed to improve quality in work and should help improve procedural adherence.
- The Procedure Upgrade Project and Administrative Control Procedure Rewrite Group has created more user friendly and technically correct procedures.
- The Plant Information Report (PIR) system has reported procedural adherence concerns which lead to corrective actions that were folded back into the organization.
- The Work Observation Program has provided monitoring and feedback on many issues including procedural compliance. Unit Directors have stressed that a satisfactory number of observations are expected.
- The monthly QAS Trend Report furnishes analysis and evaluation of performance in several areas encompassing procedural compliance and has served as a catalyst for management action.

Additional Actions

As the NRC acknowledged in the March 7, 1994, inspection report the violations cited are individually of minor significance, most of them involved inadequacies in our procedures and procedure adherence. Some of these problems should have been prevented by previous corrective actions. As we continue to implement and enforce the previous corrective actions, the following additional actions are being developed:

- An improved issues reporting process designed to allow anyone to initiate a report, promote a low initiation threshold, and to increase the consistency and thoroughness of investigation and corrective action.
- We are beginning to evaluate how our procedures impact the issues of the educational level and reading ability of those who use procedures.

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- A process for developing common procedures is being finalized. Unit procedures are being evaluated to determine those which would be candidates for common procedures.

Conclusion

NNECO management continues to recognize the need to improve self-assessment capabilities, corrective action programs, and compliance with administrative procedures. We have taken actions to explicitly communicate and reinforce these expectations. We realize that we have not achieved the level of performance that we desire. As we discussed during the October 1, 1993, meeting with NRC Region I Staff, due to the nature of these "cultural change" issues, continued emphasis toward improvement will be necessary.