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EXECUTIVE SUMMARY

Millstone Unit 2 NRC Inspection Report 50-336/99-01

During the weeks of January 19 and February 1, 1999, a team of inspectors conducted an onsite inspection of the licensee's corrective action program implementation using the guidance of NRC Inspection Procedure 40500, "Effectiveness of Licensee Controls in Identifying, Resolving, and Preventing Problems." The results of this inspection were summarized at a public exit meeting conducted on February 17, 1999 at the Millstone Nuclear Power Station Training Center.

The team concluded that overall problem identification and processing by the Condition Report process was generally good, with a low threshold and high volume input to the process. Assignment of significance level and initial screening was appropriate. Root cause evaluation and corrective action development and implementation were generally good. A few instances were identified where the extent of condition reviews were too narrowly focused.

No system hardware discrepancies or operating concerns were noted that were not previously identified by the licensee. The team found the Condition Report use was generally acceptable. System Engineers were very knowledgeable of their systems, were conversant with past and present operability concerns and knew the status of their system's readiness for restart. Additionally, the System Engineers were knowledgeable and conversant with the Corrective Action Program and utilized the program effectively to identify and to track problems associated with their systems. The team noted that the material condition of the four selected systems was good, as was the portion of the plant observed during the walkdown of each of the four systems. Based upon the team's limited review of Maintenance Rule implementation, the licensee was effectively utilizing trend analysis to identify maintenance related system performance problems.

The team identified that licensee identification and tracking of control room deficiencies was generally good. However, the licensee failed to initiate Condition Reports in accordance with station procedure RP 4, "Corrective Action Program," for the proper evaluation of conditions adverse to quality involving the charging pump hand switches and reactor building closed cooling water system valve 2-RB-210 leakage. This Severity Level IV violation of procedural requirements is being treated as a **Non-Cited Violation**, consistent with Appendix C of the NRC Enforcement Policy. The team acknowledged that other tracking systems were used to ensure final resolution of these control room deficiencies, but these tracking mechanisms lacked appropriate operability reviews to assess system or plant impact. **(NCV 50-336/99-01-01)**

The team concluded that, in spite of minor administrative deficiencies, the operability determination process and associated corrective actions were appropriate for the affected structures, systems, and components important to safety. The licensee was properly identifying problems associated with plant safety systems and adequately implementing temporary modifications, where warranted. However, all of the temporary modifications had been installed longer than the six months procedural limit indicating poor administrative control and management oversight of this activity.

The team concluded that the licensee had adequately identified and scheduled training for operators in preparation for the plant restart. Additionally, action items relating to the lessons learned from the Unit 3 restart were being adequately tracked and incorporated into the licensed and non-licensed operator training cycle.

The team considered the licensee's Human Performance Enhancement System (HPES) program to be a contribution to error prevention. This contribution was primarily manifested in the education and indoctrination efforts of the HPES newsletters and the actions of the HPES committees.

The team concluded that the Action Item Tracking and Trending System (AITTS) was a powerful tool being used by plant staff, managers, and oversight organizations to ensure appropriate tracking of corrective action assignments and that AITTS was an effective trend analysis data base. The team found that the Corrective Action department adequately performs the trend analysis on a monthly and quarterly basis. Based upon a review of available trend data and discussions with Unit 2 management, it was evident to the team that the licensee was cognizant of the corrective action assignment backlog and that a well established prioritization plan was being used to help facilitate an appropriate work-off of the approximate 3500 backlogged work activities.

The team concluded that the Operations department self-assessment process was comprehensive, and adequately contributed to problem identification and resolution. In addition, the Work Observation program appeared to be an effective tool for the communication and improvement of standards and quality of performance within the Operations department. The team concluded that the Maintenance, Engineering, Plant Support, and Nuclear Oversight area self assessments were generally self-critical of the current work processes; were effective in identifying program and process enhancements; and were generally conducted consistent with the self-assessment guidelines.

Unit 2 Plant Operations Review Committee was conducted with appropriate regard to safety and good oversight of plant activities. Between the Station Operations Review Committee and Station Management Review Team activities, the licensee had an appropriate safety focus for corrective action matters of site-wide activities.

The Nuclear Safety Assessment Board (NSAB) meets Technical Specification requirements for member qualifications and meetings. The board was providing effective oversight on important activities at Unit 2 as it prepared for plant restart. A good initiative was observed regarding NSAB member participation in several System Readiness Reviews.

The Nuclear Oversight Verification Plan (NOVP) was a widely accepted method in use for continuous assessment of "key issues" important to support Unit 2 restart. The team viewed the NOVP as another good performance trending tool being effectively used by the plant staff and management.

Audits have been appropriately performed, such as the Fire Protection audit, which was a valuable contribution to the assessment of this key issue in the NOVP. The Performance Evaluation group was "in touch" with the line organization activities and appeared to be in a

good position for real time assessments of the line organization performance. This group also provided current performance information from surveillances for inclusion in several "key issues" areas of the NOVP. The Recovery Oversight group was providing good technical and independent assessments in the Engineering and specialty areas, such as motor-operated valves and environmental equipment qualification programs, for inclusion in the NOVP. In summary, the team concluded that the Nuclear Oversight organization was providing effective independent oversight of Unit 2 activities.

The team concluded that the Employee Concern Program was an effective vehicle for the acceptance and processing of safety issues identified to the Program.

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Report Details

1.0 PROBLEM IDENTIFICATION, ROOT CAUSE EVALUATION, AND CORRECTIVE ACTION

The inspection team reviewed a sample of Millstone Unit 2 Condition Reports and a variety of licensee problem/issue tracking systems to assess the effectiveness of the licensee in identifying, evaluating, and resolving conditions adverse to quality.

1.1 Condition Reports

a. Inspection Scope

The team selected a broad sample of approximately 150 Unit 2 Condition Reports (CRs), including CRs from each of the three defined significance levels (1, 2, and 3). The detailed CR review included a verification of proper program implementation per the CR process, as delineated in Millstone Station Procedure RP 4, "Corrective Action Program," Revision 7, dated August 12, 1998. The team reviewed the CR root cause evaluations, assessed the adequacy of assigned corrective actions, and verified proper tracking and/or implementation of corrective actions. The review included documentation reviews and follow-up discussions with individuals involved with the identification and resolution of the CRs.

b. Observations and Findings

From the numerous CRs reviewed, the team identified that the overall threshold of CR initiation was low, with a typical daily generation rate of between 10 to 20 CRs. Team observations of the daily Unit 2 status meetings and follow-up discussions with attendees identified good adherence to procedure RP 4 and good awareness of recently identified problems or concerns by station management. The team observed the multi-disciplinary management review team (MDMRT) daily screening meetings and noted appropriate discussion to understand the problem/issue identified, proper CR significance level verification, and appropriate department/working group assignment of CR follow-up. In addition to daily CR screening, the team observed the MDMRT review of significance Level 1 CR corrective action plan revisions. The team agreed with CR significance level assignments made by the MDMRT and noted good discussion and follow-up actions for two CRs which were re-screened (M2-98-3839 and M2-98-3486) for action plan revision. Likewise, the team's root cause evaluations of selected CRs were generally in good agreement with the licensee's root cause, common cause, or apparent cause determinations. The team observed that the licensee's root cause evaluations were completed consistent with procedure RP-6, "Root Cause Analysis."

The team made the following observations of specific Condition Reports:

M2-98-3685 - Emergency Diesel Generator Wattmeters

Condition Report M2-98-3685 originated from an operating experience review of emergency diesel generator testing at another facility and involved questions about wattmeter accuracy during Technical Specifications testing of the emergency diesel generators (EDGs). The team noted that this particular CR was one of 40 open Unit 2 "Mode 4 Issues List" items being tracked by Nuclear Oversight (NO) organization. Team follow-up determined that the four EDG wattmeters (one local/EDG room and one remote/control room meter for the "A" and "B" EDG) were last calibrated in 1994 and 1995, respectively. When checked at the 4000 kW data point during the last calibration on April 8, 1995, the wattmeter in the "A" EDG room was left at 3880 kW, which was less than the acceptance criteria of 3920 kW. A test failure was noted on the calibration data sheet, but licensee review was unable to determine if this deficiency had been corrected. The licensee promptly issued CR M2-99-0404 to address this potential oversight, and concluded that the out of tolerance condition for the "A" EDG wattmeter did not affect "A" EDG operability, since the associated control room wattmeter was in tolerance and this instrument was the primary indicator during testing. With respect to the time interval since the EDG wattmeters were calibrated, the licensee offered that a similar issue had been recently identified (reference M2-99-0032), associated with refueling frequency preventive maintenance (PM) tasks, and consequently a corrective action had been established to review all refuel PMs not performed since the last refueling, to determine if any equipment would require immediate attention prior to plant startup. This corrective action was to be completed prior to Mode 2.

The team concluded that adequate corrective actions were in place to resolve the EDG wattmeter out of tolerance condition and broader balance of plant refuel cycle calibration concerns.

M2-97-1106 and M2-98-3224 - Auxiliary Feedwater System Issues

M2-97-1106, "Discrepancies associated with system calculations concerning turbine driven AFW pump room maximum temperature," and M2-98-3224, "Problem regarding the flow coefficient that should be used for AFW control valves 2-FW-43A/B in hydraulic calculations," were identified during a Nuclear Oversight (NO) assessment of the auxiliary feedwater (AFW) system. The team discussed both CRs with the NO initiator and confirmed that M2-97-1106 was satisfactorily resolved and closed. M2-98-3224 was open, with reviews in progress and being tracked via the Mode 4 Issues List. The team concluded that both issues were being appropriately tracked and prioritized.

M2-98-0798 - Unauthorized RCA entry

This Level 1 CR described an unauthorized entry into the radiologically controlled area via the exterior door to the "B" emergency diesel generator room and was characterized as a repeat occurrence. Team review of this CR identified an example of a poorly developed root cause evaluation and narrowly focused corrective action. For example,

the root cause determination for this CR listed a failure to obey a radiological posting as the root cause. The team observed that the root cause determination did not probe deeper to discover the reason for this failure. Follow-up discussions with the initiator of the CR identified that a recommended corrective action was for the vital key card readers at the exterior door to be permanently removed from service (prohibiting access to the radiologically controlled area from this access point). This action was discussed in the root cause determination, but not implemented or formally rejected as a viable corrective action. Corrective action did include counseling of the personnel involved and emphasizing better coordination of the change in status of this vital area boundary through the control room. The team determined that the Health Physics department staff had coordinated the evolution with the control room, to a limited extent, on the day of the incident.

The team concluded that the corrective action that was recommended and implemented appeared to be too narrowly focused on this specific Condition Report event, vice the recurrent nature of the problem. Further, a Condition Report was initiated during the week of the inspection that described another instance of unauthorized entry into the radiologically controlled area (M2-99-0378), indicating that corrective action, to date, was not fully effective. (Also see Section 1.7)

M2-98-1204

This Level 1 CR documented a failure to comply with a Technical Specification (TS) surveillance requirement for the meteorological tower. Specifically, the full loop channel calibration for the wind speed instrument had not been performed, since the detector (anemometer) was being removed and replaced during each calibration.

The team observed that when this condition was evaluated for similar situations or generic implications (Section 5.2 of CR Form RP 4-1), this section was answered 'No' with the justification that the meteorological tower was unique to the station. The team observed that the question of whether other similar type channel calibration problems may be occurring in other plant systems, was not sufficiently addressed. The team viewed this observation as another example of too narrowly focused corrective action.

M2-98-3760

This CR was initiated in response to an NRC finding (reference NRC letter dated January 7, 1999) associated with Independent Corrective Action Verification Program (ICAVP) issues follow-up. The CR identified a few instances where the cause and extent of condition reviews were not fully developed. Based on follow-up discussions, the licensee recognized the absence of clarity and/or clear expectations for the extent of condition reviews and initiated a revision to RP-4 to provide better guidance. The team noted that this revision was deferred until after Unit 2 restart. The team viewed the licensee's response to this issue to be appropriate, although deferral of the RP 4 revision does present potential opportunities for less than fully effective corrective actions, in the interim.

c. Conclusions

The team concluded that overall problem identification and processing via the Condition Report process was generally good, with a low threshold and high volume input to the process. Assignment of significance level and initial screening was appropriate. Root cause evaluation and corrective action development and implementation were generally good. A few instances were identified where the extent of condition reviews were too narrowly focused.

1.2 Risk Significant Systems Review

a. Inspection Scope (40500)

The team selected four risk significant safety systems (High Pressure Safety Injection (HPSI), Reactor Building Closed Cooling Water (RBCCW), Service water (SW) and Auxiliary Feedwater (AFW) systems) to review for proper configuration control and system readiness. The reviews included system walkdowns, review of completed and outstanding work items and Condition Reports, and discussions and examinations of System Restart Readiness Reports. If the system was rated as Maintenance Rule category (a)(1), the Maintenance Rule Action Plan was also reviewed.

b. Observations and Findings

The team conducted the system walkdowns with the respective System Engineer. The team noted that the material condition of the four systems was good, as was the portion of the plant observed during the walkdown. The team also observed that the System Engineers were very knowledgeable of their systems, were conversant with past and present operability concerns, and knew the status of their system's readiness for restart. The System Engineers were also quite knowledgeable of and conversant about the Corrective Action Program and demonstrated an effective utilization of the program AITTS to identify and track issues and action items associated with their respective system.

The team reviewed the System Readiness Evaluation Report for each of the four systems. The report included completed activities (such as design changes accomplished during the current outage), open items (such as Mode restrained CR's), system status/configuration, and any other item that may impact system operability and/or plant restart readiness. The reports were found to be comprehensive and accurately reflected the status of their respective system.

For the four systems, the team examined about 36 CRs. The team focused on the adequacy of the CR problem description, appropriateness of significance level assignment, immediate corrective action and recommended long term corrective action, and the adequacy of the extent of condition reviews. Where performed, root cause determinations were also reviewed.

The team noted that the SW system was categorized (a)(1) with respect to the Maintenance Rule (10CFR50.55). Review of the corrective action plan for the SW system and the established performance goals to restore the system to (a)(2) status identified no concerns. During the on site inspection period, the team observed that licensee trend analysis identified repetitive functional failures associated with the boric acid tanks. As a consequence, the licensee staff initiated an effort to determine the cause of these repetitive failures and to evaluate whether the boric acid tanks should be elevated for Maintenance Rule (a)(1) system status.

c. Conclusions

No system hardware discrepancies or operating concerns were noted that were not previously identified by the licensee. The team found the Condition Report use was generally acceptable. System Engineers were very knowledgeable of their systems, were conversant with past and present operability concerns and knew the status of their system's readiness for restart. Additionally, the System Engineers were knowledgeable of and conversant with the Corrective Action Program and utilized the program effectively to identify and to track problems associated with their system. The team noted that the material condition of the four selected systems was good, as was the portion of the plant observed during the walkdown of each of the four systems. Based upon the team's limited review of Maintenance Rule implementation, the licensee was effectively utilizing trend analysis to identify maintenance related system performance problems.

1.3 Control Room Deficiencies

a. Inspection Scope

The team reviewed the licensee's effectiveness in the implementation of the corrective action program relating to the deficiencies identified on the Control Room Panel Deficiency List.

b. Observations and Findings

The team examined outstanding deficiencies from the Unit 2 Control Room Panel Deficiency List. With the exception of 2 of the 34 identified control room deficiencies on the list, the team observed appropriate tracking and resolution of the items.

Valve 2-RB-210, the degasifier effluent cooler return isolation valve in the reactor building closed cooling water (RBCCW) system was listed as a control room deficiency. During performance of an RBCCW flow distribution test, conducted in February 1998, the licensee identified that 2-RB-20 passed 100 gpm of flow, while in the closed position. A trouble report (TR) was generated and an automated work order (AWO) was issued to repair the valve. However, the repair of RB-210 was deferred until after Unit 2 restart. The team viewed the identified leak rate as potentially gross degradation, particularly since the normal flow through the valve when in the full open position is approximately 300 gpm. Further, this leakage (valve closure) could potentially divert flow from essential

containment coolers during a design basis accident (DBA). This failure to "close" during a DBA potentially challenged the design basis function of the valve, which requires that the valve close on a safety injection actuation signal.

Team follow-up identified that no CR was initiated, in parallel with the TR, to evaluate the operability impact on the RBCCW system of this degraded valve condition. Initial discussions with the licensee staff determined that the leakage did not impact the operability of the RBCCW system, based on the actual February 1998 flow distribution test results. However, the licensee initiated a CR, performed an initial "reasonable expectation of continued operability" analysis and declared the RBCCW system operable. Prior to the conclusion of the inspection, the licensee confirmed the initial operability evaluation with a formal RP 5, "Operability Determination," and concluded that the RBCCW system was operable, with this degraded valve condition.

The team concluded that the failure to initiate a Condition Report for the degraded condition of 2-RB-210 and perform a formal operability determination was contrary to the requirements of station procedure RP 4. The team also noted that, absent the CR process, an appropriate extent of condition review was not accomplished via the TR or AWO processes.

Team examination of the control room deficiency involving the charging pump hand switches found a similar issue where a CR had not been initiated. Specifically, the licensee identified that the "A" charging pump switch may not remain in the pull-to-lock (PTL) position, as designed (potentially due to excessive wear). The licensee generated a TR and an AWO was used to facilitate replacement of the switch prior to placing the unit in Mode 4. The licensee also identified that the "B" charging pump hand switch was similarly affected, and replaced the "B" pump hand switch. Although the team viewed this problem identification, tracking (via the Control Room Panel Deficiency List), and resolution adequate, this degraded charging system pump hand switch condition should have more appropriately been addressed via the CR system for formal operability evaluation and extent of condition review. In this instance, the licensee staff did examine the other charging pump hand switches, but did not extend their examination to the numerous other hand switches on the control panels. This team observation is being treated as a second example of the licensee's failure to follow station procedure RP 4.

The two examples discussed above, of the failure to initiate a CR for conditions adverse to quality, were viewed by the team as somewhat isolated events, based upon the numerous issues and CRs initiated by the licensee and the sampling of CRs reviewed by the team. Consequently, these two examples do not appear to be a repetitive or a broad programmatic concern, were promptly addressed by the licensee (including initiation of CR M2-99-0242 to review the oversight), and were of minor safety consequence. Accordingly, these two examples of failure to follow station procedural requirements constitute a Severity Level IV violation which is being treated as a Non-Cited Violation, consistent with the Appendix C of the NRC Enforcement Policy.

c. Conclusion

The team identified that licensee identification and tracking of control room deficiencies was generally good. However, the licensee failed to initiate Condition Reports in accordance with station procedure RP 4, "Corrective Action Program," for the proper evaluation of conditions adverse to quality involving the charging pump hand switches and RBCCW system valve 2-RB-210 leakage. This Severity Level IV violation of procedural requirements is being treated as a **Non-Cited Violation**, consistent with Appendix C of the NRC Enforcement Policy. The team acknowledged that other tracking systems were used to ensure final resolution of these control room deficiencies, but these tracking mechanisms lacked appropriate operability reviews to assess system or plant impact. **NCV 50-336/99-01-01**

1.4 Operability Determinations

a. Inspection Scope

The team reviewed the licensee's operability determination process and its implementation to assess the effectiveness of this process with regards to the identification, evaluation, and tracking of conditions adversely impacting the operability of safety systems.

b. Observations and Findings

The team found that, in general, operability determinations (OD's) were being performed in accordance with RP-5, "Operability Determinations." The team sampled 13 of 30 ODs from the control room OD Log Index which addressed specific restrictions to operational mode changes (e.g., requires closure prior to entering Modes 4 or 2). The team identified two ODs which had minor administrative errors, which when discussed with the licensee staff, were promptly resolved. Specifically, in one instance, the OD was administratively closed in the Action Item Tracking and Trending System (AITTS), prior to the closure by the Shift Manager. The second item involved an incorrectly identified Mode restraint referenced in the AITTS. The team noted that a recent audit performed by the licensee of outstanding ODs had identified additional minor administrative oversights and errors. No significant problems were identified by that audit or via the team's review.

c. Conclusions

The team concluded that, in spite of minor administrative deficiencies, the operability determination process and associated corrective actions were appropriate for the affected structures, systems, and components important to safety.

1.5 Temporary Modifications

a. Inspection Scope

The team reviewed a sample of temporary modifications (TMs) to assess this facet of the licensee's program to identify and correct problems adverse to quality.

b. Observations and Findings

The team observed that, in general, TMs followed the procedural requirements of WC 10, "Temporary Modifications." Detailed examination of three TMs by the team identified that two of the three TMs were identified during operator plant walk-throughs and the third TM was the result of a detailed system review, associated with the extended outage. The team viewed all three TMs as examples of good licensee problem identification. A condition report was initiated, as a result of a team observation in this area, involving TMs being in effect in excess of the procedural time limit (six months) of WC 10. At the time of the team inspection, there were 16 open temporary modifications, of which 13 were pre-1997 and the remaining three were initiated in 1997. The majority of the TMs installed were related to the extended outage. In all cases, the licensee was properly tracking the TMs and had plans to either remove the TM prior to unit restart or convert the TM to a permanent modification. The failure of the licensee to resolve and remove TMs within a period of six months from the date of installation is contrary to the administrative requirements of WC 10. However, this failure to adhere to procedure WC 10 constitutes a violation of minor safety significance and is not subject to formal enforcement action.

c. Conclusions

The team concluded that the licensee was properly identifying problems associated with plant safety systems and adequately implementing temporary modifications, where warranted. However, all of the temporary modifications had been installed longer than the six months procedural limit indicating poor administrative control and management oversight of this activity.

1.6 Millstone Unit 3 Restart Lessons Learned

a. Inspection Scope (40500)

The team interviewed the supervisor of Millstone Unit 2 Operations Training, the Millstone 2 Operations Manager, and a number of licensed operators to determine if Operations Department personnel were being adequately trained on subjects pertinent to unit restart following an extended outage. The team also reviewed associated memoranda, training schedules, lesson plans, and action item documentation.

b. Observations and Findings

The team observed that licensed and non-licensed operator training had incorporated lessons learned from Unit 3 restart. This lessons learned training was scheduled to be completed prior to Unit 2 restart. In addition, "just-in-time" training had been and continues to be conducted to re-familiarize the Operations staff with evolutions which have not recently been performed or which were infrequently performed (i.e., refueling, loss of normal power, heat-up, cool-down, and reactor start-up). Interviews with the Operations staff identified enthusiastic support for the recent training. In addition, the team observed that Operations staff performance had already benefitted from this training, as evidenced by the efficient and essentially error-free completion of reactor vessel refueling. The team noted that training on plant modifications was also being conducted.

c. Conclusions

The team concluded that the licensee had adequately identified and scheduled training for operators in preparation for the plant restart. Additionally, action items relating to the lessons learned from the Unit 3 restart were being adequately tracked and incorporated into the licensed and non-licensed operator training cycle.

1.7 Human Performance Evaluations

a. Inspection Scope (40500)

The team reviewed the licensee's Charter governing the implementation of the Human Performance Enhancement System (HPES), interviewed the Unit 2 HPES Coordinator, and members of the station HPES committee. The team attended a HPES Committee meeting and reviewed past meeting minutes. The team also reviewed a self-assessment by the Corrective Actions Department which focused on the effectiveness of the station Human Performance Enhancement System.

b. Observations and Findings

The team noted that the HPES Charter, dated December, 1997, was a broad scope overview procedure that also contains specific responsibilities for selected site individuals. As stated in the Charter, the objective of HPES is chiefly to strive to prevent human errors, before they occur, by promotion of the understanding of sources of human error to the personnel engaged in human error-likely activities. The HPES Charter also tasks the HPES coordinators with analyzing adverse human performance trends, in order to provide corrective action recommendations to unit and/or station management.

With regard to the promotional mission, the team observed that the Unit 2 HPES coordinator and the site HPES staff have developed and implemented several initiatives. A monthly HPES newsletter for Unit 2 was promulgated to employees highlighting human performance incidents and discussing methodologies for recognizing potential error situations and avoiding mistakes. Each unit has a HPES committee which was

represented by most of the unit's line organization departments. Meeting minutes were kept and agenda items were tracked to resolution.

The HPES committee meeting, which the team observed on February 4, 1999, was characterized by enthusiastic discussion of recent problems associated with unauthorized radiologically controlled area entry and improper protected area egress by escorted visitors. Several potential solutions were offered, but because of a stringent agenda, the committee did not fully develop them. Rather they were tabled for future discussion. The team noted that the committee members paralleled the recent occurrence of unauthorized radiologically controlled area entry with similar events involving emergency diesel generator room entries. However, no formal recognition of a common cause was made by the attendees to investigate a potential broader corrective action to address these events.

The site corrective action department's self-assessment of the HPES implementation, completed in July 1998, identified some tasks in which the HPES charter was not being implemented fully. Corrective actions for the adverse findings of that self-assessment were identified and assigned via the Action Item Tracking and Trending System. Some of these items were completed, but some corrective actions were still outstanding, such as modification of the HPES Charter to align more closely with management expectations. The team also identified some areas in which the HPES Charter were still not being implemented such as the requirement for quarterly reports with recommendations to the Corrective Action manager and periodic reports to unit management. The team discussed these observations with the Corrective Action manager and the HPES coordinator who acknowledged that the successful implementation of the tracking and trending and corrective actions leg of the HPES Charter was not as effectively implemented as they would like.

c. Conclusions

The team considered the licensee's HPES program to be a contribution to error prevention. This contribution was primarily manifested in the education and indoctrination efforts of the HPES newsletters and the actions of the HPES committees.

2.0 **TRENDING, TREND ANALYSIS, and BACKLOG REVIEW**

a. Inspection Scope

The team reviewed the use of the Action Item Tracking and Trending System (AITTS) by discussing its capabilities and implementation with the plant staff and managers and by sampling selected AITTS assignments. The team also examined the licensee's progress and methodology for addressing the backlog of work and corrective action program action items.

b. Observations and Findings

Station use of the AITTS is governed by procedures SI-100.1, "Millstone Station Action Item Tracking and Trending System (AITTS)," and SI-100.2, "Station Trending Handbook." The team observed that the AITTS and its associated output documents were widely used by all departments. AITTS was observed to be used for: Corrective Action department generation of monthly and quarterly trend reports; generation of the bimonthly Key Performance Indicators; support and tracking of important milestones (i.e., modes changes, team inspection preparation, third-party assessments, etc.); support of department self assessments; preparation of daily status reports; and individual employee tracking of work assignments. Use of AITTS for development of the daily status report was of particular note because of the detailed information and broad dissemination. For example, the February 4, 1999 status report identified that Unit 2 Success Objective #4, "Effective Corrective Action Program", listed 747 open assignments to do prior to Mode 4. Overdue assignments were clearly designated by the AITTS, according to department and/or work group.

In sampling AITTS assignments to verify proper closeout, the team observed that the Corrective Action department was adequately monitoring assignments for "premature closeout" when CRs were presented to the owner for closure. Less than a dozen "premature closeouts" occurred in the past eight months. One such example, which was also a part of the team's selected sample, involved the corrective action to prevent recurrence assignment Action Request (AR) 98006802-06 concerning significance level 1 CR M2-98-0909. The Corrective Action department had identified the inappropriate closeout of this assignment and issued CR M2-99-0159 to resolve this problem. The team verified a number of other AITTS assignments that were properly implemented. The team also noted that a ready staff was available to support AITTS users when hardware or software questions arose.

The team reviewed the Corrective Action department Trend Analysis Reports for the first three quarters of 1998. In general, the reports were comprehensive and were effective in identifying adverse trends, as required by RP-4, "Corrective Action Program." For example, the operational configuration and control degrading trend was first identified in the second quarter trend report, and was subsequently upgraded to an adverse trend in the third quarter report. This adverse trend resulted in the generation of a CR and the performance of a common cause investigation. The team observed that the Corrective Action department monthly trend reports focused on adverse trends previously identified in the quarterly trend reports and monitored the effectiveness of corrective actions to address those trends.

The team reviewed and discussed the licensee's process for monitoring and prioritizing work items and corrective action assignments with members of the Unit 2 management team. Based upon this discussion and a review of current backlog data and trends, the team observed that Unit 2 management was clearly aware of the status of individual work items and outstanding corrective action assignments. The licensee outlined their backlog management process, as documented in their letter to the NRC, dated December 22, 1998. The plan, as defined, addresses work item resolution and

prioritization consistent with the need to support Unit 2 restart and the importance of continued safe facility operation. The team noted that backlog items captured under the December 22, 1998, Millstone Unit 2 Restart Backlog Management Plan, included: Condition Reports; ICAVP deficiency reports; configuration management program unresolved item reports; maintenance AWOs; and engineering work products. The team noted that an NRC inspector review of Unit 2 restart deferred work activities was performed and documented in inspection report 50-336/98-06, dated March 1, 1999. In addition, subsequent to this team inspection, a second review of the deferred issues was planned and will be documented in inspection report 50-336/99-04.

A discussion of current Unit 2 backlog data identified that there has been a fairly constant number (approximately 3500) of open corrective action assignments over the past few months. Although this number of backlogged items has remained fairly constant, there was a declining trend in the number of restart corrective actions and increasing trend in non-restart corrective actions. The 3500 items included approximately 2200 engineering work items and 550 corrective maintenance AWO's. Trend analysis performed by the licensee demonstrated that the Unit 2 restart backlog reduction was on a declining trend, but would not necessarily achieve the licensee's earlier established goals. A discussion with the Director of Engineering identified that the Engineering staff's Unit 2 open work assignments were trending similar to the Unit 3 backlog, and that engineering resources had been contracted to maintain the current work-off rate, until the end of 1999.

c. Conclusions

The team concluded that the AITTS was a powerful tool being used by plant staff, managers, and oversight organizations to ensure appropriate tracking of corrective action assignments and that AITTS was an effective trend analysis data base. The team found that the Corrective Action department adequately performs the trend analysis on a monthly and quarterly basis. Based upon a review of available trend data and discussions with Unit 2 management, it was evident to the team that the licensee was cognizant of the corrective action assignment backlog and that a well established prioritization plan was being used to help facilitate an appropriate work-off of the approximate 3500 backlogged safety related work activities.

3.0 DEPARTMENTAL SELF ASSESSMENTS

a. Inspection Scope

The team evaluated the licensee's self-assessment program to verify appropriate implementation in accordance with Self-Assessment Program (OA-11) and to assess the effectiveness of these internal departmental reviews in identifying and correcting problems and enhancing established programs and processes. Specifically, the team reviewed select self-assessment reports and interviewed responsible department staff to follow-up on self-assessment findings, causal evaluations, and corrective action prioritization and timeliness.

b. Observations and Findings

Operations

The team reviewed the 1998 monthly Operations self-assessments which used the observations generated by the Work Observation Program. The team found that the Work Observation Program was comprehensive and the major contributor to the department's self-assessment process. For example, numerous work observations were performed (>100 per month) by Operations supervisory personnel, in accordance with Operations Department Instruction (ODI) 2-OPS-1.25, "Work Observations." ODI 2-OPS-1.25 contains 34 standard Work Observation forms covering a wide range of activities (e.g., alarm response, control operator watchstanding activities, command and control, and reactivity management). The team found that the expectations contained within the individual Work Observation forms were derived from specific standards, such as OP 200.1, "Unit 2 Conduct of Operations," the procedure that provides the standards of performance for plant operations at Unit 2. The team reviewed selected deficiencies from the sampling of monthly self assessment reports examined and found that all deficiencies were appropriately dispositioned.

The team also evaluated the quarterly self-assessments required by OA-11. Of the three Operations self-assessments performed in 1998 (versus the four prescribed by procedure), the team found that, in general, the department had appropriately identified adverse performance trends, recommended adequate corrective actions, and effectively communicated the results to the department staff. For example, via the quarterly self-assessment process the Operations staff identified an adverse trend in configuration control for Unit 2 in 1998, generated a CR, and performed a common cause evaluation. The team reviewed the corrective actions developed from this evaluation and observed that they have either been completed or have been scheduled for completion in 1999, including actions to reinforce configuration control in operator re-qualification training. The team did note one minor corrective action oversight, involving the 1999 self-assessment plans, which was promptly addressed by the Operations staff.

Maintenance

The Maintenance department performed five self assessments in 1998 and was scheduled to perform five self assessments in 1999. Through interviews, the team determine that self assessment topics had been identified by line managers, based upon previous and current work projects. The team observed that, although no immediate safety concerns had been identified by the Maintenance self assessments, the assessments did identify areas of program improvement and made appropriate recommendations. Follow-up of these recommendations identified that these program improvements were considered long term enhancements and thus were deferred until post Unit 2 restart. The team noted no problems associated with the deferral of these program improvements.

Engineering

The team observed several instances where the Engineering staff and Engineering Assurance (EA) group identified items for improvements in the conduct of engineering activities. Examples of insightful self-assessment findings included: self assessment PES-SA-98-040, "Engineering assurance group assessment, Acceptance of Purchased Quality Calculations and Analyses," and condition reports M3-99-0364, "Engineering assurance group identification of lack of timeliness for completion of two fourth quarter self assessments," and M2-99-0231, "Engineering assurance group identification of lack of documentation of acceptance reviews of vendor deliverables for a Unit 2 modification." In addition, the team noted that as a result of poor quality of modification packages and supporting safety evaluations, the Engineering department initiated the Quality Review Board (QRB). As a result of the QRB oversight and review, Engineering department performance trends in the area of modifications' quality and timeliness have demonstrated observable improvement.

Plant Support

The team reviewed selected self-assessments and interviewed personnel who performed them. The various disciplines inspected included fire protection, emergency preparedness, health physics, chemistry, and security.

Self-assessments in the area of plant support varied from group to group in the quality of the self-assessment and the number performed during calendar year 1998. Most groups adhered to the practices specified in station procedure OA-11 in scheduling one self-assessment each calendar quarter, one of which was to be an assessment of the effectiveness of that particular group's corrective actions. One exception was the Emergency Preparedness (EP) Services Department, which had missed the third quarter 1998 self-assessment. This oversight was not detected until the team requested the self-assessments, which indicated that the completed self-assessments for EP Services were not being closely tracked. The EP Services Department, on realizing the oversight, issued a condition report to ensure appropriate resolution.

Some of the groups inspected placed high value on self-assessment activities. The Health Physics Department performed a total of seven self-assessments in 1998 and maintained more frequent tracking of problem areas, such as personnel contaminations. The site Fire Protection group incorporated self-assessment into everyday routine activities. The site Security organization performed more than twenty assessments in 1998. All of the organizations used the condition report process to formally document and track areas for improvement.

Nuclear Oversight Self-Assessments

In reviewing their performance for 1998, Nuclear Oversight (NO) recognized (reference self-assessment 98-NO-07) the need to improve in the area of self-assessments. Weaknesses such as NO self-assessment report quality and the absence of substantive findings or recommendations were identified. The team noted that condition report M3-

98-5255 was issued for resolution of these weaknesses. The team also observed that the NO self-assessment plan for 1998 was overly aggressive, calling for the conduct of 36 self-assessments. Thirteen were either deleted, canceled, or incomplete as of December 31, 1998.

The team discussed NO's plans to improve in the area of self-assessments with the new Director, Nuclear Oversight, who had approved a more carefully developed 1999 self-assessment plan. The 1999 plan includes six self-assessments with the first assessment to be lead by the new Manager, Quality Control (previously the NO self-assessment coordinator).

c. Conclusions

The team concluded that the Operations department self-assessment process was comprehensive, and adequately contributed to problem identification and resolution. In addition, the Work Observation program appeared to be an effective tool in the communication and improvement of standards and quality of performance within the Operations department. The team concluded that the Maintenance, Engineering, Plant Support, and Nuclear Oversight area self assessments were generally self-critical of the current work processes; were effective in identifying program and process enhancements; and were generally conducted consistent with the self-assessment guidelines.

4.0 INDEPENDENT OVERSIGHT

4.1 Plant Operations Review Committee (PORC)

a. Inspection Scope (40500)

The team reviewed the PORC activities and discussed specific issues with selected committee members to gain insight and to assess the PORC's effectiveness in overseeing plant activities and plant staff performance.

b. Observations and Findings

The team attended the PORC meetings of January 20 and February 1, 1998, and interviewed the PORC chairman and secretary. The team reviewed minutes of past meetings, as well as, written memoranda which stated management expectations for PORC presenters and attendees. The team observed good safety discussion at the two PORC meetings attended. Members questioned presenters and discussed safety implications of draft licensee event reports and corrective actions for condition reports.

The PORC action item list had only one item on it. The PORC chairperson informed the team that the PORC philosophy was to get problems fixed promptly and correctly, rather than promote tracking of lengthy corrective actions. The team was also informed that some of the tracking functions for PORC action items were assumed by the Unit 2

management review team. The PORC chairperson stated that this arrangement would continue until after unit restart, at which time PORC would re-assume the tracking role.

c. Conclusions

Unit 2 PORC was conducted with appropriate regard to safety and good oversight of plant activities.

4.2 Station Operations Review Committee (SORC) and Site Management Review Team (SMRT)

a. Inspection Scope (40500)

The team attended the SORC meeting of January 20, 1999 and the SMRT meeting of February 3, 1999, and also interviewed the SORC chairman and secretary and reviewed past SORC meeting minutes.

b. Observations and Findings

The SORC meeting of January 20 had primarily an administrative agenda and was characterized by a sound safety focus among the members. The SMRT meeting of February 3 dealt with specific corrective actions of site-wide scope and demonstrated that SMRT members had high expectations for presenters to adhere to for corrective action items they wished to close or be granted an extension for.

c. Conclusions

The team concluded that, between the SORC and SMRT activities, the licensee had an appropriate safety focus for corrective action matters of site-wide activities.

4.3 Nuclear Safety Assessment Board

a. Inspection Scope

The team reviewed the performance of the Nuclear Safety Assessment Board (NSAB) via discussions with selected board members, observations at a board meeting, and examination of the selected NSAB and NSAB subcommittee meeting minutes.

b. Observations and Findings

The team verified that the NSAB meetings and the members qualifications were in accordance with Technical Specifications requirements. Members were appointed to the NSAB by letter from the Northeast President & Chief Executive Officer. Some members were recently appointed, such as the Vice President, Nuclear Oversight & Regulatory Affairs (effective November 1998).

The team noted several instances where the NSAB and its subcommittees demonstrated active involvement in important activities at Unit 2.

- The Unit 2 Startup and Power Ascension Program required specific NSAB review and concurrence, as part of the management assessment prior to Mode 2. Although the team noted that a specific NSAB concurrence was not included in Special Procedure OP98-2-08, "Unit 2 Restart Following 10CFR50.54(f) Outage," the licensee preferred to accommodate NSAB concurrence by a line management meeting with the board and subsequent documentation of meeting minutes. This process was used for the restart of Unit 3.
- Board members were charged to meet with System Engineers and comment on several System Readiness Reviews (e.g., service water auxiliary feedwater, reactor building closed cooling water). Discussions with some System Engineers and an NSAB board member indicated that these reviews were beneficial.
- The NSAB Safety Evaluation sub-committee was quite active with approximately 40 meetings in 1998. This sub-committee initiated many CRs to improve the performance of safety evaluations. For example CR M2-98-1567 identified the need for possible improvements in a safety evaluation regarding changes to service water piping "WEKO" seals.
- NSAB challenged the findings of the Nuclear Oversight Verification Plan (NOVP). For example, the December 2, 1998 meeting minutes reflected NSAB requested clarification of NO's Engineering area assessment concerning the current "tracking to satisfactory" assessment, when two months before Engineering was assessed as a "significant weakness".

c. Conclusions

The NSAB meets Technical Specification requirements for member qualifications and meetings. The board was providing effective oversight on important activities at Unit 2 as it prepared for plant restart. A good initiative was observed regarding NSAB member participation in several System Readiness Reviews.

4.4 Nuclear Oversight

a. Inspection Scope

The team reviewed the implementation of audits, surveillances, and assessments as conducted by the Nuclear Oversight (NO) Audits and Evaluations, Performance Evaluation, and the Recovery Oversight groups, respectively. Specific focus was devoted to the recent interaction of these groups with the line organization concerning the key issue monthly assessments developed for senior management review in the Nuclear Oversight Verification Plan (NOVP).

b. Observations and Findings

(1) Audits and Evaluations

The team sampled the following audits from the 1998 audit schedule for review and discussed the conduct and results with audit personnel.

| | |
|-----------|--|
| MP-98-A01 | "Conduct of Operations", Units 2 & 3, Conducted January 12-23, 1998 |
| MP-98-A05 | "Corrective Action Program", Units 2 & 3, Conducted March 23 - April 3, 1998 |
| MP-98-A18 | "Corrective Action", Millstone Station, Conducted September 8-18, 1998 |
| MP-98-A16 | "Fire Protection", Millstone Station, Conducted August 10-21, 1998 |

The licensee was adequately conducting audits in accordance with its audit schedule. Qualified staff were in place to perform the audits. While the audits were appropriately performed, it was apparent that some had more substantive findings, such as the Fire Protection audit. Specifically, the results from this Fire Protection audit contributed to the Fire Protection key issue assessment included in the NOVP.

(2) Performance Evaluations

Many of the sixty-nine 1998 surveillances by the Performance Evaluations group were a compilation of daily field observations conducted over a 3-4 week periods in specific functional areas. The daily field observations were communicated promptly to the respective line organization and documented in a subsequent surveillance report. The team sampled the following surveillances for detailed review:

| | |
|--------------|---|
| MP2-P-98-066 | Unit 2 Surveillance of Corrective Actions and Self Assessment for December 1998 |
| MP2-P-98-062 | Unit 2 Surveillance of Plant Support Performance for December 1998 |
| MP2-P-98-065 | Unit 2 Surveillance of Maintenance and Work Control/Planning Performance Assessment for December 1998 |
| MP2-P-98-064 | Unit 2 Surveillance of the Conduct of Operations for December 1998 |

The team noted a good practice, in that the Performance Evaluations group evaluators used established standards from the Nuclear Oversight Surveillance Guides (NOSGs). For example, in surveillance MP2-P-98-065, the Performance Evaluation group used the evaluation guide involving emergent work from NOSG B.2.2.1, "Work Control/Planning and Scheduling - Work Planning", to call attention in the Work Control office to an increasing trend of work orders categorized as emergent work.

The Performance Evaluation group was responsible for many of the key issue monthly assessments included in the NOVP, such as Operations, Work Control, Corrective

Action, Maintenance, Health Physics, and Chemistry departments. Observations in these areas were discussed at a daily group meeting and the Manager, Performance Evaluations was then equipped with current insights for the Unit 2 daily plant status meeting. This flow of information appeared to place this group "in touch" with the current performance of the various departments being monitored. The team attended several Unit 2 plant status meetings and there was visible participation by the Manager, Performance Evaluations, including discussion of recent industry operating experience items.

(3) Recovery Oversight

The Recovery Oversight group was responsible for monitoring the key issue of Engineering for the NOVP. Engineering covers a broad area, including such specialties as motor-operated valves (MOV) and environmental equipment qualification (EEQ). The team reviewed the following sample of assessments performed by the Recovery Oversight group:

| | |
|-------------|--|
| OPGM-99-001 | Report of Unit 2 Engineering Assessment for December 1998 |
| OPGM-98-127 | Report of Unit 2 Assessment in December 1998 of EEQ Program Implementation |
| OPGM-98-101 | Unit 2 MOV GL 89-10 Program Assessment Report |

The team also reviewed a number of CRs that were initiated from the assessment by the Recovery Oversight staff.

The Recovery Oversight group provided a good assessment (OPGM-98-101) of the Unit 2 MOV program prior to the completion of the most recent NRC review. Discrepancies were identified by NO regarding MOV "weak link" calculations and included in condition report M2-98-2447 for resolution. The Recovery Oversight group identified substantive findings concerning design/licensing basis questions for the auxiliary feedwater (AFW) system. These findings were also included in CRs for resolution. One example involved questions regarding calculations of the turbine driven AFW pump room maximum temperature. The team observed that some calculations remain to be done concerning questions about hydraulic analyses performed in response to the NO AFW safety system functional assessment. This work was documented in CR M2-98-3224 and was being tracked as Issue No. 9 on the NO Mode 4 Issues List.

(4) Nuclear Oversight Verification Plan

Nuclear Oversight Procedure NOQP - 1.08, "Nuclear Oversight Verification Plan (NOVP)," identifies: the assessment areas and "key issues" to be reviewed by NO; the methodology for the assessments; the responsible individuals for each assessment; and how the results are to be reported. The goal of NOVP and the "key issues" review are an integrated NO assessment of the effectiveness of recovery, restart, operations, and extended maintenance activities at Millstone Station.

The team reviewed the results of the NOVP for the period from December 9, 1998 to January 6, 1999. Consistent with the team's observations stated in (1), (2), and (3) above, the NOVP program, in conjunction with other management tools, such as the NO Unit 2 Mode 4 Issues List, seemed to be a widely accepted method in use for continuous assessment of key issues important to support restart.

c. Conclusions

The NOVP was a widely accepted method in use for continuous assessment of "key issues" important to support Unit 2 restart. The team viewed the NOVP as another good performance trending tool being effectively used by the plant staff and management.

Audits have been appropriately performed, such as the Fire Protection audit, which was a valuable contribution to the assessment of this key issue in the NOVP. The Performance Evaluation group was "in touch" with the line organization activities and appeared to be in a good position for real time assessments of the line organization performance. This group also provided current performance information from surveillances for inclusion in several "key issues" areas of the NOVP. The Recovery Oversight group was providing good technical and independent assessments in the Engineering and specialty areas, such as MOVs and EEQ, for inclusion in the NOVP. In summary, the team concluded that the Nuclear Oversight organization was providing effective independent oversight of Unit 2 activities.

5.0 Employee Concerns Program Implementation Review

a. Inspection Scope

The team also reviewed a sample of Employee Concerns Program (ECP) case files and documentation packages to determine the level of use of the process and whether it was effective in responding to potential nuclear safety issues or 10 CFR 50.7 (employee protection) issues. The results of the late-1998 site survey results, performance indicators for ECP, and ECP case status and backlogs were also examined.

b. Observations and Findings

ECP case packages which had been processed through the investigative and corrective action determination phases during the last six months of 1998 were reviewed. The team observed that the majority of issues identified to ECP in that period involved human resource management or industrial relations issues that have little or no direct relationship to technical, nuclear safety or 10 CFR 50.7 issues. A sample of those ECP packages were reviewed to confirm that any which involved nuclear safety issues or 10 CFR 50.7 issues were appropriately identified and processed. No problems were identified. (Note: The packages were NOT evaluated for the adequacy or propriety of the human resource management or industrial relations matters.) A review of thirteen ECP cases involving technical and nuclear safety issues found that case processing and investigations were performed in accordance with ECP guidance. Issues and problems requiring corrective action were appropriately recognized and processed by the ECP

staff and channeled into the AITTS, as appropriate. The team judged the eventual corrective actions to have been responsive to the concerns raised.

ECP case inventory data including case emergence rates, backlog inventory, and case age were reviewed. The licensee had experienced an increase in new cases received during December 1998. This increase in new cases, combined with staff re-alignment activities which decreased ECP resources, and recent ECP management changes, contributed to increases in backlog and case age, and consequently a decrease in the case closure statistics. The team observed that management had recognized these trends and were evaluating them for further action.

The team identified an opportunity for Improvement in the area of ECP technical issue processing. In early 1998, the ECP program began the practice of "Rapid Resolutions" for cases where direct communications between the involved parties would likely resolve a concern and thus eliminate the need for an ECP investigation and full case processing. This "Rapid Resolutions" process had been used extensively, especially in the personnel and labor relations type cases. However, this process had also been used in the some technical and nuclear safety-related cases. In these instances, the team observed that where the "Rapid Resolutions" process did not actually resolve the technical issue or differences, the issue was entered into the CR program. Thus, the transparency of the CR process afforded the concernee the opportunity to review the CR resolution and associated documentation.

The team found that this deferral to the CR process allowed the ECP staff to close the ECP case, without final resolution of the technical issue via the CR. Furthermore, the team observed that the "Rapid Resolutions" procedure did not provide a formal mechanism (such as an AITTS Action Request) to ensure that the final resolution of the CR was discussed or reviewed by the ECP staff and concernee. The team did note that in spite of the absence of a formal mechanism, all planned actions documented in the ECP files (including deferral of the issue to the CR process and an Action Request to follow-up with the concernee on the CR resolution) had been entered into the AITTS on the initiative of the responsible ECP staff member. The ECP Director acknowledged this team observation and indicated that a procedure revision would be considered to formalize the "Rapid Resolutions" follow-up process.

The late-1998 site survey results (relative to employee willingness to utilize programs for problem correction and employee satisfaction levels with these programs) and performance indicators for ECP indicated no material change in these areas over the past year.

c. Conclusions

The team concluded that the Employee Concern Program was an effective vehicle for the acceptance and processing of safety issues identified to the Program.

6.0 MISCELLANEOUS CORRECTIVE ACTIONS ISSUES

6.1 (Closed) EEI 50-336/96-201-30: Failure to implement timely corrective action for significant conditions adverse to quality; (Unit 2 Significant Items List No. 5.2)

This escalated enforcement item was based upon the licensee's failure to address a number of Level A and B (highest levels of significance assigned to conditions adverse to quality via the 1996 corrective action program) Adverse Condition Reports (ACRs) in a timely and effective manner, indicating a programmatic breakdown of the overall corrective action process. The licensee's response to this and other related escalated enforcement items included a major revision to the Corrective Action Program (Station Procedure RP 4). The implementation of this revised program at Unit 2 was reviewed by this team (as discussed above) and a previous team inspection at Unit 3 (reference NRC inspection report 50-423/97-82, dated June 11, 1998). The team also sampled and verified proper implementation of corrective actions for the specific ACRs referenced in this escalated enforcement item and identified no problems. Accordingly, the licensee's corrective actions to address this item were acceptable and this item is closed.

6.2 (Updated) Unit 2 Significant Items List No. 1: Management Oversight and Effectiveness

This Significant Items List item broadly addresses the licensee's overall effectiveness in overseeing day-to-day operations of Unit 2. The team identified through the various observations and findings documented above, in the area of corrective action program effectiveness, that Unit 2 management demonstrated good awareness of plant activities and performance assessment recently completed or in progress. The team observed through interviews with supervisors and workers and through independent verification of identified problems and their resolution, that the corrective actions processes were being acceptably used and monitored by the Unit 2 staff and management.

6.3 (Updated) Unit 2 Significant Items List No. 11: Nuclear Oversight Program Effectiveness

This Significant Items List item addresses the overall effectiveness of the licensee's 10 CFR 50, Appendix B, Quality Assurance Program, as defined and implemented by the Nuclear Oversight organization. The team reviewed a sampling of the Nuclear Oversight (NO) activities, as discussed above, and concluded that the NO staff and managers were "in touch" with day-to-day operations of the facility and providing good performance assessments and audits of licensee programs and their implementation.

7.0 MANAGEMENT MEETING SUMMARY

Meetings were held periodically with licensee management during this inspection to discuss inspection observations and findings. A summary of preliminary findings was also discussed at the conclusion of the on-site inspection on February 5, 1999. A public meeting was held on February 17, 1999 at the Millstone Training Center to discuss the team's findings and conclusions. The slides used at that public meeting are included as Attachment 1 to this report.

PARTIAL LIST OF PERSONS CONTACTED

| | |
|-------------|---|
| L. Olivier | Sr. VP and CNO Millstone |
| M. Brothers | VP Nuclear Operations |
| D. Amerine | VP Engineering Services |
| R. Necci | VP Nuclear Oversight and Regulatory Affairs |
| S. Sace | Director Nuclear Oversight |
| B. Wilkens | Director Design Engineering |
| P. Grossman | Director Plant Engineering |
| M. Bowling | Recovery Officer |
| S. Heard | Manager, Independent Review Team |
| A. Price | Director, Unit 2 |
| H. Miller | Manager, Regulatory Affairs |
| J. Gionet | Regulatory Affairs |
| E. Annino | Regulatory Affairs |

INSPECTION PROCEDURES USED

| | |
|----------|--|
| IP 40500 | Effectiveness of Licensee Controls for Identifying, Resolving, and Preventing Problems |
| IP 71707 | Plant Operations |
| IP 92901 | Follow-up - Operations |

ITEMS OPENED, CLOSED, AND DISCUSSEDOpened/Closed

| | |
|---------------------|---|
| NCV 50-336/99-01-01 | Severity Level IV, Non-Cited violation involving failure to initiate Condition Reports for two control room deficiencies. |
|---------------------|---|

Closed

| | |
|-----------------------|--|
| EEL 50-336/96-201-30, | Failure to implement timely corrective action for significant conditions adverse to quality. |
|-----------------------|--|

Discussed

| | |
|------------|---|
| SIL No. 1 | Management Oversight and Effectiveness |
| SIL No. 11 | Nuclear Oversight Program Effectiveness |

LIST OF ACRONYMS USED

| | |
|-------|---|
| ACRS | Adverse Condition Reports |
| AITTS | Action Item Tracking and Trending System |
| AFW | auxiliary feedwater |
| AR | Action Request |
| AWO | automated work order |
| CR | Condition Reports |
| DBA | designed basis accident |
| EA | Engineering Assurance |
| ECP | Employee Concerns Program |
| EDG | emergency diesel generators |
| EEQ | environmental equipment qualification |
| EP | Emergency Preparedness |
| HPSI | High Pressure Safety Injection |
| HPES | Human Performance Enhancement System |
| MDMRT | multi-disciplinary management review team |
| MOV | motor-operated valves |
| NCV | Non-Cited Violation |
| NO | Nuclear Oversight |
| NOSG | Nuclear Oversight Surveillance Guides |
| NOVP | The Nuclear Oversight Verification Plan |
| NSAB | The Nuclear Safety Assessment Board |
| NU | Northeast Utilities |
| OD | operability determinations |
| ODI | Operations Departments Instruction |
| PM | preventive maintenance |
| PORC | Plant Operations Review Committee |
| PTL | pull-to-lock |
| QRB | Quality Review Board |
| RBCC | Reactor Closed Cooling Water |
| SORC | Station Operations Review Committee |
| SW | Service Water |
| TAR | Trend Analysis Reports |
| TM | temporary modifications |
| TR | trouble report |
| TS | Technical Specifications |

**40500 TEAM INSPECTION
MILLSTONE UNIT 2**

Exit Meeting
February 17, 1999
Inspection Report 50-336/99-01

AGENDA

**INTRODUCTIONS
TEAM FINDINGS AND CONCLUSIONS
REGIONAL MANAGEMENT OBSERVATIONS
LICENSEE COMMENTS
CLOSE MEETING**

NRC STAFF AVAILABLE FOR QUESTIONS FROM PUBLIC AND MEDIA

FOLLOWING THE PUBLIC MEETING

Team Composition and Schedule

William Cook - Team Leader
Len Prividy - Asst. Team Leader
 Paul Cataldo
 Greg Cranston
 Lois James
 Steve Jones
 Bill Maier
Don Beckman (Contractor)

Onsite Inspection weeks of January 19-22 and February 1-5, 1999

Inspection purpose and guidance

Evaluate the effectiveness of licensee controls in identifying, resolving, and preventing issues that degrade the quality of plant operations or safety.

NRC INSPECTION MANUAL, Inspection Procedure 40500

Inspection Team Findings and Presentation Format:

- Problem Identification
- Root Cause Evaluations and Corrective Action Development
- Corrective Action Tracking and Trend Analysis
- Self Assessment
- Independent Oversight
- Employee Concerns Program Review
- Significant Items List Review
- Overall Summary

Problem Identification Review Scope

- Selected Condition Reports (Level 1, 2, and 3)
- Risk Significant Safety System Reviews (RBCCW, HPCI, AFW, and SW)
- Control Room Deficiencies
- Operability Determinations (ODs)
- Temporary Modifications
- Millstone Unit 3 Lessons Learned

Problem Identification Findings and Conclusion:

Licensee problem identification and processing via the Condition Report (CR) process was good.

- Low threshold and high volume of CR's initiated daily
- Appropriate assignment of Significance Level
- Appropriate reviews and screening (Operations and Multi-Discipline Management Review Team)

Problem Identification Observations:

- System walkdowns identified no problems not already identified for resolution
- Systems Engineers were knowledgeable
- OD's technically sound, with appropriate justifications for system operability
- Temporary Modifications adequately implemented
- Good use of Millstone Unit 3 restart lessons learned

- Two examples of Control Room Deficiencies that did not have CR's associated with them to address system operability impact.
(*Potential Violation - procedural non-compliance with Station Procedure RP-4*)
 - RBCCW system valve 2RB-210
 - CCP switches not remaining in the Pull-to-Lock (PTL) position

Root Cause Evaluations and Corrective Action Development Findings and Conclusions

Licensee root cause evaluations and assignment of corrective actions were generally good.

- Good agreement between the team's and licensee's R/C determinations
- Assignment of corrective actions generally appropriate

Opportunities for Improvement

- Application of the human performance enhancement system (HPES) processes was found to be under-utilized
- CR "Extent of Condition Reviews" (Form RP 4-1, Section 5.2) were sometimes found to be too narrowly focused
- The HPES coordinator was identified to have not independently reviewed all formal root cause evaluations.

Corrective Action Tracking and Trend Analysis

Corrective action tracking (Action Requests - AR's) via the Action Item Tracking and Trending System (AITTS) was found to be good.

- Daily Status Report "Opportunity Index"
- Individual assignment assess via personal computers

Trend Analysis by the Licensee was quite extensive

- Key Performance Indicators
- Corrective Action Dept. monthly and quarterly trend reports
- Specialty trend reporting
- Department Self Assessments

Departmental Self Assessments

The team found that the implementation and results of the department self assessments were generally good.

- Self-critical reviews performed by the Operations, Fire Protection, and Radiation Protection groups.
- Implementation of the Quality Review Board (QRB) by the Engineering department a good example of self assessment and appropriate corrective action.
- Some Unit 2 departments were not completing all of their quarterly self assessments per Self Assessment OA-11 guidelines. (*Opportunity for Improvement*)

Independent Oversight Review Scope

- Plant Operations Review Committee
- Station Operations Review Committee
- Station Management Review Team
- Nuclear Safety Assessment Board (NSAB)
- Nuclear Oversight Organization

Oversight Committees

The team observed that the review committees were generally effective in overseeing the unit activities and providing the unit staff and management with appropriate feedback.

- Good safety focus by each group
- High quality presentation standards enforced by the committees
- NSAB Safety Evaluation Sub-Committees very active (~40 meetings in 1998)
- NSAB observed challenging the Nuclear Oversight staff and Nuclear Oversight Verification Plan (NOVP).

Nuclear Oversight

The team identified that the Nuclear Oversight organization was very active and involved with the day-to-day operations of Unit 2, and provided good independent oversight and feedback to the line organization.

- Sampling of audits were found to be thorough
- Performance Evaluation group was very much "in touch" with the operations, maintenance, and radiation protection staffs.
- Nuclear Oversight was demonstrating a prominent role in the daily management meetings and actively engaged with the Nuclear Oversight Verification Plan (NOVP).

Analysis and Programs staff responsible for Operating Experience, Independent Safety Engineering Group, and Recovery Oversight were observed to have provided quality technical analysis and assessments.

- Thorough re-review of past Information Notices.
- Quality MOV and EQ program reviews for restart readiness.

Employees Concerns Program (ECP) Implementation

The team observed that the Millstone Employee Concerns Program was an effective vehicle for the acceptance and processing of problems and issues identified to the Program

- A sampling of ECP packages involving technical and nuclear safety issues were examined and found to have been appropriately processed and investigated; corrective actions were responsive to the concernee's issues.
- Recently, the majority of the issues identified to the ECP were human resource management and industrial relations issues.
- Review of licensee's recent survey of results and ECP performance indicators identified no material changes or trends.
- Team noted that when the "Rapid Resolution" process is used, there is no formal mechanism to ensure that an Action Request is entered in to the AITTS to provide follow-up once the CR has been closed.
(Opportunity for Improvement)

Significant Items List (SIL) Review and Closure

- SIL # 1 - Management Oversight and Effectiveness - Updated
- SIL # 5.2 - EEI 336/96-201-30 - Closed
- SIL # 11 - Quality Assurance and Oversight Program - Updated

Overall Summary

The 40500 Team concluded that the Unit 2 Corrective Action Program has been effective.

- low threshold for problem identification
- generally thorough root cause evaluations
- appropriate corrective action assignment and tracking
- generally self-critical and functional self assessment process
- active and involved Nuclear Oversight organization
- one item of procedural non-compliance and a number of opportunities for improvement noted.

Region I Management Oversight Observations and Remarks

Licensee Comments and Feedback