

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001  
September 12, 1997

Deborah Katz, President  
Citizens Awareness Network  
P.O. Box 83  
Shelburne Falls, MA 03170

Paul Gunter, Reactor Watchdog Project  
Nuclear Information and Resource Service  
1424 16th Street, NW., 4th Floor  
Washington, DC 20036

Dear Ms. Katz and Mr. Gunter:

I am responding to the Petition you submitted pursuant to Section 2.206 of Title 10 of the **Code of Federal Regulations** (10 CFR 2.206), on November 25, 1996, as amended by letter dated December 23, 1996. These two submittals, hereinafter referred to as the Petition, were submitted by you on behalf of the Citizens Awareness Network (CAN) and the Nuclear Information and Resource Service (NIRS). In accordance with 10 CFR 2.206, the Office of Nuclear Reactor Regulation was assigned to prepare a response to CAN and NIRS's (Petitioners') request.

The Petitioners requested that the U.S. Nuclear Regulatory Commission (NRC) take the following actions: (1) immediate suspension or revocation of Northeast Utilities' (NU's or Licensee's) licenses to operate its nuclear facilities in Connecticut; (2) investigation of possible NU material misrepresentations to the NRC; (3) continued shutdown of the NU facilities until the Department of Justice completes its investigation and the results are reviewed by the NRC; (4) continued shutdown until the NRC evaluates and approves NU remedial actions; (5) continued listing of the NU facilities on the NRC's "Watch List" should any facility resume operation; (6) prohibition of any predecommissioning or decommissioning activity at any NU nuclear facility in Connecticut until NU and the NRC take certain identified steps to assure that such activities can be safely conducted; (7) initiation of an investigation into how the NRC allowed the asserted illegal situation at NU's nuclear facilities in Connecticut to exist and continue for more than a decade; and (8) an immediate investigation of the need for enforcement action for alleged violation of 10 CFR Part 50, Appendix B.

In addition, in the December 23, 1996, amendment, the Petitioners requested copies of specific calculations performed by the Licensee in response to an event at the Haddam Neck Plant that resulted in the introduction of a nitrogen bubble into the reactor vessel. The results of the calculations, which were performed to determine the reactor vessel water level, were presented by NU during a public predecisional enforcement conference held on December 4, 1996. The calculations are the basis for the Petitioners requested action (8) above. A copy of the calculations was provided to the Petitioners by letter dated July 21, 1997.

The bases for the Petitioners' requested actions are NU and NRC inspection findings and NU documents referred to in the Petition and a videotape, Exhibit A, which accompanied the Petition. The videotape records an August 29, 1996, Citizens Regulatory Commission televised interview of a former Millstone Station employee expressing his views on NU management.

Areas identified in the Petition include inadequate surveillance testing, operation outside the design basis, inadequate radiological controls, failed corrective action processes, and degraded material condition. The

Petition asserts that this information demonstrates that there are inadequate quality assurance programs at NU's nuclear facilities in Connecticut, that NU has made material false statements regarding its Millstone units, and that safe decommissioning of the Haddam Neck facility is not possible given the defective nature of the design and licensing bases for this facility.

The NRC acknowledged receipt of your Petition in a letter dated January 23, 1997. In the acknowledgement letter, the Petitioners were informed that their request for immediate action in Requests (1) and (8) above was denied. The Petitioners were further informed that copies of the Petition and videotape were sent to the Office of the Inspector General in response to Request (7) and parts of Requests (5), (6), and (8).

For the reasons given in the enclosed Partial Director's Decision (DD-97-21), Request (2) is granted for both the Millstone units and the Haddam Neck Plant; Requests (4) and (5) are partially granted for the Millstone units; Request (1) and parts of Requests (3), (4), (6), and (8) are denied for the three Millstone units; parts of Requests (6) and (8) are denied for the Haddam Neck Plant; part of Request (3) is deferred for the three Millstone units; Requests (1), (3), (4), and part of Request (5) are not applicable to Haddam Neck; and Request (7) and parts of Requests (5), (6), and (8) are beyond the scope of the 2.206 process and are not addressed. The deferred requests will be addressed in a Final Director's Decision after any possible wrongdoing by the Licensee has been fully considered.

A copy of the Partial Director's Decision (DD-97-21) will be filed with the Secretary of the Commission for the Commission to review in accordance with 10 CFR 2.206(c). As provided by this regulation, the Decision will constitute the final action of the Commission 25 days after the date of issuance of the Decision unless the Commission, on its own motion, institutes a review of the Decision within that time.

I have also enclosed a copy of the notice of "Issuance of Partial Director's Decision Under 10 CFR 2.206," including the complete text of DD-97-21, which is being filed with the Office of the Federal Register for publication.

Sincerely,

Samuel J. Collins, Director  
Office of Nuclear Reactor Regulation

Enclosures:                   1.     Director's Decision DD-97-21  
                                  2.     Federal Register Notice

cc w/encls: See next page

---

Northeast Nuclear Energy Company  
Millstone Nuclear Power Station  
Units 1, 2, and 3 and Haddam Neck

cc:

Lillian N. Cuoco, Esquire  
Senior Nuclear Counsel  
Northeast Utilities Service Company  
P. O. Box 270  
Hartford, CT 06141-0270

Mr. Wayne D. Lanning  
Deputy Director of Inspections  
Special Projects Office  
475 Allendale Road  
King of Prussia, PA 19406-1415

Mr. Kevin T. A. McCarthy, Director  
Monitoring and Radiation Division  
Department of Environmental Protection  
79 Elm Street  
Hartford, CT 06106-5127

Mr. F. C. Rothen  
Vice President - Work Services  
Northeast Nuclear Energy Company  
P.O. Box 128  
Waterford, CT 06385

Mr, Allan Johanson, Assistant Director  
Office of Policy and Management  
Policy Development and Planning Division  
450 Capitol Avenue - MS 52ERN  
P. O. Box 341441  
Hartford, CT 06134-1441

Charles Brinkman, Manager  
Washington Nuclear Operations  
ABB Combustion Engineering  
12300 Twinbrook Pkwy, Suite 330  
Rockville, MD 20852

Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406

Mr. D. M. Goebel  
Vice President - Nuclear Oversight  
Northeast Nuclear Energy Company  
P. O. Box 128  
Waterford, CT 06385

First Selectmen  
Town of Waterford  
Hall of Records  
200 Boston Post Road  
Waterford, CT 06385

Mr. N. L. Bowling, Jr.  
Recovery Officer - Millstone Unit 2  
Northeast Nuclear Energy Company  
P. O. Box 128  
Waterford, CT 06385

Mr. J. P. McElwain  
Recovery Officer - Millstone Unit 1  
Northeast Nuclear Energy Company  
P. O. Box 128  
Waterford, CT 06385

Senior Resident Inspector  
Millstone Nuclear Power Station  
c/o U.S. Nuclear Regulatory Commission  
P. O. Box 513  
Niantic, CT 06357

Deborah Katz, President  
Citizens Awareness Network  
P. O. Box 83  
Waterford, CT 06385

Mr. David Amerine  
Recovery Officer - Nuclear Engineering and Support  
Northeast Nuclear Energy Company  
P. O. Box 128  
Shelburne Falls, MA 03170

Mr. M. H. Brothers  
Vice President - Millstone Unit 3  
Northeast Nuclear Energy Company  
P. O. Box 128  
Waterford, CT 06385

Mr. Evan W. Woollacott, Co-Chair  
Nuclear Energy Advisory Council  
128 Terry's Plain Road  
Simsbury, Connecticut 06070

Mr. M. R. Scully, Executive Director  
Connecticut Municipal Electric Energy Cooperative  
30 Stott Avenue  
Norwich, CT 06360

Mr. Daniel L. Curry, Project Director  
Parsons Power Group Inc.  
2675 Morgantown Road  
Reading, Pennsylvania 19607

Mr. William D. Meinert, Nuclear Engineer  
Massachusetts Municipal Wholesale Electric Company  
  
P. O. Box 426  
Ludlow, MA 01056

Mr. Don Schopfer, Verification Team Manager  
Sargent & Lundy  
55 E. Monroe Street  
Chicago, Illinois 60603

Ernest C. Hadley, Esq.  
1040 B Main Street  
P. O. Box 549  
West Wareham, MA 02576

Mr. Ted C. Feigenbaum, Executive Vice President  
c/o Mr. Russell Mellor  
Director of Site Operations  
Connecticut Yankee Atomic Power Co.  
362 Injun Hollow Road  
East Hampton, CT 06424-3099

Joseph R. Egan, Esq.  
Egan & Associates, P.C.  
2300 N Street, NW  
Washington, D.C. 20037

Board of Selectmen  
Town Office Building  
Haddam, CT 06438

Citizens Regulatory Commission  
ATTN: Ms. Susan Perry Luxton  
180 Great Neck Road  
Waterford, Connecticut 06385

Resident Inspector  
Haddam Neck Plant  
c/o U.S. Nuclear Regulatory Commission  
362 Injun Hollow Road  
East Hampton, CT 06424-3099

The Honorable Terry Concannon, Co-Chair  
Nuclear Energy Advisory Council  
Room 4035 Legislative Office Building  
Capitol Avenue  
Hartford, Connecticut 06106

Mr. James S. Robinson  
Manager - Nuclear Investments and Administration  
New England Power Company  
25 Research Drive  
Westborough, MA 01582

Little Harbor Consultants, Inc.  
Millstone - ITPOP Project Office  
P. O. Box 0630  
Niantic, Connecticut 06375-0630

Mr. G. P. van Noordennen  
Manager - Nuclear Licensing  
Northeast Utilities Service Company  
362 Injun Hollow Road  
East Hampton, CT 06424-3099

UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REACTOR REGULATION

Samuel J. Collins, Director

In the Matter of	)	Docket Nos.	50-245
	)		50-336
	)		50-423
NORTHEAST UTILITIES	)		50-213
	)		
	)	License Nos.	DPR-21
	)		DPR-65
(Millstone Nuclear Power Station,	)		NPF-49
Units 1, 2, and 3, and	)		DPR-61
Haddam Neck Plant)	)		
	)	(10 CFR 2.206)	

## **PARTIAL DIRECTOR'S DECISION PURSUANT TO 10 CFR 2.206**

### **I. INTRODUCTION**

On November 25, 1996, as amended on December 23, 1996, Ms. Deborah Katz and Mr. Paul Gunter filed a Petition on behalf of the Citizens Awareness Network (CAN) and the Nuclear Information and Resource Service (NIRS), hereafter, referred to as Petitioners. These two submittals will hereafter be referred to as the Petition. The Petition was filed with the U.S. Nuclear Regulatory Commission (NRC) and the NRC Executive Director for Operations pursuant to Section 2.206 of Title 10 of the **Code of Federal Regulations** (10 CFR 2.206).

The Petitioners requested that the NRC take the following actions: (1) immediate suspension or revocation of Northeast Utilities' (NU's or Licensee's) licenses to operate its nuclear facilities in Connecticut; (2) investigation of possible NU material misrepresentations to the NRC; (3) continued shutdown of the NU facilities until the Department of Justice completes its investigation and the results are reviewed by the NRC; (4) continued shutdown until the NRC evaluates and approves NU remedial actions; (5) continued listing of the NU facilities on the NRC's Watch List should any facility resume operation; (6) prohibition of any predecommissioning or decommissioning activity at any NU nuclear facility in Connecticut until NU and the NRC take certain identified steps to assure that such activities can be safely conducted; (7) initiation of an investigation into how the NRC allowed the asserted illegal situation at NU's nuclear facilities in Connecticut to exist and continue for more than a decade; and (8) an immediate investigation of the need for enforcement action for alleged violation of 10 CFR Part 50, Appendix B.<sup>(1)</sup>

The bases for the Petitioners' assertions are NU and NRC inspection findings and NU documents referred to in the Petition and a VHS videotape, Exhibit A, which accompanied the Petition. No new information regarding Licensee activities was provided by the Petitioners except for the alleged violation referred to in Request 8. The Petitioners assert, in Request 8, that NU relied partly on draft calculations in its presentation at a public predecisional enforcement conference with the NRC staff, which included a discussion of an event at the Haddam Neck Plant. The Petitioners further assert that the calculations had not been reviewed and approved in accordance with the requirements of 10 CFR Part 50, Appendix B.

The areas of concern identified in the Petition include inadequate surveillance testing, operation outside the design as specified in the updated Final Safety Analysis Report (UFSAR), Inadequate radiological controls,

failed corrective action processes, and the degraded material condition of the plants. The Petitioners also assert that this information demonstrates that there are inadequate quality assurance programs at NU's nuclear facilities in Connecticut, that NU has made material false statements regarding its Millstone units, and that safe decommissioning of the Haddam Neck Plant is not possible given the defective nature of the design and licensing bases for the facility. The videotape records an August 29, 1996, Citizens Regulatory Commission televised interview of a former Millstone Station employee expressing his views on NU management. The tape has been transcribed and placed on the dockets of the facilities cited. The videotape interview included the former employee's views relating to NU's poor management in allowing degradation of the material condition of the plant; poor radwaste practices resulting in potential radiation exposure to employees; and harassment, intimidation, and subsequent illegal termination of employees raising safety concerns.

On January 23, 1997, the NRC acknowledged receipt of the Petition and informed the Petitioners that the Petition had been assigned to the Office of Nuclear Reactor Regulation to prepare a response and that action would be taken within a reasonable time regarding the specific concerns raised in the Petition. The Petitioners were also informed that the requests for immediate action were denied. The Petitioners were further informed that copies of the Petition and videotape were sent to the NRC's Office of the Inspector General (OIG) in response to Petitioners' Request 7 and parts of Requests 5, 6, and 8.

## **II. DISCUSSION**

The NRC staff has reviewed the Petition and, with the exception of Request 8, has not identified any new Information regarding either the Millstone or the Haddam Neck facilities. Both of the facilities have been the subject of close NRC scrutiny for several years.

### **MILLSTONE FACILITY**

With regard to the Millstone units, the NRC staff has been concerned for the last several years about the number and duration of violations at the Millstone site in the broad programmatic areas of design and licensing bases, testing, and radiological controls. Programmatic concerns in these areas, along with concerns in other areas, were major contributors to the decline in performance at the Millstone site. In the most recent systematic assessment of licensee performance (SALP) report of August 26, 1994, the NRC staff stated in the cover letter that it had noted several performance weaknesses, common to all three Millstone units. Among these were continuing problems with procedure quality and implementation, the informality in several maintenance and engineering programs (contributing to instances of poor performance), and the failure to resolve several longstanding problems at the site. In addition to these programmatic problems, the Licensee has had significant problems in dealing with employee concerns involving safety issues at the site.

On November 4, 1995, the Licensee shut down Millstone Unit 1 for a scheduled refueling outage. The NRC sent a letter to the Licensee on December 13, 1995, requiring the Licensee, before restarting Millstone Unit 1, to inform the NRC, pursuant to Section 182a of the Atomic Energy Act of 1954, as amended (the Act), and 10 CFR 50.54(f), of the actions taken to ensure that in the future the Licensee would operate that facility according to the terms and conditions of the unit's operating license, the Commission's regulations, and the unit's FSAR.

In January 1996, the NRC designated the three Millstone units as Category 2 on the NRC's Watch List. Plants on the Watch List in this category have weaknesses that warrant increased NRC attention until the licensees demonstrate improved performance for an extended period of time.

On February 20, 1996, the Licensee shut down Millstone Unit 2 when it declared both trains of the high-pressure safety injection (HPSI) system inoperable because of a design issue. There was a potential that the HPSI throttle valves could become plugged with debris when taking suction from the sump during recirculation mode.

On March 30, 1996, the Licensee shut down Millstone Unit 3 after finding that containment isolation valves for the auxiliary feedwater turbine-driven pump were inoperable because the valves did not meet NRC requirements. In response to a Licensee root cause analysis of inaccuracies in the Millstone Unit 1 FSAR, identifying the potential for similar configuration control problems at Millstone Units 2 and 3 and the existing design configuration issues identified at these units, the NRC issued 10 CFR 50.54(f) letters to the Licensee on March 7 and April 4, 1996. These letters required that the Licensee inform the NRC of the corrective actions taken regarding design configuration issues at Millstone Units 2 and 3 before the restart of each unit.

In June 1996, the NRC designated the three units at Millstone as Category 3 on the NRC's Watch List. Plants in this category have significant weaknesses that warrant maintaining them in a shutdown condition until the Licensee can demonstrate to the NRC that it has both established and implemented adequate corrective actions to ensure substantial improvement. This category also requires Commission approval before operations can be resumed.

On August 14, 1996, the NRC issued a Confirmatory Order directing the Licensee to contract with a third party to Implement an Independent Corrective Action Verification Program (ICAVP) to confirm the adequacy of its efforts to reestablish the design basis and configuration controls for each of the three Millstone units. The ICAVP is intended to provide additional assurance, before a unit restart, that the Licensee has identified and corrected existing problems in the design and configuration control processes for that unit.

On April 16, 1997, the NRC issued another 10 CFR 50.54(f) letter, which superseded the previously mentioned 10 CFR 50.54(f) letters and consolidated its requests for information and periodic updates. The information requested included: (1) the identification of significant items needed to be accomplished before restart; (2) identification of items to be deferred until after restart; (3) NU's process and rationale for deferring items; and (4) a description of the actions taken by NU to ensure that future operation will be conducted in accordance with the terms and conditions of the operating licenses, the Commission's regulations, and the FSARs. The Licensee provided the initial information requested by letter dated May 29, 1997. Additional information and updates will be provided in accordance with the time intervals specified in the 10 CFR 50.54(f) letter.

During eight NRC inspections conducted between October 1995 and August 1996, more than 60 apparent violations of NRC requirements were identified at the Millstone site. These apparent violations were discussed at a public predecisional enforcement conference held at the Millstone site on December 5, 1996. During the meeting, the Licensee stated that management failed to provide clear direction and oversight, performance standards were low, management expectations were weak, and station priorities were inappropriate. The NRC staff is nearing completion of its evaluation of potential enforcement action to address these apparent violations and their overall impact on the safe operation of the Millstone units.

Additionally, the Licensee has had a chronic problem of not dealing effectively with employee concerns at the Millstone site. On December 12, 1995, the NRC established a review group to conduct an independent evaluation of the history of the Licensee's handling of employee concerns related to licensed activities at the Millstone facility. The review group determined that, in general, an unhealthy work environment, which did not tolerate dissenting views and did not welcome or promote questioning attitudes, has existed at the Millstone facility for the last several years. To address this problem, the NRC issued an order on October 24, 1996, that directed NU to devise and implement a comprehensive plan for handling safety concerns raised by Millstone employees and to ensure an environment free from retaliation or discrimination. In addition, the order required NU to have an independent third party oversee its employee concerns program. The third party is responsible for providing periodic reports to NU and the NRC detailing its findings and recommendations. The third-party findings and the NU responses to them will be assessed by the NRC staff for any restart issues.

The NRC regards compliance with regulations, license conditions, and Technical Specifications (TSs) as mandatory. However, the NRC also recognizes that plants will not operate trouble-free.<sup>(2)</sup> This is clearly articulated in Criterion XVI, Appendix B, Part 50, Quality Assurance Criteria for Nuclear Power plants and Fuel

Reprocessing plants." Criterion XVI states that "measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected."

The appropriate response to an identified deficiency can and should vary, depending on the safety significance of the deficiency. For example, for rapidly developing situations, when prompt action is required to assure plants are not in an unsafe condition, automatic safety systems are in place to shut down the reactor. In other, less time-critical situations, TSs relating to structures, systems, and components (SSCs) vital to the safe operation of a nuclear plant require that specific actions be taken within a predetermined time period when the SSC is determined to be inoperable. The time period is dependent on the safety significance of the SSC. NRC Generic Letter 91-18, "Information to Licensees Regarding Two NRC Inspection Manual Sections on Resolution of Degraded and Nonconforming Conditions and on Operability," provides guidance for licensees to determine what actions are required and when they need to be taken for identified degraded or nonconforming conditions.

The conduct of NRC regulatory oversight at the Millstone site is based on the recognition that it is the Licensee's primary responsibility to demonstrate that corrective actions have been effectively implemented. Thus, the Licensee must determine that a unit is in conformance with applicable NRC regulations, its license conditions, and its FSAR and that applicable licensing commitments have been met before the NRC staff can recommend that the Commission approve the restart of any unit. The Licensee's conformance with NRC regulations, license conditions, and licensing commitments is fundamental to NRC's confidence in the safety of licensed activities. In short, the Licensee has the primary responsibility for the safe operation of its facilities.

In a June 20, 1996, letter to the NRC, the Licensee described its Configuration Management Plan (CMP), which is its principal program to provide reasonable assurance that weaknesses at the Millstone units have been effectively corrected. The CMP includes efforts to understand and correct the licensing and design bases issues that led the NRC to issue the 10 CFR 50.54(f) letters and order actions to prevent recurrence of those issues. The Licensee stated that the objective of the CMP was to document and meet the licensing and design bases requirements of each unit and to ensure that adequate programs and processes are in place to maintain control of these requirements.

The Licensee's CMP must either correct each FSAR deficiency or evaluate it to ensure that the change to the facility does not involve any unreviewed safety question or change to the facility TSs. NU has documented a large number of deficiencies, which vary in scope and safety significance for each unit. These lists contain significant deficiencies that must be corrected before restart and others that the Licensee is planning to correct after the restart. In its continuing reviews of the deficiency lists, the NRC staff will determine whether the Licensee has appropriately scheduled safety significant items for completion before restart and whether those items that the Licensee will defer until after restart are appropriate for each unit. The results of these efforts will be documented in NRC inspection reports.

The NRC's regulatory oversight of the Licensee's corrective actions requires extensive planning and program integration. To focus more regulatory attention on all of the restart issues related to the Millstone units, the NRC has established a Special Projects Office (SPO) within the Office of Nuclear Reactor Regulation to oversee these activities. The SPO has developed a comprehensive and multifaceted oversight program to verify the adequacy of NU's corrective actions, programs, and processes. The breadth and significance of the problems identified at the Millstone site require this program. The SPO has developed a Restart Assessment Plan (Assessment Plan) for each of the Millstone units, which includes: (1) the appropriate aspects of NRC Inspection Manual, Manual Chapter (MC) 0350, "Staff Guidelines For Restart Approval"; (2) oversight of NU's ICAVP; and (3) oversight of NU's corrective actions relating to employee concerns involving safety issues. The activities associated with the Assessment Plan are in addition to the normal inspection and licensing activities being carried out at the Millstone site.



MC 0350 establishes the guidelines for approving the restart of a nuclear power plant after a shutdown resulting from a significant event, a complex hardware problem, or serious management deficiencies. The primary objective of the guidelines in MC 0350 is to ensure that NRC's restart review efforts are appropriate for the Individual circumstances, are reviewed and approved by the appropriate NRC management levels, and provide objective measures of restart readiness.

The Assessment Plan for each unit includes those issues listed in MC 0350 that the NRC staff has identified as relevant to the shutdown of the unit. Each Assessment Plan also includes additional issues determined to be applicable to the specific situation. The Assessment Plans include all actions the NRC expects NU to take before the NRC staff recommends to the Commission that a unit be permitted to restart. Accordingly, the staff will use the Assessment Plan for each Millstone unit to track and monitor all significant actions necessary to support a decision on restart approval of the unit.

The Assessment Plan for each Millstone unit includes the requirement to review the NU Operational Readiness Plan, the deficiency lists associated with the Assessment Plan, including restart and deferred items, the corrective action program, work planning and controls, the procedure upgrade program, the nuclear oversight function (quality assurance), outstanding enforcement items, and a Significant Issues List (SIL), which includes issues identified by both NU and the NRC as issues requiring resolution before restart. NRC MC 93802, "Operational Safety Team Inspection" (OSTI), provides the framework for a team inspection to be performed during the later stages of the restart process. The inspection will be structured to focus on the pertinent issues at each of the Millstone units.

Within the SPO, a Millstone Restart Assessment Panel (RAP) has been formed in accordance with MC 0350. The RAP meets to assess the Licensee's performance and its 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 Action 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 RAP holds periodic meetings with the Licensee to discuss the Licensee's corrective actions and schedules of each Millstone unit. These meetings are noticed and are open to the public. An additional meeting with the public is usually held that same day in the evening to summarize the meeting with the Licensee, provide an update on NRC activities, and address comments from the public.

The purpose of the ICAVP, as stated in the Confirmatory Order, is to confirm that the plant's physical and functional characteristics are in conformance with its licensing and design bases. The ICAVP audit required by the NRC is expected to provide independent verification, beyond NU's quality assurance and management oversight, that the Licensee has identified and satisfactorily resolved existing nonconformances with the design and licensing bases; documented and utilized the licensing and design bases to resolve nonconformances; and established programs, processes, and procedures for effective configuration management in the future. NU has started programs to identify and understand the root causes of the licensing and design bases issues that led to NRC Issuance of the 10 CFR 50.54(f) letters to NU and to implement corrective actions that will ensure that NU maintains the design configuration and that each unit is in conformance with its licensing basis. NU has indicated that the scope of its corrective programs will include those systems that it has categorized as either Group 1 (safety-related and risk-significant) or Group 2 (safety-related or risk-significant). The ICAVP audit must provide insights into the effectiveness of NU's programs so that the results can be reasonably extrapolated to the structures, systems, and components that were not reviewed in the audit.

As a practical matter, the NRC cannot do a 100-percent verification of the Licensee's corrective actions, processes, and programs for each Millstone unit. However, a comprehensive and multifaceted oversight process has been developed by the NRC staff to provide a high level of confidence that the Licensee has implemented required corrective actions and that all of the issues on the SILs have been resolved. The independent third-party evaluations required by the NRC will be used to enhance NRC confidence that the Licensee's corrective action

programs have been effectively implemented at each unit.

NRC activities (including oversight of the ICAVP) to ensure that effective corrective actions are being taken by the Licensee will provide additional assurance that the Licensee's corrective action programs have been effectively implemented. These activities will include in-process reviews of the ICAVP contractor's activities, reviews of the ICAVP results, and additional independent reviews of compliance with the design and licensing bases of selected systems. The State of Connecticut's Nuclear Energy Advisory Council has provided input to the NRC staff for selecting the systems which will be reviewed by the ICAVP contractor and has been invited to observe the NRC staff's ICAVP inspections.

When the restart review process has identified, corrected, and reviewed relevant issues regarding each Millstone unit, a restart authorization process will be initiated for that unit. Upon receipt of a staff recommendation and a briefing on any ongoing investigations, the Commission will meet to assess the recommendation and vote on whether to allow the restart of the unit. The same process will be followed for the remaining units.

### **HADDAM NECK FACILITY**

With regard to the Haddam Neck Plant, the Licensee shut down the plant on July 22, 1996, as required by the facility's TSs, because of concerns that the containment air recirculation fans service water piping may exceed design loads during certain accident scenarios. The Licensee determined that these concerns and other hardware and programmatic problems identified before and during the forced outage should be resolved before restarting the plant. Thus, the Licensee decided to begin Refueling Outage 19 on August 17, 1996. On October 9, 1996, the owners of the Haddam Neck Plant stated that a permanent shutdown of the plant was being considered by the Board of Trustees based on an economic analysis of operations, expenses, and the cost of replacement power. Subsequently, all fuel assemblies were removed from the reactor and placed in the spent fuel pool.

From November 21, 1995, to November 22, 1996, the NRC conducted numerous inspections at the Haddam Neck Plant to review several facets of plant performance. These inspections included a Special Team Inspection by NRC headquarters staff focused on engineering performance; a special Augmented Inspection Team (AIT) inspection of a reactor vessel nitrogen intrusion event in late August and early September 1996 that lowered the reactor vessel water level; a special radiation protection inspection of a significant contamination event in November 1996; an emergency preparedness inspection to observe the Licensee's response during an emergency exercise held in August 1996; and several resident inspections. Numerous violations, as well as several significant regulatory concerns, were identified during these inspections. Most of the violations were discussed at a transcribed public predecisional enforcement conference at the Millstone training building in Waterford, Connecticut, on December 4, 1996. The December 4 conference was open to the public and focused on the broader programmatic deficiencies underlying the violations that contributed to the problems at Haddam Neck. A Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$650,000 was issued on May 12, 1997, and subsequently paid by the Licensee.

The restart process described for the three Millstone units is not applicable to the Haddam Neck Plant. By letter dated December 5, 1996, the Licensee certified to the NRC, pursuant to 10 CFR 50.82(a)(1)(i) and 10 CFR 50.82(a)(1)(ii), that it had decided to permanently cease operations at the Haddam Neck Plant and had permanently removed the fuel from the reactor. The Licensee further noted that a Post-Shutdown Decommissioning Activities Report (PSDAR) and a site-specific decommissioning cost estimate would be submitted in accordance with 10 CFR 50.82, "Termination of License".

It is important to note that the NRC continues to identify problems at both the Millstone site and the Haddam Neck Plant, as documented in inspection reports issued after this Petition was filed. These findings indicate that the corrective actions required to restart the Millstone units have not yet been fully implemented. The NRC staff will not recommend that the Commission allow the restart of a Millstone unit until the Commission has determined, in accordance with the Assessment Plan, that the necessary corrective actions have been effectively

implemented for the unit.

As for Haddam Neck, a Confirmatory Action Letter (CAL) was issued to the Licensee on March 4, 1997, concerning radiological-control problems at the Haddam Neck Plant. This CAL is an example of the type of action that the NRC takes to assure that the limited activities at the site will be conducted in a safe manner and in accordance with regulatory requirements. The CAL prohibits the Licensee from performing any radiological work except that required to maintain the plant in a safe configuration until the corrective actions identified in the CAL have been implemented.

### **III. NRC RESPONSE TO REQUESTED ACTIONS**

In summary, the Licensee's implementation of its Configuration Management Plan (CMP) for each Millstone unit, response to the elements in the NRC staff's Restart Assessment Plan (Assessment Plan) for each Millstone unit, implementation of actions to improve programs to address employee concerns at the Millstone site, and the implementation of the decommissioning process specified in 10 CFR 50.82 for the Haddam Neck Plant, as discussed above, are the bases for the NRC staff's responses discussed in this Partial Director's Decision to the specific actions that the Petitioners requested be taken against NU. The Petitioners' requested actions and the NRC staff's responses are discussed below.<sup>(3)</sup>

1. Petitioners request that the NRC immediately suspend or revoke NU's license to operate Connecticut Yankee (Haddam Neck) and the Millstone Nuclear reactors due to chronic, negligent management of the reactors which, for over a decade, has endangered and continues to endanger occupational and public health and safety and the environment due to resultant and cumulative major safety problems and violation of NRC regulations.

The Petitioners base their request to suspend or revoke the operating licenses of Haddam Neck and the three Millstone units on NU reports and NRC inspection findings referred to in the Petition and on a videotape in which a former Millstone Station employee expresses his views on NU management and plant conditions. As previously noted, based on the NRC staff review of these materials, the Petitioners have identified no new information.

With regard to the Millstone units, the units are currently in an extended shutdown and significant management changes at NU have been made in the past year. The NRC's focus is on evaluating improved performance, hardware and programmatic upgrades, and corrective actions. Specifically, NRC review and inspection emphasis will be directed toward the results of NU's actions to correct identified weaknesses in areas such as design controls, radiological controls, quality assurance, work control practices, corrective action processes, and the handling of employee concerns.

The previous discussion provides an overview of the Assessment Plans that the SPO has developed for assessing the adequacy of NU's corrective actions being taken prior to Commission approval of restart for any of the Millstone units. The NRC staff will have to reach a determination that the corrective actions taken by NU provide reasonable assurance that future operation will be conducted in accordance with the terms and conditions of the operating license, the Commission's regulations, and the design basis, as documented in the FSAR, of each unit before recommending that the Commission approve the restart of any one of the units. Upon receipt of an NRC staff recommendation and a briefing on ongoing investigations, the Commission will hold a meeting to assess the recommendation and then vote on whether to approve the restart of each unit.

The restart process discussed for the Millstone units does not apply to Haddam Neck. The Licensee has certified to the NRC that operations at the facility have permanently ceased and that fuel has been permanently removed from the reactor.

The Petitioners' request to take immediate action was denied in the letter of January 23, 1997, which

acknowledged receipt of the Petition. The request to suspend or revoke the licenses for the three Millstone units is denied based on the NRC staff's conclusion that such action is not warranted by the facts. Programmatic and review efforts are in place. If these efforts are successful, the NRC would allow the Millstone units to resume operation. The request to suspend or revoke the license to operate the Haddam Neck Plant is moot since the Licensee has certified to the NRC that the plant has permanently ceased operation and the fuel has been permanently removed from the reactor.

2. The Petitioners request that the NRC investigate the possibility that NU made material misrepresentations to the NRC concerning engineering calculations and other Information or actions relied upon to assure the adequacy of safety systems at the Haddam Neck and Millstone reactors. The Petitioners said NU made possible material misstatements either through lack of rigor and thoroughness or by providing intentionally misleading information.

The NRC has ongoing investigations related to alleged wrongdoing by NU personnel. The investigative results will be reviewed for possible enforcement action. Depending on the results of the ongoing evaluations of inspections and investigations, both NU as an organization and NU employees found to have engaged in deliberate misconduct will be subject to appropriate enforcement action. Consistent with the General Statement of Policy and Procedures for NRC Enforcement Actions (NUREG-1600), some enforcement action is normally taken against a licensee for violations caused by significant acts of wrongdoing by its employees. Such action could include a civil penalty or an order. In deciding whether to also take action directly against the responsible employees, the NRC considers a number of factors such as the employee's level in the organization, the employee's training and experience, the degree of supervision, the employee's attitude, and the degree of management responsibility or culpability. A decision to take action directly against an individual is significant and normally will be taken only when the NRC is satisfied that the individual has engaged in deliberate misconduct. The action taken could include prohibiting the individual from involvement in licensed activities for a period of years.

As the NRC is currently evaluating alleged wrongdoing by NU personnel, the Petitioners' request is granted.

3. Petitioners request that the NRC revoke NU's operating licenses for the Haddam Neck and the Millstone Units 1, 2, and 3 reactors if an investigation determines that NU deliberately provided insufficient and/or false or misleading information to the NRC. If the NRC chooses not to revoke NU's licenses, the Petitioners specifically request that the reactors remain off-line until a United States Department of Justice (DOJ) independent investigation is complete and the NRC reviews the conclusions and recommendations contained therein for potential consequences to the Licensee and its agents under NRC regulations. The Petitioners note in a footnote that a DOJ report will likely produce information essential to the NRC's evaluation of NU's management problems. The Petitioners further stated that such information should influence any NRC decision concerning NU's future operation of nuclear reactors in Connecticut.

Since the NRC investigations are ongoing, the NRC cannot respond to the first portion of the request to revoke the licenses of the three Millstone units at this time.

The response to the Petitioners Request 1 applies to the part of Request 3 asking that the reactors remain off line until the investigations are complete. As noted, the Commission will consider the status of all ongoing investigations, including any referrals to DOJ, in its deliberations before voting on the restart of any of the Millstone units.

The part of the request relating to revoking the licenses of the three Millstone units is deferred until all investigations are complete. The request that the reactors remain off line until the investigations are complete is denied.

This request does not apply to the Haddam Neck Plant, which has already permanently ceased operation.

4. The Petitioners request that, If NRC chooses not to revoke NU's licenses to operate the Haddam Neck Plant and the Millstone Units 1, 2, and 3 reactors and allows the reactors to return to operation, the reactors

remain on the NRC's Watch List to oversee reactor operations until NU management demonstrates to the NRC that:

- a. NU is able to fulfill NRC regulatory requirements;
- b. NU has met all prior commitments concerning the repair, modification, maintenance, and documentation of the nuclear power stations;
- c. NU has retrained all staff in the application and interpretation of NRC's regulations; and
- d. NU has removed from any positions of responsibility for operation and/or management of the reactors all persons whom DOJ, NRC, or other government investigators and/or civil or criminal prosecutions find to have made material misrepresentations to the NRC during the past decade of mismanagement.

Due to the significance and programmatic nature of the concerns evolving from the various NRC reviews and inspections at the Millstone Station and the fact that each unit is shut down pending resolution of these issues, the Commission put the Millstone units in Category 3 of the Watch List. Accordingly, restart of any of the units is subject to Commission approval. SIL issues, which require resolution for safe operation, will have been addressed and a process will be in place to resolve any deferred items. If the Commission approves restart of any unit, that unit will be placed in Category 2 of the Watch List, where it will remain until the Licensee has demonstrated that satisfactory operational performance can be sustained at the unit.

The restart process, as previously discussed, will assure that the management attributes identified by the Petitioners in Request 4.a, b, and c, will be adequately considered within the context of the SPO's Assessment Plans before the NRC staff recommends that the Commission allow the restart of any unit. Request 4.d will be considered in the restart process when the Commission is briefed regarding investigation efforts and recommendations.

The request to retain the Millstone units on the NRC's Watch List, if the Commission approves restart, is granted. Any unit permitted to restart will be placed in Category 2 of the Watch List, where it will remain until the Licensee has demonstrated that satisfactory performance can be sustained at the unit. Request 4.a, b, c, and d will be considered as set forth above.

This request does not apply to the Haddam Neck Plant because the Haddam Neck Plant has permanently ceased operation. The NRC will continue its oversight of the defueled facility.

5. Petitioners request that, as a minimum, the NRC keep Haddam Neck and the Millstone 1, 2, and 3 nuclear reactors off line until NU's chronic mismanagement has been analyzed, remedial management programs have been implemented, and the NRC has evaluated and approved the effectiveness of the Licensee's actions. As a minimum, NU should:
  - a. thoroughly analyze root causes for deficiencies in NU's FSARs, its documentation of licensing and design bases, its safety analysis, its engineering, its quality assurance, its as low as reasonably achievable (ALARA) programs, and other necessary or required documentation.
  - b. create a complete, accurate FSAR—mere reform is impossible when the basic document is inadequate and inaccurate;
  - c. reevaluate any of its activities initiated under (or which NU should have initiated under) 10 CFR 50.59 in order to confirm the validity of such activities, particularly to determine the extent to which the FSAR does not match "as built" configurations. This reevaluation requires more than a paper audit; it requires checking actual physical plant against the existing documentation, component by component and system by system and creating correct documentation where it is lacking and/or inadequate;
  - d. institute and document an effective ALARA review of all operational and nonoperational activities that expose workers and/or the public to radiation;
  - e. thoroughly document the root causes of NU's chronic and systemic mismanagement including, documentation of the NRC Region I inspection program's staff and management failures over the past decade to detect and deal with this problem;

- f. demonstrate, over a substantial period of time to the satisfaction of the NRC, NU's commitment to respect NRC regulatory requirements and consistently follow them;
- g. retrain all personnel involved in day-to-day operations so that they are thoroughly conversant with NRC regulations; and
- h. update and document Plant Design Change Requests (PDCRs) to include all changes to the reactor's design, and verification by the NRC staff of these design changes, with closeouts of PDCRs receiving the highest priority.

As previously noted, NRC regulatory oversight programs at the Millstone Station are based on the recognition that the Licensee is primarily responsible for demonstrating that corrective actions have been effectively implemented. Before the NRC staff can recommend that the Commission approve the restart of a Millstone unit, the Licensee must determine that the unit conforms with applicable NRC regulations, license conditions, and the FSARs and that applicable licensing commitments have been met. The Licensee's conformance with NRC regulations, license conditions, and licensing commitments is fundamental to the NRC's confidence in the safety of licensed activities.

The significant actions that the NRC is taking to monitor the Licensee's activities have been discussed in detail earlier in this Decision. Based on that discussion, the actions requested in Request 5.a through h, with the exception of the part of 5.e relating to NRC staff performance, will be adequately addressed within the context of the SPO's Assessment Plan for each of the Millstone units.

With regard to Request 5.e, the part of 5.e relating to the performance of the NRC staff is beyond the scope of the 2.206 process and will not be addressed in the Director's Decision relating to this Petition. This issue has been referred to the NRC's DIG for action as appropriate.

The request to keep the Millstone units off line until the items identified in Request 5.a through h, with the exception of the part of Request 5.e relating to NRC's previous actions in dealing with the Licensee, is granted to the extent that the issues will be considered within the SPO's Assessment Plan for each of the units.

This request does not apply to the Haddam Neck facility, which has permanently ceased operation.

- 6. Petitioners request that, if NU decides to shut down any or all of the nuclear power reactors at issue herein with the intent to commence the decommissioning process, the NRC not permit any decommissioning or predecommissioning activity to take place until:
  - a. all the documentation mentioned in earlier requests is available to the NRC and on site at the reactors;
  - b. all personnel involved in the decommissioning process have been retrained (or trained) in the use and interpretation of the applicable NRC regulations in Title 10 of the Code of Federal Regulations;
  - c. the NRC has appropriately evaluated and replaced personnel and has restructured the NRC Region I Inspection program, its management, and the supervising NRC directorate to eliminate the regulatory anarchy that plagued the Connecticut nuclear reactors during the past 10 years; and
  - d. the NRC makes certain that NU does not employ any persons in management or operations who made material misrepresentations to the NRC about the status of operations, repairs, modifications, or maintenance of NU's Connecticut reactors.

On October 9, 1996, the owners of the Haddam Neck Plant stated that the Board of Trustees was considering a permanent shutdown of the plant, based on an economic analysis of operations, expenses, and the cost of replacement power. All fuel assemblies were removed from the reactor and placed in the spent fuel pool for temporary storage. By letter dated December 5, 1996, the Licensee certified to the NRC, pursuant to 10 CFR 50.82(a)(1)(I) and 10 CFR 50.82(a)(1)(ii), that it had determined to permanently cease operations at the Haddam Neck Plant and that the fuel had been permanently removed from the reactor. The Licensee further noted that a Post-Shutdown Decommissioning Activities Report (PSOAR) and the site-specific decommissioning cost estimate would be submitted in accordance with 10 CFR 50.82,

termination of license. The PSDAR will be submitted to the NRC and a copy sent to the affected state(s) within 2 years after operations have permanently ceased. The report must include, among other things, a description of the planned decommissioning activities and a schedule for their implementation. No major decommissioning activities may be performed until 90 days after the NRC receives the PSDAR. The current activities at the site include the operation, monitoring, and maintenance of the spent fuel pool; radioactive waste management; radiological protection; and fire protection. These activities, including any activities relating to decommissioning, must be in compliance with the current license requirements, which apply when the reactor is defueled.

The degree of regulatory oversight required during decommissioning of a nuclear power reactor is considerably less than during its operational phase. When the reactor is operating, the fuel in the reactor core undergoes a controlled nuclear fission reaction that generates a high neutron flux and large amounts of heat. Safe control of the nuclear reaction involves the use and operation of many complex systems, adherence to operational limits, testing of components and systems to assure their operability, specified procedure adherence, and operator actions. Once the fuel has been permanently removed and temporarily stored in the spent fuel pool, the fuel is still highly radioactive and generates heat caused by radioactive decay. However, no neutron flux is generated and the fuel slowly cools as its energetic decay products diminish. Since the spent fuel is stored in a configuration that precludes the nuclear fission, no generation of new radioactivity can occur. However, the same areas of the facility contain radioactive contamination and those areas must still be controlled to minimize radiation exposure to personnel and to control the spread of radioactive material.

The NRC staff continues to be concerned about the failures of the Haddam Neck radiological controls program (which recently resulted in the unplanned exposure of two individuals), long-standing discrepancies in the calibration of several radiation monitors that are used to monitor and control radiological effluent releases, and the inadequate control of radioactive material that resulted in the undetected release of contaminated equipment to a nonlicensed vendor.

In response, the NRC has taken comprehensive and significant actions to resolve concerns in the area of radiological controls, including the issuance of a CAL on March 4, 1997, confirming the Licensee's commitment to respond to the findings in Inspection Reports 50-213/96-12, dated December 19, 1996, and 50-213/97-02, dated March 21, 1997. The CAL restricts the Licensee from performing any radiological work except that required to maintain the plant in a safe configuration. The CAL identifies four significant activities required of the Licensee to bring its management and implementation of radiation control programs up to a standard acceptable to the NRC. The activities are to (1) identify, in writing, specific compensatory measures that the Licensee will establish to assure sufficient management control and oversight of ongoing or planned activities that require radiological controls; (2) engage the services of an independent assessor to assess the quality and performance of the Licensee's

7. The Petitioners request that the NRC commence an investigation into how it allowed the illegal situation at NU's Connecticut reactors to exist and to continue over a decade. Particularly, Petitioners request that the Commission order Its staff (directors of the responsible directorates, managers, and Region I management and staff) to answer the following questions, and hold these persons accountable for their answers and actions regarding the past 10 years at NU's Connecticut nuclear power reactors:
  - a. What documents did Region I Inspectors, their supervisors, and NRC Project Directors and Project Managers review during 10 years of NU's out-of-compliance operation?
  - b. If NU provided documents that somehow deceived the Region I inspector, how does the information in these documents relate to the everyday workings and activities conducted during the otherwise undocumented decade of operations at the Millstone and Haddam Neck plants?
  - c. How did Region I inspectors, their supervisors, and NRC Project Directorates and Managers find that NU was conducting operations in a way that keeps worker and public exposures to radiation ALARA when NU was not adequately documenting either its licensing basis or the basis of reactor operations?

- d. Knowing, as Region I inspectors must have known, of excessive worker exposures (for example, due to a long standing problem with leaking pipes as documented by an NU worker in the video tape provided with this Petition Exhibit A), how did the Region I inspectors certify that operations at the Millstone and Haddam Neck plants were being conducted ALARA? How did the supervisors, and those in the NRC Project Directorate, make the same certifications?
- e. During the undocumented decade, how did Region I inspectors, their supervisors, and NRC Project Directors and Managers manage to track NU's activities at the Millstone and Haddam Neck plants under 10 CFR 50.59?
- f. To what extent have NRC Region I Inspectors, their supervisors, and NRC Project Directors and Managers allowed the same type of problems to develop at other nuclear power reactors in New England (i.e., Maine Yankee, Pilgrim, Seabrook, Vermont Yankee, and Yankee Rowe)?
- g. Is there any connection between licensees employing Yankee Atomic Electric Company's consulting and engineering services and the serious problems with documentation and lack of compliance with the licensing and design bases nuclear power stations in New England or in other parts of the country?

This request is beyond the scope of the 2.206 process. It concerns the performance of the NRC staff and will not be addressed in the Director's Decision relating to this Petition. This request has been referred to the NRC's OIG.

- 8. In the amendment to the Petition, the Petitioners request that the NRC take the following actions to enforce its regulations against NU. As part of the 2.206 process, the NRC should provide copies of Haddam Neck's nitrogen calculations to the Petitioners and conduct an independent review to see if the calculations meet the requirements of 10 CFR Part 50, Appendix B. If Appendix B requirements were violated, the Petitioners are concerned that the Licensee cannot safely decommission the Haddam Neck Plant. Accordingly, NU's operating licenses for its Connecticut reactors should be revoked, and NU should not be permitted to commence decommissioning until it has complied with the conditions outlined in the main body of the original Petition. Finally, the Commission should inquire into the NRC staff's failure to discern this situation and its continuing failure to enforce the terms and conditions of NU's license and NRC regulations.

As noted above, the assertion by the Petitioners that the calculations performed by the Licensee violated NRC requirements is a new issue not previously considered by the NRC staff.

The subject calculations were performed subsequent to an event at the Haddam Neck Plant that resulted in the formulation of a nitrogen bubble in the reactor vessel. The results of the calculations, which were one of several methods used to confirm the water level during the event, were discussed by the Licensee during a public predecisional enforcement conference held on December 4, 1996.

By letter dated July 3, 1997, the Licensee provided information, including the requested calculations, relating to the different methods used for determining the reactor vessel water level resulting from the nitrogen intrusion event. This information has been placed in the NRC's Public Document Room and the Local Public Document Rooms. The Petitioners were provided a copy of the calculations as an enclosure to a Petition status letter dated July 21, 1997, since the calculations are relevant to the Petitioners' concern, are not proprietary, and are in the public domain.

On September 5, 1996, while investigating the root cause of the undetected accumulation of nitrogen gas in the reactor vessel, the Licensee performed a special test (ST 11.7-197, (Determination of Reactor Vessel Level)) to verify reactor vessel level. This test was necessary because the reactor vessel level indication system and the core exit thermocouples had been removed from service in accordance with the Licensee's refueling procedures. The reactor level measurement problem had been exacerbated by the nitrogen gas intrusion, which displaced water from the reactor vessel into the pressurizer, resulting in an unquantified decrease in reactor vessel inventory. During the course of the event, the shift manager had requested that



the worst-case (lowest) reactor vessel level achieved during the event be determined. As noted in NRC Inspection Report No. 50-213/96-80, "NRC Augmented Inspection Team Review of the Undetected Introduction of Nitrogen Gas into the Reactor Vessel During Plant Shutdown," the plant staff completed a preliminary analysis on September 4, 1996. It was further noted that, at the end of the onsite inspection activities, the Licensee had yet to complete a final volumetric inventory balance calculation. In the Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$650,000 issued on May 12, 1997, the Licensee was cited for failure to take timely corrective actions following the nitrogen intrusion event, including the failure to timely establish the actual lowest reactor vessel level resulting from the event.

Subsequently, the Licensee completed two calculations: (1) Calculation 96-MDE-1515-MY, "Reactor Vessel Level Determination," prepared on October 2, 1996, independently reviewed on November 1, 1996, and approved on November 5, 1996; and (2) Calculation 96-MDE-1536-MY, "Reactor Vessel Level Determination," prepared on October 4, 1996, independently reviewed on November 22, 1996, and approved on December 1, 1996. These calculations were performed consistent with the requirements of 10 CFR Part 50, Appendix B. Also, during the December 4, 1996, predecisional enforcement conference, the Licensee presented the results of reactor vessel water level simulations, which were calculated using the RELAP5/MOD3 code. These simulation results were presented by the Licensee to corroborate, with a diverse methodology, the lowest reactor vessel water level determined by Calculations 96-MDE-1515-MY and 96-MDE-1536-MY. The results of the RELAP5/MOD3 reactor vessel water level simulations presented by the Licensee during the predecisional enforcement conference were only used to corroborate and provide additional insight into the reactor vessel water level that had been determined through Calculations 96-MOE-1S1S-MY and 96-MDE-1536-MY. These two calculations had been independently reviewed and performed consistent with the applicable provisions in the

#### **IV. CONCLUSION**

The NRC staff has determined, for the reasons provided in the above discussion, that: Request 2 is granted for both the Millstone units and the Haddam Neck Plant; Requests 4 and 5 are partially granted for the Millstone units; Request 1 and parts of Requests 3, 4, 6, and B are denied for the three Millstone units; Requests 6 and 8 are partially denied for the Haddam Neck Plant; Request 3 is partially deferred for the three Millstone units; Requests 1, 3, 4, and parts of Request 5 are not applicable to Haddam Neck; and Request 7 and parts of Requests 5, 6, and 8 are beyond the scope of the 2.206 process and are not addressed. The deferred parts of Request 3 will be addressed in a Final Director's Decision after any possible wrongdoing is fully considered by the NRC staff.

As provided for in 10 CFR 2.206(c), a copy of this Partial Decision will be filed with the Secretary of the Commission for the Commission's review. This Partial Decision will constitute the final action of the Commission (for Petitioners Requests 1, 2, 5, 6, and 8) 25 days after issuance unless the Commission, on its own motion, institutes review of the Decision in that time.

Dated at Rockville, Maryland, this 12th day of September.

FOR THE NUCLEAR REGULATORY  
COMMISSION

Frank J. Miraglia Jr., Deputy Director  
Office of Nuclear Reactor Regulation

---

# **ISSUANCE OF PARTIAL DIRECTOR'S DECISION UNDER 10 CFR 2.206(7590-01-P)**

7590-01-P

UNITED STATES NUCLEAR REGULATORY COMMISSION  
NORTHEAST UTILITIES  
MILLSTONE NUCLEAR POWER STATION, UNITS 1, 2, AND 3  
DOCKET NOS. 50-245, 50-336, AND 50-423  
HADDAM NECK PLANT  
DOCKET NO. 50-213  
ISSUANCE OF PARTIAL DIRECTOR'S DECISION UNDER 10 CFR 2.206

Notice is hereby given that the Director, Office of Nuclear Reactor Regulation, has issued a Partial Director's Decision with regard to a Petition dated November 25, 1996, as amended on December 23, 1996, filed by Ms. Deborah Katz and Mr. Paul Gunter on behalf of the Citizens Awareness Network (CAN) and the Nuclear Information and Resource Service (NIRS), hereafter referred to as "Petitioners." The Petition pertains to the Millstone Nuclear Power Station, Units 1, 2, and 3, and the Haddam Neck Plant.

The Petitioners requested that the NRC: (1) immediately suspend or revoke Northeast Utilities' (NU's or Licensee's) licenses to operate its nuclear facilities in Connecticut; (2) investigate possible Licensee material misrepresentations to the NRC; (3) continue the shutdown of the Licensee's facilities until the Department of Justice completes its investigation and the results are reviewed by the NRC; (4) continue the shutdown until the NRC evaluates and approves the Licensee's remedial actions; (5) continue listing the Licensee's facilities on the NRC's "Watch List" should any facility resume operation; (6) bar any predecommissioning or decommissioning activity at any of the Licensee's nuclear facilities in Connecticut until the Licensee and the NRC take certain identified steps to assure that such activities can be safely conducted; (7) initiate an investigation into how the NRC allowed the asserted illegal situation at the Licensee's nuclear facilities in Connecticut to exist and continue for more than a decade; and (8) immediately investigate of the need for enforcement action for alleged violation of 10 CFR Part 50, Appendix B, with respect to nitrogen calculations.

The bases for the assertions are Licensee and NRC inspection findings and Licensee documents referred to in the Petition and a VHS videotape, Exhibit A, which accompanied the Petition. The videotape records an August 29, 1996, Citizens Regulatory Commission televised interview of a former Millstone Station employee expressing his views on Licensee management. Areas identified in the Petition include inadequate surveillance testing, operation outside the design basis, inadequate radiological controls, failed corrective action processes, and degraded material condition. The Petition asserts that this information demonstrates that there are inadequate quality assurance programs at the Licensee's nuclear facilities in Connecticut, that the Licensee has made material false statements regarding its Millstone units, and that safe decommissioning of the Haddam Neck facility is not possible because of the deficiencies in the design and licensing bases of the facility.

The Director of the Office of Nuclear Reactor Regulation has partially granted the Petition. The reasons for this partial grant are explained in the "Partial Director's Decision Pursuant to 10 CFR 2.206" (DD-97.-21 ), the complete text of which follows this notice and is available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, at the local public document rooms located at the Learning Resources Center, Three Rivers Community-Technical College, New London Turnpike, Norwich, Connecticut, and at the temporary local public document room located at the Waterford Library, ATTN: Vince Juliano, 49 Rope Ferry Road, Waterford, Connecticut, for Millstone Units 1, 2, and 3;

and at the Russell Library, 123 Broad Street, Middletown, Connecticut, for the Haddam?

A copy of the Partial Director's Decision will be filed with the Secretary of the Commission for the Commission's review in accordance with 10 CFR 2.206(c) of the Commission's regulations. As provided for by this regulation, the Decision will constitute the final action of the Commission (for Requests 1, 2, 5, 6, and 8) 25 days after the date of issuance unless the Commission, on its own motion, institutes a review of the Decision in that time.

Dated at Rockville, Maryland, this 12th day of September

FOR THE NUCLEAR REGULATORY  
COMMISSION

Frank J. Miraglia Jr., Deputy Director  
Office of Nuclear Reactor Regulation

---

### Footnotes

1. Petitioners requested copies of the Licensee's calculations performed in response to the event at the Haddam Neck Plant that resulted in the introduction of a nitrogen bubble into the reactor vessel. The calculations requested were discussed during a predecisional enforcement conference held on December 4, 1996. The calculations were provided to the Petitioners on July 21, 1997.
2. The NRC's approach to protecting public health and safety includes the philosophy of defense-in-depth, which supports the identification and correction of degraded or nonconforming conditions discussed above. Briefly stated, this philosophy (1) requires the application of conservative codes and standards, to establish substantial safety margins in the design of nuclear plants; (2) requires high quality in the design, construction, and operation of nuclear plants to reduce the likelihood of malfunctions, and promotes the use of automatic safety system actuation features; (3) recognizes that equipment can fail and operators can make mistakes and therefore requires redundancy in safety systems and components to reduce the chances that malfunctions or mistakes will lead to accidents that release fission products from the fuel; and (4) recognizes that, in spite of these precautions, serious fuel damage accidents can happen and therefore requires containment structures and safety features to prevent the release of fission products. In the unlikely event of an offsite fission product release, emergency plans are in taken to protect the population around nuclear power plants. These emergency plans are coordinated with local and State officials and the Federal Emergency Management Agency.
3. In this Partial Director's Decision, Petitioners' Requests have been identified as Requests 1 through 8. These requests correspond to Requests A.1 through 5, B and C in the initial Petition, and Request II.A in the amendment to the Petition.