

November 20, 1998

Mr. M. L. Bowling, Recovery Officer - Technical Services
c/o Ms. P. A. Loftus, Director - Regulatory
Affairs for Millstone Station
NORTHEAST NUCLEAR ENERGY COMPANY
PO Box 128
Waterford, CT 06385

SUBJECT: RESTART ASSESSMENT PLAN

Dear Mr. Bowling:

This letter provides Revision 6 to the NRC's Millstone Restart Assessment Plan (RAP). Revision 5 to the RAP, sent to you in a letter dated September 4, 1998, closed out the restart assessment process for Units 1 and 3. This revision and future revisions to the RAP will apply only to Unit 2. Since the issuance of Revision 4 to the RAP on February 17, 1998, changes have been made to the Unit 2 Significant Items List and Licensing Issues Required for Restart of Unit 2. These changes are in Enclosures (1) and (3) to this RAP. In addition, the MC 0350 Restart Approval Checklist has been revised to eliminate references to the Special Projects Office and to include the Region 1 Regional Administrator. Although this RAP applies only to Unit 2, there are some references to Units 1 and 3 in order to maintain the proper perspective for the restart assessment process.

If you have any questions, please contact Mr. Wayne D. Lanning at 610-337-5126 or Mr. Jacque P. Durr at 610-337-5224.

Sincerely,

ORIGINAL SIGNED BY:

Wayne D. Lanning, Director
Millstone Inspection Directorate
Region I

Enclosure:
As stated

Docket No. 50-336

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RESTART ASSESSMENT PLAN
MILLSTONE STATION

ORIGINAL SIGNED BY:

APPROVED BY: _____

WAYNE D. LANNING, DIRECTOR, MILLSTONE INSPECTION DIRECTORATE, REGION 1

Date: 11/20/98

REVISION 6

MILLSTONE RESTART ASSESSMENT PLAN

1.0 BACKGROUND

1.1 HISTORICAL

The three Millstone units shut down to formulate responses to a series of 10 CFR 50.54 (f) letters requiring them to affirm their compliance with the conditions of each unit's license and the regulations. During May-June, 1996, the NRC performed a series of inspections at Units 2 and 3 with a 20 person Special Inspection Team (SIT) to ascertain the extent of their compliance. The licensee initially focused on Unit 3 as the lead plant for restart. However, as a result of a licensee reorganization which occurred on October 1, 1996, each Millstone unit was assigned a recovery manager who was an executive on temporary loan from another nuclear utility. Resources originally assigned to Unit 3 from the other units were returned to their respective units. Each unit has been tasked with establishing their own restart plan and whichever unit is ready will apply to restart first. Hence this restart assessment plan has been expanded to include Manual Chapter (MC) 0350 evaluations (see paragraph 3.0) for all three units.

On June 28, 1996, the Executive Director for Operations (EDO) issued a letter to the licensee that stated the Commission had decided to make the three Millstone units a Category 3 on the Watch List and would vote on the restart of the Millstone units. It is the intent to implement the appropriate aspects of NRC Manual Chapter 0350, "Staff Guidelines for Restart Approval" for the restart of all three units. The NRC will schedule and implement its inspection program after the licensee has indicated that the individual activities necessary for restart are complete and ready for inspection.

The NRC has been dealing with Northeast Utilities on broader performance issues which go beyond the 10 CFR 50.54(f) concerns. These broader concerns are considered contributory causes for the current poor performance, which the 10 CFR 50.54(f) issues are a subset. These issues have been formalized by the licensee in a program titled "Improving Station Performance" (ISP) and are topics that will be addressed by the licensee and reviewed by the NRC Millstone Restart Assessment Panel. A meeting was conducted on April 30, 1996, and disclosed that the licensee was not adequately managing the program or tracking progress.

The salient concerns embodied in the ISP include leadership, communications (employee concerns), the corrective action program, procedural adherence and procedure upgrades, work planning and control, and operational enhancements. The NRC Restart Assessment Plan will focus on the broader issues of the ISP and licensee self) assessments and management oversight, recognizing the necessity to ensure adequate closure of the 10 CFR 50.54(f) process. The NRC plan for inspection of the Improving Station Performance issues is discussed in more detail in Section 3 of this plan.

On November 3, 1996, the agency established the Special Projects Office (SPO) to

consolidate NRC efforts under a single Senior Executive Service (SES) manager, who reports to the Director of the Office of Nuclear Reactor Regulation (NRR). The Director, SPO assumed the authority and responsibilities of the Regional Administrator and the Associate Director of Projects.

1.2 CURRENT STATUS

Millstone Unit 2 is currently preparing for restart estimated to be sometime during 1999; Unit 1 is to be permanently shutdown; and, Unit 3 restarted June 29, 1998 and is currently operating at 100% power. Units 2 and 3 still remain on the NRC watchlist. The NRC's Special Projects Office has been eliminated and inspection activities, except for ICAVP inspections and Employee Concerns/ Safety Conscious Work Environment oversight, have been returned to NRC Region I. NRC ICAVP activities for Unit 2 will remain a separate NRR function until completion of Unit 2 restart. The Region 1 Regional Administrator has overall responsibility for the Millstone 2 restart oversight process.

2.0 10 CFR 50.54(f) Activities

2.1 HISTORICAL

Each Millstone unit was requested to submit information describing actions taken to ensure that future operations will be conducted in accordance with the terms and conditions of the operating license, the Commission's regulations, and the Final Safety Analysis Report. In a May 21, 1996, letter, the NRC requested Northeast Utilities (NU) to provide for each unit its plan for completing the licensing bases reviews.

To aid in NRC understanding of how deficiencies were identified and dispositioned, the NRC's May 21, 1996, letter also requested that NU provide for each Millstone unit a comprehensive list of design and configuration deficiencies and information related to how each deficiency was identified and would be dispositioned.

On August 14, 1996, the NRC issued a Confirmatory Order establishing an Independent Corrective Action Verification Program (ICAVP). The independent effort will verify the adequacy of NU's efforts to establish adequate design bases and design controls, including translation of the design bases into operating procedures and maintenance and testing practices, verification of system performance, and implementation of modifications since issuance of the initial facility operating licenses. The NRC oversight of the ICAVP and activities will be in addition to the activities described in this Restart Assessment Plan. The results from this program will be incorporated into this restart plan and considered a significant part of the decision regarding recommended restart.

2.2 CURRENT STATUS

The Unit 2 ICAVP is in progress and NRC ICAVP inspections are ongoing. The following inspections concerning configuration management have been performed at Unit 2:

- C 50-336/97-211 (ICAVP) performed August 25-29, September 2-5, and December 1-5, 1997
- C 50-336/98-202, (SSFI) performed March 2- April 3, 1998
- C 50-336/98-201, (ICAVP) performed April 13-May 8, 1998

Future ICAVP inspections will be performed to evaluate the adequacy of the Unit 2 configuration management.

3.0 Inspection Manual Chapter 0350 Process

3.0.1 HISTORICAL

Millstone Unit 1 entered a routine refueling outage on November 3, 1995. On December 13, 1995, the NRC sent a "Demand for Information Letter" (10 CFR 50.54(f)) requiring the licensee to certify compliance with the regulatory requirements before restarting the unit. At the January 1996 Senior Management Meeting, the site was placed on the "Watch List" for various reasons, including a concern for regulatory compliance. Subsequently, Millstone Units 2 and 3 were sent similar letters which required responses before restart.

The NRC Inspection Manual Chapter (MC) -0350, "Staff Guidelines For Restart Approval", provides guidelines and a list of tasks and activities that must be considered before a plant that has been shutdown for cause can restart. Because of NRC concerns relating to the licensee's management effectiveness, the appropriate aspects of MC 0350 will be applied to the restart of Units 1, 2, and 3 to ensure applicable requirements have been met.

3.02 CURRENT STATUS

The MC 0350 checklist has been completed for Unit 3; is no longer applicable to Unit 1; and is in its early stages for Unit 2 because of current plant status (core still fully off-loaded). Most checklist items concerning Unit 2 readiness are still open. Some responsibilities on the checklist have been changed due to the elimination of the Special Projects Office and the involvement of the Region 1 Regional Administrator. Unit 2 Core reload has been rescheduled several times due to emergent work. Closure of many MC 0350 items will depend on plant readiness, and the results of future NRC inspections including completion of ICAVP inspections, the Unit 2 OSTI and the 40500, Corrective Actions, inspection. The OSTI and the 40500 inspections for Unit 2 have been tentatively scheduled for the first quarter of 1999. Both Units 2 and 3 remain on the NRC watchlist.

3.1 SPECIAL PROJECTS OFFICE

3.1.1 HISTORICAL

The SPO was created on November 3, 1996, to oversee the restart of the Millstone units. The plan was to consolidate the NRC resources devoted to the restart efforts under one SES manager. The office is organized into three primary elements, licensing, inspection, and independent corrective action oversight. The Licensing Branch will administer the typical licensing actions performed in NRR; the Inspection Branch will implement the inspection programs, normally managed from the region, and the Independent Corrective Action Verification Program Oversight Branch will oversee the licensee's licensing and design bases review process.

Within the SPO, the Restart Assessment Panel (RAP) will meet to assess the licensee's performance and their progress in completing the designated restart activities. The RAP is composed of the Director, SPO (chairman); the Deputy Directors of Licensing, Inspections, and Independent Corrective Actions Verification Program Oversight; the Project Managers for the three Millstone units; the Inspection Branch Chief, the Senior Resident Inspectors for the three Millstone units, and the appointed Division of Reactor Safety representative. The function of the Millstone RAP is described in MC-0350.

3.1.2 CURRENT STATUS

In a staff requirements memorandum dated July 15, 1998, the Special Projects Office was eliminated. Responsibilities originally residing within SPO were reassigned various groups within NRR and Region I. Inspection activities, with the exception of ICAVP inspections, have been assigned to Millstone Inspection Staff under the Region I Office of the Regional Administrator. The ICAVP Project and Millstone Project Directorate are assigned to the Director of NRR. The three groups will still meet on a regular basis as the Restart Assessment Panel for Unit 2.

3.2 MILLSTONE OPERATIONAL READINESS PLAN

3.2.1 HISTORICAL

On July 2, 1996, NU submitted the Unit 3 Operational Readiness Plan, which was discussed at the July 24, 1996, meeting and updated at the August 19, 1996, meeting. However, the licensee has replaced all of the senior managers (President, Vice Presidents, and two of the three unit directors) in the recent past. With these replacements, the submitted plans for Unit 3 and the proposed plans for Units 1 and 2 are being changed substantially. The RAP will review these plans and hold periodic meetings with NU, open to the public, to discuss the schedule for implementation and coordination of NRC restart activities.

The deficiency lists associated with the restart plans for each unit, which will be

updated periodically by the licensee, includes restart and deferred items, and will be audited by the NRC to verify the acceptability of the criteria used to defer items from the restart list.

3.2.2 CURRENT STATUS

The NRC continues to hold meetings with the licensee which are open to the public to discuss restart activities. Since Unit 3 has been restarted, current meetings will emphasize the status of Unit 2. The NRC also holds periodic meetings directly with the public to obtain comments concerning the Millstone Restart Plan and to answer questions. The frequency of the public meetings has been reduced to quarterly or when milestone updates are appropriate.

In a letter dated October 21, 1997, Unit 2 provided to the NRC a second update to the post restart deferred items list. This list was reviewed by the NRC during an inspection performed between October 2 and November 30, 1997. The inspection concluded that Unit 2 had improved the review and approval process to provide assurance that the list would be complete and accurate. The improved process resulted in the list containing items that were appropriate for deferral and that the contents of the list had reflected a conservative decision making process. No deferred issues were identified, that if not corrected prior to plant restart, would result in a safety significant concern to plant operations. An inspection of the recent update submittals will be performed on or about early December.

Since the October 21, 1997, update of the deferred items list for Unit 2, two updates have been received by the NRC. These updates have not yet been reviewed by the NRC, but will be reviewed prior to any authorization for the Unit 2 restart.

3.3 CORRECTIVE ACTION PROGRAM

3.3.1 HISTORICAL

The NU corrective action program has been weak in ensuring comprehensive and effective corrective actions. There are many instances of narrowly focused corrective actions that failed to embrace all aspects of the underlying problem. Additionally, the licensee has failed to follow up on corrective actions to ensure they were effective. Consequently, the RAP has determined that any restart effort should examine the current state of the licensee's corrective action program. Because of the large number of Condition Reports (CR) [Note: CRs were previously called Adverse Condition Reports] being identified by the licensee's staff, the resident and regional inspection staff will concentrate on issues for each unit identified by the CR process and audit the licensee's corrective actions for completeness. The staff is periodically selecting CRs for review, based on the licensee's assigned level of importance, or their risk significance, as perceived by the resident staff. Additionally, other CR's will be examined to provide a spectrum of safety significant and lessor risk issues. These selected CR's will be added to the SIL for each unit, which are Enclosures 1, 2, and 3

to this plan. The intent is to primarily assess the corrective action program while dealing with the safety significant technical issues. Examination of the corrective action program needs to review the Action Requests (AR) from the Action Item Tracking and Trending System (AITTS) program, which is an extension of the CR process, and commitments regarding violations and inspection items. Further, a significant input to assessing the licensee's corrective action program is derived from the normal inspection program where valuable insights regarding the effectiveness of corrective actions are routinely collected from the technical safety inspections.

Additionally, the NRC Independent Corrective Action Verification Oversight Branch will assess the licensee's corrective actions for degraded and non-conforming conditions. Finally, the Operational Safety Team Inspection (OSTI) will audit portions of the corrective action process during the course of its activities.

Demonstration of improvements in the process will be judged by the completeness of the licensee's corrective actions for each of the inspected CRs. There must be a high ratio of successfully completed CR's to the total population inspected. There should only be minor comments regarding the processing, evaluation, directed corrective actions and closure of an issue.

3.3.2 CURRENT STATUS

The licensee's corrective action processes were significantly reviewed by the Unit 3 40500 and OSTI inspections. Although the emphasis in these inspections was for Unit 3, much of the licensee's corrective action system applies to Millstone Station in general. Based on these and other NRC inspections, SECY 98-090 concluded that the licensee's corrective action program was adequate to support the restart of Unit 3. 40500 and OSTI inspections will be performed for Unit 2 prior to restart to determine the effectiveness of the corrective action program specifically as it applies to Unit 2.

3.4 WORK PLANNING AND CONTROLS (C.4.)¹

3.4.1 HISTORICAL

Work planning and controls are other areas that the licensee has shown a weakness. The ability to plan, control, and complete work is fundamental to achieving adequate corrective actions. Effective work planning and controls are prerequisites for reducing and managing backlogs. Weak work planning and control were evident during the 1995 Unit 2 outage, wherein, tagging boundary violations resulted in an extensive effort by the licensee to correct. Work control and planning were also issues at Unit 1, which resulted in a management meeting.

There will be a complete review of the Automated Work Order (AWO) process by the

¹ Reference to applicable MC) 0350 section

resident or regional staffs. The automated work order process is an integral part of the work planning and control system and is instrumental in establishing the scope of the work, providing the appropriate procedures, and establishing the tagging boundaries. The OSTI will assess the engineering and maintenance backlogs during its operational readiness inspection and will determine if there are safety significant issues that must be resolved before restart.

3.4.2 CURRENT STATUS

The work control process at Unit 2 is the subject of ongoing routine inspections. An OSTI will be performed at Unit 2 as the unit nears restart. The OSTI, in part, will perform an in depth review of the Unit 2 work control process.

3.5 PROCEDURE UPGRADE PROGRAM (C.3.3.e)

3.5.1 HISTORICAL

The quality and adherence to procedures has been a chronic problem at the Millstone site. The issue was an element in "Improving Station Performance" and was one of the subjects of discussion at the periodic meetings between NU and the NRC. In response to NRC concerns, the licensee developed the Procedure Upgrade Program (PUP) in the early 1990's to improve station procedures.

The resident inspectors will relate procedural inspection findings back to the procedural upgrade program (PUP), identifying whether the procedures reviewed during the course of an inspection have been upgraded and characterize the quality of the document. This will provide an input for assessing the effectiveness of the licensee's PUP. The NRC staff will develop an inspection plan for examining selected portions of each unit's individual efforts.

3.5.2 CURRENT STATUS

The licensee has essentially completed the PUP for Unit 2. The NRC performed a series of inspections of the PUP starting in August, 1996, and ending in August, 1997. These inspections determined that the licensee had met most of its commitments made to the NRC in a June 4, 1992, letter, particularly in standardizing the format of station procedures and reducing the number of higher tiered procedures.

Programmatic inspections of the PUP apply to all Millstone units. NRC inspections of the technical adequacy of Millstone Unit 2 procedures as a result of the ICAVP process are ongoing. There is a backlog of procedure changes at Unit 2 identified externally to the PUP which are being driven by other processes in place such as the CMP process, procedure performance, biennial reviews, design changes and technical specification changes. Because of problems identified in the adequacy of surveillance tests during 1996 and early 1997, during the past year Unit 2 has performed a 100% review of Section 4 of their Technical specification to determine that all surveillance tests will

validate conformance to the TS. This process has been completed and surveillance tests are being revised to correct identified deficiencies. This process also reviewed conformance to the Unit 2 Technical Requirements Manual and to testing required by ASME Code Section XI, Pumps and Valves.

Procedures will be reviewed for adequacy by the ongoing NRC ICAVP Inspection Process and routine NRC inspections. The Unit 2 OSTI will provide the final determination as to the adequacy of Unit 2 procedures for restart.

3.6 OVERSIGHT (C.1.4)

3.6.1 HISTORICAL

The licensee has identified its oversight function as deficient through self) assessments and external and internal audits and as a contributing factor in the licensee's declining performance. The report of Assessment of Past Ineffectiveness of Independent Oversight by the Yankee Atomic Electric Company (YAEC), examined the failure of Quality Assessment Services, the Independent Safety Evaluation Group, and the Nuclear Review Board (NRB) to identify the deficient FSAR control process and the radioactive waste conditions. They found that management did not support these functions adequately.

Late in the restart process for each unit, there will be an inspection to evaluate the effectiveness of the oversight groups and management's utilization of the oversight process. There should be positive indications that the oversight function has been made an integral part of the licensee's management team assessment process. The oversight function should result in meaningful findings, have access to line management, and provide assessments of process and program effectiveness through periodic reports. There should be evidence that the reports are forwarded to the responsible manager and that they have dealt with the contents appropriately. Oversight should be adequately staffed with qualified and experienced personnel. The audit and surveillance programs need to be clearly defined, proceduralized, and implemented with established schedules.

3.6.2 CURRENT STATUS

Both the 40500 and OSTI inspections performed extensive reviews of the current function of the Nuclear Oversight organization. Both inspections determined that Nuclear Oversight is more effective than in the past and was more involved in day to day plant activities. Significant improvement has been made in this area since serious deficiencies were noted in an assessment performed in 1996 by a Joint Utilities Management Assessment. SECY 98-090, stated, in part, "...The NRC staff concludes that oversight is adequate to support the restart of Millstone Unit 3 based on (1) the reorganization and replacement of key managers within NNECO and specifically NOS; (2) the promulgation of improved management expectations; (3) the establishment of open communications between the line and NOS and within NOS; (4) the completion of

staffing and improved quality and training of the NOS staff; (5) development of a viable inspection and audit program; (6) demonstrated improvements in NOS problem identification and assurance that corrective actions are implemented; (7) improved performance of quality control inspectors; (8) credible performance by the safety committees; and (9) an effective self-assessment program.” Although the recent 40500 and OSTI inspections focused on Unit 3, many of the conclusions are applicable to Unit 2.

In addition, the Joint Utilities Management Assessment (JUMA) issued a critical report in its 1996 review, which concluded that the Quality Assurance (QA) program had not been effective in resolving identified problems, including those documented in previous QA internal and external assessments. The following and most recent JUMA, completing its on-site assessment in June 1998, determined that the Nuclear Oversight organization had improved in every area evaluated. However, the team noted that the transition from unit restart goals to station operational excellence required additional efforts to reinforce the gains made since 1996, particularly in the area of issue ownership, the emphasis on the overall site responsibility for quality, and the need for improvement in the response to numerous Condition Reports (CRs). These recent JUMA findings resulted in the issuance of four new CRs, covering such broad issues as “expectations, communication, teamwork and trust, and corrective action program implementation”, where continued improvements are expected.

Since the startup of Unit 3 in June 1998, the NOS has changed its NORVP assessment process to a Nuclear Oversight Verification Plan (NOVP) format, which incorporates a review of common site programs (e.g., security, EP, training) along with separate assessments of Unit 3 operations, Unit 2 restart, and Unit 1 maintenance. Recent NOVP reports have identified the need for improvements for some of the key issues affecting all three units, as well as the common site programs. The full scope of NOS activities, including the NOVP, appears directed toward focusing Millstone Station management attention to the areas impacting Unit 2 restart readiness and the achievement of operational excellence for overall station performance.

Recent routine inspection activities have observed that Nuclear Oversight has been very active in the monitoring of activities being performed at Unit 2. They have provided significant oversight through audits and surveillances of plant activities particularly in the area of readiness for fuel load. There is also a special oversight group which is monitoring the licensees overall readiness for plant restart. Oversight has been very active in its review and involvement in plant activities. As with Unit 3, 40500 and OSTI inspections will be performed at Unit 2 prior to restart.

3.7 ENFORCEMENT

3.7.1 HISTORICAL

Outstanding enforcement items will be reviewed by the resident inspectors to determine if any issues require closure before plant restart. The Agency is currently accumulating

escalated enforcement items concerning design bases issues which may require licensee response before recommending restart of each unit. There are also potential enforcement items that will result from the efforts of the Office of Investigations, the allegation process review group, the Office of the Inspector General, the Special Inspection Team, routine resident and regional inspection efforts, and the 10 CFR 2.026 petition process.

A Pre-decisional Enforcement Conference was held with the licensee on December 5, 1996, to discuss 64 individual apparent violations. The licensee did not contest any of the violations at the conference, and the staff is in the process of finalizing the enforcement package. Once enforcement actions have been taken, the NRC will evaluate the licensee's corrective action to those enforcement actions which are determined to impact restart of each unit. Subsequently, a \$2.1 million civil penalty was issued to NNECo on December 10, 1997, which included violations applicable to all three units.

3.7.2 CURRENT STATUS

No significant violations for Unit 2 have been identified in 1998 that would have been considered for escalated enforcement action. Twenty one Severity Level IV violations were identified and issued beginning in January through September 30, 1998. In the December 10, 1997, civil penalty, 24 violations were identified against Unit 2. As of October, 1998, 9 of the 24 civil penalty violations have been closed.

3.8 EMPLOYEE CONCERNS

3.8.1 HISTORICAL

The Millstone site has had a chronic problem in dealing effectively with employee concerns. These problems have been documented in several licensee assessments, audits, and internal task group studies. The NRC continues to receive an inordinate quantity of allegations from the staff at the Millstone site. The current series of 10 CFR 50.54(f) letters were initiated due to NRC concerns regarding design basis issues at Millstone, as well as an allegation, and a subsequent Millstone 10 CFR 2.206 petition, dealing with the Unit 1 spent fuel pool. The NRC has issued two enforcement actions for harassment and intimidation to NU in the past three years.

In a September 1996 report, "Millstone Independent Review Group Regarding Millstone Station and NRC Handling of Employee Concerns and Allegations," the NRC staff determined that, in general, an unhealthy work environment, which did not tolerate dissenting views and did not welcome nor promote a questioning attitude, has existed at the Millstone plants for the past several years. This poor environment resulted in repeated instances of discrimination and ineffective handling of employee concerns.

The NRC initiated two task groups to examine the Northeast Utilities handling of employee concerns, and the recent layoffs that affected several previous allegers. The task group examined NU's handling of employee concerns and identified a number of root causes for the licensee's problems in this area. The task group also concluded that past problems and their root causes still remain. The output from these two task groups and the licensee's response to the order will be reviewed for restart issues.

On October 24, 1996, the director, Office of Nuclear Reactor Regulation (NRR), issued an Order to Northeast Nuclear Energy Company (NNECO) requiring specific actions to resolve problems in the process for handling employee safety concerns at the Millstone station. The Order required NNECO to develop, submit for NRC review, and implement a comprehensive plan for (a) reviewing and dispositioning safety issues raised by its employees, and (b) ensuring that employees who raise safety concerns can do so without fear of retaliation. On January 31, 1997, NNECO submitted the plan to the NRC and began implementation of elements of the Plan.

The Order further required NNECO to submit, for NRC approval, a proposed independent, third-party oversight program (ITPOP) organization, to oversee implementation of NNECO's Plan. On December 23, 1996, NNECO submitted the proposed third-party organization, Little Harbor Consultants, Inc. (LHC), to the NRC. On April 7, 1997, the NRC approved LHC as the third-party organization. The Order specified that once approved, the third-party organization develops and submits for NRC approval an oversight plan for conduct of their activities. On May 2, 1997, LHC submitted the third-party oversight plan to the NRC for approval. On July 15, 1997, the NRC reviewed and approved the ITPOP oversight plan. As specified in the Order, independent, third-party oversight will continue to be implemented until NNECO

demonstrates, by its performance, that the conditions which led to the requirements of the oversight have been corrected.

The effectiveness of NNECO programs and program implementation associated with fostering and maintaining a SCWE and for handling employee safety concerns will be assessed by NRC staff relying substantially on the findings of ITPOP's oversight activities. Staff will direct its limited resources to evaluation of a sample of NNECO programs and activities and on review of ITPOP oversight activities. This approach will provide the staff with independent assessment of the effectiveness of NNECO programs as well as establishing confidence in ITPOP's findings.

3.8.2 CURRENT STATUS

The NRC has made an interim evaluation of Millstone's current program of evaluating employee concerns and maintaining a safety conscious work environment (SCWE). SECY 98-090 documents the final NRC conclusions in this area and applies to all three units. Unless emerging issues arise, this area is closed for all three units. SECY 98-090 states, in part, the following: "...Based on review of documentation, monitoring of NNECO activities, NRC team [inspection] evaluations, and consideration of LHC findings, the NRC concludes that the NNECO's ECP and SCWE are established and functioning effectively at Millstone. Employee concerns are prioritized based on safety significance, identities are protected, case resolution is timely and there is appropriate follow-up on corrective action adequacy. Further, significant improvements have been made in the training provided the employees and contractors regarding SCWE and ECP...The staff also considers that NNECO has developed adequate plans, following restart of a unit, for monitoring the sites safety environment...The staff notes that in accordance with the October 24, 1996, Order, the independent third party oversight organization will continue at Millstone until the licensee demonstrates by its performance that the conditions, which led to the requirement of the oversight, have been corrected to the satisfaction of the NRC..."

The NRC has performed an evaluation, 50-245/98-215, for ECP and SWCE during August 1998. Another evaluation was completed during October 1998. The results of this evaluation are under NRC management review to determine if the "Order Requiring Third Party Order Oversight of Northeast Nuclear Energy Company's Implementation of the Millstone Station Employee's Safety Concerns Issues" dated October 24, 1996, can be lifted.

3.9 SIGNIFICANT ITEMS LIST

3.9.1 HISTORICAL

The technique to be used for the restart will be to reach agreement with the licensee on its restart issues list, have it impose controls on adding or deferring items from the list, have the resident inspectors review the list to ensure it includes issues of interest to the NRC, and have the residents review the deferred list to ensure appropriate rationales for deferral have been documented (see item B.4.3. of MC 0350). As a result of the 10 CFR 50.54(f) activities, the licensee initially determined that, for all three Millstone units, hundreds of items did not meet criteria for inclusion as a restart item. The resident inspectors, augmented by headquarters staff, are reviewing these lists periodically and confirming that the licensee is performing an adequate assessment of the discrepancies. This process will be used in the restart assessment of each unit. The RAP will determine that licensee's restart issues list includes appropriate restart items from the licensee's programs such as ACR, AR (AITTS), engineering work requests, and commitments.

The enclosed NRC Significant Items Lists for all Millstone units (Enclosures 1, 2 and 3) contain some of the items that are being used to audit and evaluate licensee programs (e.g., the corrective action process) and significant safety/regulatory technical issues.

Restart issues on the NRC's Significant Items List will meet at least one of the following criteria:

1. Resolution of the issue is required to ensure safe operation of the facility to include satisfaction of the technical specifications or licensing basis.
2. Inspection of the issue will provide an insight to an identified programmatic deficiency such as the corrective action system.
3. Inspection of the issue will provide assessment of management effectiveness or personnel performance.

3.9.2 CURRENT STATUS

Because of licensee attention to the restart of Unit 3, only limited licensee and NRC resources were applied to Unit 2. Major emphasis was placed on the Configuration Management Program process but lesser emphasis was placed on Unit 2 plant readiness. The Unit 2 SIL consists of 54 items which incorporate 75 separate issue closure packages and 8 issues which require no closure packages. The most recent SIL update is enclosed as Attachment (1) to the RAP.

3.10 POWER ASCENSION INSPECTION

3.10.1 HISTORICAL

Selected portions of NRC MC-93802, "Operational Safety Team Inspection," will provide the framework for a team inspection of each unit during the restart process. The procedure scope will be modified to address the pertinent issues at Millstone. The inspection will cover self-assessments by the licensee, the licensee's implementation of its startup plan, control room observations during the approach to criticality and power ascension, selected systems readiness inspection and observation of management oversight.

The resident inspectors will provide close monitoring of each unit during mode changes to ensure compliance with each unit's technical specifications and FSAR design bases.

3.10.2 CURRENT STATUS

Unit 2 has not reloaded fuel. Heat up and restart has not yet been scheduled by the licensee. The NRC has not yet drafted an inspection plan for Unit 2, but the inspection plan will be similar to the inspection used for the startup of Unit 3. In addition, the OSTI will be used evaluate Unit 2 readiness for restart.

3.11 PLANT PERFORMANCE REVIEW

The Restart Assessment Panel performs Plant Performances Reviews (PPRs) semi-annually. Two reviews were conducted, on March 19 and November 18, 1997. These PPRs were used to identify issues that need to be inspected at Millstone Station based on licensee performance. These reviews identified several issues that warrant NRC inspection before plant restart of Unit 3. Unit specific issues as well as station wide issues identified by the March 19, 1997, PPR, are contained in the SIL for each Unit as inspection items.

PPRs for Millstone were suspended for all units starting in October, 1997. The reason was the continuous NRC management oversight by the Special Projects Office. The PPR remains suspended for Unit 2 until after restart. All though the SPO has been eliminated, special oversight is still in place as required by the July 27, 1998, SRM. The joint NRR and Region I Millstone oversight group still meets frequently as the Restart Assessment Panel (RAP). The RAP management will continue to frequently brief NRC senior management and the Commission on Millstone Unit 2 status obviating the need for a redundant PPR.

3.12 LICENSING ISSUES

Millstone Unit 2 has periodically submitted licensing issues (amendments, unresolved safety questions, relief requests, etc.) which will impact the restart process. The status of NRR actions concerning each issue is documented in Enclosure (3) of this plan. Licensing actions required for Unit 2 must be resolved prior to the restart to Unit 2.

Enclosures:

- (1) Significant Items List - Millstone Unit 2
- (2) MC-0350 - Restart Approval Checklist - Millstone Unit 2
- (3) Licensing Issues Required for Restart of Millstone Unit 2

MILLSTONE RESTART ASSESSMENT PLAN ENCLOSURE (1)

Millstone Unit 2 Significant Items List

The following is a list of the Millstone issues that, as a minimum, require an NRC inspection and evaluation prior to restart.

	REFERENCE	MILLSTONE UNIT 2 INSPECTION ITEM	RESP	STATUS
1	MC 0350 SECTION C.1.3, C.2.1, C.2.2.a,d,e, C.3.1,a,b,c,d	MANAGEMENT OVERSIGHT AND EFFECTIVENESS; LICENSEE STAFF SAFETY CULTURE	INSP, 40500, OSTI	
2	MC 0350 SECTION C.1.1, C.1.3, C.1.4.g, C.3.2, C.4.f; CONFIRMATORY ORDER DATED 08/14/96	50.54(f)/ICAVP (PHASE I and II) FSAR UPDATES 10 CFR 50.59 PROCESS CONFIGURATION MANAGEMENT/DESIGN CONTROL PROCESS (PART OF ICAVP PHASE I)	ICAVP, INSP, PROJ	UPDATED IR 98-201 IR 98-202 IR 98-208
3	MC 0350 SECTION C.1.1 AND C.1.3; C.2.2.d; UNIT 1 ACR 7007; UNIT 2 ACR 8761	DESIGN CONTROL PROCESS CHANGES TO ADDRESS UNIT 1 ACR 7007 NUMEROUS EXAMPLES OF DRAWINGS NOT REFLECTING ACTUAL PLANT CONFIGURATION	ICAVP	UPDATED IR 98-201 IR 98-202 IR 98-208
4	MC 0350 ITEM C.1.4.e, C.2.2.b,e; CONFIRMATORY ORDER DATED OCTOBER 24, 1996	LICENSEE HANDLING OF CONCERNS RAISED BY EMPLOYEES ! EMPLOYEE CONCERNS PROGRAM IMPROVEMENTS ! SCWE IMPROVEMENTS	PROJ	UPDATED IR 98-210
5	MC 0350 SECTION C.1.1, C.1.3, C.1.4.d-l, C.2.1, C.2.2.c,e, C.3.1.d,m; C.4.f; IR 336/96-04 & 08 EEI 336/96-201-30	CORRECTIVE ACTION PROGRAM EFFECTIVENESS SELF-ASSESSMENT PROGRAM IMPLEMENTATION AND EFFECTIVENESS; COMMITMENT TRACKING	INSP, 40500	
6	MC 0350 ITEMS C.2.2.d, C.4.e,f,h,i,j	WORK PLANNING AND CONTROL: PLANT MAINTENANCE PROGRAM EFFECTIVENESS; SIGNIFICANT HARDWARE ISSUES RESOLVED; MAINTENANCE BACKLOG MANAGED AND IMPACT ON OPERATION ASSESSED; SURVEILLANCE TESTING; PLANT HOUSEKEEPING	INSP, OSTI	UPDATED IR 97-207
7	MC 0350 ITEMS C.1.3.f, C.2.1.e, C.3.2.e, C.4.f,i;	BYPASS JUMPERS, OPERATOR WORK-AROUNDS & CONTROL BOARD DEFICIENCIES	INSP, OSTI	

	REFERENCE	MILLSTONE UNIT 2 INSPECTION ITEM	RESP	STATUS
8	MC 0350 ITEMS C.2.1.b, C.2.2.d, C.3.1.k, C.3.3.e,f; IFI 336/95-201-03; URI 336/96-01-04; URI 336/96-06-08 NU LETTER B16257 EEI 336/97-02-12	PROCEDURE ADEQUACY/PROCEDURE UPGRADE PROGRAM PROCEDURE CLASSIFICATION - GENERAL USE VERSUS CONTINUOUS USE LOSS OF DC BUS EVENT - ESTABLISH PROCEDURES REQUIRED BY TECHNICAL SPECIFICATION 6.8.1 SHUTDOWN COOLING SYSTEM WATER HAMMER; REVIEW OPERATING PROCEDURES TO PRECLUDE WATER HAMMER EVENTS SURVEILLANCE PROCEDURE ADEQUACY	INSP, OSTI, ICAVP	UPDATED IR 97-202 IR 97-203 IR 97-207 IR 98-207 IR 98-212
9	MC 0350 ITEMS C.1.4.g, C.2.2.g, C.3.3.e,f; EEI 336/96-08-13, EEI 336/96-06-05, EEI 336/96-08-06, LER 336/97-02; ACR 11104	OPERATING PROCEDURES CONSISTENT WITH FSAR DESCRIPTION OF SYSTEM OPERATION ADEQUACY OF PROCEDURE CHANGE PROCESS TO ENSURE OPERATION IN ACCORDANCE WITH LICENSE	INSP, ICAVP	UPDATED IR 97-02 IR 98-201 IR 98-202 IR 98-206 IR 98-207 IR 98-208
10	MC 0350 ITEMS C.2.1.g, C.3.3.e,f; IR 336/95-21	PROGRESS OF EMERGENCY OPERATING PROCEDURE UPGRADES; ACCEPTABILITY OF DEFERRING ABNORMAL OPERATING PROCEDURE UPGRADES	DRS(OL)	UPDATED IR 97-203
11	MC 0350 ITEMS C.1.4.a,b,c, C.2.1.c	QUALITY ASSURANCE AND OVERSIGHT PROGRAM	INSP, 40500	
12	MC 0350 SECTION C.1.1 C.1.3, C.1.4.e, C.2.1.f-g, C.4.f,i	LICENSEE RESTART PUNCH LIST - REVIEW OF ITEMS DEFERRED UNTIL AFTER RESTART	INSP	UPDATED IR 97-207
13	MC 0350 ITEMS C.3.1.g,h,i,j,l, C.3.3.a,b,d,g	LICENSED OPERATOR STAFFING; CONTROL ROOM FORMALITY; ATTENTIVENESS TO DUTY; ATTENTION TO DETAIL; OFF-HOUR PLANT STAFFING; OVERTIME USAGE; AWARENESS TO PLANT SECURITY; AWARENESS OF EQUIPMENT STATUS; LOG KEEPING PRACTICES;	INSP, OSTI	

	REFERENCE	MILLSTONE UNIT 2 INSPECTION ITEM	RESP	STATUS
14	MC 0350 ITEMS C.3.1.e, C.3.3.c; CONFIRMATORY ACTION LETTER DATED MARCH 7, 1997; URI 336/97-01-03	OPERATOR LICENSING AND TRAINING	DRS(OL)	
15	MC 0350 ITEMS C.4.a,b,c,d,e,g	AUGMENTED INSPECTION COVERAGE DURING RESTART INSPECTION: OPERABILITY OF TECHNICAL SPECIFICATION SYSTEMS; OPERABILITY OF SECONDARY AND SUPPORT SYSTEMS; SYSTEM LINEUPS; RESULTS OF PRE-STARTUP TESTING; POWER ASCENSION TESTING	INSP, OSTI	
16	MC 0350 ITEMS C.2.2.g-h, C.3.1.m, C.3.2.h; NU LETTER (B16195) DATED FEBRUARY 10, 1997	EMERGENCY PREPAREDNESS PROGRAM (INCLUDING ORGANIZATION/STAFFING/DOSE ASSESSMENT CAPABILITY)	DRS(EP)	CLOSED IR 96-06 IR 97-202 IR 98-208
17	MC 0350 SECTION C.5 AND C.6	DISPOSITION OF REGULATORY ISSUES: LICENSE AMENDMENTS; EXEMPTIONS; RELIEFS; ORDERS; SIGNIFICANT ENFORCEMENT ISSUES; ALLEGATIONS; AND 10 CFR 2.206 PETITIONS. COORDINATION WITH INTERESTED AGENCIES AND PARTIES.	NRR, PROJ, OE, OI, DRS, OPA	
18	ACRs 02621, M2-96-0239 EEI 336/96-201-42 & 43	MATERIAL, EQUIPMENT AND PARTS LIST (MEPL) PROGRAM	INSP	UPDATED IR 97-202 IR 97-203 IR 97-208 IR 98-207 IR 98-212
19	ACRs M2-96-0515 & 07958; EEI 336/96-06-12, EEI 336/96-201-20, URI 336/93-19-02 LER 336/97-31	EQUIPMENT ENVIRONMENTAL QUALIFICATION (EEQ) PROGRAM HIGH ENERGY LINE BREAK PROGRAM	ICAVP DRS(EEB) INSP	UPDATED IR 97-203 IR 98-212

	REFERENCE	MILLSTONE UNIT 2 INSPECTION ITEM	RESP	STATUS
20	IFI 336/95-01-01 EEI 336/96-05-11 EEI 336/96-05-09 EEI 336/95-08-01, 03 & 04 LER 336/97-34	MOTOR OPERATED VALVES (GENERIC LETTER 89-10) INACCURATE INFORMATION PROVIDED TO THE NRC REGARDING GENERIC LETTER 89-10; DYNAMIC TESTING OF AFW TERRY TURBINE STEAM ADMISSION MOV; PRESSURE LOCKING OF CONTAINMENT SUMP RECIRCULATION VALVES	DRS(SEB)	UPDATED IR 97-203
21	MC 0350 ITEM C.3.3.e; IR 336/96-08; LICENSEE SELF-ASSESSMENTS AND QA AUDITS; ACR M2-96-0460	FIRE PROTECTION/APPENDIX R PROGRAMS APPENDIX R RELATED ABNORMAL OPERATING PROCEDURES; APPENDIX R COMPLIANCE ASSOCIATED WITH THERMO-LAG	DRS(EEB)	
22	ACRs M2-96-0513; EEI 336/96-06-11 URI 336/96-06-10	CONTAINMENT SUMP SCREEN MESH SIZE & ECCS PUMP THROTTLE VALVE CLOGGING	DRS(SEB)	CLOSED IR 97-203 IR 98-207
23	ACRs 01991, M2-96-0449, 0467, 0654, 0655, & 0656; EEI 336/96-08-11, 12 & 13, EEI 336/96-201-03 & 41, URI 336/96-01-05 URI 336/90-18-05	HYDROGEN MONITORS AND POST-ACCIDENT SAMPLING SYSTEM (PASS) INOPERABLE AND FAILURE TO MEET DESIGN BASIS AND LICENSING BASIS CORRECTIVE ACTIONS TO DEVELOP A REPRESENTATIVE TOTAL GAS SAMPLE USING PASS	INSP DRS(EP)	
24	ACRs 08174, 04047, 06372 & 09739; URI 336/95-42-03	EXCESSIVE REACTOR COOLANT SYSTEM HEATUP AND COOLDOWN RATES; EVALUATION OF SIMULTANEOUS REACTOR COOLANT PUMP AND SHUTDOWN COOLING SYSTEM OPERATION	INSP	
25	NUMEROUS ACRs; URI 336/96-06-08	ECCS PUMPS SUCTION LINE FROM RWST HAS NUMEROUS DEGRADED OR INOPERABLE PIPE SUPPORTS, MANY CAUSED BY WATER HAMMER	INSP	UPDATED IR 97-203
26	ACR 11252; EEI 336/96-09-10	"B" EMERGENCY DIESEL GENERATOR FAILURE - INADEQUATE CORRECTIVE ACTIONS	INSP	CLOSED IR 97-02 IR 97-203 IR 98-207
27	EEI 336/96-201-09	INADEQUATE DESIGN CONTROL MEASURES FOR VERIFYING ACCURACY OF INFORMATION CONTAINED IN DESIGN BASIS DOCUMENT PACKAGES	ICAVP	

	REFERENCE	MILLSTONE UNIT 2 INSPECTION ITEM	RESP	STATUS
28	EEI 336/96-201-11, EEI 336/96-201-31	FAILURE TO ADEQUATELY CONTROL INSTALLATION OF TEMPORARY MODIFICATION TO THE RBCCW SURGE TANK	INSP	CLOSED IR 97-203 IR 98-212
29	EEI 336/96-201-12	SEPARATION AND SINGLE FAILURE CONCERNS FOR WIDE RANGE NUCLEAR INSTRUMENTS	INSP	CLOSED IR 97-203 IR 98-207
30	EEI 336/96-201-25	FAILURE TO IMPLEMENT CORRECTIVE ACTIONS CONCERNING "DUAL-FUNCTION" ISOLATION VALVES	INSP	UPDATED IR 97-202
31	EEI 336/96-201-28	FAILURE TO ADDRESS STATION BLACKOUT ISSUES IDENTIFIED IN THE VECTRA ASSESSMENT	INSP	UPDATED IR 97-203
32	EEI 336/96-201-29	FAILURE TO IMPLEMENT CORRECTIVE ACTIONS FOR AUDIT ISSUES INVOLVING TRENDING AND PRIORITIZATION OF NON-CONFORMANCE REPORTS	INSP	CLOSED IR 97-02 IR 97-207 IR 98-207
33	EEI 336/96-201-36	INADEQUATE CORRECTIVE ACTION CONCERNING A SEISMIC DESIGN DEFICIENCY OF A VITAL SWITCHGEAR ROOM COOLER	DRS (CMME)	CLOSED IR 97-202 IR 97-203 IR 98-207
34	EEI 336/96-08-06	IMPLEMENTATION OF CORRECTIVE ACTION OF CHANGING OPERATING PROCEDURE TO LOCK OPEN REFUELING POOL DRAIN VALVES, AS SPECIFIED IN THE FSAR, WAS INADEQUATE	INSP	CLOSED IR 97-02 IR 97-203 IR 98-207
35	EEI 336/96-08-08	INADEQUATE CORRECTIVE ACTION IN LER 336/96-24	INSP	CLOSED IR 97-203 IR 98-207
36	EEI 336/96-08-10	INADEQUATE CORRECTIVE ACTIONS TO ADDRESS UNIT 1 HEAVY LOADS LIFTED OVER THE UNIT 2 VITAL SWITCHGEAR ROOM	INSP	CLOSED IR 97-02 IR 97-203 IR 98-207
37	EEI 336/95-44-05	ICE BLOCKAGE OF SERVICE WATER STRAINER BACKWASH LINE	INSP	
38	URI 336/96-05-11 (IFS NO. URI 336/96-05-17)	SPENT FUEL POOL FSAR UPDATES	INSP	CLOSED IR 97-02

	REFERENCE	MILLSTONE UNIT 2 INSPECTION ITEM	RESP	STATUS
39	EEI 336/96-04-10 URI 336/96-201-38	ERRONEOUS RBCCW FLOW VALUES IN CONTAINMENT TEMPERATURE PROFILE ANALYSIS FAILURE TO CONSIDER POST-ACCIDENT FLUID TEMPERATURE IN HPSI FLOW EVALUATION	INSP	
40	LER 336/96-31	POTENTIAL STEAM GENERATOR OVERPRESSURE DUE TO RESTRICTIVE MAIN STEAM SAFETY PIPING	INSP	CLOSED IR 98-212
41	ACR M2-97-0023	SEIMANS COMPUTER MODEL OF REACTOR CORE FOLLOWING LARGE AND SMALL BREAK LOSS OF COOLANT ACCIDENTS	NRR	CLOSED NRC LETTER DATED 07/23/97
42	IR 336/94-201 (IFS NO. IFI 336/94-201-90)	EMERGENCY DIESEL GENERATOR FUEL DAY TANK DOES NOT SATISFY 7-DAY DESIGN BASIS CAPACITY	PROJ, INSP	UPDATED IR 98-207
43	URI 336/96-08-14 LER 336/96-29	INAPPROPRIATE REMOVAL OF STARTUP RATE TRIP	INSP	CLOSED IR 96-08 IR 97-207
44	ACR 02797, ACR 09563, ACR M2-96-0153; LER 336/97-06	POTENTIAL TO EXCEED CONTAINMENT DESIGN PRESSURE FOLLOWING A MAIN STEAM LINE BREAK	INSP	
45	ACR M2-96-0296	FAILURE OF MAIN STEAM CHECK VALVE FOLLOWING A MAIN STEAM LINE BREAK (MSLB) COULD CAUSE BOTH STEAM GENERATORS TO BLOW DOWN RESULTING IN EXCEEDING CONTAINMENT DESIGN PRESSURE. THE LICENSEE'S MEPL PROGRAM DESIGNATES THE MS CHECK VALVES AS NON-QA WHICH THE LICENSEE HAS EVALUATED AS ACCEPTABLE.	INSP	CLOSED IR 97-202
46	LER 336/97-02	CONTROL ROOM AIR CONDITIONING COMMON INLET DAMPER COULD BECOME STUCK CLOSED, DISABLING BOTH FACILITIES. DAMPER HAS NO MANUAL OPERATOR AS STATED IN FSAR.	INSP	
47	URI 336/96-08-09, LER 336/96-24	REACTOR PROTECTION SYSTEM AND ENGINEERED SAFETY FEATURE RESPONSE TIME TESTING	INSP	
48	ACR M2-96-0542	TECHNICAL SPECIFICATION LIMITS FOR INOPERABLE MAIN STEAM SAFETY VALVES NON-CONSERVATIVE	INSP	CLOSED IR 98-212

	REFERENCE	MILLSTONE UNIT 2 INSPECTION ITEM	RESP	STATUS
49	LER 336/96-30, LER 336/97-05 CR M2-97-0491 & 1229	INSERVICE INSPECTION/INSERVICE TESTING PROGRAMS	DRS (CMME)	UPDATED IR 96-06 IR 96-08
50		CONTROL/USE OF VENDOR INFORMATION	INSP	UPDATED IR 97-203 IR 98-208
51	IR 336/95-29	SERVICE WATER SYSTEM OPERATIONAL PERFORMANCE INSPECTION (SWSOPI) FOLLOWUP	DRS(SEB)	
52	LER 336/97-33	ENGINEERED SAFEGUARDS ACTUATION SYSTEM INOPERABLE DUE TO IMPROPERLY SIZED POWER SUPPLY FUSES	INSP	
53	LER 336/98-02	THE EMERGENCY CORE COOLING SYSTEM (ECCS) DESIGN DID NOT ADEQUATELY ADDRESS A LOSS OF COOLANT ACCIDENT (LOCA) COINCIDENT WITH THE LOSS OF EITHER DIRECT CURRENT (DC) BUS OR ALTERNATING CURRENT (AC) BUS.	INSP	
54	LER 336/98-09	LARGE BREAK LOSS OF COOLANT ANALYSIS INDICATES PEAK CLAD TEMPERATURE COULD EXCEED 2200 DEGREES F.	PROJ	

MILLSTONE RESTART ASSESSMENT PLAN

ENCLOSURE (2)

MILLSTONE UNIT 2 - MC 0350 RESTART APPROVAL CHECKLIST

The following items are considered applicable to the restart of Millstone Units 2:

RESPONSIBILITIES AND AUTHORITIES

		NEED	STATUS	RESP
4.01	<u>Regional Administrator, Region 1.</u> Notifies the Executive Director for Operations (EDO) and the Commission, as appropriate, of the NRC actions taken concerning shutdown plants and the proposed followup plan.	X	C	RA
4.02	<u>Regional Administrator, Region 1.</u>	X	C	RA
	a. Discusses with the Deputy Executive Director for Nuclear Reactor Regulation, Regional Operations and Research, the Office of Enforcement (OE), and NRR, as appropriate, the need for an order or confirmatory action letter (CAL) specifying the actions required of the licensee to receive NRC approval to restart the plant and the proposed followup plan.	X	C	RA
	b. Decides, in consultation with the NRR Associate Director for Projects, whether this manual chapter applies to a specific reactor restart.	X	C	RA
	c. In coordination with the NRR Associate Director for Projects, decides whether to establish a Restart Panel.	X	C	RA
	d. Develops a written Restart Assessment Plan, including a case-specific checklist, to assign responsibilities and schedules for restart actions and interactions with the licensee and outside organizations.	X	C	RAP

		NEED	STATUS	RESP
	e. Coordinates and implements those actions prescribed in the Restart Assessment Plan that have been determined to be the Office of Special Project's responsibility. These include, when appropriate, interactions with State and local agencies and with regional offices of Federal agencies.	X		RAP
	f. In conjunction with NRR, reviews and determines the acceptability of licensee's action program.	X		RAP SRI OSTI NRR (L)
	g. Approves restart of the shutdown plant, following consultation with the EDO and the Director of NRR, and approval/vote by the Commission.	X		RA
4.03	Regional Administrator, Region 1			
	a. Acts as the focal point for discussions within NRR to establish the appropriate followup actions for a plant that has been shut down.	X		RA
4.04	Director, Licensing			
	a. Coordinates participation in followup conference calls and management discussions to ensure that the Regional Administrator is directly involved, when appropriate, in followup action.	X		NRR (L)
	b. Coordinates and implements actions prescribed in the Restart Assessment Plan that have been determined to be Licensing's responsibility. These include, where applicable, appropriate NRC Office or NRR Division interaction with other Federal agencies (e.g., Federal Emergency Management Agency (FEMA), Department of Justice (DOJ)) pursuant to any applicable Memoranda of Understanding.	X		NRR

		NEED	STATUS	RESP
B.1	<p>INITIAL NRC RESPONSE</p> <p>The facts, the causes, and their apparent impacts should be established early in the process. This information will assist the NRC in characterizing the problems, the safety significance, and the regulatory issues. Early management appraisal of the situation is also important to ensure the proper immediate actions are taken. The following items should have been completed or should be incorporated into the CSC as appropriate. Refer to Section 5.02 of this manual chapter for additional information.</p>	NA		
	a. Initial notification and NRC management discussion of known facts and issues	NA		
	b. Identify/implement additional inspections (i.e. AIT, IIT, or Special) (Region).	NA		
	c. Determine need for formal regulatory response (i.e. order or CAL).	NA		
	d. Identify other parties involved (i.e., NRC Organizations, other Federal agencies, industry organizations).	NA		

		NEED	STATUS	RESP
B.2	<p>NOTIFICATIONS</p> <p>Initial notification of the event quickly communicates NRC's understanding of the event and its immediate response to the parties having an interest in the event. Notification to regional and headquarters offices of cognizant Federal agencies may be appropriate. As the review process continues, additional and continuing notifications may be required.</p>	NA		
	a. Issue Daily and Directors Highlight (NRR).	NA		
	b. Issue preliminary notification (Region).	NA		
	c. Conduct Commissioner assistants' briefing.	NA		
	d. Issue Commission paper (NRR).	NA		
	e. Cognizant Federal agencies notified (i.e., FEMA, EPA, DOJ).	NA		
	f. State and local officials notified (Region).	NA		
	g. Congressional notification (NRR)	NA		
B.3	<p><u>ESTABLISH AND ORGANIZE THE NRC REVIEW PROCESS</u></p>			
	a. Establish the Restart Panel.	X	C	RAP
	b. Assess available information (i.e. inspection results, licensee self-assessments, industry reviews).	X	C	RAP
	c. Obtain input from involved parties both within NRC and other Federal agencies such as FEMA, EPA, DOJ.	X		RAP RA
	d. Conduct RA briefing.	X	C	RAP
	e. Conduct NRR Executive Team briefing (NRR).	X	C	RAP
	f. If required, develop the case-specific checklist (CSC).	X	C	RAP
	g. Develop the Restart Assessment Plan.	X	C	RAP

		NEED	STATUS	RESP
	h. Director, Inspections approves Restart Assessment Plan.	X	C	R1
	i. NRR Director approves Restart Assessment Plan.	X	C	DNRR
	j. Implement Restart Assessment Plan.	X		RAP
	k. Modify order as necessary	X		NRR
B.4	REVIEW IMPLEMENTATION			
B.4.1	<u>Root Causes and Corrective Actions</u>			OSTI RAP
	a. Evaluate findings of the special team inspection.	X		
	b. Licensee performs root cause analysis and develops corrective action plan for root causes.	X		NU OSTI 40500
	c. NRC evaluates licensee's root cause determination and corrective action plan.	X		RAP OSTI 40500

		NEED	STATUS	RESP
B.4.2	<p><u>B.4.2 Assessment of Equipment Damage</u></p> <p>For events where equipment damage occurs, a thorough assessment of the extent of damage is necessary. A root cause determination will be necessary if the damage was the result of an internal event. The need for independent NRC assessment should be considered. The licensee will need to determine corrective actions to repair, test, inspect, and/or analyze affected systems and equipment. These actions are required to restore or verify that the equipment will perform to design requirements. Equipment modifications may also be required to ensure performance to design requirements.</p> <p>Potential offsite emergency response impact for external events such as natural disasters, explosions, or riots should be considered. NRR should obtain information from FEMA headquarters reaffirming the adequacy of State and local offsite emergency plans and preparedness if an event raises reasonable doubts about emergency response capability.</p>	NA		
	a. Licensee assesses damage to systems and components.	NA		
	b. NRC evaluates licensee damage assessment.	NA		
	c. Licensee determines corrective actions.	NA		
	d. NRC evaluates corrective actions.	NA		
B.4.3	<p><u>Determine Restart Issues and Resolution</u></p> <p>The establishment of the restart issues that require resolution before restart demands a clear understanding of the issues and the actions required to address those issues by both the NRC and the licensee. This section outlines steps to determine the restart issues and NRC's evaluation of their resolution.</p>	X		RAP
	a. Review/evaluate licensee generated restart issues.	X		RAP

		NEED	STATUS	RESP
	b. Independent NRC identification of restart issues	X	C	RAP
	c. NRC/licensee agreement on restart issues.	X	C	RAP
	d. Evaluate licensee's restart issues implementation process.	X	C	RAP
	e. Evaluate licensee's implementation verification process.	X		SRI - SIL 40500 OSTI
B.4.4	<p><u>Obtain Comments</u></p> <p>Since some shutdowns involve a broad number of issues, solicitation of comments from diverse sources may be appropriate. The decision to solicit comments from a group and the level of participation should be made on a case-by-case basis. Input from these groups should be factored into the restart process when they contribute positively to the review. Note: If needed, comments concerning the adequacy of state and local emergency planning and preparedness must be obtained from FEMA headquarters through NRR.</p> <p>a. Obtain public comments.</p>	X	C	RAP
	b. Obtain comments from State and Local Officials (Region).	X	C	Regional SLO/RAP
	c. Obtain comments from applicable Federal agencies.	X	C	RAP
B.4.5	<p><u>Closeout Actions</u></p> <p>When the actions to resolve the restart issues and significant concerns are substantially complete, closeout actions are needed to verify that planned inspections and verifications are complete. The licensee should certify that corrective actions required before restart are complete and that the plant is physically ready for restart. This section provides actions associated with completion of significant NRC reviews and preparations for restart.</p> <p>a. Evaluate licensee's restart readiness self-assessment.</p>	X		RAP OSTI

		NEED	STATUS	RESP
	b. NRC evaluation of applicable items from Section C "ISSUES" complete.	X		RAP
	c. Restart issues closed.	X		RAP SRI OSTI
	d. Conduct NRC restart readiness team inspection.	X		OSTI
	e. Issue augmented restart coverage inspection plan.	X		OSTI RAP
	f. Comments from other parties considered.	X		RAP
	g. Determine that all conditions of the Order/CAL are satisfied.	X		RAP ICAVP
	h. Re-review of Generic Restart Checklist complete.	X		RAP SRI- NU
B.5	<u>RESTART AUTHORIZATION (B.5)</u> When the restart review process has reached the point that the issues have been identified, corrected, and reviewed, a restart authorization process is begun. At this point the Restart Panel should think broadly and ask: "Are all actions substantially complete? Have we overlooked any items?"			
	a. Prepare restart recommendation document and basis for restart.	X		RAP
	b. NRC Restart Panel recommends restart	X		RAP
	c. No restart objections from other applicable HQ offices.	X		NRR (L)
	d. No restart objections from applicable Federal agencies.	X		RAP
	e. RA concurs in restart recommendation	X		RA
	f. NRR Director concurs in restart recommendation.	X		NRR (L)
	g. EDO concurs in restart recommendation when required.	NA		
	h. Conduct ACRS briefing when requested (NRR).	NA		
	i. Conduct Commission briefing when requested.	X		DSPO

		NEED	STATUS	RESP
	j. Commission approves restart.	X		COMM
	k. EDO authorizes restart.	X		EDO
B.6	<u>RESTART AUTHORIZATION NOTIFICATION (B.6)</u> Notify the applicable parties of the restart authorization. Notifications should generally be made using a memorandum or other format consistent with the level of formality required. Communication of planned actions is important at this stage to ensure that NRC intentions are clearly understood.			
	a. Commission (if the Commission did not concur in the Restart Authorization or as requested) (NRR).	NA		
	b. EDO (if the EDO did not concur in the restart recommendation or as requested) (NRR).	NA		
	c. Congressional Affairs (RAP).	X		OCA
	d. ACRS (a briefing may be substituted for the written notification if the ACRS requests a briefing) (NRR).			
	e. Applicable Federal agencies.	X		RAP
	f. Public Affairs.	X		OPA
	g. State and local officials.	X		SLO
	h. Citizens or groups that expressed interest during the restart approval process.	X		RAP
	i. Issue staff concerns memorandum.	X		RAP
C.1.1	<u>Root Cause Assessment</u>			
	a. Conditions requiring the shutdown are clearly understood.	X	C	RAP
	b. Root causes of the conditions requiring the shutdown are clearly understood.	X	C	RAP
	c. Root causes of other significant problems are clearly understood.	X	C	RAP
	d. Effectiveness of the root cause analysis program.	X		40500 RAP OSTI

		NEED	STATUS	RESP
C.1.2	<u>Damage Assessment</u>			
	a. Damage assessment was thorough and comprehensive.	NA		
	b. Corrective actions clearly restored systems and equipment or verified they can perform as designed.	NA		
C.1.3	<u>Corrective Actions</u>			
	a. Thoroughness of the corrective action plan	X		RAP 40500
	b. Completeness of corrective action programs for specific root causes.	X		SRI 40500
	c. Control of corrective action item tracking.	X		SRI OSTI 40500
	d. Effective corrective actions for the conditions requiring the shutdown have been implemented.	X		SRI OSTI
	e. Effective corrective actions for other significant problems have been implemented.	X		SRI OSTI ICAVP 40500
	f. Control of long-term corrective actions. (Backlog Management Plan)	X		SRI OSTI 40500
	g. Effectiveness of the corrective action verification process.	X		SRI OSTI 40500

		NEED	STATUS	RESP
C.1.4	<p><u>Self-Assessment Capability</u></p> <p>The occurrence of an event may be indicative of potential weaknesses in the licensee's self-assessment capability. A strong self-assessment capability creates an environment where problems are readily identified, prioritized, and tracked. Effective corrective actions require problem root cause identification, solutions to correct the cause, and verification methods that ensure the issue is resolved. Senior licensee management effectiveness in ensuring effective self-assessment is treated separately.</p> <p>a. Effectiveness of Quality Assurance Program.</p>	X		RAP 40500
	b. Effectiveness of Industry Experience Review Program.	X		OSTI 40500
	c. Effectiveness of licensee's Independent Review Groups.	X		SRI OSTI 40500
	d. Effectiveness of deficiency reporting system.	X		SRI OSTI 40500
	e. Staff willingness to raise concerns.	X		NRR (L) RAP
	f. Effectiveness of PRA usage.	X		OSTI 40500
	g. Effectiveness of commitment tracking program.	X		SRI RAP 40500
	h. Review applicable external audits	X		OSTI 40500
	i. Quality of 10 CFR 50.72 and 50.73 reports.	X		SRI
C.2.1	<p><u>Management Oversight and Effectiveness</u></p> <p>a. Goals/expectations communicated to the staff.</p>	X		OSTI 40500
	b. Demonstrated expectation of adherence to procedures.	X		SRI OSTI

		NEED	STATUS	RESP
	c. Management involvement in self-assessment and independent self-assessment capability	X		RAP 40500
	d. Effectiveness of management review committees.	X		SRI OSTI 40500
	e. Management's demonstrated awareness of day-to-day operational concerns.	X		SRI OSTI
	f. Management's ability to identify and prioritize significant issues.	X		SRI OSTI 40500
	g. Management's ability to coordinate resolution of significant issues.	X		SRI OSTI 40500
	h. Management's ability to implement effective corrective actions.	X		SRI OSTI 40500
C.2.2	<u>Management Support</u>			
	a. Impact of any management reorganization.	X		RAP 40500
	b. Effective and timely resolution of employee concerns.	X		RAP NRR (L) SCWE
	c. Adequate engineering support as demonstrated by timely resolution of issues.	X		DRS OSTI ICAVP
	d. Adequate plant administrative procedures.	X		SRI 40500 OSTI
	e. Effective information exchange with other utilities.	X		SRI OSTI 40500
	f. Participation in industry groups.	NA		
	g. Effectiveness of Emergency Response Organization.	X		DRS
	h. Coordination with offsite emergency planning officials.	X		DRS
C.3.1	<u>Assessment of Staff</u>			
	a. Demonstrated commitment to achieving improved performance.	X		RAP SRI OSTI

		NEED	STATUS	RESP
	b. Demonstrated safety consciousness.	X		OSTI SRI NRR (L) SWCE
	c. Understanding of management's expectations and goals.	X		OSTI 40500
	d. Understanding of plant issues and corrective actions.	X		OSTI SRI 40500
	e. Qualifications and training of the staff.	X		OSTI
	f. Staff's fitness for duty.	NA		
	g. Attentiveness to duty.	X		OSTI
	h. Level of attention to detail.	X		OSTI
	i. Off-hour plant staffing.	X		SRI
	j. Staff overtime usage.	X		SRI 40500
	k. Procedure usage/adherence.	X		SRI OSTI 40500
	l. Awareness of plant security.	X		DRS
	m. Understanding of offsite emergency planning issues.	X		DRS
C.3.2	<u>Assessment of Corporate Support and Site Engineering Support</u>			
	a. Corporate staff understanding of plant issues.	X		OSTI
	b. Corporate staff site specific knowledge.	X		OSTI
	c. Effectiveness of the corporate/plant interface meetings.	X		OSTI
	d. Corporate involvement with plant activities.	X		OSTI
	e. Effectiveness of site engineering support.	X		DRS OSTI ICAVP
	f. Effectiveness of the site design modification process.	X		ICAVP OSTI
	g. Effectiveness of licensing support.	X		RAP

		NEED	STATUS	RESP
	h. Coordination with offsite emergency planning officials.	X		DRS
C.3.3	<u>Operator Issues</u>			
	a. Licensed operator staffing meets requirements and licensee goals.	X		DRS
	b. Level of formality in the control room.	X		OSTI SRI
	c. Effectiveness of control room simulator training.	X		DRS
	d. Control room/plant operator awareness of equipment status.	X		OSTI SRI
	e. Adequacy of plant operating procedures.	X		SRI ICAVP OSTI
	f. Procedure usage/adherence.	X		SRI OSTI
	g. Log keeping practices.	X		OSTI
C.4	<u>ASSESSMENT OF PHYSICAL READINESS OF THE PLANT</u>			
	a. Operability of technical specification systems.	X		OSTI
	b. Operability of required secondary and support systems.	X		OSTI
	c. Results of pre-startup testing.	X		SRI OSTI
	d. Adequacy of system lineups.	X		OSTI
	e. Adequacy of surveillance tests/test program.	X		OSTI
	f. Significant hardware issues resolved (i.e. damaged equipment, equipment ageing, modifications).	X		OSTI
	g. Adequacy of the power ascension testing program.	X		OSTI SRI
	h. Effectiveness of the plant maintenance program.	X		OSTI DRS
	i. Maintenance backlog managed and impact on operation assessed.	X		OSTI
	j. Adequacy of plant housekeeping and equipment storage.	X		OSTI

		NEED	STATUS	RESP
C.5	<u>ASSESSMENT OF COMPLIANCE WITH REGULATORY REQUIREMENTS</u>			
	a. Applicable license amendments have been issued.	X		RAP
	b. Applicable exemptions have been granted.	X		RAP
	c. Applicable reliefs have been granted.	X		RAP
	d. Imposed Orders have been modified or rescinded.	X		RAP
	e. Significant enforcement issues have been resolved.	X		RAP OE
	f. Allegations have been appropriately addressed.	X		RAP SRI PE
	g. 10 CFR 2.206 Petitions have been appropriately addressed.	X		NRR (L)
	h. Atomic Safety and Licensing Board hearings have been completed.	NA		No ASLB hearing required before restart
C.6	<u>COORDINATION WITH INTERESTED AGENCIES AND PARTIES</u>			
	a. Federal Emergency Management Agency	X		DRS NRR (L)
	b. Environmental Protection Agency	NA		
	c. Department of Justice	X		OE OI RA
	d. Department of Labor	X		OE
	e. Appropriate State and local officials	X		SLO
	f. Appropriate public interest groups	X		RAP
	g. Local news media	X		OPA

MILLSTONE RESTART ASSESSMENT PLAN

ENCLOSURE (3)

LICENSING ISSUES REQUIRED FOR RESTART OF UNIT 2

#	TAC No.	Issue	Status
1	M97746 Mode-N/A	Meteorological Tower Instrumentation (TSs)	12/16/97 CW (Withdrawn)
2	M98277 Mode 4	Ultimate Heat Sink Temperature (TSs)	02/06/98 CA
3	M98347 Mode 4	Enclosure Building (TSs)	09/30/97 CA
4	M94623 Mode 4	Containment Iso Valve List Removal from TSs (TSs)	11/19/97 CA
5	M92879 Mode 4	Control Rm Emergency Ventilation Sys (TSs)	08/16/98 CW (Withdrawn)
6	M99543 Mode 4	EDG Fuel Oil Supply Adequacy (USQ) License Amendment	01/23/98 CA
7	MA2340 Mode 4	ESFAS and RPS - Setpoints & Allowable Values (TSs)	Under Review TS (01/15/99T)
8	MA0121 Mode 4	RCS P-T Curves (TSs)	07/01/98 CA
9	M99503 Mode 4	Max. Containment Pressure Limit (TSs)	10/27/97 CA
10	M99504 Mode 4	Technical Specification - Verbatim Compliance (TSs)	05/26/98 CA
11	M94105 Mode 4	Steam Generator Blowdown (TSs) Monitors	08/26/97 CA
12	M99609 Modes 1-3	Rx Trip Setpoints - SG Safety Valves (TSs)	11/19/97 CA
13	M97680 Mode 4	Siemans LOCA Analysis-Evaluation (non TS)	07/23/97 CA
14	M99266 Mode 4	Startup Rate Trip (non TS)	08/19/97 CA
15	M99296 Mode 4	Hydrogen Monitors - NUREG-0737 (non TS)	10/28/97 CA
16	M99613 Mode 4	RG 1.97 - Core Exit Thermocouples (CETs) Power Supply Modifications (non TS)	01/12/98 CA

17	MA2416 Mode 4	Exemption request - Appendix R (4 - Exemption requests needed) (EX)	Under Review TS (12/31/98T)
18	MA0251 Mode 2	Compliance for CEA Rod Drop Testing & Design Section Updates (TSs)	06/16/98 CA
19	M99614 Mode 4	ATWS - Commitment Withdrawal (non TS) RAI Issued (01/23/98)	10/29/98CA
20	MA2441 Mode 4	Condensate Storage Tank Volume (TSs)	Under Review - PM (12/31/98T)
21	MA1554 Mode 3	Trisodium Phosphate (TSP) Volume (TSs)	06/22/98 CA
22	MA1649 Mode 4	Low Range Press Xmitters Diversity (USQ)	Will be withdrawn (12/30/98T)
23	MA2255 Mode 4	Service Water Sys Protective Coating (USQ)	Under Review TS (12/30/98T)
24	MA1771 Mode 4	Continuous Bypass Inop Ch RPS/ESFAS (TSs)	11/10/98 CW
25	MA3553 Mode 4	RCS Head Vent Surveillance Compliance Issues # 4 (TSs)	Under Review - PM (01/15/99T)
26	MA1462 Mode 4	MSIV & Pressurizer Surveillance (TSs)	08/21/98 CA
27	MA1137 Mode 4	RG 1.97 Deviation Variable D23 CAR Fans (non TS)	04/30/98 CA
28	MA 1066 Mode 4	ATWS Pressure Instruments (non TS)	04/30/98 CA
29	MA1070 Mode 4	Leak-Before-Break Reanalysis-Cold Leg (non TS)	10/06/98CA
30	MA2367 Mode 4	Leak-Before-Break (SI & SDC sys) (non TS)	10/06/98CA
31	MA0838 Mode 4	Emerg. Preparedness Plan, Rev 24 (non TS)	06/04/98 CA
32	M83642 Mode 4	IPEEE - Fire Protection Issues (non TS) (Turbine Building)	Under Review TS (12/30/98)
33	MA3410 Mode4	Siemens MSLB - Reanalysis (TSs) Methodology Change	Under Review - TS (12/30/98T)
34	MA2311 Mode 4	EDG Surveillance Requirements & GDC-17 TS Clarification (TSs)	Under Review TS (01/30/99T)

35	MA3955 Mode4	Shutdown Cooling Sys Relief Valve (TSs)	Under Review TS (12/31/98T)
36	Mode 4	Boron Precipitation - Hot leg Inj single Failure (USQ)	12/15/98T
37	Mode 4	Long Term CST Makeup via FW Sys. (USQ)	Not required to be submitted (no USQ involved).
38	MA3672 Mode 4	Cont. Rm. Ventilation DBA Calculus. (TS & USQ)	Under Review - TS (12/30/98T)
39	Mode 4	Passive Failure - ECCS Piping Post LOCA (USQ)	Not required to be submitted (no USQ involved).
40	MA4126 Mode 4	Leak Before Break - Press Surge Line (non TS)	Under Review TS (02/26/99T)
41	Mode 4	Separation - Raceways (USQ)	1/5/99T
42	MA3671 Mode 4	Separation - Control Panel 12' to 6" (USQ)	Under Review TS (12/30/98T)
43	MA3392 Mode 4	Ampacity Derating (GL92-01) (non TS)	Under Review TS (02/15/99T)
44	MA4175 MODE 4	S G Tube Rupture - Reanalysis (USQ)	Under Review
45	Mode 4	Loss of Feedwater - Reanalysis (USQ)	Submittal date TBD.
46	MA4150 Mode 4	Continuous Bypass Inop Ch RPS/ESFAS (TSs)	Under Review TS (12/31/98T)
47	Mode 4	USQ - Hydrogen Purge (Backup to Recombiners)	12/15/98T
48	Mode 4	TS Change - ECCS Pump Flow Requirements (will refer to IST program instead of having values in TS)	12/15/98T

48 licensing issues - 23 TS amendments, 13 other licensing actions, 1 Exemp. and 11 USQs
22 are complete - 11 TS amendments, 1 USQ, and 10 other licensing actions
3 withdrawn - 3 TS Amendments
2 were determined, upon further review, to not be USQs and will not need NRC approval.
21 remaining - 16 are under review and 5 have not been submitted.