OFFICE OF THE INSPECTOR GENERAL
EVENT INQUIRY

NRC STAFF ACTIONS TO ADDRESS NORTHEAST UTILITIES SYSTEM (NU) 1991 SELF-ASSESSMENTS

CASE NO. 96-02S

Special Agent Date	**Section Chief Date**

Acting Assistant Inspector General for Investigations Date

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CHRONOLOGY

Date	Event
5/28/91	NRC SALP report 89-99 issued
5/29/91	NU announced formation of 3 task groups to analyze various aspects of its nuclear program (Allegation Root Cause Task Group; Operability, Reportability, and Communications Task Group; and NE&O Performance Task Group)
6/91	Millstone discussed at NRC Senior Management Meeting
8/14/91	NU announced formation of a fourth task group to assess the level of procedural compliance at Millstone (Procedure Compliance Task Force)
8/26/91	NU Allegations Root Cause Task Group Final Report issued with 10 C.F.R. 2.790 request that report be withheld from public disclosure
8/26/91	NU Operability, Reportability, and Communications Task Group Final Report issued
9/26/91	NU NE&O Performance Task Group Final Report issued with 10 C.F.R. 2.790 request that report be withheld from public disclosure
10/4/91	NU Procedure Compliance Task Force Final Report Summary issued with 10 C.F.R. 2.790 request that report be withheld from public disclosure; report reflected procedure non-compliance was 30-50 percent
10/25/91	NU Millstone Nuclear Power Station, Unit 2, Employee Concerns report issued with 10 C.F.R. 2.790 request that report be withheld from public disclosure
12/23/91	NU Procedure Compliance Review Group II Final Report issued; report reflected 99 percent procedure compliance
1/92	Millstone discussed at NRC Senior Management Meeting
3/92	NU developed Performance Enhancement Program (PEP)
5/92	NRC established Millstone Assessment Panel (MAP)
6/92	Millstone discussed at NRC Senior Management Meeting
8/4/92	NRC SALP report 90-99 issued

1/93	Millstone discussed at NRC Senior Management Meeting
6/93	Millstone not discussed at NRC Senior Management Meeting
10/19/93	NRC SALP report 92-99 issued
1/94	Millstone discussed at NRC Senior Management Meeting
6/94	Millstone discussed at NRC Senior Management Meeting
8/26/94	NRC SALP report 93-99 issued
1/95	Millstone discussed at NRC Senior Management Meeting
6/95	Millstone discussed at NRC Senior Management Meeting
1/96	Millstone discussed at NRC Senior Management Meeting
1/96	Millstone placed on the NRC problem plant list

EXECUTIVE SUMMARY

The Office of the Inspector General (OIG), U.S. Nuclear Regulatory Commission (NRC), initiated this inquiry based on information received from Ernest Hadley, an attorney for We the People, Inc., who alleged wrongdoing on the part of the NRC staff regarding certain self-assessments conducted by Northeast Utilities System (NU). Specifically, in letters dated March 4 and 28, 1996, Hadley advised the OIG that in 1991, NU submitted to the NRC certain self-assessment reports regarding licensed activities at the Millstone Nuclear Power Station (Millstone) Units 1, 2, and 3 which identified management and operational deficiencies and which were highly critical of NU's performance at Millstone. Hadley questioned the staff's review of the deficiencies identified in these reports, and he noted that several of these reports were withheld from the public. Hadley alleged that the NRC had colluded with NU to conceal extensive and significant safety problems from public disclosure.

The OIG examined the NRC staff's actions to address the performance deficiencies identified by the licensee. OIG also reviewed inspections and other evaluations conducted by the staff to determine how the staff documented licensed activities at the Millstone site. In addition, the OIG addressed whether the staff handled the public disclosure of the NU self-assessment documents in accordance with NRC regulatory requirements.

The OIG event inquiry disclosed that in spite of the increased regulatory scrutiny in the form of inspections and evaluations, the NRC staff has determined that the deficiencies identified at Millstone in the 1991 NU self-assessments have persisted. The staff has continued to document a general declining level of performance at the Millstone site since 1991. The NRC Executive Director for Operations, the Director of Nuclear Reactor Regulation, and the Region I Regional Administrator advised OIG that given the indicators of poor performance at Millstone, the NRC should have taken more aggressive action including placing the Millstone site on the NRC watch list as early as 1993.

The OIG inquiry also disclosed that the NRC staff handled the public disclosure of NU's self-assessment documents in accordance with the requirements contained in title 10, Code of Federal Regulations, Section 2.790 (10 C.F.R. 2.790). This regulation allows the licensee to submit a withholding request and supporting affidavit with each document it sought to have withheld from the public. OIG determined that when self-assessments are provided to the NRC, licensees often request that they be withheld from public disclosure and that the NRC generally grants the request.

BASIS

The Office of the Inspector General (OIG) initiated this inquiry based on information received from Ernest Hadley, an attorney for We the People, Inc., who alleged wrongdoing on the part of the U.S. Nuclear Regulatory Commission (NRC) staff regarding certain self-assessments conducted by Northeast Utilities System (NU) regarding licensed activities at the Millstone Nuclear Power Station (Millstone) Units 1, 2, and 3. Specifically, in letters dated March 4 and 28, 1996, Hadley advised the OIG that in 1991, NU submitted to NRC certain internal self-assessment reports which identified management and operational deficiencies and were highly critical of NU's performance at Millstone. Hadley questioned the NRC staff's review of the deficiencies identified in these reports, and he noted that several of these reports were withheld from the public. Hadley alleged that the NRC had colluded with NU to conceal extensive and significant safety problems from public disclosure.

SCOPE

The OIG reviewed regulatory actions taken by Region I and the Office of Nuclear Reactor Regulation (NRR) staff to address performance deficiencies identified in the 1991 NU self-assessment reports. OIG also examined NRC Inspection Reports (IRs), Systematic Assessment of License Performance (SALP) reports, and other evaluations prepared by the staff to determine how the staff documented licensed activities at the Millstone site. OIG also reviewed the manner in which the NU self-assessment reports were withheld from public disclosure to ascertain if this action was in accordance with title 10, Code of Federal Regulations, Section 2.790 (10 C.F.R. 2.790).

The OIG inquiry focused on the actions taken by the NRC staff to address the deficiencies identified by the licensee. The OIG did not address the adequacy of NU's efforts to resolve deficiencies identified in their self-assessment reports.

The OIG reviewed the following documents:

- NU self-assessment reports conducted in 1991 as well as several others conducted by NU in similar program areas;
- NU Performance Enhancement Program (PEP) documents; Millstone Assessment Panel (MAP) meeting minutes;
- selected NRC Inspection Reports covering the period 1988 to 1995; Systematic Assessment of Licensee Performance (SALP) reports;
- Senior Management Meetings briefing papers; Institute of Nuclear Power Operations (INPO) Evaluation Reports pertaining to deficiencies areas; documents provided by NU; and,
- other NRC documents relevant to NU self-assessments.

During this event inquiry, OIG interviewed NRC Senior Resident Inspectors; Region I managers and staff; the Regional Administrator; NRR past and present Project Managers; the NRR Director and managers; the Deputy Executive Director for Nuclear Reactor Regulation, Regional Operations and Research; and the NRC Executive Director for Operations. In addition, the OIG interviewed certain members of the NU task groups who conducted the self-assessments and an NU management official.

BACKGROUND

Northeast Utilities System (NU) is the parent company of several subsidiaries, including Northeast Nuclear Energy Company and Northeast Utilities Services Company. The nuclear facilities associated with NU include the Millstone Nuclear Power Station, Units 1, 2, and 3 located in New London County, Connecticut.

The NRC has several mechanisms in place to evaluate plant performance and licensee efforts to improve poor performance. These include Inspection Reports, the Systematic Assessment of Licensee Performance (SALP) program, and Senior Management Meetings (SMMs). In addition, licensees may develop their own assessment programs to gauge plant performance, or they may request outside organizations such as the Institute of Nuclear Power Operations (INPO) to evaluate their plant operations.

The SALP program is an integrated NRC effort to evaluate licensee performance and management effectiveness on a periodic basis through the collection of available observations and data such as Inspection Reports (IRs) and Licensee Event Reports (LERs). The program supplements the normal regulatory processes used to ensure compliance with NRC rules and regulations. The SALP program is intended to be sufficiently diagnostic to provide a rational basis for allocating NRC resources. For example, the program may focus inspection activities to be conducted during the next SALP period. Also, the program is intended to provide meaningful feedback to licensee management regarding the NRC's assessment of its facilities' performance in four functional areas. Currently, the functional areas are: Plant Operations, Maintenance, Engineering, and Plant Support.

An NRC SALP Board, composed of regional and headquarters staff members, meets approximately every 18 months to review the observations and data on licensee performance in the four functional areas. After the SALP report is issued, the NRC schedules a public meeting to present the assessment. At the meeting, the licensee must be prepared to discuss the findings and present any initiatives they plan to take to address the concerns noted in the SALP report.

During mid-1991, in response to an overall decline in performance as documented in a SALP report which highlighted declining trends in functional areas, NU conducted a series of internal self-assessments to analyze various aspects of its nuclear program and provide recommendations for improvement. Between August and December 1991, NU completed the following self-assessments reports: "Allegations Root Cause Task Group Final Report"; "Operability, Reportability, and Communications Task Group Final Report"; "Nuclear Engineering and Operations (NE&O) Performance Task Group Final Report"; "Procedure Compliance Task Force Final Report"; "Millstone Nuclear Power Station, Unit No. 2, Employee Concerns"; and "Procedure Compliance Review Group II Final Report."

In early 1992, based on the results of its self-assessments, NU developed a Performance Enhancement Program (PEP) to focus on the actions it planned to take to improve its performance. The PEP was organized as a three-phase effort: Phase I would determine the underlying causes of NU's performance deficiencies; Phase II would detail action plans to address the deficiencies and lead to improved performance; and Phase III would detail the verification and validation of the successful implementation of the action plans. The PEP was a five-year plan, although many of the key elements were scheduled to be completed within three years.

In May 1992, the NRC Region I Regional Administrator, established a Millstone Assessment Panel (MAP) to review the adequacy of the PEP and to maintain an ongoing review of NU corrective actions and Millstone performance. The MAP developed a list of 23 performance issues which encompassed the significant concerns the NRC had regarding Millstone's performance. In addition, the MAP conducted a public meeting near Millstone to receive comments on NU's PEP.

The NRC had instituted a Senior Management Meeting (SMM) process at the recommendation of a Special Review Group (SRG) in 1986, after a 1985 loss-of-water event at the Davis-Besse Nuclear Power Plant revealed weaknesses in the NRC's integration of licensing, inspection and operating experience. The Executive Director for Operations (EDO), the regional administrators, and the headquarters program office directors meet semi-annually to discuss plants with marginal performance and significant operating problems.

The SMM process begins with a screening meeting between senior managers and staff from the Office of Nuclear Reactor Regulation, the Office for Analysis and Evaluation of Operational Data, the Office of Enforcement, the Regional Administrator, and selected personnel from the regions. These meetings are held approximately 10 to 12 weeks before each SMM to discuss the overall performance of each plant in the respective regions. Plants with operating problems or having experienced significant events are designated discussion plants for the SMM. A narrative summary is prepared by the staff for each discussion plant which identifies the basis for adding a plant to the discussion plant list and any significant change in the plant's status since the previous SMM.

The SMM is conducted under the direction of the EDO. The performance of all discussion plants identified in each region is reviewed. This includes reviewing SALP ratings, significant plant activities, management and station personnel performance, and risk perspectives from a probabilistic risk assessment (PRA) standpoint. In addition, the performance indicator data and enforcement history are evaluated to determine the appropriate status for each plant.

During the SMM, senior managers determine which plants, if any, to place on the NRC problem plant list/watch list. Plants are placed in the following categories: Category 1 includes plants which are removed from the problem plant list due to their corrective action and require no further monitoring. Category 2 includes plants which are authorized to operate but require close monitoring by NRC. Plants remain in this category until the licensee demonstrates a period of improved performance. Category 3 includes plants which are in shutdown condition due to

significant weaknesses. These plants remain in this status until the licensee can demonstrate that adequate programs have been implemented to ensure substantial improvement. NRC Commission approval is required for restart of these plants. Plants that are placed in Category 2 or Category 3 are referred to as being on the NRC problem plant list or NRC watch list. Not all plants discussed at the SMM are placed on the problem plant list. The EDO may decide to take other action such as issuing a trending letter or directing that a diagnostic evaluation be conducted at a particular plant. A trending letter advises the utility's chief executive officer or board that the plant performance is close or trending toward problem plant status. In addition, licensee senior managers of each plant discussed during the SMM, but not placed on the problem plant list, are contacted by the regional administrator and informed of NRC's concerns.

The Institute of Nuclear Power Operations (INPO) was founded by the nuclear industry and is a private organization whose stated mission is to promote the highest levels of safety and reliability in the operation of nuclear plants. INPO is funded entirely by utilities, and its board is made up of industry executives. INPO sends a team of inspectors every 18 to 24 months to each plant to review operations. INPO inspectors stay about two weeks and issue a detailed report to the licensee. INPO findings and recommendations are intended to assist licensees in their ongoing efforts to improve all aspects of their nuclear programs.

DETAILS

I. NRC STAFF ACTIONS TO ADDRESS PERFORMANCE DEFICIENCIES IDENTIFIED BY NU SELF-ASSESSMENT REPORTS.

Review of NRC Inspection Reports:

OIG reviewed a selection of inspections conducted by the NRC Region I at the Millstone Units 1, 2, and 3 from 1989 to 1995. In reviewing these inspections, OIG grouped them according to the SALP periods within which they were conducted. Generally, Region I performed numerous routine inspections and special team inspections which were conducted jointly with the NRR staff. Throughout this period, inspectors documented continuing problems in the management and operational areas identified by NU in the self-assessment reports. For example, between June 1989 and December 1990, a special allegation team inspection at Millstone resulted in violations for failure to follow procedures; a special mid-SALP cycle inspection found inadequate surveillance procedures at Unit 1 and noted that improvements were needed in reportability and operability evaluations. In addition, several other NRC inspections noted untimely notification and reporting of problems with equipment/systems (Region I Inspection Reports (IRs) 336/89-13; 245/90-80; 336/89-24; and 423/89-23).

During the period December 1990 to February 1992, several special team inspections noted weaknesses in operability determinations, deficiencies in engineering design (erosion/corrosion) programs, and inadequate response to correct program weaknesses (IRs 245/91- 80, 423/91-80, and 336/91-81). Also, several inspections listed violations for failure to take timely corrective actions and lack of procedures; and failure to follow design procedures (IRs 245/91-16, 245/91-81, and 245/91-04).

During the period February 1992 to April 1993, NRC inspections noted that NU needed improvement in its identification of root causes; development and timely implementation of effective corrective actions; and attention to detail in procedural compliance (IRs 423/92-23; 245/93-10; and 336/91-31).

During the period April 1993 to July 1994, several NRC inspections noted weaknesses and/or issued violations for inadequacy of procedures and procedural adherence; design control; and failure to have operability determinations completely incorporated in procedures (IRs 245/93-32; 245/94-201; and 245/94-36).

In addition, in September 1993, NRC issued a special inspection report which reviewed circumstances surrounding NU's inability to stop a reactor coolant leak from the letdown system isolation valve 2-CH-442. The valve could not be isolated from the reactor coolant system and failure of this valve could have caused a small break loss of coolant accident. The NRC inspection noted that from June to August 1993, NU repeatedly had been injecting sealant into the valve area and that all four valve studs were damaged. The repair activities were conducted

by a NU contractor. On August 5, 1993, excessive leakage from the 2-Ch-442 valve resulted in a forced shutdown of Millstone Unit 2 (IR 336/93-18).

In December 1993, NRC took escalated enforcement action against NU. The NRC Notice of Violation noted that the two-month-long event activities reflected a "breakdown in the quality assurance program and management controls of a safety significant repair activity" which represented "a significant lack of attention and carelessness toward licensed activities." The civil penalty was escalated by 375 percent due to NU management's failure to recognize the safety consequences of the repair activity (IR 336/93-18 and Enforcement Action 93-228).

Review of Systematic Assessment of Licensee Performance (SALP) Reports

OIG reviewed SALP reports for Millstone Units 1, 2, and 3 which covered the period June 1989 to July 1994. One SALP report was issued approximately every 14 to 18 months for all three units. The NRC did not issue a SALP report for the 1994-1995 time period after Millstone was placed on the NRC problem plant list in January 1996. OIG determined that at the beginning of the SALP review period, the Millstone units were evaluated in seven functional areas. The seven areas were: Plant Operations; Radiological Controls; Maintenance/Surveillance; Emergency Preparedness; Security and Safeguards; Engineering and Technical Support; and Safety Assessment/Quality Verification. However, in 1993, the NRC changed the SALP functional areas to Plant Operations; Maintenance; Engineering; and Plant Support. Generally, OIG found that the SALP reports for Millstone showed a decline in performance. SALP ratings dropped from primarily Categories 1 and 2 to ratings in Categories 2 and 3. Also, SALP reports noted problems with procedural adherence, corrective action effectiveness and the adequacy of root cause analyses at all three Millstone units.

Indications of a declining trend in performance was noted by the NRC in SALP Report 89-99 for the period June 16, 1989, to December 15, 1990. While all three units were rated in Categories 1 and 2, the need for improvements in performance-based audits and self-assessments and in addressing safety deficiencies and system operability issues in a timely manner was noted. Further, the SALP noted that NU had failed to adequately
address the root causes of some employee concerns and that lapses in attention to detail and adherence to procedures had occurred.

SALP Report 90-99 for the period December 16, 1990, to February 15, 1992, reflected that all three Millstone units showed a decline in performance and all units were rated in Categories 2 and 3. The SALP noted that all units were subjected to long forced outages for programmatic and/or equipment problems. In addition, the SALP noted that procedural adherence continued as a problem at all three units.

Subsequently, SALP Report 92-99 for the period February 16, 1992, to April 3, 1993, noted that performance had improved only marginally at all three Millstone units and that long-standing problems remained at all three units, particularly in the areas of procedural adherence, reportability, and corrective action effectiveness. All units were rated in Category 2, except for ratings in Category 1 for Radiological Controls and Ratings in Category 3 for Safety

Assessment/Quality Verification. The SALP reflected that while the PEP addressed the areas of concern, significant performance improvement was not seen due to the low degree of completion of PEP action plans.

SALP Report 93-99 for the period April 4, 1993, to July 9, 1994, reflected that all three Millstone units were rated Category 2 or Category 3 in each of the four functional rating areas. The SALP noted examples of poor implementation of procedures and procedural adherence; plant management ineffectiveness in correcting known weaknesses at Units 1 and 2; and inadequate management attention to resolve certain engineering issues in a timely manner.

Review of Senior Management Meetings (SMMs)

A review of briefing documents from SMMs disclosed that senior managers first discussed the Millstone site at the SMM in June 1991. Further, with the exception of the June 1993 SMM, Millstone was a discussion plant for nine SMMs from June 1991 through January 1996. SMM documents disclosed that the basis for designating all three Millstone units as a "discussion plant" included programmatic weaknesses in NU's timely resolution of design deficiencies; resolution of employee safety concerns; procedural adherence; staff attention to detail; and elimination of significant personnel error. During this period, the SMMs also noted a significant increase in the number of escalated enforcement actions and civil penalties levied against NU.

The SMM documents disclosed that beginning in the early 1990's, the Millstone site experienced declining performance that principally impacted Units 1 and 2. The NRC's focus at the time was in the areas of resolution of employee concerns, corrective actions, and operability determinations. During this period, there was an increase in the number of allegations received by the NRC; therefore, the NRC began to develop concerns with NU's history of harassment and intimidation of employees, the allegation volume, the corrective action processes, regulatory perspective and regulatory compliance.

Although the June 1992 and January 1993 SMMs noted there was an increased number of escalated enforcement actions taken against NU, they also noted some improvement in site performance. In addition, the January 1994 SMM noted that NU's PEP had achieved limited effectiveness, but that a substantial NU management reorganization reflected a "strong effort" to improve performance at Millstone.

Following the January 1995 SMM, the EDO, the NRR Director, and the Region I Administrator met with the NU Board of Trustees on March 17, 1995, to discuss the NRC's concerns with lingering performance problems at the Millstone facility. These problems included the handling of employee concerns, procedural adherence, corrective action process effectiveness, communication between units, and the historic emphasis on cost savings versus performance.

During the January 1996 SMM, it was noted that NU's performance at Millstone had concerned NRC for the last five years. Further, the NRC senior managers, in view of the history of serious operational problems at the site and NU managements' inability to consistently sustain

performance improvements across all three units and to effectively resolve many employee safety concerns, concluded that the Millstone site should be placed on the NRC watch list.

In a letter dated January 29, 1996, from the EDO to the President, Energy Resources Group, NU, the NRC advised that the Millstone site was placed on the NRC problem plant list as a Category 2 plant. The letter noted longstanding performance concerns in the areas of untimely corrective actions and operability and reportability determinations for identified design deficiencies and the failure to implement licensee procedures which precipitated significant plant events and in some cases endangered plant staff.

Interviews of NRC Region I Staff

Two former senior resident inspectors at Millstone Units 1, 2, and 3, advised the OIG that the NRC monitored NU's corrective actions through the MAP process by focusing inspection activities in the problem areas. Also, in December 1995, Region I assigned a senior resident inspector to each of the Millstone units. The two former senior resident inspectors stated that there was an increase in the number of inspections conducted by the NRC and in the level of resources devoted to the Millstone site. For example, they noted that the number of resident inspectors assigned to Millstone was increased in 1992, and additional resources were provided to assist resident inspectors in handling the increased number of allegations being received by the NRC regarding Millstone. One former senior resident inspector noted that the expanded inspection activity resulted in an increased number of violations, escalated enforcement actions, and civil penalties levied against NU.

The senior resident inspectors told OIG that given the NRC regulatory framework, the staff took adequate measures to try to force NU to resolve their performance problems. They noted that during 1992-1993, there was some improvement in NU's performance; however, the improvements were not timely or long term. One senior resident inspector felt that NRC could not have taken additional action because NU was essentially operating safely; therefore, there was no basis for shutting down the site. The other senior resident inspector stated that the NRC probably could have been more forceful in exercising regulatory oversight of NU. He said that in his opinion, NRC had sufficient basis for placing NU on the NRC watch list after the 2-CH-442 valve event in August 1993, but the agency did not take the opportunity to do so. He noted that this event was not only safety significant, but it provided the NRC meaningful insight into NU management's performance. He added that NU management's approach allowed the 2-CH-442 event to occur, and the event was an example of management's disregard for safety.

Several Region I Division of Reactor Project (DRP) managers told the OIG that the region conducted extensive inspections and devoted significant resources to the Millstone site. The region used the MAP to track specific performance issues and to focus inspection activities in these areas to follow up on NU corrective action. Several managers stated that at first it appeared that the MAP process was effective and that NU was addressing NRC's concerns. They also stated that it appeared that improvements were being made until the 2-CH-442 event occurred at Unit 2.

The DRP managers attributed the NU performance deficiencies to licensee management. The DRP managers cited poor management organization and oversight, inconsistency in dealing with the three units, and preoccupation with cost containment. Managers noted that NU developed great corrective action plans but was ineffective at following through on their commitments. One manager said that it always appeared that NU was addressing NRC's concerns by establishing a new program or initiative or instituting a significant management reorganization. For example, he noted that after the 2-CH-442 event, NU initiated a major management reorganization. He added that whenever NU took such action, the NRC then needed a period of time, possibly a year or two, to determine the effectiveness of the new program or initiative. He stated that for several years, NU was one "significant event" away from being placed on the watch list.

The current DRP Branch Chief stated that in April 1994, the regional administrator directed the MAP to refocus its efforts to gain closer oversight of all Millstone units. According to the Branch Chief, during this time NU was disagreeing with the MAP findings regarding their performance problems; consequently, the MAP and NU officials were meeting periodically to discuss NU's continuing deficiencies. He noted that one of the major problems involved the verification and validation aspects of the PEP. The Branch Chief added that by early 1995, NU accepted the NRC's view that they still had significant problem areas and they recognized that the PEP was ineffective. He said that NU then incorporated the remaining PEP issues into their Improving Station Performance (ISP) plan.

The Branch Chief said he attributed NU's performance deficiencies to a lack of leadership and a refusal by management to accept fault. He noted that NU management practices regarding employee concerns and work control problems were due to management's inability to follow through on commitments and to NU corrective actions which tended to be narrowly construed. However, he said that he had recommended against placing Millstone on the NRC problem plant list.

The former Deputy Director of DRP and the former Director of DRP advised the OIG that the NRC took appropriate actions to address NU's performance deficiencies. The former DRP Deputy Director noted that the MAP process enabled the region and NRR staff to closely monitor licensed activities and to allocate and coordinate resources at the Millstone site. The former DRP Director said that the NRC took a number of actions to monitor the implementation of NU corrective actions including initiating the MAP and a PEP Special Review Group; increasing staff resources devoted to Millstone; and initiating an aggressive inspection program. Both managers stated that NU management was not effective in implementing long term improvements. In addition, the former Deputy Director stated that senior Region I and NRC Headquarters managers were fully aware of the status of licensed activities at Millstone. He noted that senior managers thoroughly discussed Millstone and reviewed SALP reports, plant performance and programmatic issues every six months at pre-briefing meetings and SMMs.

The current Deputy Director of DRP told OIG that Region I has conducted numerous inspections at Millstone and has used essentially every available inspection tool to improve plant performance. He noted that the only inspection not conducted by Region I was a diagnostic

evaluation. He said that there were probably additional actions the NRC could have taken such as placing Millstone on the NRC watch list sooner. He stated that he recommended to the Region I Administrator that Millstone be placed on the NRC watch list in 1993. He noted that while NU could have improved performance, their deficiencies did not mean that they were operating the plant outside the NRC regulatory framework. According to the Deputy Director, the NRC did not have an adequate basis for shutting down the plant.

The current Director of DRP stated that NRC inspection activities have been directed by the MAP as well as the SALP reports. According to the DRP Director, the NRC inspections have been monitoring performance deficiencies over the past four or five years. He noted that the NRC inspections consistently identified NU's failure to adequately implement corrective actions. He added that the NRC met with NU management throughout the inspection process to discuss inspection findings and recurring problems. He recalled that during this time period, MAP recognized that a major problem with NU's validation and verification feature of the PEP program was that NU was focusing on numbers rather than the quality of corrective actions. He added that while NU proposed good program initiatives, they had problems implementing their plans.

The DRP Director said that in late 1993, after noticing continued performance problems at Millstone, he suggested to the Region I Administrator that the site be placed on the NRC watch list. He said that the regional staff had conveyed the appropriate information to senior NRC officials so that members of the SALP and SMMs had an accurate representation of the status of licensed activities at the Millstone site.

The Regional Administrator, Region I, advised the OIG that the region initiated the MAP to establish a mechanism for measuring the success of NU's corrective actions. He noted that such panels are typically established for plants that are on the problem plant list or in an extended shut down. He said that initially the MAP was successful in having NU include several items in the PEP such as the verification and validation aspect of the program. In his view, the MAP was successful in focusing inspection activities in the problem areas and directing initiatives above and beyond the core inspection program. The Regional Administrator noted that additional resources were assigned to resolving the large number of allegations being reported to the NRC, and both the region and NRR mounted certain initiatives to specifically target PEP issues. For example, during late 1993-1994, NRR conducted an engineering team inspection and Region I reviewed the NU Nuclear Safety Concerns Program. Nevertheless, he added that while NU had initiated many new procedures, upgraded processes, and added personnel, the NRC was still observing a large number of allegations, numerous personnel errors, work control problems, and procedural adherence problems.

The Regional Administrator told OIG that there appeared to be an interval of continuous improvement during the SALP period ending in June 1993; the PEP appeared to be responsive to NRC's concerns, and NU appeared to be making improvements. However, he noted that after the August 1993 2-CH-442 event, coupled with steam generator replacement issues at Unit 2, there was a recognition that while there were improvements at Units 1 and 3, Unit 2 performance was continuing to decline. At this juncture, the MAP and senior management focus shifted to

Unit 2. He noted that after the unit went into an outage in 1994, NU agreed to an NRC confirmatory action letter to remain shut down.

The Regional Administrator advised the OIG that in hindsight, NU officials have been good at doing critical self-assessments and good at planning corrective action; however, they have not been effective in correcting their longstanding problems. He noted that whenever the NRC identified a problem, NU would attempt to understand the problem and develop a grandiose program to address the issue. He added that NU has made "a lot of promises too many times" and while there may have been a temporary period of improvement, it was not long term. He said he believed that NU was committed to resolving the problems, but may not have had the capacity to do so.

The Regional Administrator told OIG that he had received a page that purported to be a part of an "LRS 1991 report," (LRS Incorporated has been a consultant to NU) which was disturbing because it laid out a game plan that recommended to NU to interact with the NRC at multiple levels in order to defuse certain "perceptions generated" by the NRC. The Regional Administrator provided OIG a copy of the LRS document. This document noted that the NRC had certain "perceptions" including the Millstone site had pervasive procedural non-compliance, recurring design issues at Unit 1, and problems in attention to detail at Unit 2. The document discussed redirecting the work of various NU task groups to assure coverage of NRC's areas of concerns or "perceptions." In addition, the paper suggests that "NU mount a full court press at all levels of the NRC to prevent the Millstone Site from being placed on the troubled plant list." [Note: In response to OIG questions, the Regional Administrator said he did not specifically recall from whom, when or how he had received the LRS document or whether he subsequently discussed it with the NRC staff].

The Regional Administrator acknowledged that several of his management staff may have recommended that Millstone be placed on the watch list; however, he noted that other managers recommended against it. He also noted that in 1995, the MAP recommended against placing Millstone on the NRC watch list. He said in hindsight, Millstone should have been placed on the NRC watch list sooner. He added that until January 1996, NRC senior managers felt that NU was making improvements which were sufficient to counterbalance the deficiencies that were still present.

Interviews of NRC Headquarters Staff

Several current NRR Project Managers and one former Project Manager assigned to the Millstone site told OIG that they reviewed inspection reports and provided information and observations to NRR managers which were relevant to the SALP process and SMMs. While several of the Project Managers were aware that NU had conducted self-assessments, they were not generally familiar with the contents of these reports.

The former Director, Project Directorate I-4, NRR, who was also the MAP co-chairman between 1992 and 1994, advised that the MAP initially met monthly to assess the PEP's performance in implementing corrective action. Further, the MAP reviewed inspection reports and discussed

findings with the resident inspectors in order to assess NU's implementation of corrective actions. According to the Project Director, there were improvements in many areas until 1993, when conditions at Millstone become static. He stated that because there were improvements in NU's performance, he never thought the site should have been placed on the NRC watch list during his tenure.

The current Director, Project Directorate, NRR stated that during 1995, the MAP reviewed NU's procedural program, corrective action program, and safety concerns program. In addition, the MAP focused on the Millstone Unit 2 re-start project after the unit went into an extended outage. He noted that the MAP periodically met with NU to review progress being made. However, he said that NU had not met the goals and expectations agreed on between NU and the NRC. The Project Director stated that NRR and Region I staff met semi-annually to assess NU's performance in the SALP issue areas and to re-direct inspection resources to those areas of greatest plant deficiencies.

The Associate Director for Projects, NRR, advised OIG that discussions during pre-briefing meetings involved plants of greatest concern to the NRC. He recalled that during past SMMs, NRC managers discussed significant performance and technical issues affecting Millstone. According to the Associate Director, senior managers were concerned that the Millstone units were engaged in an unhealthy competition because they operated independent of each other and the units were not sharing information.

The Associate Director stated that over the years there have been numerous discussions at the SMMs regarding whether Millstone should be placed on the NRC watch list. The decision not to place Millstone on the watch list prior to January 1996 was a consensus decision reached by NRC managers. In addition, he said that while Millstone was not placed on the NRC watch list until 1996, the NRC did apply additional inspection resources to the site. Also, he noted that as a result of NRC concerns, senior NRC managers met with the NU Board of Trustees in 1995, to discuss NU's poor performance. However, he stated that in hindsight, Millstone probably could have been placed on the NRC watch list sooner.

The Director of NRR, NRC, advised the OIG that he has attended essentially all SMMs since March 1987. From March 1987 to March 1990, he was the Regional Administrator in Region I. He recalled that the SMM discussions in the 1990-1991 time period, were essentially focused on Millstone Unit 2 concerns with instrumentation and hardware issues as well as a general concern that performance was declining at that unit. He said that the protocol for the SMM is to obtain the opinion and recommendation of the regional administrator as to what action should be taken regarding a particular plant(s) in his region; however, a consensus is typically formed as to the appropriate action for each discussion plant. He stated that the consensus reached at the January 1995 SMM, was that senior managers would escalate the agency's concern by meeting with the NU Board of Trustees before issuing a trending letter or placing Millstone on the NRC problem plant list.

The Director of NRR stated that during the NRC's meeting with the NU Board of Trustees, they expressed concern; however, he did not discern any substantive change in NU performance

following the meeting. He noted that subsequently, during the SMM in January 1996, senior managers concluded that NU's performance problems were sufficient to place Millstone on the NRC problem plant list. He said that discussions during that meeting focused primarily on whether only Millstone Units 1 and 2 or all three units should be placed on the problem plant list. The NRR Director said that senior managers concluded that fundamentally, the issues were management oriented; therefore, they decided that all three units deserved to be placed on the problem plant list.

The Director of NRR stated that in hindsight the NRC could have met with the Board of Trustees or placed Millstone on the NRC problem plant list sooner and that the NRC probably should have done so after the August 1993 2-CH-442 event. In addition, he stated that while the NRC had focused on team inspections and other activities, the agency did not escalate the matter quickly enough. Moreover, it appeared the NRC had "done a very good job of inspecting, finding things, and we have not done as good a job of integrating it." Further, it appeared that some of the commitments made by NU were not fully implemented and that the NRC was not aggressive enough in verifying that NU's commitments were in fact implemented.

The Deputy Executive Director for Nuclear Reactor Regulation, Regional Operations and Research (DEDO), NRC, stated that he was familiar with the self-assessments conducted by NU because he was responsible for a special review group which reviewed NU's safety concerns program in December 1991. As part of that effort, he had reviewed the self-assessments, therefore, he was familiar with the performance deficiencies which were identified by NU. He said he did not recall specific discussions regarding the Millstone site during SMMs. However, he did recall that in early 1995, NRC senior managers met with the NU Board of Trustees which was extremely unusual. He noted that the meeting did not have the response that the NRC was looking for because improvement in NU's performance was not forthcoming. The DEDO stated that the 2-CH-442 valve event in August 1993, was significant enough to warrant the NRC taking more aggressive action against NU. He added that although the civil penalty levied against NU for the event was significant, it should have motivated the NRC to scrutinize the Millstone site more closely.

The Executive Director for Operations (EDO), NRC, advised the OIG that the SMM discussions concerning Millstone during the 1991 to 1992 time period were focused on the deficiencies identified by NU in their self-assessments. He added that the MAP reports indicated that NU's performance was improving at the time. However, he stated that he considered the August 1993 2-CH-442 event a flagrant act which indicated that NU management was out of control. He noted that following the event, Millstone was a discussion plant at the January 1994 SMM. The EDO stated that subsequently, in early 1995, he and other senior managers met with the NU Board of Trustees to discuss the agency's concerns regarding NU's poor performance at Millstone. He added that such action was rarely done; however, in retrospect, NRC should have placed Millstone on the NRC watch list after the 2-CH-442 event.

The EDO told OIG that at SMMs, the regional administrator generally sets the tone for the desired action to be taken regarding each of the discussion plant(s) in their respective region. In this instance, the Region I Administrator presented information regarding NU's operational

performance which resulted in Millstone's status as a discussion plant and ultimate inclusion on the NRC watch list. However, he noted that the status of a plant is decided through a consensus reached by senior managers at the SMMs. He stated that because NU had sporadic improvements over the years, senior managers did not feel justified in placing the Millstone site on the problem plant list sooner. He said that currently, there is no formal criteria for placing a plant either on the discussion plant list or the problem plant list. In addition, he said that a plant could remain a discussion plant indefinitely.

On May 1, 1996, NRC issued SECY-96-093 which addresses issues related to SMMs and evaluation processes for placing plants on the NRC watch list. More specifically, this document addresses the following issues: the preparation for, and conduct of, SMMs; the assumptions and criteria that are used to evaluate the safety performance of nuclear power plants; providing greater openness to the industry and public about the NRC evaluation process; criteria and actions to be taken when a plant remains on the watch list for an extended period; and criteria in determining when a plant may be removed from the watch list.

II. NRC'S HANDLING OF NU SELF-ASSESSMENTS IN ACCORDANCE WITH 10 C.F.R. 2.790

Background

OIG reviewed NRC rules pertaining to the availability of official records which are located in Title 10 Code of Federal Regulations, Section 2.790 (10 C.F.R. 2.790), public inspections, exemptions, requests for withholding. This regulation generally provides that NRC records and documents are subject to public disclosure in the absence of a compelling reason for nondisclosure. The regulation also provides that several categories of records may be excluded from public disclosure. Specifically, 10 C.F.R. 2.790(a)(4) exempts records from public disclosure which contain trade secrets and commercial or financial information obtained from a person, which is privileged or confidential, and 10 C.F.R. 2.790(a)(6) exempts personnel and medical files and similar files, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

The regulation requires the person proposing that a document be withheld from public disclosure submit to the NRC an application for withholding accompanied with an affidavit identifying the basis for nondisclosure when the document is submitted. The NRC then determines if the information sought to be withheld from public disclosure is a trade secret or confidential or privileged information, and if so, should be withheld from the public. If the NRC denies the request for withholding, a denial notice is sent to the individual who submitted the document advising that the document will be placed in the Public Document Room (PDR) in not less than thirty days. Section 2.790(c) explicitly states that if the applicant requests withdrawal of the document within the specified period, the document will not be placed in the PDR and will be returned to the applicant. However, information submitted in a rule making proceeding which subsequently forms a basis for the final rule will not be withheld from public disclosure by the NRC and will not be returned to the applicant after denial of the application for withholding.

The NRC staff advised that periodically, licensees voluntarily provide the NRC copies of their internal review of operations or programs. When these self-assessments are provided to the NRC, licensees often request that they be withheld from public disclosure under Section 2.790. In addition, OGC staff advised that the NRC generally grants the licensee's request that the documents be withheld from the public under Section 2.790(a)(4), since they contain confidential information that would not routinely be released to the public and such disclosure would impair the NRC's ability to obtain frank information in the future.

NRC Staff Handling of NU's Withholding Requests

On August 26, 1991, NU forwarded to the NRC Document Control Desk a copy of its "Operability, Reportability, and Communications Task Group Final Report" for NRC's information and review. This document included a listing of recommendations for improvement in the subject areas. Upon receipt of the report, the NRC placed it in the NRC Public Document Room (PDR).

Also, on August 26, 1991, NU forwarded to the Regional Administrator, Region I, NRC, a second task group report entitled, "Allegations Root Cause Task Group Final Report." Accompanying this report was an affidavit and request by NU that the report be withheld from public disclosure in accordance with 10 C.F.R. 2.790. According to the affidavit, NU requested that the document be withheld from the public for several reasons. Specifically, NU asserted that information in the report was proprietary, the information was contained in personnel files and involved personnel matters, the information could be utilized in making personnel decisions, and the information made reference to the conduct/performance of specific individuals.

On September 26, 1991, and October 4, 1991, NU forwarded to the Regional Administrator, Region I, NRC, a copy of the "NE&O Performance Task Group Final Report" and a copy of the "Procedure Compliance Task Force Final Report," respectively. In addition, on October 25, 1991, NU submitted to the Region I Administrator, NRC, a report entitled "Millstone Nuclear Power Station, Unit No. 2, Employee Concerns." NU requested that each of these reports be withheld from public disclosure in accordance with 10 C.F.R. 2.790 and provided supporting affidavits with their requests.

On November 13, 1991, the Director, Division of Reactor Projects, Region I, NRC, responded to NU's requests that the Allegations Root Cause Task Group Final Report, NE&O Performance Task Group Final Report, and Procedure Compliance Task Force Final Report be withheld from public disclosure. NRC advised NU that some of the material contained in the reports could be withheld from disclosure under 10 C.F.R. 2.790(a)(6), but that the remaining material should be placed in the NRC Public Document Room. The NRC further advised NU that it could request withdrawal of the reports in accordance with 10 C.F.R. 2.790(c), or provide the NRC with reasons for withholding additional portions.

In a letter dated November 22, 1991, NU informed the NRC of its decision to withdraw the reports from the docket in their entirety rather than allow redacted versions to be released to the public. On December 5, 1991, NU made a similar request to withdraw from the docket the fourth self-assessment it submitted to the NRC on October 25, 1991, as this report was not referenced in the NRC's November 13, 1991, letter. NU also requested that certain handouts it provided the NRC during meetings with the staff be withdrawn. After considerable debate among the staff, NRC ultimately agreed to treat all four of NU's reports and related handouts as Section 2.790 material and withhold them from public disclosure.

A Region I manager told OIG that NU's repeated requests for document withholding under Section 2.790 required the NRC to balance several important, competing interests. He noted that the task force reports dealt with highly visible issues at a highly visible site. During the late 1991 time period, the NRC Chairman was stressing the importance of conducting business in the public. He advised that it was forced to weigh the needs of the licensee to communicate with the NRC in a candid manner and the licensee's ability to perform critical self-assessment against the public's need to know. According to the Region I manager, in deciding whether to treat the NU documents as Section 2.790 material, the staff also considered the importance of protecting the identity of allegers and the personal privacy of individuals involved in the reports.

The OGC staff advised that licensee documents are generally not reviewed for Section 2.790 applicability unless a licensee requests withholding. According to OGC and Region I staff, these requests are reviewed by NRC counsel to ensure that the request complies with Section 2.790 requirements. Regarding the NU self-assessment reports and meeting handouts relating to Millstone, the staff stated that attorneys from the NRC OGC and RegionI Counsel, had reviewed these documents and provided advice to the staff.

NU'S Two Procedure Compliance Review Reports

As noted above, NU forwarded its "Procedure Compliance Task Force Final Report" to the NRC on October 4, 1991. On December 23, 1991, NU submitted to the NRC a second "Procedure Compliance Review Group II Final Report." However, NU did not include with the second report a request that the document be withheld from public disclosure pursuant to 10 C.F.R. 2.790. The second report noted that 99 percent procedural compliance was observed by the task group. This differed sharply with the findings made in the task force report issued two months earlier, wherein procedural compliance was observed 30 to 50 percent of the time.

According to Region I staff interviewed by the OIG, both compliance review reports accurately reflect the areas and issues addressed in each report. In addition, the staff stated that they were not surprised by the findings in either report. Region I staff explained that the task forces were initiated in response to NRC's recommendation that NU determine the root cause of Millstone's procedural noncompliance problem. The second procedural compliance review was initiated, in part, to put the findings of the first procedural compliance review in proper perspective. Several Region I managers stated that they did not rely on what NU identified as the level of or source of their noncompliance problems; rather, they focused on NU's efforts to resolve the matter.

The OIG determined that since NU requested withholding of only one of the two procedural compliance task force reports, it appeared that NU was selectively controlling the information released to the public. Because NU requested Section 2.790 withholding of the task force report which found 50 to 70 percent procedural compliance, and did not seek withholding of the task force report which found 99 percent compliance, NU provided the public only with the information that was most favorable to it. Accordingly, this selective handling of information gave the appearance that NU's procedural compliance with NRC and internal requirements was near perfect (99 percent).

While several NRC staff members noted the benefits in allowing licensees to submit documents to the NRC under the protection afforded by Section 2.790, the Director, Office of Enforcement, NRC, commented on areas where the rule needed to be changed. He noted that Section 2.790(c), as currently written, permits a licensee to seek the return of documents it had submitted to the NRC when the NRC denies its request to withhold the documents from public disclosure. He stated that the NRC should not have to return documents if the NRC relies on them, regardless of whether the document meets the requirements of Section 2.790(a). According to the Director, once the document is submitted to the NRC, the agency should decide how the document should be categorized. If the licensee is unable to persuade the NRC to withhold the

document from public disclosure, it would be required to challenge the staff's decision in Federal court.

Interviews of NU Personnel

The OIG interviewed members of the NU task groups who were involved in conducting the self-assessments in 1991, and a NU management official. The task group members essentially confirmed the historical basis for NU's initiating the internal self-assessments and confirmed their findings.

The NU management official told the OIG that the success of the PEP and the subsequent five year business plan has been "mixed." He noted that there have been a number of discreet areas where these programs were effective and timely, and had generally accomplished what NU set out to accomplish. However, in other cases these programs were ineffective. Accordingly, he said that the real issue was that some of the performance deficiencies identified by NU in 1991 were still present, therefore, the PEP has not been effective. He stated that NU procedure compliance performance continues to need attention and improvement, and that more recently, NU's attention has focused on design control and integrity of design basis issues.

Regarding the issue that NU sought that the first procedural compliance task group report be withheld from public disclosure but did not make a similar request for the second report, the NU official surmised that a judgment was made by NU that the nature of the second report did not rise to the level where NU had concerns about critical self-assessments having an adverse impact on NU. He stated that he did not believe that the document fell into this category, therefore, it would be difficult to advance an argument that the document could be withheld under 10 C.F.R. 2.790.

The task group leader responsible for conducting the second procedure compliance review stated that NU management did not conduct the second review to invalidate the first procedure compliance report. Rather, he said that after NU issued the first report, NU management took certain immediate actions including advising employees that NU would take disciplinary action, to include termination for non-compliance of procedures. He stated that NU management later directed the second procedure compliance review to gauge the effectiveness of their corrective actions.

According to the second procedure compliance task leader, the second group sampled every department at Millstone and conducted a larger number of observations than the first review group. He also stated that the major difference between the two reports was that the second review group found that NU employees were now completing a procedure change work order, rather than not complying with procedures.

FINDINGS

1. During this inquiry, OIG learned from the staff that in spite of increased NRC inspections and evaluations the deficiencies identified at Millstone in the 1991 NU self-assessments have persisted. The staff has continued to document a general declining level of performance at the Millstone site since 1991. Furthermore, the Region I Administrator had information that indicated in 1991, NU management intended to conduct "a full court press" to change NRC "perceptions" of poor performance at Millstone and to convince senior NRC management to not place Millstone on the NRC watch list. The NRC EDO, Director of NRR, and the Region I Administrator acknowledged to OIG that based on the indicators of poor performance at Millstone, NRC should have taken more aggressive action including placing the Millstone site on the NRC watch list as early as 1993. This was especially true in light of the 1993 2-CH-442 event. However, NU's periodic changes in program initiatives and management reorganizations caused the NRC staff to allow an excessive amount of time for NU's proposed corrective actions to take effect. Moreover, NU's sporadic improvements in some areas of NRC concern neutralized the staff's willingness to take prompt aggressive action.

2. NRC handled NU's 1991 self-assessment documents in accordance with the requirements of 10 C.F.R. 2.790. OIG determined that intentionally or otherwise, NRC licensees can, to a limited degree, control information released to its ratepayers, stockholders, and the public by strategically requesting protection of information provided to the NRC under 10 C.F.R. 2.790. Because the NRC is not required to, and in practical terms, cannot effectively determine what information constitutes a trade secret or what information is already in the public domain, Section 2.790 requires the licensee to submit a withholding request and affidavit with each document it seeks to have withheld from the public. This regulatory framework allows a licensee to selectively control the information available to the public by requesting Section 2.790 withholding for documents which reflect poorly on the licensee and by not requesting withholding for self-assessments which portray the licensee in a favorable manner.