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

Millstone Nuclear Power Station, Unit No. 3
Initial Results of Millstone 3 Recovery Activities

Reference (a): T. C. Feigenbaum letter to U.S. Nuclear Regulatory Commission, Millstone Nuclear Power Station, Unit No. 3, Response to May 21, 1996 10CFR50.54(f)," dated June 20, 1996.

In a letter dated June 20, 1996 [Reference (a)] , Northeast Utilities provided the NRC with a detailed description of our plans and ongoing activities regarding the identification and correction of design and configuration management discrepancies at Millstone 3. A substantial portion of those activities have now been completed. This letter is the first of what we anticipate will be a series of submittals that will discuss the results of those efforts. It also more fully describes the measures that the Millstone nuclear organization is implementing to address the personnel and cultural issues that we know lie at the root of the organization's problems.

The results of the Configuration Management Plan (CMP) investigations and reviews completed to date demonstrate that Millstone 3 has problems with its design and licensing basis that are similar to those that Adverse Condition Report (ACR) 7007 identified at Millstone 1. The nature and degree of these are such that we have decided that a review and correction of the Final Safety Analysis Report (FSAR) will be conducted before we restart Millstone 3. The scope of this review is still being developed and will be provided to the NRC shortly. The details of the CMP results that have led us to make this decision are provided in Section IV below.

Before discussing the detailed results of our efforts to identify and correct configuration management discrepancies at Millstone 3, we will summarize the preliminary results of two assessments, that looked for the basic causes of NU nuclear's performance

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decline. The first, the Fundamental Cause Assessment, deals with the leadership and management failures that led to this decline; the second assessed the reasons why the oversight organization did not effectively identify or communicate the symptoms of this decline. We will also discuss and provide the results of a unit specific assessment that evaluated the reasons for the configuration management failures at Millstone 3.

Fundamental Cause Assessment

The Nuclear Committee of the NU Board of Trustees chartered a Nuclear Committee Advisory Team (NCAT) to assess NU's nuclear program and efforts to improve its performance. As part of its efforts, the NCAT established the Fundamental Cause Assessment Team (FCAT) to address why NU's nuclear program performance declined, especially at Millstone.

The FCAT is conducting a comprehensive set of document reviews and interviews to determine the causes of specific adverse events and trends in performance. Those causes are then being further analyzed to identify fundamental causes -- those which caused repeated adverse conditions or trends, persisted through time, and resulted in major performance problems. The FCAT review is ongoing. Preliminary results, however, indicate that the fundamental causes of NU's performance decline include the areas of leadership, standards, and management skills.

The team found that, in the past, the vision and direction of the NU nuclear organization were not entirely consistent with the needs of a well-performing nuclear program. The emphasis was on justifying the status quo rather than resolving problems. As a consequence, the response to mounting indications of serious problems was inadequate.

Management standards did not ensure conservative decisions when faced with problems. Deficient conditions were sometimes overlooked, not corrected, or corrected slowly with a narrow focus. In addition, regulatory requirements were not always met because they were either not recognized or not considered important. Weak skills in people management, communication, prioritization of resources, and definition of organizational roles resulted in an ineffective organization. This led to an inability to respond properly to many employee concerns.

The preliminary results have been communicated to line management for their consideration in formulating corrective actions. The FCAT expects to complete its review and provide a detailed report in late July. The steps we have taken to address these leadership and management weaknesses were discussed in our letter of May 31, 1996. Additional information on several aspects of our actions in these areas including the Nuclear Excellence Plan, leadership development and enhancements in the employee concerns area are provided in Section I of this letter.

Root Cause of Oversight Failure

The ACR 7007 Report concluded, in part, that NU's oversight organizations (Review Boards, Quality Assessment Section (QAS), Independent Safety Engineering Group (ISEG) and Operating Experience) did not identify the pattern of Millstone Unit 1 FSAR discrepancies to management; nor did it identify the significance, or the effectiveness of corrective actions to prevent recurrence. An independent Root Cause Evaluation Team was formed to determine the causes for these failures.

The preliminary findings of the team are: (1) QAS should have surfaced the FSAR discrepancies as a condition adverse to quality since the NU Quality Assurance Program (NUQAP) specifically calls for the control of quality documents such as the FSAR, including a review for adequacy; (2) QAS failed to perform this responsibility because it did not assess its own performance against the NUQAP, the very base document to which it was responsible for verifying compliance; (3) QAS which focused narrowly on technical specifications and procedural compliance, was activity driven rather than results driven, and had no history of escalating issues effectively; and (4) even if QAS had identified an FSAR discrepancy pattern, the outcome may have been the same because the environment in which QAS was forced to operate did not lend itself to meaningful intervention. The team also found that the Nuclear Review Board did not pursue the issue of FSAR completeness and accuracy effectively, and that ISEG, upon identifying FSAR discrepancies, did not pursue generic implications of their findings.

Since February, a number of actions have been taken which have changed this situation. The new Chief Nuclear Officer (CNO) has set high standards and communicated expectations to the NU nuclear group. The Nuclear Safety & Oversight (NS&O) organization has also been established to consolidate all of the oversight functions. NS&O, headed by a Senior Vice President, has been given prominence and broad powers to provide the oversight necessary to ensure that the units are operated safely and that the CNO's high standards are realized. New leadership positions have has also been established in quality assurance and a pro-active Nuclear Safety Advisory Board which includes external members has replaced the Nuclear Review Board.

In addition, a Joint Utility Management Assessment (JUMA) of the NS&O organization was recently performed. We have not yet received the JUMA report but are addressing the interim JUMA recommendations.

Millstone Unit 3 Project Instruction 2/MP-3 Specific Assessment

This assessment, which is included as Attachment 1, was done under the auspices of the Configuration Management Plan (CMP) Project Instruction (PI) 2 as described in Reference (a). It concluded that the ACR 7007-identified configuration management issues have impacted Millstone 3 although the plant's relative newness and better starting documentation have prevented significant degradation of Millstone 3's current configuration. The report states that management expectations in many areas having an impact on compliance with the design and licensing bases of the unit, while improving in recent years, fell short. This condition will require correction as part of the restart program. As a result, the assessment team has recommended a number of scope additions to the CMP. These will be addressed before restart as recommended. Many of the recommendations deal with the accuracy of the FSAR and will, therefore, be encompassed by the pre-restart FSAR review that is being developed as discussed above.

The remainder of this letter consists of six sections:

Section I outlines and provides the Nuclear Excellence Plan which encompasses the actions that are underway to address the fundamental performance issues.

Section II provides an update to the list of design and configuration management deficiencies that were initially submitted in Reference (a).

Section III provides Revision 0 of the Operational Readiness Plan (ORP) document for Millstone 3. It delineates and consolidates the actions necessary to address the root causes of the station's performance deficiencies and achieve a level of performance improvement that would support the unit's safe return to operation.

Section IV provides the results of the Configuration Management Plan (CMP) activities that have been completed to date.

Section V describes the plan that is now in place at all Millstone units to improve the effectiveness of the corrective action program.

Section VI describes the process that is being followed to develop Performance Indicators (PIs) that will be used to both monitor progress toward restart and to achieve nuclear excellence in the long term. This section also provides PIs that are already in use.

Many of these documents and programs will change during Millstone's pre-restart recovery period. For example, CMP findings likely will generate changes in, or expansion of, its original scope and result in additional issues being added to the discrepancy list. This, in turn, may lead to new restart requirements in the ORP. Even

with this expectation, the plans described below provide the NU nuclear group with the basic tools to make the necessary process, leadership and cultural changes.

I. Nuclear Excellence Plan

The Nuclear Excellence Plan (Attachment 2), which is the vehicle by which NU will pursue significant long-term performance improvement is illustrated in context in Figure 1.

The Nuclear Excellence Plan charts the strategic direction necessary to achieve these objectives while preserving the Operational Excellence Objectives (OEOs) set out by nuclear management in 1994. This is accomplished by establishing a focused set of initiatives that are designed to achieve and sustain each of the OEOs. Included prominently among these OEOs are the Improving Station Performance (ISP) initiatives. The ISP was developed to address Millstone performance problems in specific areas. We are continuing to address these issues under the Nuclear Excellence Plan. A series of action plans with action plan managers will implement these initiatives, which also have individual key performance indicators.

As we implement the Nuclear Excellence Plan, operational performance and cultural improvement can be expected. We will operate the five units with common objectives, strategies, business processes and a clear vision of how to achieve nuclear excellence. The vision of nuclear excellence can only be realized by engaging the entire organization and dramatically changing our way of doing business. Management is focused on assuring the work force is highly skilled and well trained, and that barriers to accomplishing work are removed. We recognize the need to show results. The foundation of the Nuclear Excellence Plan is a management model consisting of:

- planning and prioritization
- monitoring results
- feedback and follow-through.

Our vision of excellence can only be achieved through commitment and involvement by all employees of our nuclear organization. NU nuclear management will strive to ensure that everyone understands the vision that underlies the plan and is involved in translating that vision into actions that everyone can take each day. NU nuclear management will have clear expectations for itself and for the organization's performance required to achieve the desired results. We will use overall measures of success that are generally accepted industry standards. These measures are not an end unto themselves. Rather, progress in these measures is an indication that our values and the management model are successfully transforming the organization towards our vision of excellence.

Several elements of the Nuclear Excellence Plan that are critical to preparing the Millstone units for restart are discussed below:

Leadership Development

We know that to reach our goal of nuclear excellence we must: (a) establish trust in management; (b) improve the clarity, focus and direction on priority efforts; (c) allow the creativity, talent and energy of our staff to be more effectively used; (d) restore communication effectiveness at all levels and direction; (e) develop improved management skills; and (f) promote teamwork, cooperation and learning from experience at all levels. We also know that each of these goals has been addressed in the past, yet these past initiatives have been largely unfocused and ineffective.

Based on self assessment and several independent studies, we have structured a Leadership Development Program to address these needs. This program focuses on individual ownership, accountability, and ways to communicate more effectively by concentrating on the interpersonal interactions between management and employees. Unit 3 staff and management will be the first to receive this program -- scheduled to begin in the near future. Continuing monitoring and feedback have been built into the program so that adjustments can be made as experience and needs dictate.

The program concentrates on two aspects: those skills and behaviors that directly affect an employee's ability to function and lead within the organization, and the use of actual work assignments as opposed to a "training exercise" that may or may not have relevance to our workplace. The principles of this training are: (1) provide a clear message on NU nuclear mission, vision and behavior; (2) using the methods of a proven behavior motivator, Steven Covey, a framework will be provided for changing from a reactive culture, dependent on management decision making and control, to a proactive culture based on individual leadership and accountability; (3) develop teaming skills necessary for successful teamwork between individuals and groups and (4) provide supervisors and managers with skills necessary to successfully manage and develop their direct reports.

Employee Concerns

A major initiative continues to involve our efforts to create and maintain an environment that is openly conducive to raising and resolving employee concerns. Employees should be willing to raise issues with their supervisors and with management, and know that they will be addressed seriously and fairly. Alternatively, employees must also feel comfortable with being able to raise their concerns through the Employees Concern Program. To that end, we are taking several steps that are designed to rebuild a corporate culture that is based on trust between management and our employees. The specific actions and task assignments that have been made to achieve this goal are outlined in the document entitled Millstone Employee Concerns Assessment Implementation Task Assignments (Attachment 3). The critical element of this effort is

for the CNO to be visible and persistent regarding expected behaviors of the NU Nuclear Group. The necessity of clearly and effectively communicating these expectations, combined with consistent day-to-day role-model based leadership is paramount. They are the key to the ultimate solution to the employee concerns issues that have enveloped the organization.

The CNO recently took an important step in establishing his expectations with the publication of the "Values for Excellence" document. It defines the CNO's expectations regarding the values and behaviors considered essential for the future success of our nuclear program. Inherent in these values is the need to consider all issues which may have safety significance, and for those issues to be promptly resolved. We continue to make appeals to Millstone personnel to take the time to reflect on past and present work activities, and identify any issue that could be a barrier to safe, error-free return to service and reliable long-term operation.

We are using several methods to gauge the organization to help the Nuclear Group better define cultural problems that may impact this trust and discourage employees from raising issues openly. These include meetings with group discussions and a cultural survey.

In June, we held a series of meetings with a cross-section of Millstone 3 employees. Forty-six people participated, ranging from the technician to the first-line supervisor level. The goal of this effort was to encourage participants to bring forward any issues or concerns. As a follow-up, we will perform self-assessments to determine how best to address the problems or situations identified at these meetings which may prevent employees from doing their jobs effectively and efficiently. The comments from the meetings are also being fed back to the Nuclear Excellence Plan Action Plan managers to enhance the Nuclear Excellence Plan actions and the Operational Readiness Plan.

With respect to the cultural survey, we have contracted with Failure Prevention and Investigation (FPI) of San Clemente, California who will use their established diagnostic methods to help us address weaknesses through focused training programs. The prime diagnostic measure of this activity will be the Culture Index survey that will be administered at regular intervals. Using standard qualitative and quantitative survey questions, and then comparing the results against benchmark data from over 40 nuclear plants, areas of weaknesses can be identified and a realistic prediction of future performance made. The survey includes specific questions on employee concerns. Training programs are then tailored to the needs of each station, unit and department. By conducting the survey at regular intervals, the results of training and other improvement efforts can be seen quantitatively, and adjustments can be made as necessary to achieve desired goals.

The initial survey at NU nuclear occurred on June 25, 1996. At that time the survey was made available to NU employees at Millstone, Haddam Neck, Berlin and Seabrook. Approximately 80% of this population participated. The survey was

designed to be anonymous and individuals were instructed not to provide their name on the answer sheet. Demographic information was requested as to the station, unit, work group, position (worker, supervisor or manager) and length of service. Participation was strictly voluntary. The responses are now being tabulated and we hope to have the initial results in late July.

Millstone Station personnel will receive the vast majority of the training considered to be appropriate as a result of the cultural surveys over the next few months. The schedule for Seabrook and Haddam Neck personnel will follow and will take advantage of the lessons learned at Millstone. This approach has been proven at other nuclear utilities where recovery was achieved from problems that were similar to our own. These initiatives, coupled with the leadership development program, should encourage an environment where issues are openly discussed and effectively addressed in a atmosphere of trust.

To ensure that the employee concerns program remains an effective option for individuals who do not wish to resolve their concern through the line organization, we are increasing the staffing of our Millstone Employee Concerns Program (ECP). This will permit increased "out reach" to help communicate the program's nature and purpose. The new ECP staff will help management understand the early warning signs of trouble so that they can seek help before a situation gets out of hand. Other prospective changes to the ECP are described in Attachment 3.

II. List of Design and Configuration Discrepancies

Attachment 4 updates the Discrepancy Review Team Report submitted with Reference (a). It contains design and configuration management discrepancies identified since issuance of ACR 7007 (February 22, 1996) and entered into the database as of June 25, 1996. An additional 306 items have been added to the list since the last submittal. A summary breakdown of the list follows:

	June 20 Report (2/22 to 6/13/96)	July 2 Report (2/22 to 6/25/96)
Documents meeting criteria as containing design or configuration management discrepancy	881	1187
Resolution required for restart	373	597

In this update, we provide estimated and/or actual completion dates for all items. We have also conducted extensive research to determine the length of time that each item existed prior to identification, whether or not it was known to exist before being identified as a discrepancy, and when it was first known. As a result, the list provides nearly 90% of this historical information.

The Millstone work control procedure (WCP) formed the basis for prioritizing the items on the list. A table containing this guidance is provided as Attachment 1A. Priority 1 or 2 items are assigned a scheduled completion date of 'Startup' and must be completed before restart authorization is requested; Priority 3 items are assigned a scheduled completion date of 12/31/96; and Priority 4 items are assigned a scheduled completion date of RFO6 (the next refueling outage).

Items that require operability determinations, are potentially reportable, or raise unreviewed safety questions will be resolved and corrected before restart. The following specific classes of design and configuration management deficiencies will also be processed and dispositioned before restart:

- FSAR conflicts with plant design that have no evidence of a safety evaluation for this difference
- FSAR conflicts with operating procedures
- FSAR test requirements with no evidence of test performance was found
- Discrepancies in operations-critical drawings
- Design bases not substantiated by calculation, specification etc.
- Quality database discrepancies

A future update of the attached list will include design and configuration management discrepancies generated or identified during implementation of the Operational Readiness Plan.

III. Operational Readiness Plan

The Operational Readiness Plan (ORP) is provided as Attachment 5. The ORP is the document that specifies responsibility and deliverables for all activities that must be completed before Millstone 3 restart. It requires signatures by each of the Action Plan Managers to signify that their activity has been completed with formal acknowledgment and acceptance of the completed action by the Unit Director.

The restart activities and deliverables are grouped under the Operational Excellence Objectives which they are designed to support. The ORP consolidates the restart activities that are included in the Nuclear Excellence Plan, the Improving Station Performance Initiatives, the Configuration Management Plan, as well as readiness items that have evolved from materiel condition issues, on-going NRC inspections and Millstone assessment activities.

The FSAR review that will be conducted prior to restart will be incorporated into the ORP when its scope and schedule are determined. Also, the conservative philosophy that is addressed in the ORP will be applied during startup and power ascension. Any operational discrepancy will be evaluated and addressed as appropriate prior to changing modes or continuing power escalation.

IV. Configuration Management Plan

As discussed in NU's June 20, 1996 letter, the Configuration Management Plan (CMP) and its Project Instructions (PIs) are designed to address the configuration management issues for the Connecticut plants. Certain activities that must be completed prior to restart are categorized as Phase 1. As stated in Attachment 3 to the CMP, the Phase 1 activities include, at a minimum:

- Licensing and design basis ("vertical slice") (PI 15)
- Walkdowns and system readiness reviews ("horizontal slice") (PI 4 and 5)
- Configuration control of programs, processes and procedures (PI 10)

Activities associated with the original scope of Phase 1, including the vertical slice reviews, have been completed. The Project Report on the Millstone 3 Vertical Slice Review is provided as Attachment 6. An integrated assessment of the results of these reviews has also been conducted by a multi-disciplined team. Their report, the Millstone 3 Integrated Assessment Program Descriptions and Status (Attachment 7), assessed the collective significance of the Phase 1 reviews.

The Integrated Assessment Program team (IAP), also assessed the results to-date of Extended Reviews and Engineering Program Assessments which were added to the original Phase 1 scope to address emerging issues.

The IAP concluded that the results of the initial scope of Phase 1 reviews in conjunction with the Extended Reviews and the Engineering Program Assessments point to the same general areas of weakness as those that ACR 7007 identified at Millstone 1. The five review efforts that lead to this conclusion are discussed below.

1. Vertical Slice Reviews

During May and June 1996, the Vertical Slice Review Team (VSRT), consisting of approximately thirty engineers from MPR Associates, Yankee Atomic, Seabrook Station, Boston Edison, Raytheon, Westinghouse, and other consulting firms performed an in-depth, structured assessment of eleven PRA-significant systems at Millstone 3. Six of these systems are used for mitigation of events associated with approximately 85% of total plant risk of core damage due to internal events. Additional systems were included to ensure adequate coverage of all engineering disciplines (e.g., electrical) and to provide additional scope (e.g., Residual Heat Removal System operation in the safety injection mode). For each system, key safety-related attributes were identified and in-depth reviews performed to assess the conformance of plant design, testing, maintenance, operation, and configuration with design and licensing basis requirements and the adequacy of programs, processes, and procedures to maintain design control and configuration.

The vertical slice reviews focused on two of six root cause categories addressed by ACR 7007 Report. The ACR 7007 root cause categories are: (1) Current Configuration, (2) Administrative Programs, (3) Training, (4) Culture, (5) Management, and (6) Oversight. The categories reviewed by the VSRT are (1) documentation of current design and configuration of the plant (the Current Configuration category) and (2) administrative programs, processes and procedures for control of the plant design and configuration (the Administrative Programs category). The VSRT has concluded that there is clear linkage between MP3 and MP1 in both of these categories.

The VSRT noted, however, that it is not possible to establish a quantitative comparison of the extent of the discrepant conditions at Millstone 3 to Millstone 1. The Millstone 1 ACR 7007 evaluation did not develop data similar to that developed during the Millstone 3 vertical slice reviews. Accordingly, VSRT conclusions have been made on an absolute basis, and no attempt was made by the VSRT to compare Millstone Units 1 and 3 regarding extent of condition.

Regarding "Conformance of Plant Design with Design and Licensing Basis", of the more than 3200 attribute checks performed as part of the VSRT, 257 discrepancies were identified (approximately 8% of the total). The discrepancies range from editorial to more significant issues which require resolution prior to plant restart. The structured evaluation of discrepancies by the VSRT identifies specific areas of weakness and the VSRT report provides specific recommendations to focus NU corrective actions in these areas.

Regarding "Correlation of Discrepancies With NU Upgraded Programs, Processes and Procedures," the VSRT concluded that NU has initiated or has committed to programs which address the extent of condition for those discrepancies which require such treatment and required corrective actions. The VSRT concluded that priorities for completing these programs are consistent with the significance of the discrepancies, and resolution of the more significant discrepancies are scheduled prior to restart.

2. Horizontal Reviews of System Readiness

Horizontal reviews of system readiness were performed in accordance with NUC PI-4, "Millstone Unit 3 Walkdowns) and PI-5, "Millstone Unit 3 Readiness Review." As stated in the CMP, Attachment 3, the horizontal reviews involved thirty-nine plant systems (i.e., Maintenance Rule systems that were identified as being both safety-related and risk-significant). Two additional systems were added to the horizontal review scope based on the results of the vertical slice reviews (Station Blackout diesel generators and the Control Room HVAC systems). Thirty-one "final readiness reports" have been issued (addressing forty-one reviews). The following documents/document types were reviewed.

Number Reviewed	Document Type	Number Reviewed	Document Type
8,265	AWOs	14	Operator Burdens
87	PDCRs	5	Rejected OSCRs
2,140	NCRs	195	ARs
67	TRs	188	ACRs
41	MRs	37	Punchlists
140	EWRs	118	SPs
28	BJs	35	Testing
39	ODs/JCOs	173	LERs
20	CR Definitions		

The results of the horizontal review are addressed as part of the Integrated Assessment Program Report.

3. Configuration Management Procedure/Process Review

This review, which is being conducted by the Configuration Management Team (CMT), has resulted in a list of approximately 100 programs, processes, and procedures which can be categorized into one of the following categories: (1) Station Procedures, (2) Licensing Procedures, (3) Engineering Technical Procedures, (4) Work Load Management and Control and (5) Document Control and Management. The evaluations have been completed for the Phase 1 programs, processes, and procedures (approximately 40). A significant number of discrepancies was identified which indicate programmatic deficiencies in the structure and past implementation of the design and configuration program. Specific revisions to appropriate procedures have been prepared for approximately 73% of the Phase 1 programs. Formal documentation of results and recommendations for improvement will be made through the UIR process with input to the corrective action program, as appropriate.

4. Extended Reviews

Several extended reviews have been initiated by NU as a result of discrepancies identified by the VSRT and other efforts. These activities include reviews of (1) FSAR Chapter 15, "Accident Analysis," to complement the VSRT review already performed, (2) Containment Isolation as a result of the AFW turbine-driven feed pump isolation valve deficiency, (3) electrical separation (4) electrical calculations and drawings to establish extent of condition of discrepancies found by the VSRT and by other walkdown activities, and (5) vendor technical information. These reviews are scheduled and currently underway. Results will be addressed as part of the Phase 2 near term corrective actions. In addition, upgrades have been initiated in the vendor technical information control and tracking program and in the corrective action program.

5. Engineering Program Assessments

These assessments include a review of nineteen engineering programs that have been established in response to regulatory initiatives such as EQ, Fire Protection, etc. For each program, the review is evaluating outstanding licensing commitments, technical adequacy of program implementation, and adequacy of program configuration management.

Integrated Assessment Program Summary

The majority of the discrepancies identified in the plant assessments reviewed by the IAP involved inconsistencies, errors and omissions in design and licensing basis documentation. There are five significant discrepancies which led to extended reviews. These include:

- failure to update FSAR Chapter 15 analyses to reflect the replacement of the NaOH pH control system with Tri-Sodium Phosphate,
- concerns with the containment testing program and documentation,
- potential failure to maintain adequate electrical separation between redundant trains of electrical bundles in main and auxiliary control panels.
- concerns with electrical calculations and drawings, and
- concerns with the control and tracking of vendor technical information.

These discrepancies are being corrected and their generic implications are being explored.

Of equal concern, however, is the relatively large volume of lower significant discrepancies in the design and licensing documentation. The IAP reached conclusions regarding "Accuracy and Completeness of Design and Licensing Bases." In the vertical slice review of the eleven target systems, discrepancy rates in excess of 5% were found in 17 of the 26 categories of documents and programs reviewed. A high percentage of the discrepancies were found in the FSAR area (including Chapter 15 Accident Analyses), and Technical Specifications, DBDPs and calculations. The nature of the discrepancies range from editorial to more significant items, which have been prioritized for resolution prior to restart based on restart criteria. Accordingly, the Phase 2 corrective action program has been expedited such that a review and correction of the FSAR, including a review of critical calculations, will be done before restart.

High discrepancy rates also were identified in the following categories: (a) Accuracy of Key Documents (Engineering Documentation), (b) Corrective Action Program, (c) Operations and Maintenance Issues, (d) Design and Configuration Control Program, and (e) Extended

Reviews. Corrective actions in these areas are under development and will be part of Phase 2 near term effort.

As stated in the CMP, the original intent of Phase 2 of the Action Plan was to address completion of longer-term corrective actions and the monitoring, trending, and implementation of long-term enhancements. As a result of the integrated assessment of the Phase 1 reviews, Phase 2 has been subdivided into near-term corrective actions which will be completed before restart authorization and long-term enhancements as follows:

Phase 2 (near term): Correct significant identified discrepancies in design and licensing basis and plant design and configuration, and initiate update of programs, processes and procedures which ensure that the plant configuration is designed, maintained and operated consistent with the design and licensing basis.

Phase 2 (long-term): Complete update of all documentation and CMP and trend Key Performance Indicators to verify effectiveness of CMP and identify required enhancements.

Independent Assessment of Vertical Slice

To confirm that the VSRT findings were sufficiently thorough and comprehensive, NS&O had an independent contractor team assess two completed VSRT reviews and perform a similar vertical slice inspection using independent judgment on documents and attributes reviewed. In this regard, the independent team concluded that the VSRT tended to focus on the adequacy of design and configuration controls. The independent effort was particularly sensitive to technical specification interpretations, operability and reportability perspectives.

The independent team concluded that the VSRT conducted a methodical review, and that their findings and supporting data were indicative of an extensive review of the material covered. In general, the independent review agreed with the significant issues identified and the significance determinations of the VSRT.

The independent team differed from the VSRT regarding the material condition for certain portions of the system reviewed and had a number of observations and recommendations based on their review. Several of these observations concerned reportability determinations and technical specifications interpretations. All of the observations and recommendations are now under review by the Director, Design Engineering.

V. Corrective Action Program

NU has embarked on a program that is significantly altering the corrective action process and increasing the resources that are dedicated to it. It will lead to a common program at all five NU nuclear units that has improved ownership, accountability, tracking and performance measurement. The revised program will ensure that future

corrective action evaluations will be broad and comprehensive to address the fundamental cause findings related to narrow focus. As described in our letter of May 31, 1996, we took a number of steps to improve the corrective action program in 1995 including introduction of a common ACR program and a common action item tracking and trending system. We also made progress in lowering the threshold for initiation of ACRs. This year we have instituted a Management Review Team (MRT) consisting of department manager level personnel appointed by the Unit Director. Its charter is to review ACRs to determine evaluation requirements, and perform a final review of the ACRs for acceptability.

Before NU requests authorization for restart, we will make further improvements to the corrective program to ensure that discrepancies receive comprehensive reviews and are closely tracked until completion of the work required as part of the corrective action. It will include a common Operating Experience Manual which includes a common ACR and a common Operability Determination procedure. The new program will be initially implemented at Millstone 3. The key principles of the new program will be:

Ownership: Either the Unit Directors or their designee will be clearly designated as the owners of the corrective action process. In this capacity, they will become the chairman of the Management Review Team which will meet to review and prioritize ACRs and will be heavily involved in MRT training. An Assistant Unit Director position has been authorized at each of the Millstone units and Connecticut Yankee; one already exists at Seabrook.

Accountability: Every ACR will have a manager designated with the responsibility to take it through its life cycle. Every ACR will remain open until all corrective action work is complete. Every ACR will be tracked through its life cycle until closure. The new process will also require an ACR's owner to obtain greater substantiation that the proscribed corrective action has actually been performed before closing the ACR.

Root Cause Evaluations: In order to improve the quality and consistency of root cause evaluations, each unit will have a core pool of at least two senior root cause evaluators. Prior to this assignment, these individuals will have received extensive training in root cause evaluation. At least one core pool member will be required for every root cause analysis. The Nuclear Safety & Oversight organization has been already authorized ten Independent Review Team members and one manager position to support the program.

Self-assessment: Each Unit Director and MRT will be required to conduct candid and critical assessments of MRT performance.

Measures of Performance: Key Performance Indicators will provide measures of the performance of the corrective action process throughout its life cycle.

The new Corrective Action Manual and ACR procedure, including training, are currently scheduled to be implemented at Millstone 3 by August 31, 1996. Part of the implementation will include an audit of ACRs that were closed under the current process.

VI. Performance Indicators

NU has acknowledged in previous correspondence that in the past, our ability to measure and improve performance was inconsistent. One of the differences in the way that current NU management correcting this is by carefully developing and actively using performance indicators to monitor and assess progress. This approach has four key elements that mark a departure from historical approaches to problem resolution: (1) personnel are carefully choosing indicators that will provide necessary information that will lead to informed management decision-making; (2) management is defining up-front ownership, roles and expectations, including measures of performance and success criteria; (3) "owners" are being held accountable regarding performance progress; and (4) management is monitoring results, making needed adjustments, and ensuring commitment follow through.

Two categories of performance indicators are being used and/or developed for Millstone Unit 3. Operational Readiness Performance Indicators (ORPIs), which are currently in place, monitor key parameters that must demonstrate satisfactory performance, or at a minimum, demonstrate satisfactory performance trends prior to restart. Key Performance Indicators (KPIs), which have been developed as part of the Nuclear Excellence Plan, will measure broader, long-term performance improvement. Since KPIs will include long-term goals, it follows that all of these KPIs need not be satisfactory prior to restart. However, they should be established and being actively monitored by that time. Both of these performance indicator categories are discussed in more detail below.

ORPIs have been correlated to applicable Operational Excellence Objectives. The selection of OEO/ORPIs was based on those categories of information which will provide the best quantitative evidence of performance. Goals have been set for each OEO/ORPI category, which must be satisfied before plant restart. Results are being documented and monitored by management at least weekly. Senior management reviews ORPI progress and is initiating necessary changes in any area that is not progressing as desired, or for which the indicator needs to be adjusted to provide better performance information. The OEOs and associated ORPIs that are included as startup prerequisites are provided in Attachment 5.

The current status of ORPI progress, as indicated on the Attachment 5 graphs, indicates the work that must be accomplished before Millstone 3 can adequately demonstrate (from a quantitative perspective) that performance has reached a level to support restart. Periodically, NU will provide the NRC with updates of ORPI information. NU management recognizes the challenge that these ORPIs present. We

are confident that ORPIs will indicate satisfactory Millstone 3 progress in the weeks ahead as we put the plant in the proper physical condition for safe, reliable operation.

NU is well aware that it must demonstrate long-term improvement to regain full confidence of the NRC regarding its performance capabilities. Long-term KPIs will provide the basis for these conclusions. For these KPIs to be valid for comparison and trending purposes, the data used must be consistent and timely for all units. NU has made significant progress in the development of a list of long term KPIs and the methodology that will be used to collect, review, and respond to the information. To provide the NRC with insight regarding our current thinking while we build our database, we have included in Attachment 9 our currently anticipated list of long term KPIs and the template that we will use to update and monitor progress. Also provided as part of Attachment 9 are sample long-term KPI data sheets and a description of how information will be presented.

We look forward to meeting with you soon to discuss our progress on all our improvement initiatives as we transform Millstone Station into a facility we can all be proud of.

If you have any questions, please contact T. L. Harpster, Director - Nuclear Licensing Services, at (860) 437-5880.

Very truly yours

NORTHEAST NUCLEAR ENERGY COMPANY

T. C. Feigenbaum
Executive Vice President and
Chief Nuclear Officer

Subscribed and sworn to before me

this 2nd day of July, 1996

Notary Public

Date Commission Expires: 8/31/98

cc: See Page 18

Attachment 1:	Millstone 3 - Specific Assessment
Attachment 1A:	Work Control Job Practice
Attachment 2:	Nuclear Excellence Plan
Attachment 3:	Millstone Employee Concerns Assessment Implementation Task Assignments
Attachment 4:	List of Design and Configuration Discrepancies
Attachment 5:	Operational Readiness Plan, Rev. 0
Attachment 6:	Vertical Slice Review Project Report
Attachment 7:	Integrated Assessment
Attachment 8:	Operational Readiness Plan Performance Indicators
Attachment 9:	Long-Term Key Performance Indicators
Figure 1:	Nuclear Excellence Planning Framework

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ATTACHMENT

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