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NUCLEAR REGULATORY COMMISSION
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MEMORANDUM TO: Linda Kilgore
Public Document Room
LL-6

FROM: William M. Dean, Chief
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Management Staff, DEDR

SUBJECT: SUMMARY OF THE NRC SENIOR MANAGEMENT MEETING
HELD JUNE 10 AND 11, 1997

Attached for public release is information regarding the NRC Senior Management Meeting held June 10 and 11, 1997: Attachment 1 is a summary of the January 1997 NRC Senior Management Meeting and copies of the Senior Management Meeting Watch List Removal Evaluation Factors are provided in Attachment 2.

Attachments:
1. Senior Management Meeting Summary
2. Senior Management Meeting Watch List Removal Evaluation Factors

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ATTACHMENT 1

NRC Senior Management Meeting (SMM) Summary
June 10 and 11, 1997
Region I

Following the June 1985 loss of feedwater event at Davis-Besse, one resulting NRC action was that senior NRC managers periodically meet to discuss the plants of greatest concern to the agency and to plan a coordinated course of action. The NRC senior managers held their twenty-third such meeting in Region I on June 10-11, 1997. The previous meeting was held in Region IV in January 1997. The meeting in Region I was structured to review the status of the Watch List plants identified at the last meeting and to review the performance of other plants to determine if any changes should be made to the list of facilities which require close monitoring by NRC.

In preparation for the meeting, NRR, in conjunction with the four regional offices, AEOD, OE, and RES, prepared background documents on the plants and materials licensees to be discussed. Inputs for each operating reactor plant included a summary of the most recent SALP and SALP history, a discussion of current operating experience, current NRC and licensee activities, and performance indicator data. Data pertaining to safety significant hardware issues at the plants were also provided. This information was distributed to meeting attendees prior to the meeting. It provided the basis for review and discussion of each plant's performance and for senior management identification of those plants warranting increased NRC attention.

In reviewing the reactor plants that have experienced significant performance problems, the NRC managers have set the following categories of performance based upon plant actions to date to correct the problems and to achieve improved operations.

Category 1. Plants removed from the list of problem facilities.

Plants in this category have taken effective action to correct identified problems and to implement programs for improved performance. No further NRC special attention is necessary beyond the regional office's current level of monitoring to ensure improvement continues.

Category 2. Plants authorized to operate that the NRC will monitor closely.

Plants in this category have been identified as having weaknesses that warrant increased NRC attention from both headquarters and the regional office. A plant will remain in this category until the licensee demonstrates a period of improved performance.

Category 3. Shutdown plants requiring NRC authorization to operate and which the NRC will monitor closely.

Plants in this category have been identified as having significant weaknesses that warrant maintaining the plant in a shutdown condition until the licensee can demonstrate to the NRC that adequate programs have been established and implemented to ensure substantial improvement. The Commission must approve restart of a plant in Category 3 status.

The following charts list conclusions reached by the senior managers at this meeting and from the previous meeting for nuclear power plants and for materials licensees:

NUCLEAR POWER PLANTS

Meeting Dates	Category 3	Category 2	Category 1
JUN 10-11, 1997	Millstone 1,2,&3 (1)	Crystal River 3 Dresden 2&3 LaSalle 1&2 Maine Yankee Salem 1&2 Zion 1&2	Indian Point 3
JAN 14-15, 1997	Millstone 1,2&3 (1)	Crystal River 3 Dresden 2&3 Indian Point 3 LaSalle 1&2 Maine Yankee Salem 1&2 Zion 1&2	

MATERIAL LICENSEES

Meeting Dates	Facilities for Priority Attention
JUN 10-11, 1997	None
JAN 14-15, 1997	None

NRC senior management will continue to hold meetings to review the status of all reactor and the major nuclear materials licensees on an approximate six-month frequency. Recommendations will be made during those meetings to add or delete licensees from the list of facilities requiring increased agency-wide attention based on demonstrated performance. This program represents an effort by the NRC senior management to focus agency-wide resources on those plants and issues that need to be addressed, to communicate the concerns of senior NRC managers to licensees with poor performance or adverse performance trends, and to ensure that coordinated courses of action are developed and implemented for licensees of concern before problems reveal themselves as significant events.

(1) Because a decision regarding the restart of Browns Ferry Unit 1 has been indefinitely deferred, the senior managers concluded, in June 1996, that it should no longer be identified as a Category 3 plant. However, if TVA were to decide to resume operation and restart activities at Browns Ferry Unit 1, this plant will be reinstated as a Category 3 plant requiring Commission authorization prior to resumption of operation.

Specific Discussion of Problem Facilities

Category 1: Plants That Have Been Removed from the List of Problem Facilities

INDIAN POINT 3

The Indian Point 3 (IP3) Nuclear Power Plant has been discussed at every SMM since June 1992. IP3 was placed on the Watch List as a Category 2 facility in June 1993. After restart in June 1995, a series of plant events occurred over the next six months, resulting in two escalated enforcement actions and a long forced outage. The plant was again restarted in April 1996, and operated continuously through January 1997, when the plant was shutdown to address several equipment problems. This extended period of power operation was marked by emergent equipment problems, particularly balance of plant, that resulted in a number of power reductions. Since February 1997, emergent equipment problems have decreased considerably in number and severity, which is partly attributable to an effort by the licensee to address material condition issues and operator workarounds during their recent forced outage. A manual reactor trip was initiated without complications on May 14, 1997, due to an unexpected turbine runback. Following this trip, the plant entered a refueling outage scheduled to last at least 60 days.

Since the last SMM, the licensee's overall performance has been good. Improvements were noted in maintenance and engineering, although a significant amount of work and planned enhancements remain to be implemented. Operations performance continued to improve and plant support remained strong. Management was actively involved in plant activities and exhibited a generally conservative approach to plant operations. Senior plant management was appropriately self-critical and conducted good self-assessments. The IP3 organization performed thorough extent-of-condition evaluations and generally implemented effective corrective actions. Operator performance as well as the rate of operator errors continued to improve.

Maintenance activities were generally well coordinated and the overall quality of the work performed was good. The number of material condition and work control process problems that challenge the IP3 organization had declined, particularly since the end of a forced outage in February 1997. Engineering continued to make progress in addressing performance concerns, although backlog reduction and emergent work activities, as well as outage preparations, hampered their ability to fully address longer term issues that affect equipment reliability and organizational performance In particular, the quality and completeness of the design and licensing basis documents needs to

be addressed. Engineering responded to emerging issues well; support to Operations improved notably in late 1996 and continued to remain good. The quality of technical work was generally good; fewer inconsistencies in the quality of engineering work have been noted than in 1996. Finally, plant support functions were excellent overall, and they contributed effectively to safe plant performance.

The senior managers considered the following factors from the plant performance evaluation template, as well as the watch list removal matrix (Attachment 2), in determining the appropriate agency response to the identified performance concerns:

CONSIDERATIONS FOR DECREASING AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**
  - Management continued to demonstrate self-critical approach to plant activities. Strong posture on problem reporting and accountability
  - QA and oversight groups adding value.
  - Recent preliminary SALP board results recognize an overall improvement.
- **Operational Performance (Frequency of Transients)**
  - Operational events and problems reduced since last SMM. Forced outage used to address many equipment problems.
- **Human Performance**
  - Rate and nature of human performance errors has decreased considerably.
  - Problems in control of evolutions (discussed last SMM) addressed. Control of outages this year has been good overall.
  - Plant support activities have remained very good.
- **Material Condition (Safety System Reliability/Availability)**
  - Recent 35 day forced outage used to address selected, important operator workarounds and equipment issues. Non-outage maintenance backlogs significantly reduced in late 1996.
- **Engineering and Design**
  - Improved engineering management. While it is large, the backlog is prioritized. Some uncertainty, but outage "descoping" appears to be defensible.
  - System engineers more involved in support to operations. Improved identification of equipment problems.
  - Some problems noted, but recent maintenance team inspection results indicate IP-3 generally on course. Positive inspection results: fire protection/App R, and IST.

- Recent addition of engineering resources having positive impacts on reducing backlog.
- Quality of engineering work improved.

CONSIDERATIONS FOR MAINTAINING INCREASED AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**
  - Some inconsistencies in self assessments
- **Operational Performance (Frequency of Transients)**
  - While very recent operating performance is better (following Feb forced outage), period of performance monitoring still somewhat limited
  - Some weaknesses noted in translation of design features into EOPs
- **Human Performance**
  - Error rates improved but some errors being made (e.g., non-licensed operator).
- **Material Condition (Safety System Reliability/Availability)**
  - Much improved but some equipment impacts occurring. Fuel storage building ventilation poor.
  - While maintenance backlogs decreased, work control process still cumbersome.
- **Engineering and Design**
  - While progress being made, engineering backlogs are large. Engineering challenged by workload and, while better, still reactive in some areas. Result is preparations for current refueling outage were impacted and some scope reductions are being made.
  - Backlog also impacting on some long-term improvement programs
  - Some weaknesses in understanding of design basis. Re: control and retrievability of design information, some areas good but uncertainty without AE examination. Appears to be low side of average.
  - Still working to firmly establish standards and expectations with staff.

In considering whether IP3 warranted removal from the watch list, the senior managers noted that all of the factors in the watch list removal matrix were assessed positively. Combined with the substantial indications of consistently improving performance in a number of areas, the key issue centered on what constituted sustained, successful plant performance, which is listed as one of the watch list removal matrix evaluation factors. Of concern was that while IP3 operated at power for most of 1996, this period of time was marked by a number of power reductions and it

has been only the last few months where the plant operated relatively problem-free.

The senior managers referred to discussions about IP3 during the January 1997 SMM, which recognized the equipment problems which caused the licensee to reduce power several times and the need to address preparation for the forthcoming outage. In the letter that was sent to IP3 following the January 1997 SMM it was noted that an additional period of monitoring was needed to determine whether necessary, lasting improvements have been made, including assessment of the outage scope and preparations and some monitoring of operations and work control during some portion of the outage. Given the excellent operations achieved from mid-February through mid-May, the well-controlled maintenance outage in early 1997, and the licensee's performance during the current refueling outage, which has been relatively error-free, the licensee appears to have met the performance the senior managers had expected for removal from the watch list.

During the extensive discussions by the senior managers relative to IP3 being removed from the watch list, both sides of the issues were explored. For example, it was noted that there is a potential with a plant of IP3's vintage that additional design issues could emerge and that there would be a greater level of confidence in making the correct decision after monitoring the entire outage IP3 is currently engaged in and observing their performance in coming out of the outage and returning to an operational status. On the other hand, senior managers noted that the plant successfully conducted a substantial maintenance outage earlier this year, has noticeably improved operations, and established a conservative, self-critical operating philosophy. It was also noted that preliminary results from the recently conducted SALP board noted an overall improvement in performance.

The senior managers concluded that the licensee had demonstrated sufficient performance improvement to establish the necessary confidence that removal from the watch list was warranted. The senior managers noted that the SMM process incorporates the Category 1 designation for plants which are removed from the watch list and that Category 1 plants are discussed at the next two SMMs to ensure that performance improvements are sustained. With IP3's performance trend clearly improved over the past 18 months, the senior managers determined that the planned continued close monitoring by the regional inspection program was the appropriate effort and agency-level attention is no longer warranted. IP3 was designated as a Category 1 plant.

INDIAN POINT 3 SUMMARY

In summary, in reviewing the considerations for decreasing agency attention at Indian Point 3, the senior managers placed great weight on the areas related to the effectiveness of the licensee's self-assessment, the recent improved operational performance, improved human performance, fixes made to address long-standing plant problems, watch list removal matrix factors and continued good performance since the last SMM. In reviewing the considerations for maintaining increased agency attention at Indian Point 3, the senior managers considered the problems in operational performance during 1996 and the continued challenges that exist in the engineering and design areas. On balance, the senior managers determined that the considerations supporting decreased agency attention outweighed those for maintaining increased agency attention, especially when considering the factors outlined in the removal matrix evaluation and recent operational performance. Therefore, Indian Point 3 was removed from the watch list and designated a Category 1 facility. As a Category 1 facility, Indian Point 3 will be discussed at the next SMM.

Category 2: Plants Authorized to Operate that the NRC Will Monitor Closely

DRESDEN

Dresden was first placed on the NRC Watch List in June 1987, removed in December 1988, and again placed on the Watch List in January 1992. Significant contributors to the decision to place Dresden on the Watch List a second time included weaknesses in: procedure quality and adherence, communications, execution of management expectations, plant material condition, supervision and control of work activities, work performance, and engineering and licensing support. During the June 1996 Senior Management Meeting (SMM), senior managers concluded that an independent special team should be formed to evaluate the performance of Dresden station. This evaluation was conducted in the Fall 1996 and the results were presented to the senior managers at the January 1997 SMM. This team concluded that safety performance had significantly improved in plant operations while the level of improvement in engineering had not yet resulted in fully effective problem identification and resolution. The team also concluded that the results of improvement initiatives in radiological protection, maintenance, and self-assessment were mixed and identified significant weaknesses in engineering, design control, and surveillance testing.

Since the last SMM, the conduct of operations and the performance of control room operators continued to be generally good. This appeared to be the result of management initiatives that included

reinforcing standards and expectations to operations staff. Control room operators properly controlled operational activities, strictly adhered to procedures in most circumstances, and communicated effectively. These attributes were instrumental in the successful control and completion of significant work activities during the Unit 3 refueling outage. Operations personnel continued to exhibit a conservative operating philosophy in the control room during most plant evolutions and performed well during a forced cutage on Unit 2 due to electrical breaker problems and a startup of Unit 3. Operators also demonstrated a questioning attitude which facilitated prompt identification of potential problems.

While plant material condition and the conduct of maintenance activities improved during the last six months, material condition deficiencies continued to present significant challenges to the operators and emergent work activities continued to hamper the licensee's ability to conduct planned work; thereby, adversely affecting the ability to reduce work backlogs to desired levels. NRC continued to identify problems with surveillance testing that resulted in the potential failure to detect degraded systems and components.

With the exception of surveillance testing, there was improved performance in the area of engineering support to the station, particularly associated with system engineering. Greater engineering involvement in resolving material condition deficiencies resulted in some equipment performance improvements. However, emergent issues and the large engineering backlog continued to divert the focus of the Engineering organization. Also, while the overall quality of engineering products improved, the significant engineering workload was an impediment to products of consistently high quality. Design control process improvement initiatives also presented a significant challenge to the Engineering organization.

The senior managers considered the following factors from the plant performance evaluation template, as well as the watch list removal matrix (Attachment 2), in determining the appropriate agency response to the identified performance concerns:

CONSIDERATIONS FOR DECREASING AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**
  - The Site Quality Verification Department has become effective as evidenced by the number of issues identified in all areas of performance.
  - Generally, significant hardware and performance issues have been identified and promptly evaluated.

- **Operational Performance (Frequency of Transients)**
  - There has been significantly improved communications among operators, good command and control, and attentiveness to plant conditions in the control room.
  - Operator response to emergent plant issues has significantly improved as evidenced by conservative decisions made by the operators without prior concurrence from station management.
- **Human Performance**
  - Significant operator errors have been reduced in the last twelve months.
  - Operator attention to detail in the control room and knowledge of plant conditions has dramatically improved. Maintenance and engineering performance has also improved, although there have been some problems in procedural adherence during surveillance testing.
- **Material Condition (Safety System Reliability/Availability)**
  - There have been significant improvements in the overall material condition of the plant. The Unit 3 outage has demonstrated that the licensee is capable of completing a large amount of work.
  - In the last three years, there has been a significant reduction in operator workarounds.
- **Engineering and Design**
  - Dresden continues to take actions to resolve the weaknesses identified by the Independent Safety Inspection in a systematic and timely manner.
  - Overall quality of engineering support to plant operations has improved, particularly support from system engineers.
  - The licensee has initiated a number of actions to address the significant weaknesses in design control that were identified by the ISI.

CONSIDERATIONS FOR MAINTAINING INCREASED AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**
  - The NRC Independent Safety Inspection (ISI) identified significant engineering weaknesses that were not previously identified by the licensee's self assessment functions.
  - Continued identification of problems keep the engineering and maintenance backlogs high.
- **Operational Performance (Frequency of Transients)**
  - The improvements and standards implemented in the control room have not yet been fully implemented in activities outside the control room.
  - Equipment problems continue to provide unnecessary challenges to the operators.

- **Human Performance**
  - Some procedural adherence and adequacy problems still exist in the maintenance and engineering areas.
- **Material Condition (Safety System Reliability/Availability)**
  - Problems still exist in the work control process that sometimes impacts getting the assigned work completed.
  - Although a large amount of work has been completed, there is still a significant amount of work that needs to be accomplished. Dresden Unit 2 shutdown four times between April 10 and May 14, 1997, because of equipment problems. These kinds of equipment problems continue to affect operational performance and safety system reliability.
- **Engineering and Design**
  - Even though engineering support to operations and maintenance has improved, some problems in engineering support still exist in the area of surveillance testing.

In reviewing the watch list removal matrix, unlike IP3, it was noted that there was not enough information to support a positive response for a number of evaluation factors, in particular concerns about the work control process and surveillance and test procedures. It was also noted that the plant is still being challenged by equipment deficiencies, as evidenced by the four recent shutdowns of Dresden Unit 2 in April and May of this year due to equipment problems.

The indications are that the operating performance and safety ethic at Dresden seem to have turned around, but that hardware problems continue to persist. Issues raised to the management level are typically dealt with appropriately, however, the corrective action process is still not totally effective in raising all the pertinent issues to the correct level of management. The concern was raised that the licensee will continue to be strained because of the number of engineering problems that exist and which are still being identified. The performance indicators for Dresden are still below the industry average, which is an indication that even though we there is fundamental improvement in the corrective action processes, it has not yet translated into observable improved performance.

The senior managers also discussed the need to consider Dresden's performance in light of the Commonwealth Edison corporate performance plan. The corporation is currently receiving substantial agency level attention in light of the recently issued 10 CFR 50.54(f) letter which questions Commonwealth Edison's ability to successfully operate six nuclear stations. Given the cyclical history of performance at Dresden, the senior managers concurred that performance improvements at Dresden need

to be assessed with the understanding that they will not be adversely impacted by corporate focus on other plants.

It was determined by the senior managers that while there has been substantial improvement in the area of operations and that the most recent outage on Unit 3 has been well-executed, there are still significant challenges in the engineering area and substantial design control weaknesses that have the potential for continued emergent equipment deficiencies. As a consequence, the senior managers concluded that an additional period of sustained dual-unit performance was prudent to provide evidence of the licensee's ability to effectively operate both units simultaneously. It was determined to retain Dresden on the watch list as a Category 2 plant.

DRESDEN SUMMARY

In summary, in reviewing the considerations supporting decreased agency attention at Dresden, the senior managers recognized the improved operational performance and the effective outage just completed on Unit 3 which improved material condition significantly. In reviewing the considerations for maintaining agency attention at Dresden, the senior managers were most concerned about continued operational challenges created by equipment deficiencies, the engineering difficulties that still need to be addressed, questions about corrective work control, continued weaknesses in procedural adherence, and continued maintenance issues. It was too early to assess what impact corporate activities to correct cyclic performance at ComEd's nuclear facilities will have on Dresden's improvement initiatives. On balance and considering the Dresden removal matrix evaluation, the senior managers determined that the considerations for maintaining increased agency attention, in particular the four recent shutdowns of Unit 2 due to equipment problems, outweighed those for decreasing agency attention. Therefore, Dresden continued to be designated as a Category 2 facility.

CRYSTAL RIVER 3

Declining performance at Crystal River 3 (CR3) was first discussed during the June 1996 Senior Management Meeting (SMM). Concerns at CR3 involved Florida Power Corporation's (FPC) handling of several design issues, their non-conservative interpretation of certain NRC regulations, and weaknesses in operator performance, corrective actions, and management oversight. At the January 1997 SMM, senior NRC management placed Crystal River 3 on the Watch List as a Category 2 plant, due to the continuing decline in overall safety performance. These performance issues included weaknesses in the licensee's design change processes, which manifested significant contemporary design flaws.

Since the January 1997 SMM, overall performance at CR3 has been at a low point. The plant has been shutdown throughout the assessment period, and continued evidence has been found of design and performance issues. A Confirmatory Action Letter (CAL) was issued on March 4, 1997, requiring NRC concurrence for the restart of CR3 prior to entering Mode 2. There has been continued escalated enforcement for programmatic engineering and security issues. Additional escalated enforcement action is pending in other program areas, including emergency operating procedures and event reporting. While recent improvements have been seen in quality assurance activities, insufficient management oversight and weak self-assessments have contributed to the problems.

CR3 management has initiated extensive corrective actions, including the replacement of a number of upper and middle-level managers. While the licensee's decision to keep the unit shutdown to perform engineering evaluations of questionable safety system margins was prudent, the effectiveness of the ongoing corrective actions remains to be demonstrated. The licensee appears to be in the discovery phase of determining the extent of the problems in the areas of operations, engineering and security.

The attributes which contributed to the decline of CR3 performance include: insufficient management oversight, ineffective self-assessment, insufficient quality assurance, a lack of understanding and compliance with the design basis and the regulatory requirements, weak engineering, and poor operator performance. These areas are the focus of the licensee's corrective action plan. The proof of any improvement will be in the implementation of the proposed corrective actions.

The senior managers considered the following factors from the plant performance evaluation template, as well as the watch list removal matrix (Attachment 2), in determining the appropriate agency response to the identified performance concerns:

CONSIDERATIONS FOR DECREASING AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**
  - New management team has been effective in identifying and resolving engineering and human performance issues.
  - Comprehensive Recovery Plan with milestones and measurements has been established.
- **Operational Performance (Frequency of Transients)**
  - No significant operator errors during the current extended shutdown.

- **Human Performance**
  - Licensee is reviewing/upgrading operations, surveillance and maintenance procedures to address issues.
- **Material Condition (Safety System Reliability/Availability)**
  - Increased budget to improve material condition.
- **Engineering and Design**
  - Modifications implemented or planned to resolve design bases issues.
  - 100% steam generator tube inspection ongoing.

CONSIDERATIONS FOR MAINTAINING INCREASED AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**
  - Extent of condition review not completed
- **Operational Performance (Frequency of Transients)**
  - in an extended shutdown through early 1998.
- **Human Performance**
  - Large backlog of procedure revisions.
- **Material Condition (Safety System Reliability/Availability)**
- **Engineering and Design**
  - Several USQs exist that are awaiting submittal to the NRC for review.

It was noted that significant problems still exist at this plant, but that plant management has begun a methodical approach to resolving the programmatic problems. The licensee is taking a long-term view (20 years) to performance improvement. The Watch List removal matrix indicates that there is still much to be resolved before the plant can start up, and that the plant is in the early stages of an extended shutdown. The NRC has applied significant resources to this plant: three resident inspectors are on-site, an IMC 0350 panel is overseeing NRC activities, the Regional Administrator is meeting with licensee management on a bimonthly basis, and there is a CAL in effect. The senior managers decided that this plant will remain a watch list Category 2 facility.

CRYSTAL RIVER SUMMARY

In summary, in reviewing the considerations for decreasing agency attention at Crystal River 3, the senior managers noted the improvement plans initiated by the new management team. In

reviewing the considerations for maintaining increased agency attention at Crystal River 3, the senior managers acknowledged that the plant is in an extensive shutdown and still in the process of determining its extent-of-condition. Clearly, it is too early to evaluate the effect of the performance improvement plans now in place. On balance, the senior managers determined that the considerations for maintaining increased agency attention outweighed those for decreasing agency attention. Therefore, Crystal River 3 continued to be designated as a Category 2 facility.

MAINE YANKEE

This is the second time that the Maine Yankee (MY) Nuclear Power Station has been discussed at a Senior Management Meeting (SMM). In January 1997 the plant was identified as a watch list Category 2 facility due to significant regulatory concerns related to safety equipment operability, testing, safety evaluations, and corrective actions. These problems were uncovered principally during the Independent Safety Assessment (ISA) team and related follow-up inspections from August 1996 to January 1997.

Since the last SMM, MY signed a contract on February 13, 1997, with Entergy Incorporated for management services at least until September 1997 with a longer term contract based on a "due diligence" review to be conducted in the same time period. In preparation for the enforcement conference on March 11, 1997, new licensee management self-assessment activities revealed additional causes for their problems: a dispersed ownership of processes and a non-intrusive quality assurance function. The licensee issued a restart readiness plan on March 7, 1997. In addition to addressing the corrective actions for underlying causes of specific problems, the MY restart readiness plan focused on conducting thorough self-assessments in the areas of systems, processes, and organizational departments in order to identify extent-of-conditions, and to fully characterize the nuclear safety culture at the site.

The NRC staff has noted some signs of improvement in safety focus since the last SMM. Management standards and expectations have been strengthened, but efforts are still needed to ensure these are consistently met by station staff. The licensee's focus appropriately continues to be on self-assessment efforts to determine the extent-of-conditions. MY's renewed focus on safety principles was evident by their decision to start the 1997 refueling outage early in light of fuel leakage problems. Although management attention to the maintenance and engineering backlogs has substantially increased, only marginal improvement in plant material condition has been achieved thus far There was substantial outage work identified and planned for the current outage to address a variety of material condition issues. This work is in various stages of completion due to the recent

decision to reduce the level of activity at Maine Yankee while its future as an operating facility is determined. There has been an expected large increase in backlogs as a result of licensee efforts to identify problems and complete extent-of-condition reviews. The licensee instituted a high volume/low threshold problem reporting system in January 1997. Numerous deficiencies that had previously been tolerated are being brought to light. Current upper management response to such issues and events as they occur has been strong.

Human performance continued to be inconsistent. Though plant staff appear to be generally well trained and experienced, task implementation continues to be weak at times due to factors such as: inattention to detail, lack of a questioning attitude, procedural non-adherence, weak communications, poorly defined processes, and weak management oversight.

On May 28, 1997, the Board of Directors of MYAPC announced a decision to immediately reduce spending levels at Maine Yankee while weighing considerations of permanent closure. Limited work to support a "preservation plan," designed to preserve the option of restarting the facility, was to continue pending a final decision by the company.

The senior managers considered the following factors from the plant performance evaluation template, as well as the watch list removal matrix (Attachment 2), in determining the appropriate agency response to the identified performance concerns:

CONSIDERATIONS FOR MAINTAINING INCREASED AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**
  - New self-assessment process in place. Generally, much better threshold for problem reporting but issues still exist.
  - Effectiveness of recent changes in QA organization have not been assessed.
- **Operational Performance (Frequency of Transients)**
  - Plant has been shut down since December 1996 and effectiveness of performance improvement cannot be fully assessed until plant restarts.
- **Human Performance**
  - New management standards not yet deeply rooted.
  - Continued operator errors during plant evolutions (e.g., 1300 gallon spill, defueling activities, testing). Problems with 50.59 reviews. Continued weak radiological work practices observed.
  - Uncertain impact of recent plant operation/ownership questions.

- **Material Condition (Safety System Reliability/Availability)**
  - Significant maintenance and modifications efforts underway but work not yet completed.
  - Large maintenance backlog still exists.
  - Future of the plant uncertain, therefore, overall material condition improvements have been suspended.
- **Engineering and Design**
  - Significant design work on major modifications was underway but not complete.
  - Large engineering backlog remains. Some weaknesses noted in engineering reviews.
  - Effectiveness of new management in engineering has not yet been assessed.

CONSIDERATIONS FOR DECREASING CURRENT AGENCY ATTENTION

Recently, the Board of Directors decided to place the plant in a preservation mode for sale or decommissioning. Change in status is difficult to contemplate until the direction of the plant has been determined.

- **Effectiveness of Licensee Self-Assessment**
  - The Entergy management team has been acting very aggressively in establishing proper standards and expectations for performance. They have emphasized a self-critical, conservative approach to work. Much of the effort to date has been directed at establishing a low threshold for problem reporting
- **Operational Performance (Frequency of Transients)**
  - N/A
- **Human Performance**
  - N/A
- **Material Condition (Safety System Reliability/Availability)**
  - A significant outage scope was established to address design, installation and material condition issues brought to light in NRC inspections, and Maine Yankee's own recent "discovery" process. (Major work has been halted.)
- **Engineering and Design**
  - Before ownership decision, significant additional engineering resources were brought in.
  - Reasonable long term design basis verification efforts planned.

The senior managers discussed the impact that Entergy has had on the operations at Maine Yankee. It was noted that they have already made substantial improvements in processes and clearly stated expectations for the core values of the organization. It was noted that there is a much greater sensitivity to stopping operations when anomalies occur. Until the recent decision by the owners to greatly reduce the level of operations, there was a substantial effort in place to resolve material condition issues.

It was noted that Entergy found a diffuse organization, with lines of responsibility unclear for many key processes. They also found the QA organization to be weak. The senior managers discussed the economic aspects of the Maine Yankee situation, and acknowledged the difficulty the owners have had in dealing with the aftermath of the ISAT and the design-related issues that have emerged subsequent to that inspection. Given the current transitory state of the plant and doubt about future operation, the senior managers determined that Maine Yankee would remain as a Category 2 facility.

MAINE YANKEE SUMMARY

In summary, in reviewing the considerations for decreasing agency attention at Maine Yankee, the senior managers noted that Entergy has greatly enhanced the effectiveness of the licensee's self-assessment process and had begun efforts to substantially improve the material condition of the plant. In reviewing the considerations for maintaining agency attention at Maine Yankee, the senior managers were most concerned about continued operational errors during plant evolutions and the uncertainty of any future plant operations in light of the recent announcement by the Board of Directors to reduce the level of activity at the plant while permanent closure of the facility is being considered. On balance, the senior managers determined that the considerations for maintaining increased agency attention outweighed those for decreasing agency attention. Therefore, Maine Yankee continued to be designated as a Category 2 facility.

LASALLE

LaSalle was given a trending letter in January 1994, due to concerns about poor radiological work practices, declining material condition, declining personnel performance, and NRC staff concerns about the licensee's ability to pursue and resolve root causes for these issues. By January 1995, the licensee's initiatives were found to be effective in arresting these adverse trends and the licensee was sent a letter informing them of this observation and urging the continuation of improvement initiatives. Improvement in plant material condition and engineering effectiveness was limited during 1995 and the first six months of 1996. The significant amount of emergent work and

difficulties in planning and executing work hindered progress in implementing the station material condition improvement plan during the last six months of 1996. Consequently, some significant equipment failures, which should have been preventable, caused transients and scrams. Personnel errors, low standards, and weak procedures in several areas, all adversely affected performance at LaSalle. In June 1996, a risk-significant event occurred involving the injection of large quantities of expandable foam sealant into the safety-related service water tunnel. This event caused two major plant transients and significantly challenged the operating crew. The event showed that work controls had broken down, revealed previously unidentified material condition problems, and disclosed significant engineering weaknesses in support of plant operations. The NRC issued a $650,000 civil penalty to the licensee for violations associated with this event. Following the January 1997 SMM, LaSalle was placed on the NRC watch list as a Category 2 facility.

Both units at LaSalle have been shut down since September 1996 to address a variety of human performance deficiencies and hardware problems. In response to a number of performance issues identified by the NRC and through licensee self-assessments, the licensee developed a comprehensive restart action plan. While several actions have either been completed or initiated under the restart plan, problems continue to exist in a number of areas.

Overall, while there was some improvement in Operations performance during the last six months, performance was characterized by weaknesses in the areas of command and control, communications, identification of problems, and knowledge of plant status. Operators continued to make errors due to the failure to follow procedures. Due to significant weaknesses in command and control, communications, and control panel awareness demonstrated during licensee simulator evaluations, licensee management suspended several licensed reactor operators and senior reactor operators from licensed duties pending remediation training.

While corrective actions have been taken to address longstanding material condition problems, work control weaknesses, personnel performance errors, poor work packages, inadequate surveillance testing, and maintenance procedure deficiencies hindered progress in implementation of the station's material condition improvement plan. For example, the licensee suspended electric control switch replacement project due to inconsistent work practices, testing procedure problems, and receipt inspection deficiencies. Furthermore, because the licensee has historically demonstrated the inability to correct material condition problems, operators were reluctant to identify equipment problems and did not consistently demand resolution of existing deficiencies. As a

result, although both units are shut down, the degraded condition of equipment continued to challenge operators.

Licensee corrective actions, which included clearer communication of management expectations, enhanced training, and the formation of an engineering assurance group, resulted in some limited improvement in engineering. The licensee's initiative to conduct functional system reviews for several safety-related systems resulted in the identification of numerous design issues, all of which were attributed to past failures to maintain the design basis. However, inconsistent implementation of the design change process, limited understanding of the plant's design basis, and weak root analyses continued to hinder the effectiveness of the engineering organization.

The senior managers considered the following factors from the plant performance evaluation template in determining the appropriate agency response to the identified performance concerns:

CONSIDERATIONS FOR DECREASING CURRENT AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**
  - The licensee developed a comprehensive restart action plan.
  - Functional system reviews have resulted in the identification of a number of design issues.
- **Operational Performance (Frequency of Transients)**
  - High intensity training is addressing operator performance concerns.
  - Some improvement has been observed in operator adherence to procedures.
  - The licensee is addressing the quality of operating procedures.
- **Human Performance**
  - Licensee actions are addressing causes for the high rate of personnel errors and poor work practices exhibited before the September 1996 work stand down. However, some personnel errors and poor work practices continue to occur.
  - The operations and maintenance staffs are becoming an integral part of the licensee's problem identification program.
- **Material Condition (Safety System Reliability/Availability)**
  - Some progress has been made in improving material condition. The licensee is developing an integrated, resource-loaded, activity based schedule to work down the high backlogs.
  - The licensee is addressing the quality of maintenance and surveillance procedures, and work packages which has caused previous problems in completing work.

- **Engineering and Design**
  - The licensee has been more effective in identifying long-standing design issues.
  - System functional reviews are high quality broad scope reviews and have been effective in identifying a number of significant issues.

CONSIDERATIONS FOR MAINTAINING INCREASED AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**
  - Problems continue to exist in a number of areas, although actions have either been completed or initiated under the restart plan.
  - System functional reviews have resulted in the identification of a number of design issues, which has further increased the high backlog in engineering.
- **Operational Performance (Frequency of Transients)**
  - Licensee management suspended 25 percent of licensed reactor operators and senior reactor operators from licensed duties pending remediation training.
  - Operators continue to make errors when implementing procedures. Improvement continues to be limited.
  - The quality of administrative and some operating procedures continues to cause problems.
- **Human Performance**
  - Since the level of work activity in the plant is limited, continued occurrences of some personnel errors and poor work practices may indicate a potential to return to the high rate exhibited before the September 1996 stand down.
  - There are still some examples similar to the June 1996 service water event where operators are willing to accept degraded equipment/material conditions.
- **Material Condition (Safety System Reliability/Availability)**
  - Emergent work and difficulties in planning and executing work hindered progress in improving material condition. A high number of items exist in the work order backlog.
  - Problems with the quality of maintenance and surveillance procedures, and work packages caused delays in completing work.
- **Engineering and Design**
  - Recent NRC findings indicate that a limited understanding of the design basis is still prevalent in the engineering organization.
  - System functional reviews have identified a significant number of deficiencies.

Given that performance improvements have been limited and that both units remain in a shutdown condition, the senior managers determined that LaSalle would remain a Category 2 facility.

LASALLE SUMMARY

In summary, in reviewing the considerations for decreasing agency attention at LaSalle, the senior managers noted the effectiveness of the system functional reviews in identifying significant issues at the plant and the potential impact improvement plans such as the high intensity training are having on addressing operator performance concerns. In reviewing the considerations for maintaining increased agency attention at LaSalle, the senior managers gave great weight to the fact that both units were shutdown and that measured improvement in operator performance is limited. In addition, emerging work and deficiencies in the work planning and work control processes, as well as the extensive work that remains to address the issues identified as a result of system functional reviews, show extensive efforts to improve material condition will be needed. On balance, the senior managers determined that in light of the shutdown condition of the plants, the considerations for maintaining increased agency attention outweighed those for decreasing agency attention. Therefore, LaSalle continued to be designated as a Category 2 facility.

SALEM

Salem Units 1 and 2 were first discussed at the January 1990 Senior Management Meeting (SMM) and have been subsequently discussed at every SMM since June 1994. Both units have been shutdown since May and June, 1995, respectively to correct longstanding equipment deficiencies, poor material condition, weak management oversight, and ineffective corrective actions. PSE&G has made significant progress in implementing their restart plan, including the completion of thousands of activities and the installation of hundreds of modifications. As a result of the January 1997 SMM, the Salem units were designated as a Category 2 watch list facility.

Since the most recent SMM, the licensee has resolved a number of longstanding problems and made significant progress in preparing the plant for restart. Equipment performance improved as the licensee implemented a number of enhancements to improve the reliability of various plant structures, systems, and components, including the Unit 1 Steam Generator Replacement Project. Some equipment concerns must be resolved before restart including issues concerning cable separation and fire barriers.

Overall, human performance in operations, maintenance, engineering and radiation protection was good and continued to improve. Management continued to demand high standards of the

staff and routinely demonstrated conservative decision making. Operators showed improved plant ownership while performing evolutions by halting activities when unnecessary distractions were present. The FSAR Project, which involved a limited comparison of the FSAR to the plant's licensing and design bases, was well-managed and effectively validated a portion of the plant's design bases. The project had strong elements of oversight and independent confirmation. The integrated test program was very comprehensive and is overall being conducted in a competent manner.

The licensee's implementation of safety fundamentals was generally good. Significant improvements were seen in the licensee's corrective action program (CAP). This program has evolved and has become an effective process for identifying and correcting problems. However, support groups such as Emergency Preparedness, Radiological Controls, and Security have demonstrated some weaknesses in implementing their portions of the CAP. Management Review Committee performance improved as demonstrated by the improved quality of restart packages.

The senior managers considered the following factors from the plant performance evaluation template, as well as the watch list removal matrix (Attachment 2), in determining the appropriate agency response to the identified performance concerns:

CONSIDERATIONS FOR MAINTAINING INCREASED AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**
  - Some problems in initial attempts to close restart items.
- **Operational Performance (Frequency of Transients)**
  - Operator ownership initiatives have not eliminated errors.
  - Given enormity and complexity of plant modifications, some challenges may appear in startup and power ascension testing.
- **Human Performance**
  - Licensee had significant equipment and human performance problems when last operating (early 95). Notwithstanding improvements noted to date, reliable human and equipment performance has not yet been demonstrated during operations.
  - While the Integrated Test Program is comprehensive in scope, some implementation problems identified in control room area ventilation tests.
- **Material Condition (Safety System Reliability/Availability)**
  - Although of minor significance, a large number of non-outage corrective maintenance items will remain at the end of the outage.

- **Engineering and Design**

  - A number of old technical issues received weak follow-up, and insufficient management attention, e.g., fire barriers, cable separation, failure to do 50.59 on hot leg recirculation modification.

  - Some engineering management changes still occurring.

  - Period of operation needed to fully assess effectiveness of engineering fixes.

CONSIDERATIONS FOR REDUCING AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**

  - Management changed in virtually all key corporate and plant-level positions -- management experienced at other plants -- have been in place for much of outage.

  - Significant change in safety philosophy -- conservative decision making. Management accountability strong.

  - Consistently showing extremely low threshold for problem reporting -- corrective action process revamped and effective.

  - Self-assessment and outside oversight activities are now strong.

  - Instituted strong employee concerns program.

- **Operational Performance (Frequency of Transients)**

  - Operations ownership of plant equipment issues is strong and continues to improve. Slow and deliberate approach being taken to startup/testing activities.

- **Human Performance**

  - Improved human performance -- normalized for level of activity, number and significance of errors has been reduced. Management reacts well to events.

  - Extensive operator/maintenance retraining programs completed. Engineering training efforts significantly increased.

- **Material Condition (Safety System Reliability/Availability)**

  - Licensee completing massive outage addressing material condition/equipment issues/workarounds. Major refurbishment of BOP, as well as safety related equipment.

  - Comprehensive test program being completed. Problems identified being addressed.

- **Engineering and Design**

  - Basic engineering capability is sound.

- Completed an extensive FSAR verification review of multiple systems. Comprehensive plans for additional design and licensing basis reverification efforts.

- Unit 1 steam generator replacement effort has been very good.

In addition to the above factors, the performance of Salem was compared to that of Indian Point 3. A major difference between the two plants is that neither Salem Unit has restarted and the licensee will need to demonstrate a sustained period of dual unit operation before the plant is placed in Category 1. However, Salem's fundamentals for conducting operations at a nuclear power plant, as outlined in the pro/con charts, appear to be strong. It was also noted that based on a comparison of allegations received within the first five months of 1997 with the number received in the same time period in 1996, allegations have decreased substantially. The senior managers determined that Salem will remain a Category 2 facility.

SALEM SUMMARY

In summary, in reviewing the considerations for decreasing agency attention at Salem, the senior managers placed great weight on the improvements shown in licensee self-assessment, plant material condition, and operator ownership of the plant and related activities. In reviewing the considerations for maintaining increased agency attention at Salem, the senior managers recognized that there has not been an opportunity to assess performance with either unit operating. This consideration was the overriding factor in the determination that the considerations for maintaining agency attention outweighed those for decreasing agency attention. Therefore, Salem continued to be designated as a Category 2 facility.

ZION

Zion was on the NRC Watch List as a Category 2 facility from January 1991 until January 1993, when it was removed based on improved performance. This improving trend continued through August 1993. However, Zion stopped improving shortly after being removed from the Watch List. The licensee was unable to maintain a course of improvement; it continued to display a lack of teamwork, and lacked strong leadership. Efforts to improve material condition, upgrade operator performance, and effectively plan and execute work had little effect, resulting in stagnant performance. The backlog of material condition problems remained large, and operators continued to be challenged by workarounds and material condition problems. The trend of personnel errors involving operations and maintenance

continued, and significant problems were identified in several technical areas and engineering processes. As a result, Zion Station was placed back on the NRC Watch List following the January 1997 SMM.

Zion's performance since the last SMM has been poor. Operator performance was characterized by an increasing trend in personnel errors resulting from failures to follow procedures, inattention to detail, lack of a questioning attitude, knowledge and training deficiencies, and acceptance of abnormal plant conditions. For example, during a Unit 1 shutdown in February 1997, an operator attempted to return the reactor to a "critical" state by continuously withdrawing control rods, contrary to procedural instructions. An Augmented Inspection Team identified a number of human performance deficiencies involving both the operating crew and licensee management. Of particular concern was the total breakdown in command and control by operations supervision, inadequate communications between all levels of the operations department, the failure to pre-plan the shutdown evolution, and licensed operator knowledge and training deficiencies which were manifested during this event. In addition, the licensee's failure to take timely and effective corrective actions for known problems, continued to result in recurrence of events. While the licensee recently initiated actions to address operator performance deficiencies, including enhanced training and more rigorous controls on operational evolutions, performance problems continued to adversely affect plant operation.

Performance in the area of maintenance showed no improvement over the last six months and continued to be characterized by inadequate procedures, procedural adherence problems, and poor work practices. The maintenance backlog problem has been compounded by the inability of maintenance personnel to do work correctly the first time. The resultant poor material condition of safety-related equipment continued to challenge operators. These performance weaknesses also contributed to several personnel safety events and the degradation of safety-related equipment.

A decline in performance continued to be evident in the radiological controls area. Historically, Zion has one of the highest source terms among PWRs in this country. While the licensee has made some progress in source term reduction, these improvements were diminished by improperly maintained contaminated area boundaries, a large number of contaminated areas, and poor radiological work practices. Also, programmatic weaknesses in the transportation of radioactive material and waste indicated a lack of attention to and oversight of the transportation program. These programmatic weaknesses caused the licensee to suspend all shipping of radioactive material and radioactive waste until corrective actions could be implemented

to ensure shipments were performed in accordance with station procedures and the regulations.

The senior managers considered the following factors from the plant performance evaluation template in determining the appropriate agency response to the identified performance concerns:

CONSIDERATIONS FOR DECREASING CURRENT AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**
  - The licensee is addressing weaknesses in the corrective action process.
- **Operational Performance (Frequency of Transients)**
  - Some improvement has been observed in operator adherence to procedures.
- **Human Performance**
  - The licensee is aggressively addressing procedure adherence concerns.
  - Initial improvement has been observed in radiation protection controls.
- **Material Condition (Safety System Reliability/Availability)**
  - The licensee is effectively evaluating 16 systems for material condition issues as part of its restart system affirmation program.
  - The licensee has implemented a new work control process to coordinate work organizations.
- **Engineering and Design**
  - The licensee is taking action to improve engineering-related procedures.
  - The Zion engineering assessment team is identifying and evaluating engineering deficiencies.

CONSIDERATIONS FOR MAINTAINING INCREASED AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**
  - Failure to take timely and effective corrective actions for known problems has resulted in the recurrence of some events.
  - The Independent Safety Assessment identified significant performance deficiencies that the licensee is beginning to evaluate and take actions to resolve.
  - The corrective action process has identified a high number of issues impacting the ability of licensee self-assessment organizations to address known problems.

- **Operational Performance (Frequency of Transients)**
  - Operators have sometimes failed to adhere to procedures, and on occasion, accepted abnormal plant conditions.
  - Operator response to events is sometimes slow and on occasion not consistent with management expectations.
- **Human Performance**
  - The 2/21/97 reactivity event AIT identified a number of human performance deficiencies involving both the operating crew and licensee management.
  - The quality of maintenance procedures and the lack of adherence to procedures at times contributes to an inability to fix equipment problems and ultimately adds to the maintenance backlog.
  - The improvements in rad pro controls have not yet been sustained.
  - The licensee is providing Phoenix training to the operations staff to address operator performance issues.
- **Material Condition (Safety System Reliability/Availability)**
  - The extremely high backlogs indicate much work is needed to improve plant material conditions. Some material condition problems continue to occur.
  - A number of recurring equipment problems (including the emergency diesel generators) have resulted from inadequate troubleshooting and poor coordination between the work groups.
- **Engineering and Design**
  - Several events occurred during engineering-related activities due to inadequate procedures or failures to follow procedures.
  - Restart system affirmation reviews have identified several equipment performance and design issues, including examples of operation outside the design basis, and have resulted in an increase in the engineering backlog.

The senior managers discussed the trend of personnel errors at Zion and the continued challenges caused by material condition problems. In addition, it was noted that there is an extensive recent enforcement history, including several pending issues. The senior managers also recognized that the number of allegations filed at the plant has increased substantially this year over the same time period as last year. It was noted that discrimination allegations are now emerging and that OI has opened four harassment and intimidation cases in 1997. There were concerns expressed that the labor-management relationships are not good. It was noted that a meeting is scheduled in the near future to discuss the work environment at Zion with Commonwealth Edison's corporate management.

Other concerns that the senior managers discussed included the high level of maintenance and engineering backlogs, which are

indicative of some progress in identifying problems, but also indicates ineffective work control and planning processes. In the context of continuing performance deficiencies, material condition deficiencies, and the incomplete status of most performance improvement initiatives, the senior managers determined that Zion will remain a Category 2 facility.

ZION SUMMARY

In summary, in reviewing the considerations for decreasing agency attention at Zion, the senior managers recognized the efforts to enhance operator training to address operator performance deficiencies and to the early improvement plans that are in place to address corrective action weaknesses and to review systems for material condition issues. In reviewing the considerations for maintaining agency attention at Zion, the senior managers gave great weight to problems that exist in the licensee's ability to conduct meaningful self-assessments, the continued human performance deficiencies, particularly in operations, and the recurrence of equipment problems due to inadequate corrective actions and root cause analyses. On balance, the senior managers determined that the considerations for maintaining agency attention outweighed those for decreasing agency attention. Therefore, Zion continued to be designated as a Category 2 facility.

Category 3: Shutdown Plants Requiring NRC Authorization to Operate and which the NRC will Monitor Closely

MILLSTONE UNITS 1, 2, AND 3

Beginning in 1991, the Millstone units have been discussed at every senior management meeting. This is the twelfth senior management meeting (SMM) that the Millstone Station has been discussed. All three Millstone units, each of which ceased operating at some point during 1995-96, were placed on the Watch List as Category 2 facilities as a result of the January 1996 SMM. Subsequent to the June 1996 SMM, the Commission identified Millstone as a Category 3 Watch List plant, which requires that the units individually receive Commission approval to restart.

On August 14, 1996, the NRC issued a Confirmatory Order directing NNECO to establish an Independent Corrective Actions Verification Program (ICAVP) to verify the adequacy of NNECO's efforts to establish adequate design basis and design controls. The licensee has selected Sargent and Lundy as the contractor for Units 1 and 3, and Parsons Power Group as the contractor for

Unit 2. The staff has approved these selections. Recently, the licensee began its ICAVP efforts on Unit 3 and expects to begin Unit 2 activities by the end of June 1997.

On October 24, 1996, the NRC issued an order directing that before the restart of any unit, NNECO must develop and submit to the NRC a comprehensive plan for reviewing and dispositioning safety issues raised by its employees, and ensuring that employees who raise safety concerns can do so without fear of retaliation. NNECO has recently notified the NRC of its selection of Little Harbor Consultants, Inc. for the employee concerns program effort. The NRC continues to receive a large amount of allegations pertaining to Millstone. However, the trend is downward and the licensee's employee concerns program is now receiving more inquiries than the NRC is receiving allegations.

Several rounds of major changes in the organizational structure have occurred over the past several years. The most recent one started in mid-September 1996, when a new president was assigned. "Recovery officers" were obtained on loan from other utilities to support the restart efforts. The recovery officers operated with all of the authority of a NNECO vice president. The recovery officers for Units 1 and 2 have agreed to long term contractual arrangements that extend from 3-5 years. The Unit 3 recovery officer departed the site in February 1997, and the Carolina Power and Light personnel that were infused into the Unit 3 organization are slowly being phased out as NNECO personnel fill the void. Additionally, the site senior vice president position, which had been vacant for more than a year, was filled in February 1997.

With each change in the corporate organization, there was an accompanying change in recovery strategy, which impacted the coherence of the overall effort. The current recovery efforts direct each unit to instill higher standards for operations, develop effective corrective action programs, revitalize quality assurance practices, regain employee confidence in management, and complete the configuration management effort (10 CFR 50.54(f) response).

Previous NRC and licensee assessments have identified several fundamental problems with the licensee's performance. These underlying problems include: ineffective management practices, poor implementation of corrective actions, continued problems resolving employee concerns, inadequate work control practices, problems with procedural adherence and quality, ineffective quality assurance and oversight, and inadequate configuration management.

The agency has accumulated enforcement issues for the Millstone site since late 1995, combining regional issues with those from

the special inspection conducted in 1996. Over 80 items were identified, ranging from engineering design issues to Office of Investigation findings from wrongdoing cases. Supporting the Department of Justice's efforts is an important task, and as such, most of the NRC's enforcement actions are on hold until DOJ completes its actions. A pre-decisional enforcement conference on the non-DOJ related issues was conducted on December 5, 1996, and though agency deliberations are still in progress, a substantial civil penalty is under consideration.

Each unit is working toward response to the 10 CFR 50.54(f) letters using substantially different approaches because of the differences in the time period in which they were licensed and how much of the design and licensing bases are intact. Concurrent with the design review and reconstitution effort, the licensee is trying to deal with the issues discussed above. Progress in all areas has been slow. However, it is too early to assess success on the part of the licensee.

The senior managers reviewed Millstone's current status and noted that the licensee has a substantial amount of effort remaining to respond to the existing Orders and the 10CFR50.54(f) letters. Though some progress has been noted, it will not be at least until the end of the year that Commission consideration of restart of a unit can be considered. In light of this clear recognition that no decision would be required for Millstone at this SMM, a plant performance evaluation template was not developed. A watch list removal matrix was prepared for the SMM. It clearly indicated that Millstone is not ready for removal from the watch list.

MILLSTONE SUMMARY

In summary, the senior managers did not review considerations for decreasing or maintaining the level of agency attention at Millstone. Given its current Category 3 standing, the continuing dialogue with the Commission through quarterly Commission meetings, and the substantial effort required as a result of the ICAVP, it was clear to the senior managers that Millstone would continue to be designated as a Category 3 facility.

Other Plants Discussed

POINT BEACH

Point Beach was issued a trending letter in January 1997 due to findings regarding inattentiveness to duty by control room operators, ineffective surveillance testing, the failure to maintain proper equipment configuration control, and inadequate operability determinations and engineering evaluations. Ineffective self-assessments, narrowly-focused root cause analyses, and a weak corrective action program contributed to numerous long-standing safety issues. Furthermore, management's failure to aggressively address these issues and lack of a strong safety-focused questioning attitude contributed to a pervading focus on keeping the units operating without assessing or resolving long-standing safety issues.

During the last six months, operations performance generally showed signs of improvement. This improvement appeared to be the result of management initiatives that included reinforcing new standards and expectations to operations staff. The voluntary shutdown of Unit 1 to address performance weaknesses clearly reinforced that the poor conduct of operations was unacceptable to plant management. While control room operator performance was sometimes inconsistent, independent assessments of performance and other performance improvement initiatives have resulted in improved command and control, attention to detail, communication, and a significant reduction in operator errors. However, at times, operations staff and plant management continued to exhibit limited understanding of administrative procedures, technical specifications, and regulatory requirements.

The material condition of safety-related components continued to be good and the maintenance staff continued to demonstrate a high level of plant knowledge and skills. The licensee performed broad-scope assessments and implemented corrective actions to address long-standing deficiencies in the surveillance and post-maintenance testing program which have historically contributed to degraded equipment conditions. These initiatives contributed to some improvement in assuring post-maintenance surveillance testing adequately demonstrates equipment performance. Improvement was also noted in the licensee's corrective action and operability evaluation programs.

There was limited improvement in the area of engineering support to the station. Engineering performance continued to be characterized by weak corporate engineering support on licensing actions. However, to resolve some inadequate operability determinations and engineering evaluations performed by site

engineering, plant management reorganized site engineering to improve the system engineering structure and increase engineering staffing. They also instituted system engineering review boards to collectively look at all open issues for each plant system prior to restart. Several instances were identified where lack of engineering rigor resulted in degraded plant safety conditions. For example, a poor engineering evaluation associated with the speed droop on an emergency diesel generator contributed to the trip of an SI pump and inadequate understanding of the plant's design basis contributed to non-conservative relay setpoints. In contrast, greater engineering involvement in resolving material condition deficiencies resulted in some equipment performance improvements. Also, engineering improvement initiatives, including enhanced training and greater emphasis on design control, contributed to better configuration management. The licensee is also planning to move its corporate engineering function to the site over the next three years.

The senior managers considered the following factors from the plant performance evaluation template in determining the appropriate agency response to the identified performance concerns:

CONSIDERATIONS FOR MAINTAINING CURRENT AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**
  - The licensee has conducted probing self- and/or independent assessments of areas where performance issues were identified or suspected.
  - The licensee has recently formed a Continuous Safety and Performance Assessment Group to perform regular reviews of plant activities.
  - The licensee has improved the corrective action reporting and resolution program.
- **Operational Performance (Frequency of Transients)**
  - The new conduct of operations standards is now being implemented by the operations crews.
  - Point Beach has experienced few transients recently; two occurred in February that were caused by equipment problems and were well handled by the operations staff.
  - The licensee is taking actions to increase control room staffing by hiring and training new operators.
- **Human Performance**
  - The licensee took significant actions to improve procedures to assure that they contained appropriate acceptance criteria and post maintenance testing, and referenced the applicable Technical Specification requirements.

- The licensee initiated actions to review Technical Specification interpretations and all administrative procedures to assure full compliance with the Technical Specifications.

• **Material Condition (Safety System Reliability/Availability)**

- The licensee initiated a review of past practices and performance records to identify, evaluate, and correct equipment performance issues.

- The licensee is taking actions to evaluate and correct operation of potentially degraded equipment.

• **Engineering and Design**

- The licensee is implementing Plant and Design Engineering organizational improvements.

- The licensee improved its Design Bases Document open item evaluation program to assure related system and component operability is considered and evaluated appropriately.

CONSIDERATIONS FOR INCREASING AGENCY ATTENTION

• **Effectiveness of Licensee Self-Assessment**

- The licensee's self-assessment improvement initiatives have only recently been implemented.

- The licensee's Continuous Safety and Performance Assessment Group has only recently been formed and is not yet fully effective.

- Previous failures to identify and correct problems have resulted in a new corrective action program that has a high backlog and is not yet fully effective.

• **Operational Performance (Frequency of Transients)**

- Control room performance improvements have not yet been fully implemented.

• **Human Performance**

- Some continuing examples of the Operations staff not fully following procedures are still being identified by both the NRC and the licensee.

- Technical Specification interpretations and administrative implementation procedures have not always assured compliance with Technical Specification requirements.

• **Material Condition (Safety System Reliability/Availability)**

- Past corrective action program weaknesses have resulted in a large maintenance backlog and a high number of equipment performance issues.

- Surveillance tests did not always assure that equipment would function under all design conditions.

- Two transients in February were caused by equipment problems.

- **Engineering and Design**
  - Plant and Design Engineering activities have sometimes focused on keeping equipment operating rather than evaluating operability by more conservative approaches.
  - The licensee did not always consider or assure system or component operability during evaluations of Design Bases Document deficiencies.

In discussing Point Beach's performance, the senior managers focused on the differences in how performance was characterized in the SMM executive summary writeup (which was negative) and the Region III administrator's oral presentation and pro/con charts (which presented a more balanced assessment). The senior managers observed that based on the licensee's response (all levels of the licensee's staff and management seem to be engaged in addressing the performance concerns), the trending letter appears to have been an appropriate tool to focus the licensee's attention on performance improvement.

The senior managers noted that there seemed to be many more PIM items identified by licensee since the NRC Operational Safety Team Inspection that was performed in December 1996. The plant's performance indicators appear to be good. Although the licensee is addressing the NRC's concerns, and some improvement has been noted, the senior managers noted that there has not yet been enough evidence to conclude that the adverse performance trend has been arrested. The senior managers believed additional monitoring was required to fully assess if the performance trend has been arrested. Therefore, no new action will be taken regarding this plant, and the trending letter will remain in effect.

POINT BEACH SUMMARY

In summary, in reviewing the considerations for maintaining agency attention at Point Beach, the senior managers viewed the licensee's efforts to conduct critical self-assessments, improve human performance and the conduct of operations, and review the material condition of its systems as a substantial response to the trending letter. In reviewing the considerations for increasing agency attention at Point Beach, the senior managers acknowledged that many of the improvement initiatives have not yet matured to a level such that the senior managers could determine if the performance decline noted in the trending letter issued following the January 1997 SMM had been arrested. This consideration was the overriding factor in the determination that no agency action should be taken relative to Point Beach and that the trending letter would remain in effect.

CLINTON

Clinton Power Station was first discussed during the January 1997 Senior Management Meeting due to an overall decline in plant performance during the past year. The decline was clearly demonstrated in September 1996 events associated with a reactor recirculation pump seal failure which revealed significant deficiencies at the facility. These deficiencies included problems with procedural adequacy and adherence, lack of rigor in conducting operations, and weak engineering support to operations. The deficiencies included significant lapses in safety focus, where managers and staff were not knowledgeable of their basic responsibilities and appeared to have made decisions that placed plant operations ahead of plant safety. Based on the results from the January 1997 SMM, Clinton Power Station received a trending letter.

The licensee continued to have several occasions of poor performance in operations over the last six months. For example, a number of procedural adherence violations continued to occur and inattention to detail resulted in the operators failing to respond to annunciators associated with continuous operation of the emergency core cooling system sump pump. In addition, similar poor performance was noted in plant support (especially radiation protection). Problems associated with procedural adherence, a lack of sensitivity toward radiological controls, and a lack of conservative decision-making resulted in several radiologically significant events. The observations do not appear to be indicative of a further decline in performance, rather more examples of preexisting problems. The licensee's corrective actions have not been fully effective although some improvements have been observed.

The material condition of the plant, most notably in the control room, improved as a result of a concerted effort by operations, maintenance, and engineering. A reduction in the threshold for reporting issues through the Condition Reporting system has also contributed to this improvement. However, surveillance program weaknesses and inattention to detail during maintenance activities continued to contribute to equipment performance problems. Furthermore, weak engineering support for the station, inadequate and untimely root cause evaluations and corrective actions, and design errors hindered equipment performance. A significant failure to take corrective actions resulted in circuit breaker deficiencies because of hardened grease. In addition, the significance of a degraded voltage problem and the degraded containment protective coating were not fully evaluated or understood. Some recent improvements in the areas of surveillance procedure quality, 50.59 evaluations, and operability determinations were noted.

The licensee has taken, although incremental, an increasing aggressive approach towards performance problems. In respon to the continuing performance errors, plant management calle for plant-wide work stand downs from January 28 through Febru y 6, 1997, and again from February 11 through 13. Since then, while human performance errors continued, the number of errors decreased and the operational impacts have lessened. However, a reliance on the NRC in the area of problem identification and a lack of thorough corrective actions have hindered the licensee's overall performance improvement initiatives.

The senior managers considered the following factors from the plant performance evaluation template, in determining the appropriate agency response to the identified performance concerns:

CONSIDERATIONS FOR MAINTAINING CURRENT AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**
  - In addition to their Startup Readiness Plan, the licensee developed a Strategic Recovery Plan to look comprehensively at systems, organizations, and processes.
  - The licensee significantly improved its problem identification process as evidenced by an increased number of condition reports since September 1996.
  - The licensee's quality assurance organization has been restructured and program guidance changed to improve its effectiveness.
  - The licensee contracted for a number of independent assessments of the engineering organization's work resulting in the identification of long term improvements.
- **Operational Performance (Frequency of Transients)**
  - The operator's response to transients has been acceptable.
  - NRC has observed effective use of the new procedure adherence policy and the temporary change process.
- **Human Performance**
  - The licensee has significantly improved its guidance on procedure usage and temporary procedure changes. The licensee provided special training for its staff.
  - The number of significant human performance errors has declined in the past three months. There appears to be a strong correlation between the reduction in errors, the new procedures, and the second work stand-down.
- **Material Condition (Safety System Reliability/Availability)**
  - The material condition of the plant is good, although several hardware problems need to be resolved prior to startup.

- Control Room deficiencies have been significantly reduced during the outage.

- **Engineering and Design**

  - The licensee significantly improved its operability and 10 CFR 50.59 evaluation programs. The licensee plans further assessments and improvements in this area.

  - The licensee's engineering organization has expended significant effort to resolve some significant equipment issues.

CONSIDERATIONS FOR INCREASING AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**

  - NRC intervention was required on a number of occasions to drive resolution for procedure adherence and some equipment issues.

  - Licensee organizations do not always review condition reports (CR) for trends and at times root cause assessments have not been rigorous. The number of open CRs is increasing, as a balance between closure and generation rate has not been reached.

  - The licensee's quality assurance program changes have not yet been fully evaluated for effectiveness.

- **Operational Performance (Frequency of Transients)**

  - With the unit shutdown since September 1996, the use of revised procedure adherence policy and procedure change process under more challenging situations has not yet been observed.

- **Human Performance**

  - Operating and surveillance procedures may not all be written to effectively support performance under the new procedure adherence policy.

  - There is continuing skepticism on the need for the new procedure adherence policy implemented by management among some of the operating staff.

  - There were a high number of procedural adherence problems identified in the radiation protection area.

- **Material Condition (Safety System Reliability/Availability)**

  - Several startup issues need to be resolved that include the unresolved safety question on degraded voltage and the operability and reliability of safety related circuit breakers and containment coatings.

- **Engineering and Design**

  - The licensee's engineering organization is still having problems recognizing the significance and appropriate level of evaluation needed for issues.

- Considerable NRC effort was required for proper resolution of some safety significant equipment issues.

The discussions among the senior managers centered on the fact that the licensee has not developed a comprehensive response the NRC's January 1997 trending letter. The licensee has implemented a number of short-term corrective actions, but has not developed a long-term approach to thoroughly address performance deficiencies. Though it is not anticipated that a turnaround can be effected in only six months, there is an expectation that a licensee's management will take some strong actions to convey its expectations, endeavor to address the root causes of the performance decline, and develop a comprehensive plan to address the identified concerns. Though they have addressed most of the operational concerns associated with specific issues related to the impending startup of the plant, they have not developed a longer term approach to achieving a broad level of performance improvement. Management appears to understand what the problems are, but they have not comprehensively addressed them.

The senior managers addressed this issue in the context of three questions:
Do we have a good understanding of the problems and have we communicated this clearly to licensee? Do they recognize and accept the problems? Has licensee instituted long-term actions to address them?

The answer to the first question is yes, the answer to the second question is less clear and the final question has not been addressed by the licensee. It was recommended that an NRC diagnostic evaluation team (DET) inspection be conducted, (or that the licensee conduct an independent safety assessment (ISA) similar to what was conducted at Cooper in 1994.) The senior managers also discussed whether it was too soon to put the plant on the watch list, given that we just issued a trending letter. Clinton's reaction to receiving a trending letter was contrasted with that of Point Beach. Point Beach has aggressively and comprehensively responded to the NRC's concerns, while at Clinton, this has not occurred to the same degree. The senior managers also expressed concern over the increased rate of allegations and the relatively high level of OI activity, with several investigations associated with harassment and intimidation situations. Another unique aspect of the increased rate of allegations is that seven of them are instances of potential wrongdoing communicated to the NRC by the licensee.

The senior managers concluded that notwithstanding the short term actions that have been initiated, there was little evidence

that these measures will lead to lasting, long term improvements. Therefore, it was determined that since it is not clear yet that a performance decline has been arrested and the licensee has not taken comprehensive measures to understand the depth and magnitude of the causes for its performance decline, a DET inspection will be conducted to more accurately diagnose the reasons for Clinton's performance decline. The licensee will be made aware of the ISA approach used by Cooper and will be encouraged to conduct an ISA in lieu of a DET.

CLINTON SUMMARY

In summary, in reviewing the considerations for maintaining agency attention at Clinton, the senior managers acknowledged the licensee's efforts to effect short-term improvements to address concerns with plant material condition, problem identification process and procedural adherence issues. In reviewing the considerations for increasing agency attention at Clinton, the senior managers were concerned that the licensee has not initiated a comprehensive self-assessment of the root causes for its performance decline. Thus, the senior managers expressed concern that the short-term improvements associated with preparations for the upcoming plant startup will have a lasting affect. In addition, the skepticism expressed by some licensed operators related to the need for a new procedure adherence policy also concerned the senior managers. It was not clear to the senior managers that the licensee has a full understanding of the depth and scope of the reasons for the performance issues at Clinton, and until that occurred, it would be difficult to consider the performance decline described in the trending letter issued following the January 1997 SMM to be arrested. Therefore the senior managers determined that, although performance may have improved sufficiently to support restart, conducting a DET (or allow the licensee to perform an Independent Safety Assessment) would be an appropriate approach towards assisting Clinton and the NRC to better understand the reasons for its performance decline and develop applicable long-term corrective actions.

Additional Topics Discussed

1. EDO's Opening Remarks

The Executive Director for Operations (EDO) welcomed the senior managers in attendance and acknowledged that they represented the most representative group of senior managers to attend a senior management meeting (SMM), specifically denoting the attendance of the Chief Financial Officer (CFO), Chief Information Officer (CIO), and the agency's Allegation Coordinator. He then introduced the Chairman who provided introductory remarks.

2. Chairman Jackson's Opening Remarks

The Chairman greeted the senior managers and stated that she was pleased to join them again for the SMM. She noted that the presence of the CIO and the CFO acknowledged the need for the agency to integrate its decision making processes. She also recognized the presence of the agency's Allegation Coordinator and the importance of considering allegations in the overall assessment of licensee performance. The Chairman expressed her pleasure in being part of an agency that is steadily improving and making progress on many fronts, particularly in light of the new challenges and opportunities for collective introspection that constantly face the agency.

She asked the senior managers to consider how this agency and the actions it takes now will be viewed 15 years from now, and what challenges and issues will exist for the future managers of this agency and how will they assess the performance of today's managers. She emphasized that every action this agency takes is just one piece of the legacy that will be left behind. She asked the senior managers to focus their thoughts on this legacy and shared her vision on how the NRC should be improving its performance and build for the future.

The Chairman described a number of areas for improvement:

SMM Process

She emphasized that the SMM process needs to be predictable, credible, scrutable, and consistent in order for it to be effective. In this regard, the senior managers must understand the nature of the data to be analyzed and match the analytical process to the nature of the data. She also noted the improvements being considered by the agency associated with the Arthur Andersen approach which should better integrate performance indicators into the process. Finally, she reemphasized her belief that "performance is as performance does." Judgements by the senior managers at the SMM must be based on what a licensee has done, not on what they plan to do.

Quality of Communication

The Chairman noted that the NRC's communications must be improved in a number of areas, whether we are communicating with the public, Congress, a licensee, or each other. She emphasized that we cannot have the excellence of our technical judgements clouded by mediocre presentations of those judgements. In this regard, she highlighted several focus areas: communicate messages such that they are received, understood, and placed into a context relevant to the readers or listeners; terminology that is used must be clearly defined; *extract* the important elements from the large volume of information we provide and *abstract* the core theme or message in an informative, coherent manner; control and manage change to minimize the impact and

confusion as we improve regulations and upgrade internal processes.

The Chairman than described her agenda for the next two years. Under the topic of "Licensing/Design Bases Issues/Millstone Lessons Learned" she indicated several tasks that the agency should strive to accomplish in the next two years. These included:

- Development of a regulatory position associated with 10 CFR 50.59 that clarifies the rule, fills in any missing gaps, allows licensees to make changes to its facilities, and that ensures the more risk-significant changes receive prior NRC review;

- Final Safety Analysis Reports that are more useful and appropriate as a reference for plant changes and that the NRC and the public can have confidence in;

- Clear and comprehensive guidance that answers any remaining questions concerning the relative functions of the Technical Specifications, the FSAR, and less formal licensee commitments;

- Correlation of the results of the architect engineering (AE) inspections with the core inspection program to make any necessary adjustments;

- Continue to monitor closely the recovery of facilities under increased scrutiny, such as the Northeast Utilities and Commonwealth Edison plants, and maintain thorough documentation or our evaluations and the bases for our decisions and recommendations to the Commission;

- Continue to trend the indicators of how a safety conscious work environment is maintained and develop additional measures for assessing a licensee's safety culture.

The Chairman also outlined her expectations for accomplishments in the following areas:

- Further development of risk-informed, performance-based regulation applications;
- Integration of NRC licensee performance assessment processes;
- Issuance of the final Regulatory Guides and Standard Review Plans associated with License Renewal;
- Vigilant oversight of age-related degradation impacts;
- Development and articulation of a clear, coherent strategy for ensuring deregulation issues do not impact negatively the safety of power reactor facilities;
- Continued, but cautious progress in moving towards the oversight of Department of Energy (DOE) nuclear facilities;

- Providing technical and policy support to DOE in exploring options for the use of mixed-oxide fuel;
- Providing DOE timely support relative to the use of commercial light-water reactors for tritium production;
- Continued development of sound technical and regulatory positions relative to high-level waste issues;
- Completion of the revision of Part 35, "Medical Use of By-Product Material" and a technically sound review of regulatory position on the control of generally licensed devices;
- Participation in the International Nuclear Regulators Association (of which the Chairman was recently elected as its first Chairman);
- Establishment of performance metrics for all aspects of each agency program as part of the final phase of the Strategic Assessment and Rebaselining initiative;
- Establishment of a fully integrated Resource Management System, including an ongoing program for succession planning; and
- Development of the mechanisms needed to achieve regulatory effectiveness, including a streamlined rulemaking process.

In closing, the Chairman stated that her agenda may be considered ambitious, but that as the decision-makers of the NRC today, we must build a legacy that will aid those decision-makers that will follow and provide them a substantial record on which to judge our efforts to improve the performance of the NRC.

3. SMM Process Revisions and Initiatives

Before the plant discussions commenced, the Director of the Office of Nuclear Reactor Regulation (DNRR) summarized the purposes of the SMM as outlined in MD 8.14, including identifying Watch List plants, and communicating the meeting's results to the Commission, Congress, and the public. He then reviewed the contents of the SMM executive summary notebooks. Referring to the introduction of the notebooks, he highlighted the significant number of plants to be discussed, and requested that meeting participants attempt to budget 30 minutes for each plant discussion. He stated that the decisions for agency action would be made on the second day of the meeting using the SMM Nuclear Power Plant Performance Evaluation Template as a guide. The DNRR completed his remarks by briefly outlining the improvements to the SMM process that are ongoing, and he requested meeting participants to contribute to the deliberations to ensure that all points of view are considered.

The Chief of NRR's Inspection Program Branch (NRR/PIPB) outlined the process that was used at the screening meetings to identify SMM discussion plants. He stated that the threshold for this decision was that if either the cognizant Regional Administrator (RA), the DNRR, the Director of AEOD, or the Director of the Office of Enforcement (OE) thought that a plant should be

considered for some type of SMM action, then that plant would be discussed at the SMM. At the screening meetings, the Arthur Andersen trend charts and economic data were discussed, but they were not used directly in identifying plants for SMM discussion.

It was noted that pro/con charts were instituted at the January 1997 SMM. As a result of lessons learned from this meeting, PIPB issued guidance to standardize the charts in conformance with the SMM plant performance evaluation template. He noted that during plant discussions, the DNRR and NRR/PIPB will provide some facilitation. Pro/con charts will be projected and marked up during the discussions; the charts will be updated and the revised charts will be used as to facilitate the discussions related to the decisions made regarding agency-level actions that are conducted on the second day of the SMM.

It was acknowledged that NRR is working closely with AEOD on new tools (performance indicators and economic data) which will be used in the future. It was noted that the economic data is not planned to be used for decision making purposes, but to help focus the senior managers on the potential for performance to be impacted by a facility's financial situation. The trend charts and economic information are not being used at this meeting because they are still under development.

The EDO discussed thresholds for SMM actions and the need to articulate the bases for such actions. He emphasized that the minutes for this (June 1997) meeting need to reflect the discussions and to clearly articulate the bases for decisions. He noted that progress has been made, but that there is still further improvement possible.

The DNRR added that the plants under discussion at this meeting are assumed to warrant some agency-level action, unless the discussions find that action is not necessary. This is a change from the previous process. He reminded the participants that they also have the option to conduct a diagnostic evaluation team (DET) inspection if additional information regarding a licensee's performance is necessary.

The EDO noted that at the last SMM, there was good interplay between the meeting participants, mainly because so many of the managers were in new positions and had familiarity with plants in other regions. Managers are now settling into their jobs and the meeting participants need to prime themselves for a robust discussion. He also said that active input from all participants is just as crucial as properly documenting the meeting so that we can make sure decisions are clearly explicable to Congress, the public, and the Commission.

Finally, the EDO admonished participants to not put too much stock in management changes at licensee facilities; SMM decisions need to be based on performance evidence. He noted that taking agency-level action at the SMM should not be done if

it is only intended to be used as a means to bring issues to the attention of licensees-- the agency has other tools available for this purpose.

4. Plant Discussion Methodology

The process for this SMM was discussed. For each discussion plant, the cognizant regional administrator is to provide an overview of the plant's performance history. Considerations for maintaining the current level of agency attention and for increasing/decreasing agency attention, as appropriate, will then be presented. These considerations were formulated in accordance with the plant performance evaluation template factors contained in Management Directive (MD) 8.14, "Senior Management Meeting," and will be projected in chart form side-by-side to foster a balanced evaluation by meeting participants. These evaluation charts are referred to as "pro/con charts." The pro/con charts will then be revised based on the discussions to reflect the consensus views of senior managers. The revised pro/con charts will then serve as the bases for the deliberations by the senior managers in determining the appropriate agency action.

It was noted that pro/con charts were prepared for all discussion plants, except for the Millstone units; the Millstone discussion in these minutes explains the rationale for not preparing the pro/con charts.

5. NMSS Issues

The Director, NMSS, presented information on two topic areas, the status of regulation of nuclear safety at DOE facilities and dry cask storage issues and status.

With respect to regulation of DOE facilities, he discussed recent discussions between the Chairman and Secretary Pena of DOE. He basically reiterated information the Chairman provided in her introductory remarks that the NRC and DOE are beginning a cautious, but optimistic approach towards establishing a pilot program as this relationship is developed.

With respect to dry cask storage issues, he addressed concerns with poor cask designer performance, poor fabricator QA programs and activities in place or planned to help address these issues. He also briefly discussed pending legislation and DOE activities in this area.

OTHER ISSUES

The Director of AEOD reviewed the actions being taken in response to the Arthur Andersen study of the Senior Management Meeting process, including the development of additional performance indicators, economic indicators, and the revision to the SMM plant performance evaluation template.

The Chief of NRR's Inspection Program Branch, reviewed the integrated evaluation process that is being initiated by his branch, an outline of which is contained in a current SECY paper before the Commission. The proposal is for an integrated assessment of all the NRC plant performance evaluation processes (i.e., SMM, SALP, EPR).

Continued use of pro/con charts was discussed. It was noted that there was improved consistency in the use of these charts relative to the January 1997 SMM, but that further guidance may be necessary. NRR took this on as an action item.

Date and Location of Next Senior Management Meeting - The next SMM will be held January 13-14, 1998, in Region II.

ATTACHMENT 2

Senior Management Meeting Watch List Removal
Evaluation Factors

- Crystal River 3
- Dresden 2 & 3
- Indian Point 3
- Maine Yankee
- Salem 1 & 2
- Millstone 1, 2, & 3

CRYSTAL RIVER
EVALUATION FACTORS FOR REMOVAL OF PLANTS FROM THE WATCH LIST

Evaluation Factors	Response	Comments
I. Root Cause Identified and Corrected		
Weak performance areas are thoroughly assessed.	NO	The licensee continues in an extended shutdown begun on September 2, 1996. FPC is still involved in discovery of the extent of condition of their problems with inadequate: safety evaluations (50.59), design control, and corrective actions.
Comprehensive and clearly defined corrective action program has been developed.	NO	Improving but not completed, still in the discovery stage.
Corrective actions include sufficient measures to prevent recurrence of problems.	NO	
Management has allocated sufficient resources to carry out long-range corrective action programs.	NO	
NRC is satisfied that corrective action program is sufficiently implemented.	NO	
Sustained, successful plant performance has been demonstrated.	NO	

Evaluation Factors	Response	Comments
II. Improved Self-Assessment and Problem Resolution Evident		
Program elements that monitor and evaluate effectiveness of corrective actions have been instituted.	NO	
Safety issues are being identified to appropriate management level and corrected in a timely manner.	NO	Identification of safety issues has improved and is now good.
Quality assurance and safety oversight groups provide timely and effective self-assessments of performance to site and corporate management.	NO	A new QA Manager was hired June 1996 and has begun to implement improved assessments.
III. Licensee Management Organization and Oversight Improved		
Corporate and plant management teams are fully committed to achieving improved performance.	YES	All top managers have been or are being replaced with managers who are evidencing a strong safety ethic and accountability of their staff.
Licensee has effective corporate management oversight and involvement in plant operations and problem resolution.	YES	
Management team provides strong direction and fosters a nuclear safety work ethic that is understood at all levels in the organization.	YES	

Evaluation Factors	Response	Comments
IV. NRC Assessment Complete		
Senior NRC management no longer considers the plant as having weaknesses that warrant increased NRC-wide attention.	NO	Restart Panel has not provided this recommendation
Significant NRC inspection and licensing activities are complete and findings properly resolved or understood.	NO	Inspection plan is coordinated with the licensee's restart readiness plan and goes through the end of 1997.
V. Additional Considerations		
Overall performance has improved as reflected in the most recent SALP ratings, Performance Indicators, or results from the Plant Performance Review.	NO	SALP has been postponed during the long term shutdown.
Enforcement history has indicated an improving trend.	NO	
Performance has improved as demonstrated by a lack of operational problems.	NO	
Performance has improved as demonstrated by a lack of significant operator errors.	NO	
Procedure adherence problems are not evident.	NO	
Simulator is operational.	YES	

Evaluation Factors	Response	Comments
Known (i.e., plant specific or industry generic) aging problems have been appropriately addressed.	NO	
Licensee has improved its management organization.	YES	
Licensee procedures are considered adequate overall.	NO	
Licensee has an effective root cause analysis program.	NO	
PRA has been performed.	YES	
PRA has been used.	NO	

DRESDEN
EVALUATION FACTORS FOR REMOVAL OF PLANTS FROM THE WATCH LIST

Evaluation Factors	Response	Comments
I. Root Cause Identified and Corrected		
Weak performance areas are thoroughly assessed.	Yes	The "Dresden Plan" was completed in 1996, and the 1997 Operational Business Plan is the tool used to monitor performance and track improvement initiatives. The licensee outlined their initiative to further define weak performance in the area of engineering identified by the ISI. The initial results indicate an understanding of weaknesses. Further, the Dresden specific response to the January 27, 1997, 54f request was candid and recognized needed improvement areas.
Comprehensive and clearly defined corrective action program has been developed.	Yes	The Dresden Plan which focused attention on six specific areas was completed in 1996. The current corrective actions program is captured in several ongoing efforts including the station's 1997 Operational Plan, the commitments confirmed by the NRC's CAL dated November 21, 1997, and the March 28, 1997, ComEd 54f response (Section 5.1).
Corrective actions include sufficient measures to prevent recurrence of problems.	No	Work control may still be a problem and measures for a long term fix have not yet been demonstrated. Station performance improvement plans include both technical and supervisory

Evaluation Factors	Response	Comments
		training for the station's engineering and maintenance staff. The licensee began its current training initiative in the latter part of 1995. The ISI was not able to view a significant amount of "outage work" and a maintenance team inspection will be conducted in April 1997.
Management has allocated sufficient resources to carry out long-range corrective action programs.	Yes	Long range corrective action programs have been given adequate resources. Of note was the added increase to the 1997 budget for further improvement initiative.
NRC is satisfied that corrective action program is sufficiently implemented.	No	Work control may still be ineffective. Some procedural adherence and procedural adequacy problems still occur.
Sustained, successful plant performance has been demonstrated.	Yes	Dresden was in a dual unit outage for a large part of 1995. In 1996 forced outages occurred on both units. However, between September 1996 and March 1997, dual unit operation was successfully demonstrated for about 5 of the 7 months. Of note is the good (relative for Dresden) performance of Unit 2 over the past two fuel cycles.

Evaluation Factors	Response	Comments
II. Improved Self-Assessment and Problem Resolution Evident		
Program elements that monitor and evaluate effectiveness of corrective actions have been instituted.	Yes	The licensee established a monthly trend status report in 1994. This report monitors individual problems generated as part of the integrated reporting program. The report has been successful in identifying repetitive problem trends in addition to creating and tracking corrective actions to resolve the problems.
Safety issues are being identified to appropriate management level and corrected in a timely manner.	Yes	Generally, significant issues are identified and promptly investigated without NRC intervention. Corrective actions are reviewed by a plant operational review committee that is becoming more effective. Communications between Dresden, Quad Cities, and corporate engineering have significantly improved.
Quality assurance and safety oversight groups provide timely and effective self-assessments of performance to site and corporate management.	Yes	The license developed a plant operational review committee in 1995. Although the committee has experienced growing pains, it has been a major improvement over the licensee's old method of on-site review. Quality assurance increased its effectiveness with the development of the Monthly Trend Report. Based on resident inspector observations, the SQV organization has been a more positive influence at the site over the last year.

Evaluation Factors	Response	Comments
III. Licensee Management Organization and Oversight Improved		
Corporate and plant management teams are fully committed to achieving improved performance.	Yes	Corporate and plant management have brought in outside talent with significant experience and, in some cases, with experience in "turning around" an organization. Examples include the Site VP, Station Manager, Engineering Manager, Maintenance Manager, Radiation Protection Manager, Engineering Design Supt., and the Site Work Control Manager.
Licensee has effective corporate management oversight and involvement in plant operations and problem resolution.	Yes	Site Vice President has been effective in focusing plant management attention on problems and initiating management accountability.
Management team provides strong direction and fosters a nuclear safety work ethic that is understood at all levels in the organization.	Yes	Management team has provided strong direction fostering a nuclear safety work ethic. However, there continues to be some examples where all levels of the organization do not have a clear understanding.
IV. NRC Assessment Complete		
Senior NRC management no longer considers the plant as having weaknesses that warrant increased NRC-wide attention.	Yes	The licensee still has several weaknesses as identified in the most recent ISI and SALP.
Significant NRC inspection and licensing activities are complete and findings properly resolved or understood.	Yes	The inspection of Dresden is an on-going process performed by the N+1 resident staff and a dedicated regional engineering specialist. The

Evaluation Factors	Response	Comments
		recent ISI led to significant corrective actions in the area of engineering that are being independently verified and validated through actions detailed in the NRC's CAL dated November 12,1996. Recent resolution of licensing issues included the staff's approval of a change to UHS temperature limits, and approval of a small overpressure allowance for ECCS pump NPSH. There still exist a number of licensing issue to resolve including approval for restoration of UHS temperature.
V. Additional Considerations		
Overall performance has improved as reflected in the most recent SALP ratings, Performance Indicators, or results from the Plant Performance Review.	No	The most recent SALP period ended December 28, 1996. The station received SALP 2 ratings in Operations and Plant Support and SALP 3 ratings in Engineering and Maintenance. Those reflected a significant improvement in Operations and a decline in Maintenance. Overall, the SALP board recognized the continuing trend of improved performance. The ISI completed last fall concluded performance improved in most areas, but was incremental. The short term trend analysis for performance indicators showed an overall improvement that had low statistical significance. The licensee was in a dual unit outage for the entire third quarter of 1995. Although the number of LERs has dropped dramatically, the September 1995

Evaluation Factors	Response	Comments
		assessment by the Division of Reactor Controls and Human Performance indicated that the number of LERs relating to human performance continued to be twice the national average.
Enforcement history has indicated an improving trend.	No	The ISI identified a number of violations in several areas. However, the licensee has also identified a significant number of problems that are older issues found through better implementation of performance standards (e.g. two S/L III problems are being finalized with no CP based on licensee identification and corrective action). In December 1995, a $50K CP was issued regarding a radiation protection transportation problem. In March 1995, a $100K CP was issued for operators failure to follow procedures and technical specifications during a reactor recirculation pump start.
Performance has improved as demonstrated by a lack of operational problems.	Yes	Dresden Unit 2 has operated well since plant restart from an extended refuel outage in 1996 and has operated in excess of 220 days. Dresden Unit 3 was operated 4 of 7 months between September 1996 and the start of its refuel outage on March 29, 1997. Unit 3 was in a forced between October 26, 1996, and January 30, 1997, due to a recirc pump motor ground. Operator attention to detail in the control room has dramatically improved. Recent plant startups/shutdowns have been essentially error

Evaluation Factors	Response	Comments
		free with majority of equipment operating as expected.
Performance has improved as demonstrated by a lack of significant operator errors.	Yes	Operator attention to detail in the control room has dramatically improved since early 1995. As a result, the significance of operator errors has been reduced.
Procedure adherence problems are not evident.	No	While significant procedural adherence problems have been reduced, the licensee continues to experience problems in this area. This continuing weakness is receiving adequate management attention.
Simulator is operational.	Yes	
Known (i.e., plant specific or industry generic) aging problems have been appropriately addressed.	Yes	Similar to the core shroud repair performed on Unit 2, the licensee plans to repair the Unit 3 core shroud during the spring 1997 outage. The staff reviewed and approved the licensee's repair technique.
Licensee has improved its management organization.	Yes	The senior management team has been in place for about 18 months and includes significant outside experience.
Licensee procedures are considered adequate overall.	Yes	The licensee has identified problems with procedure adequacy but is working diligently to correct those problems. The most significant procedure weakness was the out-of-service procedure.

Evaluation Factors	Response	Comments
Licensee has an effective root cause analysis program.	Yes	Overall, the licensee's root cause analysis program has improved and has demonstrated effectiveness. For example, effective root cause analysis was demonstrated in determining the failure mechanisms for the Unit 3 turbine blade failure, the problems with "post scram" feedwater controls, and more recently on selected negative (OOS problems) trends from their trend analysis report.
PRA has been performed.	Yes	However, as mentioned above the staff could not conclude the IPE submittal met the requirements of GL 88-20.
PRA has been used.	Yes	During 1995 the licensee began to use PRA in the day-to-day operation of the facility. The licensee identifies "protected pathways" during routine maintenance from a risk assessment using PRA. A specific example of the use of PRA involved the assessment of the significance of temporarily securing a core spray pump during the removal of a LPCI pump motor.

INDIAN POINT 3
EVALUATION FACTORS FOR REMOVAL OF PLANTS FROM THE WATCH LIST

Evaluation Factors	Response	Comments
I. Root Cause Identified and Corrected		
Weak performance areas are thoroughly assessed.	Yes	NYPA and NRC assessments have identified the significant performance weaknesses. Corrective action for many significant performance weaknesses such as quality assurance corrective actions and operations were completed. Corrective actions to address other performance weaknesses (e.g. work control process and engineering programs) are at various stages of implementation.
Comprehensive and clearly defined corrective action program has been developed.	Yes	The Restart and Continuous Improvement Plan (RCIP), developed during the Performance Improvement Outage, continues to be implemented and is incorporated as part of NYPA's Business Plan. Improved operator performance has continued with plant operations conducted in a safe manner in accordance with approved procedures, although some weaknesses were recently noted in translating design features into the EOPs. Corrective actions to address concerns with the engineering backlog are being implemented, with some progress evident.

Evaluation Factors	Response	Comments
Corrective actions include sufficient measures to prevent recurrence of problems.	Yes	Corrective actions typically provide adequate measures to prevent recurrent problems. Few repeat performance problems of significance have been noted in 1997.
Management has allocated sufficient resources to carry out long-range corrective action programs.	Yes	Sufficient resources have been devoted to operations to achieve improved performance. The resources applied to reduce the backlog allowed NYPA to reach planned goals at the end of 1996. Although NYPA management's addition of resources to reduce the engineering backlog and carry out long range corrective action programs (e.g. the Setpoint Control Program) aided these efforts, progress was hampered due to emerging work, a five week forced outage in February, and preparations for the refueling outage in May-June.
NRC is satisfied that corrective action program is sufficiently implemented.	Yes	Corrective actions from previous operator performance events have been effective; the non-outage corrective backlog has been substantially reduced. Corrective actions in response to Deficiency Event Reports (DERs) are sufficiently detailed to address and correct the performance issue of concern. Corrective actions are being implemented to address engineering program weaknesses and the large engineering backlog. Efforts are also underway to enhance design basis information.

Evaluation Factors	Response	Comments
Sustained, successful plant performance has been demonstrated.	Yes	Prior to January 1997, work control and emerging equipment problems, many of which originated in the balance of plant, resulted in plant transients, shutdowns and power reductions. The correction of the most significant equipment problems during the February 1997 forced outage greatly reduced the number of challenges to the plant. In the last SMM, the NRC concluded that an additional period of monitoring was required to determine whether NYPA has made necessary, lasting improvements. The success of the February forced outage in terms of effective equipment fixes and plant configuration control provided a significant data point indicating improved NYPA performance. The return to power operation, plant performance at power and entry into the refueling outage demonstrated an improved level of performance is being achieved, although this period of performance monitoring is somewhat limited. Furthermore, the recent comprehensive NRC review of Engineering performance and refueling preparations indicated that Engineering performance is continuing to improve, but refueling preparations were started late and were not completed prior to the start of the outage.

Evaluation Factors	Response	Comments
II. Improved Self-Assessment and Problem Resolution Evident		
Program elements that monitor and evaluate effectiveness of corrective actions have been instituted.	Yes	NYPA has a comprehensive DER reporting and evaluation system. The DER process has program elements to monitor the effectiveness of corrective actions for several months after implementation. Most department audits and self-assessments have been effective in monitoring corrective action performance, although some inconsistencies in self-assessments have been noted (e.g. work control).
Safety issues are being identified to appropriate management level and corrected in a timely manner.	Yes	NYPA senior management demonstrated the ability to self-assess performance, be self-critical and implement timely, effective corrective action. The IP-3 organization performed thorough extent-of-condition evaluations and generally implemented effective corrective actions.
Quality assurance and safety oversight groups provide timely and effective self-assessments of performance to site and corporate management.	Yes	The QA and safety oversight groups generally provide effective self-assessments of performance and are adding value.

Evaluation Factors	Response	Comments
III. Licensee Management Organization and Oversight Improved		
Corporate and plant management teams are fully committed to achieving improved performance.	Yes	The current NYPA management team is committed to improved plant performance to ensure safe plant operation. The current outage scope is comprehensive and should address the outstanding equipment problems at the plant. NYPA's response to the 50.54(f) request was considered thorough.
Licensee has effective corporate management oversight and involvement in plant operations and problem resolution.	Yes	Corporate management is substantially involved in plant operations and has provided significant oversight.
Management team provides strong direction and fosters a nuclear safety work ethic that is understood at all levels in the organization.	Yes	Management decision making is conservative and management fosters a good nuclear safety work ethic. Elevated standards and expectations of the staff have been established and enforced within departments. However, in the Engineering area, this effort was not effectively begun until late 1996; these efforts are continuing. NYPA recently hired a new Chief Nuclear Officer (CNO) with extensive commercial nuclear industry experience.

Evaluation Factors	Response	Comments
IV. NRC Assessment Complete		
Senior NRC management no longer considers the plant as having weaknesses that warrant increased NRC-wide attention.	Yes	NYPA made substantial gains in reducing the backlog and some progress on engineering backlogs as well as corrected significant operator burdens during the forced outage in February 1997. A veteran industry CNO was successfully recruited and lower level management changes are much more infrequent. Sustained improvement in Engineering performance is needed, but progress in the last several months was noted during the Special Engineering Team inspection in April 1997.
Significant NRC inspection and licensing activities are complete and findings properly resolved or understood.	Yes	The Engineering team inspection in April 1997 provided significant insights into Engineering's performance in several areas (e.g. 50.59 evaluations and operability determinations, plant modifications, corrective action programs, calculation quality and retrievability, drawing control, design basis documentation and surveillance testing). Also, indepth inspections were conducted in the areas of refueling preparations and work control. No other special NRC inspection or licensing initiatives are planned in response to NYPA's past performance problems, although a future A/E type inspection of the control and retrievability of design information may be warranted.

Evaluation Factors	Response	Comments
V. Additional Considerations		
Overall performance has improved as reflected in the most recent SALP ratings, Performance Indicators, or results from the Plant Performance Review.	Yes	Most recent SALP period ended March 1996. Adequate performance was seen in Operations and Engineering. Good performance was noted in Maintenance. Excellent performance was noted in Plant Support. The SALP report for the current period, which ended on May 17, 1997, is currently in draft form; it denotes improved performance in several key areas. The March PPR and senior management site visits in December noted improved performance in Operations and improved overall plant performance and material condition. The short term performance indicator trend shows a slight improvement in the second half of 1996. Key longer term PI comparisons to other similar plants indicate above average performance during operations.
Enforcement history has indicated an improving trend.	Yes	The last escalated action (which also included a fine) was issued in January 1996. Eight non-escalated violations were issued in 1996; to date, twelve violations have been identified, of which only one is potentially escalated. Although the number of violations have increased, these violations do not reflect fundamental problems in performance, programs

Evaluation Factors	Response	Comments
		and processes. This is in contrast to violations identified prior to early 1996.
Performance has improved as demonstrated by a lack of operational problems.	Yes	Since November 1996, there were only three shutdowns or significant transients, all of which the operators handled well. Improved operator performance continued and, while equipment failures challenged plant power operations on a few occasions, NYPA operated the plant safely. Equipment problems forced a shutdown in January and a five week forced outage which lasted into February. During that outage, a number of equipment problems were rectified; the number of equipment problems impacting Operations since restart has decreased.
Performance has improved as demonstrated by a lack of significant operator errors.	Yes	Overall, the Operations department performance has continued to improve, including shift leadership. Although human errors in Operations, particularly by non-licensed operators, have occasionally impacted equipment performance (e.g. inadvertent letdown system overpressurization, February 20, 1997), corrective actions have been taken to prevent recurrence.

Evaluation Factors	Response	Comments
Procedure adherence problems are not evident.	Yes	Observations of Operations and since the last half of 1996 have shown generally good procedure adherence. However, some minor nonadherence to procedures were identified by both the NRC and NYPA and were being appropriately addressed.
Simulator is operational.	Yes	The simulator has been operational since the late 1980's.
Known (i.e., plant specific or industry generic) aging problems have been appropriately addressed.	Yes	Significant effort is planned during the forthcoming outage to address these issues (e.g. SW piping, charging system). The principal plant material condition issues are related more to past poor plant practices than age-related degradation with the exception of small bore service water piping corrosion.
Licensee has improved its management organization.	Yes	While some transitions have occurred in the IP-3 management team, the NRC has observed that the current management team is safety focused and receptive to NYPA staff identification of problems. NYPA recently hired a new Chief Nuclear Officer (CNO) with extensive commercial nuclear industry experience.

Evaluation Factors	Response	Comments
Licensee procedures are considered adequate overall.		
	Yes	NYPA procedures overall are considered good. Plant departments are making substantial improvements during the biennial review process or a dedicated procedure improvement process. Several procedural deficiencies were identified by NYPA during the review of design basis information and are being addressed.
Licensee has an effective root cause analysis program.	Yes	Root cause analyses are generally thorough and extent of condition evaluations are frequently performed and comprehensive.
PRA has been performed.	Yes	Indian Point previously performed a PRA in the early 1980's; the IPE was completed, submitted to the NRC and approved several years ago.
PRA has been used.	Yes	Examples: Rule implementation, Operator training and work planning and scheduling.

MAINE YANKEE
EVALUATION FACTORS FOR REMOVAL OF PLANTS FROM THE WATCH LIST

Evaluation Factors	Response	Comments
I. Root Cause Identified and Corrected		
Weak performance areas are thoroughly assessed.	No	MY submitted a restart plan on March 7, 1997. The plan addresses major restart issues. However, their review of extent of condition issues is not complete.
Comprehensive and clearly defined corrective action program has been developed.	No	A MY restart plan was recently submitted to the NRC on March 7, 1997. This plan is currently under review by the NRC, the state of Maine, and the public. The plan identifies corrective action program issues as a restart item.
Corrective actions include sufficient measures to prevent recurrence of problems.	No	As noted in the licensee's March 7, 1997 restart plan, the licensee has not completed all of their activities to address weaknesses in their corrective action program.
Management has allocated sufficient resources to carry out long-range corrective action programs.	Unknown	This issue will be reviewed by the NRC Maine Yankee Assessment Panel (MYAP).

Evaluation Factors	Response	Comments
NRC is satisfied that corrective action program is sufficiently implemented.	No	An NRC assessment panel was chartered on March 25, 1997 to monitor MY restart activities under a modified MC 0350 process. Weaknesses in the MY corrective action program are identified in the restart plan as a restart issue.
Sustained, successful plant performance has been demonstrated.	No	MY has not completed the restart activities in their restart plan.
II. Improved Self-Assessment and Problem Resolution Evident		
Program elements that monitor and evaluate effectiveness of corrective actions have been instituted.	Unknown	These issues are currently under review by the licensee and NRC.
Safety issues are being identified to appropriate management level and corrected in a timely manner.	Unknown	The licensee's program to address this concern is addressed by their restart plan. However, the adequacy of these activities is under review by the NRC.
Quality assurance and safety oversight groups provide timely and effective self-assessments of performance to site and corporate management.	No	Licensee actions to address weaknesses in this area are currently under review by the licensee and the NRC.

Evaluation Factors	Response	Comments
III. Licensee Management Organization and Oversight Improved		
Corporate and plant management teams are fully committed to achieving improved performance.	Yes	MY management is committed to improve plant performance to ensure safe plant operation.
Licensee has effective corporate management oversight and involvement in plant operations and problem resolution.	Unknown	The effectiveness of Corporate management support will be reviewed by the MYAP.
Management team provides strong direction and fosters a nuclear safety work ethic that is understood at all levels in the organization.	Unknown	Entergy recently assumed management of the MY restart activities. The effectiveness of the new MY management team has not been established. However, initial observations indicate that the new management team has set higher standards for performance at the site.
IV. NRC Assessment Complete		
Senior NRC management no longer considers the plant as having weaknesses that warrant increased NRC-wide attention.	No	It is too early in the MYAP and NRC management review of the MY restart process to draw this conclusion.
Significant NRC inspection and licensing activities are complete and findings properly resolved or understood.	No	A number of NRC restart related inspections have yet to be completed.

Evaluation Factors	Response	Comments
V. Additional Considerations		
Overall performance has improved as reflected in the most recent SALP ratings, Performance Indicators, or results from the Plant Performance Review.	No	The last SALP for MY was conducted in 1995. This preceded the identification of the issues leading to MY shutdown in December 1996. The next MY SALP has been delayed until after MY restart.
Enforcement history has indicated an improving trend.	No	A number of related enforcement issues have been identified in inspections following the issuance of inspection report 96-16 which captured the ISAT potential escalated enforcement.
Performance has improved as demonstrated by a lack of operational problems.	No	The unit was shut down December 1996. No performance trend has been noted since the shutdown.
Performance has improved as demonstrated by a lack of significant operator errors.	No	The unit was shut down December 1996. No significant operator errors have occurred. However, there have been a number of operator errors during routine evolutions.

Evaluation Factors	Response	Comments
Procedure adherence problems are not evident.	Yes	Some limited problems identified but no significant problems observed at the programmatic level.
Simulator is operational.	Yes	The simulator has been operational since the late 1980's.
Known (i.e., plant specific or industry generic) aging problems have been appropriately addressed.	No	Steam Generator tube degradation corrective actions (tube sleeving) are currently being assessed for effectiveness.
Licensee has improved its management organization.	Unknown	The effectiveness of the recent significant Entergy changes in the MY management structure are currently under review by the MYAP.
Licensee procedures are considered adequate overall.	Yes	No major programmatic problems have been identified in this area.
Licensee has an effective root cause analysis program.	No	Weaknesses in the area of Root cause analyses and extent of condition evaluations are addressed in the licensees March 7, 1997 restart plan. These issues are currently under review by the licensee and the NRC.

Evaluation Factors	Response	Comments
PRA has been performed.	Yes	Maine Yankee performed and submitted an IPE to the NRC in 1992. The NRC approved the IPE via SER in 1996.
PRA has been used.	Yes	Examples: The IPE is used for making risk informed decisions to perform maintenance and testing activities.

SALEM
EVALUATION FACTORS FOR REMOVAL OF PLANTS FROM THE WATCH LIST

Evaluation Factors	Response	Comments
I. Root Cause Identified and Corrected		
Weak performance areas are thoroughly assessed.	Yes	PSE&G conducted an extensive review to identify fundamental issues which resulted in overall performance decline. This review also identified common causes for decline across organization. In addition, PSE&G conducted an extensive FSAR versus plant review. Corrective actions to address these weaknesses are at various stages of implementation.
Comprehensive and clearly defined corrective action program has been developed.	Yes	A comprehensive corrective action plan has been developed to address each of the fundamental causes of performance decline. This plan was sent to the NRC in a letter, dated November 24, 1995, and contains detailed actions in each area, as well as the management process to be used to determine if the corrective actions are effective.
Corrective actions include sufficient measures to prevent recurrence of problems.	Unknown	The corrective action program contains verification elements that require post implementation reviews to validate the success of proposed corrective actions. Results to date have been generally favorable. However, some uncertainty exists with respect to actions that require actual plant operation to verify their long-term effectiveness.

Evaluation Factors	Response	Comments
Management has allocated sufficient resources to carry out long-range corrective action programs.	Yes	Significant resources have been dedicated to address the numerous hardware and program issues during the extended outage. The ability to sustain a problem backlog reduction during power operation has not been demonstrated.
NRC is satisfied that corrective action program is sufficiently implemented.	Yes	The NRC staff has reviewed the licensee's corrective action program and has determined that it has improved significantly. The program has a low threshold for entry and, by using it, the Salem staff has routinely identified plant problems. Root cause analyses and corrective action implementation continued to improve. The corrective action oversight groups provided very effective feedback on the quality of activities. Quality Assurance audits provided comprehensive assessment of the program with well supported conclusions. Performance indicators provided an effective way for managers to monitor departmental performance. Some problems remain, but are considered minor relative to the overall improvement in the program. The improvements in the corrective action program are adequate to support restart. The NRC staff intends to continue monitoring this area through a large-scale integrated readiness assessment prior to restart.

Evaluation Factors	Response	Comments
Sustained, successful plant performance has been demonstrated.	No	Plant startup has not yet occurred. Some plant hardware problems should be expected given the magnitude of the outage. In addition, the number and significance of the equipment problems that will remain after restart have not yet been evaluated.
II. Improved Self-Assessment and Problem Resolution Evident		
Program elements that monitor and evaluate effectiveness of corrective actions have been instituted.	Yes	The new corrective action program includes a primary element that monitors and evaluates the effectiveness of corrective actions.
Safety issues are being identified to appropriate management level and corrected in a timely manner.	Yes	During this outage, PSE&G has consistently demonstrated a very low threshold for identifying issues to the appropriate management level. The timeliness of the corrective actions have been commensurate with the large volume of ongoing activities.
Quality assurance and safety oversight groups provide timely and effective self-assessments of performance to site and corporate management.	Yes	Improved contribution from the QA and oversight groups. Site management has routinely utilized expertise from outside PSE&G to benchmark performance.
III. Licensee Management Organization and Oversight Improved		
Corporate and plant management teams are fully committed to achieving improved performance.	Yes	The current PSE&G management team has routinely demonstrated a commitment to achieving improved

Evaluation Factors	Response	Comments
		performance. Examples include extensive operator/maintenance training program.
Licensee has effective corporate management oversight and involvement in plant operations and problem resolution.	Yes	Corporate management is substantially involved in plant oversight and utilize an offsite Nuclear Review Board to provide objective assessment.
Management team provides strong direction and fosters a nuclear safety work ethic that is understood at all levels in the organization.	Yes	Management decision making is conservative and management fosters a good nuclear safety work ethic. New management is now in place in virtually all key corporate and plant-level positions, many of whom came from outside PSE&G with significant industry experience at solving longstanding performance problems.
IV. NRC Assessment Complete		
Senior NRC management no longer considers the plant as having weaknesses that warrant increased NRC-wide attention.	No	Although improved performance has been noted in all key areas, there remains some performance uncertainty given the magnitude of the effort and the absence of sustained power operation.
Significant NRC inspection and licensing activities are complete and findings properly resolved or understood.	No	Many of the specific technical issues needed for restart have been resolved. However, the larger programmatic issues are still under NRC review and assessment. The staff plans to continue extensive inspections of these technical and programmatic items. Additionally, test and restart activities, including power operations, will receive significant staff attention. The

Evaluation Factors	Response	Comments
		extent of corrective actions to resolve identified design/licensing issues are still being evaluated.
V. Additional Considerations		
Overall performance has improved as reflected in the most recent SALP ratings, Performance Indicators, or results from the Plant Performance Review.	Yes	The SALP process has been suspended until return to operation is achieved. The NRC has formed a Salem Assessment Panel to more closely monitor the progress of the corrective actions. Although the most recent Plant Performance Review indicated improving performance, there is some uncertainty that this level of performance will be sustained given the absence of integrated operational performance.
Enforcement history has indicated an improving trend.	No	Significant enforcement action was taken for those performance issues that preceded the current shutdown. Since the shutdown and implementation of subsequent corrective actions, including substantial management changes, discretion has been applied to enforcement actions for issues stemming from the problems that caused and preceded the shutdown. Enforcement actions involving recent performance in shutdown operations have generally been less significant, but have continued to occur. In addition, the NRC identified significant programmatic issues with security and fire protection.

Evaluation Factors	Response	Comments
Performance has improved as demonstrated by a lack of operational problems.	No	While operational problems have continued to occur, they appear to be less frequent and due to the increased potential for human error from the extensive dual outage still in progress. Performance while operating has yet to be demonstrated.
Performance has improved as demonstrated by a lack of significant operator errors.	No	The number and significance of operator errors have been reduced, and the action taken to address these errors has been comprehensive. While improved, occasional lapses and human performance problems have been noted. The ability of operations to coordinate large scale plant evolutions will be challenged during the startup and power ascension testing, and thus remains to be demonstrated.
Procedure adherence problems are not evident.	Yes	Site management has emphasized the importance of procedural adherence, and the number of errors has been reduced.
Simulator is operational.	Yes	The simulator is operational with good fidelity as demonstrated by a recent NRC SSFI effort.
Known (i.e., plant specific or industry generic) aging problems have been appropriately addressed.	Yes	PSE&G is completing an extensive outage to address material condition/equipment issues throughout the plant. For issues with aging or parts availability, such as with the RPS control modules, PSE&G implemented extensive refurbishment and repair activities.

Evaluation Factors	Response	Comments
Licensee has improved its management organization.	Yes	Site management has been replaced with experienced managers from other plants. This management team has been in place now for most of the outage, and has demonstrated a conservative safety ethic through the insistence of reporting and addressing problems.
Licensee procedures are considered adequate overall.	Yes	The NRC SSFI considered the operating procedures associated with the component cooling system as good. In addition, a complete upgrade of the Abnormal and Emergency Operating Procedures has been completed.
Licensee has an effective root cause analysis program.	Yes	Root cause analyses are considered generally thorough and comprehensive.
PRA has been performed.	Yes	The Salem IPE is complete and evaluated by the NRC as relatively detailed.
PRA has been used.	Yes	PRA is being used with the Maintenance Rule implementation. In addition, the PRA has been updated to reflect the extensive plant modifications from this outage.

MILLSTONE 1

EVALUATION FACTORS FOR REMOVAL OF PLANTS FROM THE WATCH LIST

Evaluation Factors	Response	Comments
I. Root Cause Identified and Corrected		
Weak performance areas are thoroughly assessed.	No	The current Unit 1 adverse condition report (ACR) backlog is 1740, with an increasing trend. The average evaluation timeliness is currently at 214 days. The average time for corrective action implementation is 322 days. The sizable backlog severely impacts the licensee's ability to thoroughly assess weak performance areas.
Comprehensive and clearly defined corrective action program has developed.	Unknown	On February 25, 1997 the licensee implemented a major revision to procedure RP-4, Corrective Action. More time is needed to determine if the program will be comprehensive and effective at resolving the corrective action problems.
Corrective actions include sufficient measures to prevent recurrence of problems.	No	Based on the number of repetitive ACRs and NRC violations, the corrective actions currently being implemented do not prevent recurrence of problems. The unit has not yet attained a level of performance to show that the corrective action program is improving.

MILLSTONE 1

Evaluation Factors	Response	Comments
Management has allocated sufficient resources to carry out long-range corrective action programs.	Unknown	The recovery organization has increased resources to deal with the ACR backlog. The ability to prevent the recurrence of problems, reduce the backlog, and deal with the long-range corrective action programs has not been demonstrated.
NRC is satisfied that corrective action program is sufficiently implemented.	No	As stated in NRC IR 96-04 (June 6, 1996): "Many of the current, apparent violations and some of the outstanding violations discussed in this report deal with inadequate corrective actions at all three units, and are associated with the current adverse condition reporting system. We have concluded that the corrective action program is not currently effective in correcting identified deficiencies." No appreciable improvement has been seen to date.
Sustained, successful plant performance has been demonstrated.	No	The large number of violations identified in the most recent NRC inspection report illustrates that a recurrent significant challenge to management is the resolution of identified deficiencies in a timely manner. Little progress has been demonstrated to implement corrective actions for these deficiencies.

Evaluation Factors	Response	Comments
II. Improved Self-Assessment and Problem Resolution Evident		
Program elements that monitor and evaluate effectiveness of corrective actions have been instituted.	Unknown	Measures of effectiveness are required by the new ACR process for all significant ACRs. However, the effectiveness of the process attribute has not been demonstrated.
Safety issues are being identified to appropriate management level and corrected in a timely manner.	No	While the number of ACRs continues to increase, we have seen a reluctance on the part of some of the plant staff, particularly engineering, to initiate ACRs. This issue has been discussed with plant management. The significant ACR backlog prevents timely corrective action.
Quality assurance and safety oversight groups provide timely and effective self-assessments of performance to site and corporate management.	Unknown	Quality assurance has demonstrated some effective assessments in particular, the oversight of the CMP process. However, QA's followup of the resolution of issues has been less than adequate. QA enters their concerns into the ACR process for the line organizations to resolve, which appears to be the extent of their involvement. The corrective action process is then relied on to correct the QA concern with little followup of the resolution by QA.

Evaluation Factors	Response	Comments
III. Licensee Management Organization and Oversight Improved		
Corporate and plant management teams are fully committed to achieving improved performance.	Unknown	Plant management has determined that the lack of accountability is hampering improved performance. Management is attempting to drive accountability into the lower levels of the organization. Improved teamwork has been demonstrated. However, the use of schedules to motivate the plant staff may be a deterrent to improved performance, as schedule pressure increases to the point it becomes an issue. QA oversight of the CMP has identified and documented a schedule pressure problem in the development of the position papers.
Licensee has effective corporate management oversight and involvement in plant operations and problem resolution.	Unknown	Corporate Management has recently changed with the appointment of a new senior vice president/CNO. This individual has taken an active involvement in plant operations. The effectiveness of this involvement has not been demonstrated.

Evaluation Factors	Response	Comments
Management team provides strong direction and fosters a nuclear safety work ethic that is understood at all levels in the organization.	Yes	New management from PECO Energy is now in place in all key plant positions. While the management team provides strong direction and fosters a good nuclear safety work ethic, it is not apparent that the lower levels of the organization understand the message. Frequent management changes and numerous recovery plans/programs have left the staff somewhat skeptical.
IV. NRC Assessment Complete		
Senior NRC management no longer considers the plant as having weaknesses that warrant increased NRC-wide attention.	No	With significant improvement yet to be demonstrated and continued weaknesses being identified, NRC-wide attention is warranted. CMP discovery continues, which provides some uncertainty as to the magnitude of the design deficiencies at Unit 1.
Significant NRC inspection and licensing activities are complete and findings properly resolved or understood.	No	The development of the NRC's significant items list is ongoing. An extensive inspection effort will be required to resolve both the hardware and programmatic issues at the site. Since the CMP is still in the discovery phase, the extent of future licensing activities are not known at this time. The licensee is also developing their significant items list in an effort to docket that information, and provide the NRC with completed corrective action packages for NRC open items. To date, we have not a received a completed package for any of these items, nor has an accurate schedule for completion of these issues been developed.

Evaluation Factors	Response	Comments
V. Additional Considerations		
Overall performance has improved as reflected in the most recent SALP ratings, Performance indicators, or results from the Plant Performance Review.	No	Overall performance has not improved, as reflected in the current PPR. Continued management changes (additional PECO personnel) and ongoing program development (work control process; corrective action program; and project management concepts for plant modifications) continue to challenge the stability of the organization. Additional time and effort will be required before substantial improvement can be demonstrated.
Enforcement history has indicated an improving trend.	No	The current enforcement history for all three unit does not indicate an improving trend. The large number of violations (13) identified in the most recent NRC inspection report illustrates this point.
Performance has improved as demonstrated by a lack of operational problems.	Unknown	Based on current plant conditions and the low level of plant activity, the operations staff has not been significantly challenged. Performance while operating has yet to be demonstrated.
Performance has improved as demonstrated by a lack of significant operator errors.	Unknown	Same as above.

MILLSTONE 1

Evaluation Factors	Response	Comments
Performance adherence problems are not evident.	Unknown	Site management has emphasized the importance of procedural adherence. However, the current low level of activity in the plant does not provide enough information to indicate or trend a procedural adherence problem.
Simulator is operational.	Yes	However, recent QA audits have identified simulator certification and fidelity problems and documented these issues in ACRs.
Known (i.e., plant specific or industry generic) aging problems have been appropriately addressed.	Unknown	The plant staff is addressing material condition and equipment issues. However, we are not aware of any specific efforts on the part of the licensee to address the issue of plant aging.
Licensee has improved its management organization.	Unknown	Although significant changes have occurred in the management organization, the overall effectiveness of these changes have yet to be demonstrated. Recent changes (within the last month) have included: the manager of work planning, reporting to the director of maintenance (this group previously reported to the director of work management); the manager of radiation protection; and the implementation of a new project management group with its own manager. All of these new individuals are from PECO. The recovery organization also plans to implement a new group to deal with the resolution of corrective action issues.

MILLSTONE 1

Evaluation Factors	Response	Comments
Licensee procedures are considered adequate overall.	No	Even after the licensee implemented a multi-phase procedure upgrade program that lasted for a number of years, procedural problems continue to be identified. Problems with off-normal, general operating, and emergency operating procedure have been noted. In the case of the off-normal (ON) procedures, the licensee has recently noted that Unit 1 does not have the full complement of ONs normally seen at BWRs. ONs that will cover additional operational problems will need to be developed.
Licensee has an effective root cause analysis program.	No	The licensee has made a number of attempts to correct problems with the root cause analysis program, which to date have not been effective. Some attempts have included the implementation of a "Root Cause Doctor" program and the use of a contractor that specializes in root cause analysis (FPI).
PRA has been performed.	Yes	The Millstone Unit 1 IPE is completed and was evaluated by the NRC as having less detail than the average. Inspection issues resulting from the IPE evaluation (specifically for MS Unit 1) included: the need to review of the adequacy of improvements to the loss of 120 Vac diagnosis/response procedures; and inspection of the ADS system reliability, maintenance, and testing.

MILLSTONE 1

Evaluation Factors	Response	Comments
PRA has been used.	Unknown	The Licensee had planned to implement a risk-based maintenance schedule during the next cycle. Additional inspection is needed to determine the status of that plan.

MILLSTONE 2

EVALUATION FACTORS FOR REMOVAL OF PLANTS FROM THE WATCH LIST

Evaluation Factors	Response	Comments
I. Root Cause Identified and Corrected		
Weak performance areas are thoroughly assessed.	No	Although there are a few notable exceptions, Millstone performance is generally not characterized by the occurrence of safety significant events but rather by an extremely high number of deficiencies of low to moderate significance. The most viable example is the hundreds of instances of not updating the FSAR, which eventually raised concerns regarding the ability of systems to perform their design basis function. Poor management, lack of accountability, and low standards over several years have created a culture where sub-standard performance was tolerated and often not even recognized. Because this culture was prevalent in virtually all Unit 2 departments, new revelations of programmatic breakdowns (such as in operator license training) continue to be revealed. Therefore, defining the "weak performance areas" is on-going because the pervasiveness and collective significance of deficiencies is often not readily apparent. There have been past examples of management inaction on employee concerns due to the concern having low safety significance when viewed in isolation.
Comprehensive and clearly defined corrective action program has developed.	Unknown	Although the licensee has developed an Operational Readiness Plan, it is not possible to predict at this time whether implementation of this plan will effect needed performance improvements. Additionally, the license has implemented a site wide revision to the station corrective action program in the recent past, and it is too early to predict success.

MILLSTONE 2

Evaluation Factors	Response	Comments
Corrective actions include sufficient measures to prevent recurrence of problems.	No	Millstone is characterized by the pervasiveness of problems much more than by the occurrence of significant events. The culture of low standards has created many areas where, due to inattention, substandard and often inadequate performance have resulted. The NRC will sample corrective actions for the items having a higher safety significance and measure the functionality of the process by verifying comprehensive closures. Although the recovery managers clearly are expecting higher standards, addressing the wide-spread performance issues of the past is a long term effort.
Management has allocated sufficient resources to carry out long-range corrective action programs.	No	Although the licensee has defined many of the corrective actions that they plan to complete after restart, the resources needed to complete these tasks are still largely undefined. Based on the licensee's well-established history where promised performance improvements were not realized, licensee assurances concerning their post-restart activities will be closely monitored.
NRC is satisfied that the corrective action program is sufficiently implemented.	No	A November 1996 NRC resident exit meeting in which multiple examples of inadequate corrective actions were cited, noted that, despite their focus on the 10CFR50.54(f) effort as the key restart issue, there were still significant concerns whether there has been sufficient progress in addressing the corrective action program. Despite numerous previous occasions where the NRC had communicated the same message, this exit meeting prompted a significant and clearly viable increase in attention and resources toward addressing corrective action problem. Progress has been made on the Adverse Condition Report(ACR) backlog in parallel with closing newly generated ACRs.

Evaluation Factors	Response	Comments
Sustained, successful plant performance has been demonstrated.	No	Although there are some signs of progress, overall plant performance has not reached a point that can be described as successful.
II. Improved Self-Assessment and Problem Resolution Evident		
Program elements that monitor and evaluate effectiveness of corrective actions have been instituted.	Yes	Although the elements have been instituted by procedure, the effectiveness of these program elements has yet to be established.
Safety issues are being identified to appropriate management level and corrected in a timely manner.	No	The ACR process effectively communicates identified concerns to plant management. However, timeliness of corrective actions remains a significant concern. Licensee efforts have focused on reducing the ACR backlog.
Quality assurance and safety oversight groups provide timely and effective self-assessments of performance to site and corporate management.	Unknown	Higher quality personnel, including the previous Unit 2 Director, have been assigned to Nuclear Safety and Oversight. Although there is some evidence of improved effectiveness, particularly involving 50.54(f) oversight, it is too soon to determine the effectiveness of QA program improvements.

MILLSTONE 2

Evaluation Factors	Response	Comments
III. Licensee Management Organization and Oversight Improved		
Corporate and plant management teams are fully committed to achieving improved performance.	Yes	The management team from Virginia Power brought in for Unit 2 has developed a recovery plan that provides an integrated approach to raising standards and expectations.
Licensee has effective corporate management oversight and involvement in plant operations and problem resolution.	Unknown	The new recovery organization has provided a much greater level of involvement in daily plant activities.
Management team provides strong direction and fosters a nuclear safety work ethic that is understood at all levels in the organization.	No	The recovery management has communicated that performance inadequacies have been the result of low standards and expectations by previous plant management. However, plant personnel often express a lack of understanding of their role in supporting unit recovery.

Evaluation Factors	Response	Comments
IV. NRC Assessment Complete		
Senior NRC management no longer considers the plant as having weaknesses that warrant increased NRC-wide attention.	No	Although the Virginia Power recovery team has instituted new program initiatives and raised performance standards, their overall effectiveness has not yet been demonstrated. Continued NRC attention is warranted.
Significant NRC inspection and licensing activities are complete and findings properly resolved or understood.	No	The Unit 2 Significant Items List has been developed that describes the programmatic and technical issues that require NRC inspection prior to startup. With few exceptions, the licensee corrective actions have not yet been completed for most of the items. Only 3 of 15 TS amendments needed to support restart have been submitted.
V. Additional Considerations		
Overall performance has improved as reflected in the most recent SALP ratings, performance indicators, or results from the Plant Performance Review.	No	While an improving trend is perceived, the current PPR does not reflect an improvement in Unit 2 performance. Additional time and effort by the new management team will be required before substantial improvement can be demonstrated.

MILLSTONE 2

Evaluation Factors	Response	Comments
Enforcement history has indicated an improving trend.	No	NRC inspections conducted in 1996 resulted in a large number of escalated enforcement items associated with configuration and design basis deficiencies. Recent enforcement items reflect that timeliness and effectiveness of corrective actions remains a concern.
Performance has improved as demonstrated by a lack of operational problems.	Unknown	Although recently there have been few operational problems, the operations staff has not been significantly challenged due to the current plant conditions and low level of plant activity.
Performance has improved as demonstrated by a lack of significant operator errors.	Unknown	Same as above.
Procedure adherence problems are not evident.	Yes	During the extended refueling outage (11/94-8/95) performance issues such as procedural adherence was a key area evaluated as part of the MC 0350 restart process. Performance improvements in this area that were made at that time, to a large extent, have been maintained.
Simulator is operational.	Yes	The simulator is operational.

MILLSTONE 2

Evaluation Factors	Response	Comments
Known (i.e., plant specific or industry generic) aging problems have been appropriately addressed.	Unknown	The extent of the aging problems have yet to be identified, with the 50.54(f) effort still in the discovery phase.
Licensee has improved its management organization.	Unknown	The previous NU senior management, in early 1996, adopted a "Power of Five" concept, which involved centralizing activities for the five NU plants to extent possible with the intent of improving efficiency. New NU senior management, hired in fall 1996, determined there was insufficient individual accountability for this approach to be effective. The new "unitized" approach utilizes a Virginia Power recovery team for Unit 2 who have been given a great deal of latitude regarding organizational structure and process changes. Although their recovery plans appear to be sound, this management team will be judged on demonstrated performance improvements which in general, are only beginning to show success.

Evaluation Factors	Response	Comments
Licensee procedures are considered adequate overall.	No	The Procedure Upgrade Program, which began in the early 1990's, has not yet been completed and the quality of the upgrade effort was often insufficient because many procedures were simply reformatted. Numerous examples of inadequate surveillance procedures have been identified. Although the focus has been on design discrepancies, there are a number of examples of systems being operated in a manner inconsistent with the FSAR. An evaluation of whether sufficient progress has been made regarding EOP upgrades and the acceptability of completing AOP upgrades after restart are considered startup issues.
Licensee has an effective root cause analysis program.	Yes	Recent inspection reports provide examples of quality root cause analyses performed by the licensee.
PRA has been performed.	Yes	The Unit 2 IPE has been completed and evaluated by the NRC.
PRA has been used.	Yes	While on line, the PRA was utilized to evaluate the collective risk of parallel maintenance activities to allow scheduler adjustments to minimize risk.

MILLSTONE 3

EVALUATION FACTORS FOR REMOVAL OF PLANTS FROM THE WATCH LIST

Evaluation Factors	Response	Comments
I. Root Cause Identified and Corrected		
Weak performance areas are thoroughly assessed.	Yes	The licensee has successfully identified the programmatic areas of weak performance at Unit 3 and has initiated corrective actions. Furthermore, an Engineering Programs initiative to conduct assessments of generic areas that have represented problems (e.g., MOV, HELB, Fire Protection) across the station has been recently instituted. Through problem identification and self-assessments, the licensee appears cognizant of the performance areas that require management attention.
Comprehensive and clearly defined corrective action program has developed.	Unknown	The corrective action program for the entire station was recently revised (February, 1997). The fundamental concepts on how adverse conditions are identified, reviewed, evaluated for root cause, corrected , and then evaluated for effectiveness have been established. However, the "discovery" phase for problem identification continues in full swing. While recent statistics indicate corrective action closure is keeping pace with identification, a backlog remains, which presents an unknown factor in the ultimate determination of corrective action effectiveness.

MILLSTONE 3

Evaluation Factors	Response	Comments
Corrective actions include sufficient measures to prevent recurrence of problems.	Unknown	This factor is dependent upon both the quality of the evaluation process and the completion of the specified corrective measures. While such data are tracked as performance indicators, the existing corrective action backlog, along with the number of condition report actions that are tied to mode changes or startup, does not yet provide evidence of a clear success path in this area.
Management has allocated sufficient resources to carry out long-range corrective action programs.	NO	Significant resources, primarily in the area of engineering, are still dedicated to problem "discovery" (vice long-range corrective action). Whether Unit 3 resources alone will be sufficient to address and resolve in a timely manner all the individual and programmatic concerns that have been identified is doubtful.
NRC is satisfied that corrective action program is sufficiently implemented.	NO	The Corrective Action program effectiveness has not yet been demonstrated. "Discovery" continues to identify repetitive problems, albeit most of a historical nature. The recent program revision is so new that transition questions and issues are still being resolved. While the NRC believes that the new program appears to being implemented in a more efficient manner, the results don't yet establish success.

Evaluation Factors	Response	Comments
Sustained, successful plant performance has been demonstrated.	NO	In the area of corrective action, performance indicators illustrate a backlog not yet fully addressed and no fully-developed evidence of corrective action effectiveness. The corrective action program has recently been revised and therefore, neither success, nor sustained performance can be fully demonstrated.
II. Improved Self-Assessment and Problem Resolution Evident		
Program that monitor and evaluate effectiveness of corrective actions have been instituted.	Yes	Corrective action tracking and performance indicator programs have been instituted to monitor effectiveness. While results, to date, project to an improving trend, the existing data remains inconclusive.
Safety issues are being identified to appropriate management level and corrected in a timely manner.	Unknown	A management review team concept has been established to ensure proper and appropriate management involvement in corrective action implementation. However,the trended data do not yet demonstrate consistent timeliness of corrective measures.

Evaluation Factors	Response	Comments
Quality assurance and safety oversight groups provide timely and effective self-assessments of performance to site and corporate management.	Unknown	The Nuclear Safety & Oversight organization has shown increased involvement in the timely audits and assessments of ongoing activities, including configuration management program (CMP) work, and has demonstrated additional institutional strength (e.g., use of its stop-work authority). Also, rotational assignments between the Unit 3 line organizations and NS&O have been initiated to increase the QA credibility and expertise. However, it is too soon to determine whether such initiatives have the expected positive impact upon performance.
III. Licensee Management Organization and Oversight Improved		
Corporate and plant management teams are fully committed to achieving improved performance.	Yes	The Carolina Power & Light (CP&L) team brought in to direct the recovery of Unit 3 provided an integrated and involved approach toward raising Unit 3 standards and expectations. This commitment has been demonstrated in the work ethic of the recovery team and has carried over to the transition of the Unit 3 recovery back to NU control.

Evaluation Factors	Response	Comments
Licensee has effective corporate management oversight and involvement in plant operations and problem resolution.	Unknown	While corporate management and NS&O involvement in daily plant shutdown activities, recovery plans, and programmatic problem resolution is evident, the effectiveness of such an approach at the Unit 3 worker level has had mixed impact, to date. Effectiveness is contingent on personnel error, backlog, and problem reductions; for which the performance indicator data has not yet shown sustained improvements.
Management team provides strong direction and fosters a nuclear safety work ethic that is understood at all levels in the organization.	Yes	While some examples of problems with the communication of expectations to the craft have arisen, overall a strong safety ethic is in evidence. This is especially true in Operations where shutdown risk controls, conservative decision making, and good contingency planning have been demonstrated. The existing NU/CP&L management team for Unit 3 recovery work has clearly provided strong direction down to the supervisory/working levels of the organization.
IV. NRC Assessment Complete		
Senior NRC management no longer considers the plant as having weaknesses that warrant increased NRC-wide attention.	NO	Several management changes and new program initiatives have occurred at Millstone throughout the past several years. Overall effectiveness and significant improvement have yet to be established. At Unit 3, the current direction is positive (e.g., backlog reduction); however, there is neither a track record, nor sufficient operational evidence that the current philosophy and programs will be more effective.

Evaluation Factors	Response	Comments
Significant NRC inspection and licensing activities are complete and findings properly resolved or understood.	NO	Of the 85 issues on the Unit 3 Significant Items List, less than 25% have been reviewed and closed. Several MC 0350 program areas require inspections; and the ICAVP has not yet commenced. In licensing, over twenty separate technical specification changes are required before Unit 3 restart. Although the number of significant licensee-identified design issues has trended down, configuration management discrepancies and design-basis questions are still being raised, as the "discovery" phase continues at the plant.
V. Additional Considerations		
Overall performance has improved as reflected in the most recent SALP ratings, performance indicators, or results from the Plant Performance Review.	NO	The SALP process is suspended at Millstone. For Unit 3, while an improving trend is perceived, the recent PPRs do not establish overall performance improvements as yet. All areas reviewed indicate mixed results, as the new initiatives (e.g., corrective action program changes, "fix-it-now" maintenance teams) have not established sufficient track records of success; and the licensee staff (operations, engineering) continues to be burdened by the impact of new findings from the configuration management program.

MILLSTONE 3

Evaluation Factors	Response	Comments
Enforcement history has indicated an improving trend.	Unknown	Before the shutdown, the enforcement history at Unit 3 was generally good, as operational performance was considered to be average to above-average. With the significant number of configuration and design-basis deficiencies identified during NRC follow-up inspections in 1996, routine and escalated enforcement rose accordingly. In the last six months, the licensee has issued 24 LERs, one-third of which represent recognition of technical specification violations. Although the licensee's routine daily activities appear to be well controlled, with the licensee's CMP efforts continuing and the ICAVP yet to be conducted, an overall enforcement trend is difficult to discern.
Performance has improved as demonstrated by a lack of operational problems.	Unknown	The number of operational problems in mode 5 conditions have been few. Shutdown risk controls and contingency planning for system outages have been good. However, the number of operational distractions created by the verbatim technical specification compliance questions and CMP findings have increased. Efforts to reduce operational burdens (e.g., bypass-jumpers) for the return to normal operation are progressing, but it is difficult to assess the impact of all the improvement efforts upon future sustained power operations.

Evaluation Factors	Response	Comments
Performance has improved as demonstrated by a lack of significant operator errors.	Unknown	Same as above comment. Operator errors during mode 5 evolutions have been few, but major plant evolutions, thus operational challenges, have been rare.
Performance adherence problems are not evident.	NO	Licensee condition reporting continues to identify procedural adherence issues, albeit mostly of minor significance. The expected improvements from previous procedure initiatives (e.g., the procedure upgrade program, PUP) have yet to be demonstrated. Given the number and magnitude of significant CMP deficiencies that have been identified (e.g., over twenty technical specification revisions required), it should not be surprising that "verbatim compliance" with procedures represents an issue requiring continued management attention.
Simulator is operational.	Yes	The Unit 3 simulator is operational and being utilized for testing of contingencies and planned operational evolutions (e.g., refill of the "C" reactor coolant loop).

Evaluation Factors	Response	Comments
Known (i.e., plant specific or industry generic) aging problems have been appropriately addressed.	Yes	While aging problems are not a major concern at Unit 3, licensed in 1985, the licensee has demonstrated appropriate consideration of industry operating experience and has been sensitive to improved material plant conditions, as well as equipment and replacement part concerns. There have been examples (e.g., cracked fuse ferrules, MEPL issues) where the Nuclear Safety & Oversight group has needed to emphasize the need to investigate the generic impact of problems; and in some cases, past failure to apply generic NRC guidance (GL 91-15, Target-Rock valves) has raised design problems. Overall, however, current licensee performance in this area has shown improvement.
Licensee has improved its management organization.	Yes	Over the past year, management at Millstone has transitioned from an existing Site VP led organization, to a "Power of Five" concept run by a transferred Seabrook team of executives, to a "unitized" approach with Unit 3 managed by a CP&L recovery organization, back to a NU VP led group supported by CP&L. The current safety ethic and approach to fixing programmatic problems are strong. However, it should be noted that each of the many past organizational management changes has appeared to be strongly directed, but it is effectiveness (currently not fully assessed) that is the final measure.

Evaluation Factors	Response	Comments
Licensee procedures are considered adequate overall.	Unknown	The effectiveness of the previous licensee PUP initiative has not been clearly evident. The CMP activities at Unit 3 have indicated a need for individual procedure revisions, as well as programmatic efforts (e.g., integration of vendor information into unit procedures). While existing procedures have not been deemed "inadequate" for control or safety purposes, enhancement has been a continuing process, with some technical perturbations arising out of the CMP work that also continues.
Licensee has an effective root cause analysis program.	Unknown	See corrective action factors evaluated under section I above. In general, the licensee's revised corrective action process (February, 1997) does not have a sufficient track record. While licensee efforts in corrective action over the last several months have emphasized proper and rigorous root cause analyses, the objective results of such efforts (e.g., the prevention of recurrent problems) are not available to determine success.
PRA has been performed.	Yes	The Millstone Unit 3 IPE has been submitted in Levels 1, 2, and 3 detail (including consideration of internal events). The NRC review has determined that the IPE submittal package was comparable to the industry average and that the Unit 3 IPE meets the intent of GL 88-20.

MILLSTONE 3

Evaluation Factors	Response	Comments
PRA has been used.	Unknown	The Licensee had planned to implement a risk-based maintenance schedule during the next cycle. Additional inspection is needed to determine the status of that plan.