March 27, 2000

Mr. Stephen E. Scace, Director
Nuclear Oversight and Regulatory Affairs
Northeast Nuclear Energy Company
Post Office Box 128
Waterford, CT 06385

SUBJECT: NRC 40500 TEAM INSPECTION REPORT NO. 05000336/2000003 AND 05000423/2000003

Dear Mr. Scace:

This letter transmits the results of the NRC team inspection at your Millstone facility involving the review of the implementation of the corrective action program at Units 2 and 3 and a review of the work control program associated with the management and prioritization of the backlog items. The team inspection was performed onsite during the weeks of January 31 and February 14, 2000, using NRC Inspection Procedures 40500, "Effectiveness of Licensee Controls in Identifying, Resolving, and Preventing Problems," and 62700, "Maintenance Implementation." The results were communicated to you, Mr. Douglas McCracken and others of your staff at an exit meeting held on February 17, 2000.

The team determined that the corrective action program was being implemented adequately. When conditions adverse to quality were identified, they were properly entered into the program via the condition report process. Root cause analysis reviewed were adequate and completed corrective actions were timely and commensurate with the safety significance of the condition. However, the team identified two instances in which a broader or more in-depth review of equipment problems may have precluded plant challenges. Management focus on backlog control appeared appropriate. Although the backlog is declining, appropriate backlog reduction continues to be a challenge requiring continued management attention.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and the enclosure will be placed in the NRC Public Document Room (PDR).

Sincerely,

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Wayne D. Lanning, Director
Division of Reactor Safety

Docket Nos. 05000336, 05000423
License Nos. DPR-65, NPR-49

Enclosure: Inspection Report No. 05000336/2000003 and 05000423/2000003

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REGION I

Docket Nos:	05000336, 05000423
License Nos:	DPR-65, NPF-49
Report No:	05000336/2000003, 05000423/2000003
Licensee:	Northeast Nuclear Energy Company
Facility:	Millstone Nuclear Power Station Units 2 and 3
Dates:	January 31 - February 4; and February 14 - 17, 2000
Inspectors:	J. Yerokun, Team Leader, Division of Reactor Safety (DRS) B. Sienel, Division of Reactor Projects (DRP) M. Modes, DRS G. Cranston, DRS T. Hipschman, DRP L. Peluso, DRS E. Lawrence, DRS
Approved By:	David C. Lew, Chief Performance Evaluation Branch, DRS

EXECUTIVE SUMMARY

Millstone Units 2 and 3
NRC Inspection Report 05000336/2000003 and 05000423/2000003

During the weeks of January 31 and February 14, 2000, an inspection team reviewed the implementation of the Corrective Action Program at Millstone using Inspection Procedure 40500, "Effectiveness of Licensee Controls in Identifying, Resolving, and Preventing Problems". The team also assessed the effectiveness of work control activities associated with the management, prioritization, and reduction of backlog items.

PROBLEM IDENTIFICATION, RESOLUTION AND PREVENTION

Overall, plant personnel appropriately identified and entered issues into the Corrective Action Program. Issues identified in various other processes such as Engineering Work Request, Trouble Report, Action Request, Operating Experience, and Self-Assessment were incorporated into the Correction Action Program. While the team identified two instances in which trouble reports were not converted to condition reports, these instances were not significant and the large majority of identified issues were appropriately converted to condition reports. Control room panel deficiencies, operator work-arounds, operability determinations, and equipment deficiencies annotated in operator logs were documented in the Corrective Action Program. Quality Assurance and departmental self-assessments were critical and provided value.

Overall, the licensee's root cause analyses were adequate, and completed corrective actions were timely and commensurate with the safety significance of the condition. However, the team identified two instances in which a broader or more in-depth review of equipment problems may have precluded plant challenges. The transients caused by the feedwater system were due to a malfunctioning valve, 2-HD-103C and a mis-wired valve, 2-HD-104C. The transients caused by the Control Element Assembly were due to several rod drop incidents.

WORK CONTROL AND BACKLOG MANAGEMENT

Management focus on backlog control was evident and appeared appropriate. Focus was applied to work off the maintenance risk-significant corrective and recovery backlog items. The licensee understood what the maintenance backlog consisted of and was making progress in reducing the numbers in a controlled manner by appropriately prioritizing and scheduling work. Unit 2 outage preparation has not had an adverse affect on reducing online maintenance backlogs to this point. Tools, such as key performance indicators, were used to manage the backlog. While the licensee remained on track to resolve the recovery backlog for Unit 2 by late 2001 and for Unit 3 by early 2001, the licensee's backlog remained a challenge that required continued focus.

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Report Details

1.0 PROBLEM IDENTIFICATION, RESOLUTION AND PREVENTION

1.1 Problem Identification

a. Inspection Scope

The inspection in this area was conducted to evaluate the effectiveness of the licensee, including the Nuclear Oversight organization, at identifying conditions adverse to quality. The inspection included a review of issues in Trouble Reports (TR), Automated Work Orders (AWO), Action Requests (AR), Operating Experience (OE), Engineering Work Request (EWR), Temporary Modifications, Plant Logs (Operators, Chemistry and Radiological Controls), Operator Work-arounds, Control Room Panel Deficiencies, Equipment Deficiency Tags and Contamination Reports, to determine if those issues were appropriately entered into the Corrective Action Program (CAP).

b. Observations and Findings

The team reviewed procedure RP 4, Corrective Action Program, revision 7, which establishes the process and methodology via Condition Reports (CR) to identify and resolve conditions adverse to quality at Millstone. After a self-assessment in 1997, the licensee identified that in addition to the CR process, there were 16 other programs, procedures, or processes used to report deficiencies. The interface between the programs and RP 4 "Corrective Action Program" was not clearly defined in most cases. As a result, a corrective action (M1-97-1119) was put in place to consolidate the reporting processes. At the time of this inspection, a few others, including the Trouble Reporting process, still remain. The team reviewed RP 16 to determine at what point the user of a "Trouble Report" would be required to exit RP 16 and enter RP 4. Attachment 10 of RP 16 lists 13 broad areas (such as "Plant Operation Issues," "Other Issues for Management's Attention") and gives six examples of situations requiring a CR. The team, however, found that no clear definition of the threshold for when to exit RP 16 and generate a CR existed. The team understood that Millstone management was aware of the problem and planned to fold the remaining reporting systems (except for safeguards related security issues) into one consistent reporting system, under a revised RP 4. Nevertheless, the number of CRs issued by Millstone last year indicated that the system was being used by station personnel. Over 7,500 condition reports were generated at Millstone Units 2 and 3 in fiscal year 1999.

Operations

In the operations area, the team selected 12 control panel deficiencies and reviewed their corrective action status. The team noted that the control panel deficiencies were well documented with plans for corrective actions. Control room operators were familiar with control panel deficiencies and discussed willingness to document equipment deficiencies with a TR or a CR. For deficiencies which were not captured in CRs but only in the TR process, the team did not identify any items that would have needed an operability determination beyond that already documented.

However, the team identified an instance where a TR should have been converted into a CR. Trouble report 01M2050123 described a problem when the 'B' iso-phase cooling fan was found not running in 'manual', and could not be reset per procedure. On February 1, 2000, a plant equipment operator (PEO), assigned to the fix-it now (FIN) team, briefed the shift manager for the necessity of a procedure enhancement concerning the 'B" iso-phase cooling fan reset problem. During troubleshooting of the reset problem identified on the TR, the PEO and an electrician determined that contacts in the controller may not have had sufficient time to open, preventing the proper operation of the fan. The operator demonstrated attention to detail to determine that the problem was not properly corrected, but did not consider initiating a CR until questioned by the inspector on February 2. Except for this example, the team did not identify any other instance where operators had failed to initiate CRs for identified concerns and issues.

The team also reviewed 12 operations department self-assessments and found the self-assessments to be critical and provided value to the operations department.

Maintenance

The team reviewed selected maintenance related TRs, NRC non-cited violations (NCVs) and licensee self-assessments to determine whether CRs were issued where required to resolve identified problems. CRs were written for items related to the TRs and NCVs reviewed. The team also verified that CRs were initiated to track corrective actions for identified conditions adverse to quality as well as areas for improvement, in accordance with licensee procedure OA 11, Self-Assessments. The sample of operating experience issues (Westinghouse NSAL 96-05 on cracks in incore thermocouples and 10 CFR Part 21 reports involving ASCO general controls hydramotors and Foxboro relays) reviewed were appropriately incorporated into the licensee's corrective action process.

However, in one example the team questioned the timeliness of converting a TR into a CR. Unit 3 TR 24M3185159 was written in January 2000 to document that the local AC input breaker for safety-related battery charger, 3BYS*CHGR2, tripped five times during attempts to close. The TR initiator recommended the breaker be retested at the next equipment outage. The team noted that no CR had been written for this item. The system engineer acknowledged that although the breaker was successfully reclosed and the battery charger was returned to service, a CR should have been written to elevate the issue to address possible degradation of the breaker. Except for this minor instance noted, maintenance-related issues were properly identified and incorporated into the licensee's corrective action process.

Engineering

The team reviewed the list of open engineering work requests (EWRs) and selected eleven for detailed review. All EWRs reviewed were associated with CRs and properly identified the work to be completed to resolve the identified issue. The CRs properly identified the problem, involved a root cause analysis when required, specified appropriate corrective action, assigned trend codes, and involved extent of condition reviews. Where deficiencies with the problem resolution and/or the root cause were identified by the team it was determined that the licensee had subsequently self-identified the issue and initiated a CR.

Radiation Protection and Chemistry

The team reviewed action requests and work observations associated with the Radiation Protection (RP) and Chemistry departments. In Chemistry, deficiencies and adverse conditions were identified and initiated in the corrective action program. In the Radiation Protection, either action requests (AR) or CRs were generated, depending on the significance of the concern. Each concern was reviewed by RP and Chemistry management to determine whether a CR was necessary. The team did not identify any instance requiring a CR where one had not been generated. The team conducted a walkdown of Unit 2 and Unit 3 and did not identify any conditions adverse to quality or regulatory concerns that were not already identified in the CR process.

The team noted that managers initiated, reviewed, and discussed CRs with the department members on a daily basis. In most cases, the managers had a clear understanding and recollection for the condition reports in question, including reasons for the condition and results of the corrective actions.

To assess the effectiveness of the licensee at incorporating industry operating experience (OE), the team reviewed the licensee's actions to address the following: OE #10308, "Un-posted High Radiation Area"; and OE #10317, "Inadvertent Radiation Exposure During a Resin Cask Shipment". The OE items were discussed at morning meetings and in the routine continuing training programs. Actions to prevent industry events from occurring at Millstone were initiated and implemented appropriately. The Radiation Protection and Chemistry departments have demonstrated acceptable review and implementation of OE items. Both departments were aware of and used external OE to bench mark and enhance the programs.

Quality Assurance

The team reviewed six Nuclear Oversight audit reports, two monthly performance summary reports, and four self-assessments to determine if issues or conditions adverse to quality identified in the reports were properly entered into the CR process. The reports were of good quality and depth providing clear information to site management including areas requiring increased management attention for resolution. They included well-defined scopes, performance criteria and summaries that identified areas for improvements that were capture as CRs and entered into the Corrective Action System for resolution. Although none of the reviewed self-assessments identified significant conditions adverse to quality, they did adequately assess the area selected.

In the reports reviewed, all issues and conditions adverse to quality identified in the reports reviewed had been properly entered into the CR process. The team also reviewed some of the CRs and found them acceptable. The team determined that Nuclear Oversight personnel are willing to and are generating CRs to capture conditions adverse to quality and improvement opportunities. Based on discussions with plant personnel and observations at the management meetings attended, Millstone Management appeared receptive to Nuclear Oversight generated CRs.

c. Conclusion

Overall, plant personnel appropriately identified and entered issues into the Corrective Action Program. Issues identified in various other processes such as Engineering Work Request, Trouble Report, Action Request, Operating Experience, and Self-Assessment were incorporated into the Correction Action Program. While the team identified two instances in which trouble reports were not converted to condition reports, these instances were not significant and the large majority of identified issues were appropriately converted to condition reports when warranted. Control room panel deficiencies, operator work-arounds, operability determinations, and equipment deficiencies annotated in operator logs were documented in the Corrective Action Program. Quality Assurance and departmental self-assessments were critical.

1.2 Problem Resolution and Prevention

a. Inspection Scope (40500)

The team reviewed a sample of CRs, including those from each of the three defined significance levels (1, 2, and 3) in the licensee Corrective action Program and those involving problems that had resulted in significant plant transients, to assess the effectiveness of the licensee at resolving and preventing repetition of problems. The team reviewed the adequacy of the assigned significance for the issues, the root cause analysis, and the implemented corrective actions.

The team reviewed CRs associated with recent plant transients caused by the feedwater heater vents and drain system, and the control element assemble (CEA) drive system to determine if associated root cause analysis and corrective actions were appropriate.

b. Observations and Findings

The team reviewed two CRs associated with feedwater transients. CR M2-99-1730 addressed the May 1999 feedwater heater vents and drain system transient that resulted in a manual plant trip. The root cause analysis identified feedwater heater 2A dump valve, 2-HD-103C, as the cause of the transient. CR M2-00-0236 addressed another feedwater transient that occurred on January 27, 2000, and resulted in another manual plant trip. The root cause analysis identified that incorrect wiring of heater drain tank vent valve, 2-HD-104C, was the cause of the transient. Valve 2-HD-103C was also identified as a possible contributor because it might have been sluggish at responding to the level fluctuation in feedwater heater 2A. As part of the corrective actions, in the first case, valve 2-HD-103C was lubricated. For the second case, the valve was lubricated and modified, and the wiring for 2-HD-104C was corrected. The team determined that while the licensee's actions in each case appeared adequate, they were not broad enough because, they focused only at the equipment level when they should have also focused at the system level. The same feedwater heater drain and vent system was involved on both occasions.

The team reviewed three CRs for the control element assemble (CEA) drive mechanism problems that resulted in manual plant trips in September 1999 and in February 2000. Following the February 2000 event, the licensee conducted an extensive root cause analysis (CR M2-00-0373). The probable causes of the rod problems were identified as the cable shorts and equipment failures in the coils power supply modules. The team noted some weaknesses associated with the root cause analysis and corrective actions taken to address these CEA problems. For example, in light of several previous instances of fuse failures, a preventive maintenance should have been instituted for periodic fuse replacements. The licensee was also aware that some plants in the industry had such preventive maintenance. As it is, after the recent transient, the licensee installed a modification to replace the 15 amp fuses with 30 amp fuses. Also, the licensee did not conduct any extensive review of a January 2000 CEA problem that had not resulted in a plant trip. In light of previous problems, a more in-depth review of the anomaly, involving rod 7-65 slipping down a few steps during the monthly CEA exercise, would have been appropriate.

Atmospheric and Condenser Dump Valves Operation during Plant Transients

In reviewing the CR and issues associated with the January 2000 manual plant trip, the team raised some questions concerning the operation of the atmospheric and condenser dump valves. One of the two atmospheric dump valves (ADV) was in the manual mode when the trip occurred and two main steam safety valves (MSSV) had briefly actuated. The team discussed the effect of an ADV controller being placed in manual on the MSSVs with engineering personnel. The controller had been placed in the manual mode because on two previous occasions, control room operators had noticed that an ADV had drifted open. The team interviewed engineering personnel concerning the controller failure and the impact on plant operations. Operating in the manual mode would prevent the ADV from maintaining the steam generator pressure at or below 920 psia following a plant trip, however, the ADV would still have its "quick open" capability to relieve steam pressure following a plant trip. The team reviewed the system schematics and concurred with the engineering personnel that an ADV in

manual mode would continue to provide automatic overpressure protection during a plant trip, therefore, there was no concern expressed with the licensee's interim corrective action. Subsequent investigation by the licensee determined that aging components in the controller were the cause of the failures.

In reviewing the operation of the condenser dump valves, the team found that the licensee had identified, in early 1999, that the main steam condenser dump valves opened slower than expected (about 6 versus 3 seconds). The slow opening of the main condenser steam dump valves was determined to be the most likely cause of the MSSV actuation during the manual plant trip. The team reviewed the Final Safety Analysis Report (FSAR), the CR and associated documents dealing with the steam dump valves stroke time. The team found that the increase in stroke time resulted in the potential for a small increase in radioactive release during a postulated steam generator tube rupture. The licensee had scheduled a modification (M2-99057) to install parallel solenoid valves in the air outlet lines to the condenser dump valves to allow the valves to close within the FSAR stroke times for the upcoming outage. The team considered the licensee's plans reasonable in light of the low risk significance associated with the issue. The problem was documented in the licensee's corrective action program (CR MP2-99-1452). The team did not identify any other discrepancy in this area.

Operations

The team selected a sample of 10 significance level 1, 2, and 3 CRs for Units 2 and 3 and assessed the depth of the associated root cause and apparent cause evaluations. The evaluations were appropriate. Assigned corrective actions and prioritization were adequate. The operators were generally satisfied with the corrective actions taken and the feedback that they received. They stated that occasionally, when the initial proposed corrective action did not address the problem or they did not agree with the proposed corrective action, they were able to discuss further acceptable corrective actions.

The team reviewed some TRs and CRs and did not identify any instances where an operability determination should have been performed and was not. Overall, the operability determinations reviewed by the team were adequate. The team interviewed one unit 2 control room crew concerning the main steam condenser dump valves operability determination (MP2-033-99). The operating crew considered main steam safety valve (MSSV) actuation to be a normal response. They were not aware of the operability determination which describes the slow opening main condenser steam dump valves nor the impact on the MSSVs.

Maintenance

The team reviewed a sample of approximately 30 maintenance related CRs issued in 1999. The CRs selected were evaluated with respect to problem assessment and resolution. In addition, some OEs were selected to assess the licensee's handling of the OE issues.

The significance levels assigned to reviewed CRs were appropriate. Some instances of CRs being consolidated to other CRs were identified. In these cases, the severity level of the CR remaining open was the same or greater than the closed one and the paper trail was generally well documented. The licensee's evaluation of extent of condition was satisfactory. The team noted a few instances where CRs remained open in the system although all corrective action assignments were completed. Discussions with licensee personnel indicated this was part of a large backlog of items awaiting owner reviews or administrative closure and was not a safety concern. The team did not identify any discrepancy with this assertion.

The team verified that when maintenance rule functional failures were identified during CR investigations, the failures were appropriately incorporated into the maintenance rule tracking system for the affected system. The licensee appropriately assessed and resolved maintenance related condition reports. The team observed satisfactory implementation of the corrective action program in the maintenance area.

Engineering

The team reviewed selected CRs and associated root cause evaluations. In general, root cause evaluations tended to focus on the root cause of equipment failures and problems associated with human factors or human errors were identified in the CR's using trend codes. For two Significance Level 1 CRs (M3-99-1448, and M3-99-1510), the inspector found that specific root causes were waived, trend codes were not entered into the CAP and effectiveness reviews had not been assigned as required. Both CRs received management approval to waive the Root Cause Analysis based on the position that the findings from a previous CR root cause analysis (Significance Level 1 CR M3-98-2731) was applicable. However, no effectiveness reviews were completed for the two CRs. Although Millstone Station Procedure RP-4, "Corrective Action Program, Rev. 7, allows root causes to be waived as a result of multi-discipline management reviews, it requires that an assignment be made to the CR owner to measure the effectiveness of planned corrective action. Nevertheless, the team noted that the specific process and equipment problems associated with CRs M3-98-2731, M3-99-1448 and M3-99-1510 have been addressed and were of low risk or safety significance. In addition, the key findings of the root cause analysis were deemed applicable to all three CRs.

The CRs reviewed properly identified the problem, specified appropriate corrective action, included appropriate root cause analysis when required, assigned trend codes, and involved extent of condition reviews.

Radiation Control and Chemistry

The team reviewed selected CRs to determine if issues entered in the CR process were being resolved. The team also reviewed work observation results from June 1999 through January 2000 and Action Requests resulting from Work Observations to determine whether the licensee appropriately resolved issues and conditions adverse to quality.

Implementation of corrective actions for most of the reviewed CRs were timely and effective. Where they were not, the licensee had conducted acceptable common cause investigation to determine cause repetitive concerns or untimely or ineffective corrective actions.

The team also evaluated the licensee's self-assessment effectiveness by reviewing selected self-assessment reports and their associated corrective actions. The self-assessments identified program strengths and weaknesses, but focused on conditions adverse to quality and areas for improvement. The licensee generated CRs as a result of the findings. Follow-up reviews were conducted to investigate and document the status of actions recommended as a result of the original assessment. The corrective actions and problem resolution were acceptable.

c. Conclusions

Overall, the licensee's root cause analysis were adequate, and completed corrective actions were timely and commensurate with the safety significance of the condition. However, the team identified two instances, in which a broader or more in-depth review of equipment malfunction may have precluded plant challenges. The transients caused by the feedwater system were due to a malfunction of valve, 2-HD-103C and a mis-wired valve, 2-HD-104C. The transients caused by the control element assembly were due to several rod drop incidents

1.3 Previously Identified Non-Cited Violations (NCVs)

a. Inspection Scope (40500)

The team reviewed licensee actions taken to address previously identified Non-Cited Violations (NCVs). The review was focused on the conditions leading to the violations such as the failure to take or request corrective actions to determine if a common fault or similar pattern existed or if the violations might point to a broader problem in Millstone's corrective action system.

b. Observations and Findings

NCV 50-336/98-219-033

This non-cited violation resulted in corrective action CR M2-98-066. Originally the NRC identified an incomplete analysis of the consequences of delaying the start of the reactor building closed cooling water RBCCW pump. The NRC's basis for the NCV was that delayed manual start should have been considered based on LER 97-015-00 and the corrective action taken. The consequences of automatic start had been considered and closed under CR 2-97-0147.

Poor hand-off between lead project engineers caused premature closure while the vendor was still considering the implications of the delayed start issue. The project engineer closing the issue was only aware of the automatic start issue. This oversight was attributed to a lack of specificity in the original CR description.

Corrective actions were taken to assure that pertinent details were contained in the descriptions. At the time the NRC issued the NCV, Millstone had already updated guidance to assure better hand-off between project engineers. The analysis of the delayed start was completed and the necessary procedures were changed in order to accommodate the delayed manual start of RBCCW. These corrective actions were acceptable and the violation is closed.

NCV 50-336/99-08-01

This non-cited violation resulted in corrective action CR M2-99-1955. This NCV was issued because Millstone operators failed to initiate a condition report and take timely corrective actions when the operators suspected the piping between the "B" train containment sump isolations valve and the downstream check valve was not full of water. The NRC postulated that trapped air in the piping had the potential to render the "B" train high pressure safety injection (HPSI) and containment spray pumps inoperable. After the NRC's questioning, Millstone determined that the amount of air in the system would not have prevented the pumps from performing their intended function because operations routinely filled the sumps before start-up and the associated check valves provided a sufficient amount of in-leakage to keep the piping filled.

The apparent cause was a change in a surveillance procedure after the modification of valve 2-CS-16.1A/B, to prevent pressure locking. The affect on voiding the piping was not recognized as a second purpose of keeping sumps filled at the time the procedural change was made.

Corrective actions were taken to provide the apparent cause, determine reportability and long term operability of the pumps, and revise the surveillance procedure. These corrective actions were acceptable and the violation is closed.

NCV 50-336/99-08-02

This non-cited violation resulted in corrective action CR M2-99-1324. Prior to start up of Unit 2, Millstone failed to initiate a condition report when a five-day trend showed the No. 3 safety injection tank was leaking past the closed isolation valve into the reactor coolant system.

The apparent cause was one of four valves not fully seating which was a result of a jog-to-close function not being fully implemented. It was further determined that the function of the valve was to fully open during an accident, and otherwise close enough to prevent inadvertent nitrogen injection into the RCS. Both of these functions were unaffected by the failure to fully seat and the resulting leakage.

The corrective actions were to request a design change eliminating the jog function and a maintenance request to increase the torque value of the valve during RFO 13 (upcoming). These corrective actions were acceptable and the violation is closed.

NCV 50-336/99-08-05

This non-cited violation resulted in corrective action CR M2-99-1808. Millstone failed to initiate a condition report and implement effective corrective actions when a significant amount of water was identified in the oil removed from the outboard bearing of the "B" auxiliary feed water pump during an oil change.

The apparent cause was the loosening of the packing in response to an over heating condition, causing water to spray on to the outboard housing filler tube-to-housing interface during a pump run May 25 - 29, 1999.

Corrective actions were to determine if the issue was reportable, replace the over heating packing, modify the splash shield to minimize intrusion of water into oil, address packing tightening practices, develop limits and actions for water levels in the oil, and provide operators with guidelines for oil levels. These corrective actions were acceptable and the violation is closed.

NCV 50-336/99-08-06

This non-cited violation resulted in corrective action CR M2-99-2047. The NRC cited the failure to initiate a corrective action report after the post-maintenance flow rate significantly exceeded the acceptance standards for a RBCCW throttle valve. The NRC was concerned the high flow could have starved the flow to other safety-related components on the same system.

The apparent cause was a sheared handwheel pin causing a valve to remain open. Although the description of the issue concentrates entirely on what Millstone believed was the central concern of the NRC resident, the entrance and exit from a Technical Specification action statement, one of the corrective actions taken was for the upset flow condition reported in NRC inspection report 99-08. These corrective actions were acceptable and the violation is closed.

NCV 50-423/99-06-10, "Failure to Meet Technical Specification 6.12.1 Requirements"

This NCV was entered into the CAP as two CRs (M3-99-1390 and M3-99-1525). Corrective actions addressed the identified problems and the reporting requirements were met. Responsibility for implementing corrective actions was appropriately assigned. This violation is closed.

c. Conclusions

The actions taken as a consequence of NRC non-cited violations were adequate. The violations did not have a common fault or similar pattern or point to a broader problem in the corrective action system at Millstone.

2.0 WORK CONTROL AND BACKLOG MANAGEMENT

2.1 Work Prioritization and Backlog Management

a. Inspection Scope (62700)

The team reviewed recently issued Trouble Reports (TRs) and open Automated Work Orders (AWOs) to determine whether priorities were properly set with respect to safety and risk significance. The inspector reviewed backlog key performance indicators (KPI) and discussed work prioritization, backlog reduction, and the effect of the upcoming Unit 2 outage on work planning with maintenance planners and the online maintenance and outage managers.

Additionally, the team reviewed the operations departments' backlogs and assessed whether they were being adequately managed.

b. Observations and Findings

The number of recovery backlog items continued to trend down, although the total backlog of corrective actions remained steady at close to 3,000 for each unit. The number of overdue corrective actions was maintained below the licensee's established "satisfactory" goal of less than (<) 3% and was recently below 1%. As of February 7, 2000, approximately 23,000 of 33,000 CR's had been closed. Corrective actions for about 4,000 of those remaining were complete but they were awaiting administrative closure. The team reviewed the Backlog Management Plan (units 2 and 3), revision 2, dated 12/2/99, used to manage and disposition deferred backlog population while focusing on safety. The team also reviewed key performance indicators (KPI) for areas such as engineering backlog management, control room panel deficiencies, temporary modifications, operator workarounds, corrective maintenance AWO's and overdue corrective action assignments and identified no indication of an adverse trend.

Through a review of open corrective maintenance AWOs and TRs the team observed appropriate work prioritization and scheduling for safety-significant systems with respect to operational focus. Priorities were set in accordance with the units' work control procedures.

The licensee has established KPI data for corrective and degraded AWO backlogs, for both recovery (items in the backlog at the time each of the units restarted from their long outages) and aggregate items. The "corrective" maintenance items are those considered required to restore equipment to a functional status. The licensee's development of KPIs to track the backlog of "degraded" AWOs, those associated with items degraded but functional, occurred subsequent to the last NRC inspection of this area (IR 50-423/99-07). Although not safety-significant, tracking both of the classifications provides the licensee with a better tool to control and reduce overall backlogs. The KPIs show a manageable and gradually declining number of corrective maintenance AWOs in the licensee's backlog. As of January 1, 2000, the licensee's total online corrective maintenance backlog was within the established goal for both units.

The team discussed the upcoming Unit 2 outage with the Outage and Online Maintenance Managers. The licensee's method for adding and deleting items from the outage scope was reasonable and based on considerations of items including operational impact, regulatory commitments, and reducing operator burdens. Unit 2

outage preparation has not had an adverse affect on reducing online maintenance backlogs to this point. Both online and outage schedules are reviewed for PRA impact before schedules are finalized and as schedules are revised to accommodate new, emergent, or deleted work scope. The licensee expects the AWO backlog to increase as the outage commences in April and will assess the increase and develop a plan to work the backlog down after the outage.

c. Conclusions

Management focus on backlog control was evident and appeared appropriate. Tools, such as key performance indicators, were used to manage the backlog. Appropriate focus was applied to work off the maintenance risk-significant corrective and recovery backlog items. The licensee understood what the maintenance backlog consisted of and was making progress in reducing the numbers in a controlled manner by appropriately prioritizing and scheduling work. Unit 2 outage preparation has not had an adverse affect on reducing online maintenance backlogs to this point. While the licensee remained on track to resolve the recovery backlog for Unit 2 by late 2001 and for Unit 3 by early 2001, the backlog was substantial and remained a challenge that required continued focus.

3.0 Miscellaneous Items

3.1 (Closed) URI 50-423/98-207-13, Commitment Tracking and Validation on CP/NOV Corrective Actions

During a previous inspection, the inspectors reviewed the licensee's corrective actions taken for a cited violation. The inspectors identified problems with the licensee's corrective actions and associated commitments. Specifically, two corrective actions noted in the licensee's response to the violation, dated 3/2/98 (issued with letter dated 12/10/97) could not be verified. The inspectors could not verify that: (1) OP 3208, "Plant Cooldown," was revised to provide specific direction to prompt operators to initiate CR and notify system engineer when exceeding temperature limits, and (2) a computer alarm was instituted to alert operators of a high temperature condition which would prompt them to initiate a CR. In addition, the inspectors identified that on occasions, excessive delays existed between when the licensee sent a commitment letter to the NRC and when the commitment was "source noted" (clover leaf) in accordance with RAC 06, "Regulatory Commitment Management Program". This delay could have allowed a change to be made that would remove the commitment as was noted in one instance. The inspectors concluded that the area of commitment tracking, validation, and source noting required further attention by the licensee and was, therefore, identified as an unresolved item (50-423/98-207-13).

During this inspection, the team reviewed the licensee's actions (via CR M3-98-1973) taken to address the issue. Regarding the two specific issues stated above, the licensee determined that, although the changes to Procedure OP-3208 and the computer alarm were appropriate, the associated commitment was not properly communicated among the Regulatory Affairs, Engineering and Operations Departments so that it could be reflected with the change made to the Main Control Board annunciator. As for the change instituted to satisfy the commitment, the inspector reviewed portions of annunciator response procedure for Main Board 2C and verified that in response to annunciators 1-4 (RHR HX A RPCCW OUTLET TEMP HI) and 1-5, step 8 of OP 3353, "MB2C, Main Board Annunciator Response," directs operators to initiate a CR. The step was "source-noted" indicating its tie to an NRC commitment. The team reviewed portions of DCM-03, Design Changes, Revision 7, and verified that there were steps (2.1.3 and 2.3.3) that required cross-referencing design changes for commitments. The team also reviewed MP-05-DC-REF00s2, MM05 Program Requirements Reference Manual, Revision 4, which established the guidance and instructions for developing, reviewing, approving and modifying documents. It contained instructions (step 5.6) for performing regulatory commitment reviews per RAC 06 in verifying the technical adequacy of new and modified documents. RP 4, Corrective Action Program, Revision 7, contained instructions (steps 1.13.2, 1.15.1, 1.15.9 and 1.15.12) to ensure completion of appropriate reviews to determine when actions could impact commitments made to the NRC. The team reviewed RAC 06, Regulatory Commitment Management Program, Revision 2, which established the regulatory commitment management program at Millstone Nuclear Power Station and provided the control for dealing with regulatory commitments.

The team also verified that the licensee had conducted workshops on the Station Regulatory Commitment Management Program to enhance personnel knowledge on the use of the regulatory commitment management processes, databases and tools. Based on the results of this review, the team did not identify any violations of NRC requirements and concluded that the licensee had adequately resolved the issue. This item is closed.

PARTIAL LIST OF PERSONS CONTACTED

Northeast Nuclear Energy Company

Tom Cleary,	NRC Coordinator
Douglas McCracken,	Assistant Station Director
Steve Heard,	Corrective Action Director
Skip Jordan,	Maintenance
Paul Grossman,	Plant Engineering Director
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Allan Johnson,	Supervisor, HP Technical Support
Ira Turner,	HP
Mike Ahern,	Oversight - Director
Steve Brinkman,	Work Management Director
Steve Newman,	Maintenance
Diane Fredericks,	Engineering

INSPECTION PROCEDURES USED

IP 40500	Effectiveness of Controls for Identifying, Resolving, and Preventing Problems
IP 62700	Maintenance Implementation

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

Closed

NCV 50-336/98-219-033, Delayed start of Reactor Building Closed Cooling Water Pump. (1.3)
NCV 50-423/99-06-10, Failure to Meet Technical Specification Requirement (1.3)
NCV 50-336/99-08-01, Failure to initiate a Condition Report (1.3)
NCV 50-336/99-08-02, Failure to initiate a Condition Report (1.3)
NCV 50-336/99-08-05, Failure to initiate a Condition Report (1.3)
NCV 50-336/99-08-06, Failure to initiate a Condition Report (1.3)
URI 50-425/98-207-13, Commitment Tracking and Validation on CP/NOV Corrective Actions (3.1)

LIST OF ACRONYMS USED

AFW	Auxiliary Feedwater
AITTS	Action Item Tracking and Trending System
AR	Action Request
AWO	Automated Work Order
CR	Condition Reports
DCN	Design Change Notice
EDG	Emergency Diesel Generators
ESF	Engineered Safeguards Features
FIN	Fix-It-Now
ISEG	Independent Safety Engineering Group
KPI	Key Performance Indicators
LER	Licensee Event Report
MDMRT	Multi-Disciplinary Management Review Team
MR	Maintenance Rule
MRT	Management Review Team
NCV	Non-Cited Violation
NNECO	Northeast Nuclear Energy Company
NO	Nuclear Oversight
NOVP	Nuclear Oversight Verification Plan
NSAB	Nuclear Safety Assessment Board
NU	Northeast Utilities
OD	Operability Determinations
PCCR	Personnel and Contaminated Clothing Report
PEO	Plant Equipment Operator
PM	Preventive Maintenance
PORC	Plant Operations Review Committee
PRA	Probability Risk Assessment
QA	Quality Assurance
QC	Quality Control
RCI	Root Cause Investigation
RG	Regulatory Guide
SORC	Station Operations Review Committee
SW	Service Water
TM	Temporary Modifications
TR	Trouble Report
TS	Technical Specifications