MEMORANDUM TO: Chairman Meserve
Commissioner Dicus
Commissioner Diaz
Commissioner McGaffigan
Commissioner Merrifield

May 24, 2000

FROM: William D. Travers ***/RA/***
Executive Director for Operations

SUBJECT: MINUTES OF THE NRC SENIOR MANAGEMENT MEETING HELD MAY 10-11, 2000

The purpose of this memorandum is to provide to the Commission a summary of the discussions held at the May 10-11, 2000, NRC Senior Management Meeting (SMM). As the Commission is aware, NRC senior managers have met periodically to review the performance of operating nuclear power plants and materials facilities licensed by the NRC. Prior to 1999, the SMM was conducted twice each year. In SECY-99-086, "Recommendations Regarding the Senior Management Meeting Process and Ongoing Improvements to Existing Licensee Performance Assessment Processes," dated March 23, 1999, the staff recommended changes to the SMM and the Systematic Assessment of Licensee Performance (SALP). The Commission approved changes that included suspension of SALP, transitioning to the new Reactor Oversight Process (ROP) and implementation of an annual SMM cycle. The staff's detailed proposal to transition from the former assessment process into the ROP was provided in SECY-00-0049, "Results of the Revised Reactor Oversight Process Pilot Program," dated February 24, 2000. Specifically, Attachment 12 to SECY-00-0049 provided a transition plan that identifies the May 2000 meeting as the final SMM. In May 2001 and subsequent years, senior members of the staff will meet to discuss plant performance in the new ROP's Agency Action Review meeting. Following that review, the Commission will be briefed on the assessment results. The staff's proposals in SECY-00-0049 have not been approved by a Commission SRM. In an SRM dated March 29, 2000, the Commission did direct the staff to commence initial implementation of the ROP on April 2, 2000.

During the April 1999 SMM, plants were discussed to determine whether their performance warranted routine oversight, regional-focus, or agency-focus. The terms routine oversight, regional-focus, and agency-focus were developed during the April 1999 SMM. Routine oversight refers to oversight in accordance with the NRC's Inspection program prior to implementation of the ROP. Regional-focus refers to oversight that warrants the direct attention and/or involvement of the Regional Administrator and agency-focus refers to oversight that warrants the direct attention and/or involvement of the Executive Director for Operations and/or the Commission. These characterizations reflected the appropriate level of attention and involvement that the staff considered necessary to coordinate NRC resources and maintain

cognizance of licensee performance. During the May 2000 SMM, consistent with SECY-99-086 and Attachment 12 of SECY-00-0049, the use of the term regional-focus has been eliminated and only those plants warranting agency level attention have been identified. Included in this category of plants warranting agency-level action would be any ROP pilot plants that were forwarded to the Agency Action Review Meeting based on the ROP Action Matrix. For the May 2000 SMM, there were no pilot plants that fell into this category.

During the May 2000 SMM, the senior managers continued their efforts to use objective performance indicators and risk information. Additionally, continued emphasis was placed on obtaining and integrating the views of each senior manager and focusing on the information summaries (pro/con charts and evaluation matrices) to facilitate the discussions related to determining the appropriate level of agency attention.

Consistent with SECY-99-086 and SECY-00-0049, the attached performance discussions focus on those plants identified during the May 2000 SMM that warrant agency-level attention, as well as updating discussions on those plants that received special NRC attention as a result of the April 1999 SMM. The staff will utilize this information to outline its views on the status of these facilities during the Commission meeting scheduled for May 25, 2000. During that meeting, the staff intends to include each agency-focus plant's current status, the staff's planned response, and the rationale for future agency action.

As indicated earlier in this paper, after the May 2000 SMM and resultant Commission briefing, use of the SMM process will be discontinued. Assessment activities for all operating reactors will be conducted under the ROP as described in Inspection Manual Chapter (IMC) 0305, "Operating Reactor Assessment Program." With implementation of the ROP, the term agency-focus will no longer be used, and the level of regulatory oversight and agency actions will be as described in IMC 0305 and the ROP Action Matrix. D.C. Cook will continue to receive oversight in accordance with IMC 0350, "Staff Guidance for Restart Approval," until its ROP transition plan is effected.

In summary, the SMM was conducted to develop senior management consensus on the appropriate regulatory approach for those plants whose safety performance warrants application of agency-level resources and ensure that coordinated courses of action are developed and implemented. The recommendations from this meeting reflect the emphasis that the NRC places on the staff's current assessment of plant safety performance as opposed to licensee plans and projections.

On May 23, 2000, the staff took the following actions. These actions were timed to give licensee management an opportunity to attend the May 25, 2000, Commission Meeting.

- The Regional Administrators (RAs) placed a telephone call to the licensee of each plant designated as an agency-focus facility. In addition, Regional Administrators placed a call to the licensee of each plant that received NRC action as a result of the April 1999 SMM. The RAs informed those licensees of the staff's assessment of their plants, and the basis for the conclusions made by the NRC senior managers; and

- The staff transmitted (by facsimile) letters documenting the results of the SMM and acknowledging the transition in plant characterization to the Chief Executive Officer for the aforementioned plants.

Attachment 2 is a summary of the May 2000 SMM. Copies of the evaluation matrices are provided in Attachment 3 and a list of attendees is provided in Attachment 4.

Please note that the information contained with this memorandum is PREDECISIONAL and will be first discussed publicly at the May 25, 2000, Commission Meeting. Following the meeting, letters to licensees will be placed in the Public Document Room.

Attachments:
1. Senior Management Meeting Related Letters to Licensees
2. Senior Management Meeting Summary
3. Senior Management Meeting Pro/Con Chart and Evaluation Matrices
4. List of Attendees

cc:w/attachments
SECY
OGC
OCA
OPA
CFO
CIO
OIG

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PREDECISIONAL INFORMATION

ATTACHMENT 1

Senior Management Meeting Related Letters to Licensees

Licensee	Adams Accession Number
Millstone 2	ML003717539
Millstone 3	ML003717523
Clinton	ML003717512
Indian Point 2	ML003717529
DC Cook	ML003717489

ATTACHMENT 2

NRC Senior Management Meeting Summary
May 10-11, 2000
Region I

PREDECISIONAL INFORMATION

Background

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-seventh such meeting in Region I on May 10-11, 2000. The previous meeting was held in Region IV on April 20-21, 1999. This most recent meeting was structured to review the status of the agency or regional-focus plants identified at the last meeting and to review the performance of other plants to determine those facilities warranting agency-focus monitoring by the NRC.

In preparation for the meeting, the Office of Nuclear Reactor Regulation; in conjunction with the Offices of Enforcement, Investigations, Research, and the four regional offices; prepared background documents on the plants to be discussed. Inputs for each operating reactor plant included a summary of the most recent Plant Performance Review, a discussion of current operating experience and licensee performance, current NRC and licensee activities, performance indicator data, risk insights, and enforcement, allegation, and investigation information. In addition, the Reactor Oversight Process (ROP) pilot plants were assessed under the new program, culminating in the Agency Action Review Meeting.

During the SMM, the senior managers continued their efforts to use objective performance indicators and risk information. Additionally, continued emphasis was placed on obtaining and integrating the views of each senior manager and focusing on the information summaries (pro/con charts and evaluation matrices) to facilitate the discussions related to determining the appropriate level of agency attention. 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 and issues of greatest concern.

In reviewing the reactor plants that potentially warrant or are currently receiving agency-level attention, the NRC managers utilized the following definition.

Agency-Focus. Plants requiring the direct attention and/or involvement by the EDO and/or Commission to coordinate NRC resources and maintain cognizance of licensee performance (e.g., issuance of an order, enactment of agency-level oversight or inspection).

Recommendations were made during the May 2000 SMM to enable the agency to focus on plants and issues of greatest concern.

Summary of Decisions

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	Agency-Focus[1]		Routine Oversight
MAY 10-11, 2000	DC Cook[2] Indian Point 2		Millstone 2 Millstone 3 Clinton
Meeting Dates	**Agency-Focus**	**Regional-Focus**	**Routine Oversight**
APRIL 20-21, 1999	Millstone 2 D.C. Cook	Millstone 3 Clinton	Crystal River 3 Salem 1&2 LaSalle 1&2 Dresden 2&3 Quad Cities 1&2

MATERIAL LICENSEES

Meeting Dates	Facilities for Priority Attention
MAY 10-11, 2000	None
APRIL 20-21, 1999	None

(1) After the May 2000 SMM and resultant Commission briefing, use of the existing SMM process will be discontinued. Assessment activities for all operating reactors will be conducted under the ROP as described in Inspection Manual Chapter (IMC) 0305, “Operating Reactor Assessment Program.” With implementation of the ROP, the terms agency-focus will no longer be used, and the level of regulatory oversight and agency actions will be as prescribed by the ROP Action Matrix.

(2) As of the time of the May 2000 SMM, DC Cook was not ready for approval of restart and was being assessed using IMC 0350, “Staff Guidance for Restart Approval,” .

SPECIFIC DISCUSSION OF FACILITIES

1. The following facilities have been categorized as Routine Oversight (i.e., Plants regulated under the auspices of Inspection Manual Chapter 2515 inspection program).

MILLSTONE 2

Background Discussion:

Since 1991, the Millstone Units have been discussed at every SMM except June 1993. In the June 1995 SMM, only Unit 2 was discussed. At the June 1996 SMM, Unit 2 and the other two Millstone units were identified as Category 3 watch list plants. After extensive action by the licensee and oversight by NRC, including implementation of a Independent Corrective Action Verification Program, Unit 2 restart was authorized and the status of the Unit 2 was changed from Category 3 to Agency-Focus in April 1999. The unit was restarted in May 1999.

While many equipment problems were identified and corrected during the extended outage, some longstanding and recurrent issues continue to challenge operators. In several instances engineering resolutions of these equipment problems were not fully effective. This resulted in degraded or inoperable safety equipment and caused two transients that led to manual reactor trips. In some cases, the licensee has had to refocus engineering resources on resolving recurring problems with aging electronic equipment such as the reactor protection system and rod control system. The plant staff has placed appropriate focus on the continuing challenge that the large maintenance, engineering, and corrective action backlogs represent to reduce the number of equipment problems.

Cumbersome work control, planning and corrective action processes have complicated backlog reduction efforts, but steps have been taken to improve efficiency. Nevertheless, large engineering and corrective action backlogs for Unit 2 and the competition for resources between emerging work and existing item closeout activities present a continuing challenge to the licensee.

Overall, the corrective action process has been adequately implemented and continues to be a low-threshold and a high volume system. However, the NRC identified several examples where the licensee failed to initiate condition reports for safety equipment that was degraded. Notwithstanding, the problem with condition report initiation was not pervasive.

A generally healthy safety conscious work environment existed at Millstone. Both Little Harbor Consultants and the NRC noted improvement during the assessment period. The licensee had appropriate programs and processes established to address employee concerns and to monitor and evaluate the safety conscious work environment. Although some deficiencies were found, they did not detract from the overall effectiveness of the programs and processes. Site employees were familiar with programs and processes for handling concerns, and they were willing to raise nuclear safety concerns. Challenges to a safety conscious work environment remained due to planned reductions in contractor and licensee management positions, and consideration of a revised pay structure.

In the radiation safety, safeguards, and emergency preparedness areas, the programs were effectively implemented.

SMM Discussion:

Millstone 2 was determined to warrant oversight as an agency-focus plant following the last SMM.

The senior managers considered an evaluation matrix that analyzes current licensee performance in determining the appropriate agency response to the identified performance concerns. All evaluation factors were considered to have been met. The senior managers noted that the licensee had taken corrective actions and demonstrated improved performance such that on April 29, 1999, the NRC authorized the restart of the facility. NRC inspections performed since the startup in May 1999, have found that the performance improvements that were implemented during the three-year extended shutdown have been sustained. On a few occasions, the staff determined that condition reports were not initiated for degraded safety systems and resolution of equipment problems were not effective. However, these concerns were not found to be pervasive and do not appear to be indicative of a reversal in performance since restart. While emergent equipment problems have resulted in three plant trips and a plant shutdown, Millstone 2 has had several periods of continuous operation since the startup. Operators responded well to emergent equipment problems and displayed a conservative approach to plant operations.

Since May 1999, the licensee has responded to several challenges to its safety conscious work environment and employee concerns programs. The licensee faces several, significant, near term challenges relating to its transition to a competitive business environment and the sale of the unit. Such activities will be particularly challenging at Millstone as the licensee is still in transition from the very large recovery project and an organizational structure that was established during the extended shutdowns. This transition includes: reducing the number of staff and management positions; completing work associated with the backlog of corrective action issues emerging from the extended shutdown; addressing a number of equipment aging issues that were deferred during the shutdown; and installing modifications needed to separate Unit 1 from the operating units. Notwithstanding these challenges, the licensee has been successful in managing transition since the last SMM.

Although some areas for improvement remained, the senior managers concluded that the licensee had taken effective action to correct identified problems at Millstone 2 and to implement programs for improved performance. As a result, assessment activities for Millstone 2 will be conducted using the NRC Reactor Oversight Process (ROP) as described in Inspection Manual Chapter (IMC) 0305, “Operating Reactor Assessment Program.”

MILLSTONE 3

Background Discussion:

Since 1991, the Millstone units have been discussed at every SMM except June 1993. In the June 1995 SMM, only Unit 2 was discussed. At the June 1996 SMM, Unit 3 and the other two

Millstone units were identified as Category 3 watch list plants. After extensive action by the licensee and oversight by NRC, including implementation of a Independent Corrective Action Verification Program, Unit 3 restart was authorized in June 1998 and the status of Unit 3 was changed from Category 3 to Category 2 following the July 1998 SMM. At the April 1999 SMM, the status of Unit 3 was changed from Category 2 to Regional-Focus.

The licensee performance at Unit 3 during this period has been good, with few operational challenges, and deliberate actions and conservative decision-making by operators where required in response to equipment problems and adverse weather conditions. The number of unplanned LCO entries was a low and manageable number, with conservative interpretation of surveillance or design criteria the typical cause for the LCO, rather than failed or unavailable equipment.

While some configuration management and shutdown risk assessment problems were identified during the 1999 refueling outage, the consequences were minor and the identification of these concerns provided the licensee the opportunity for strengthening certain process controls, such as tagging and system restoration, upon the return to power operations. Cumbersome work control, planning and corrective action processes have complicated backlog reduction efforts, but steps have been taken to improve efficiency. Overall, maintenance activities were appropriately implemented.

The corrective action program and engineering controls demonstrated improvements from the previous cycle. However, recurrent design control problems with the recirculation spray system (RSS) cubicle sump pumps raised questions regarding both the effectiveness of the licensee corrective actions and the adequacy of the design controls relating to previous modifications. Resident inspections have identified some examples of inadequate interdepartmental coordination, which led to design interface problems. Otherwise, team inspections of both the corrective action and engineering programs found effective controls for identifying, resolving, and preventing equipment problems and personnel performance issues, and good engineering support of Unit 3 operations and maintenance.

A generally healthy safety conscious work environment existed at Millstone. Both Little Harbor Consultants and the NRC noted improvement during the assessment period. The licensee had appropriate programs and processes established to address employee concerns and to monitor and evaluate the safety conscious work environment. Although some deficiencies were found, they did not detract from the overall effectiveness of the programs and processes. Site employees were familiar with programs and processes for handling concerns, and they were willing to raise nuclear safety concerns. Challenges to a safety conscious work environment remained due to planned reductions in contractor and licensee management positions, and consideration of a revised pay structure.

In the radiation safety, safeguards, and emergency preparedness areas, the programs were effectively implemented.

SMM Discussion:

Millstone 3 was determined to warrant oversight as a regional-focus plant following the last SMM.

The senior managers considered an evaluation matrix that analyzes current license performance in determining the appropriate agency response to the identified performance concerns. All evaluation factors were considered to have been met. The senior managers noted that since the beginning of 1999, and in contrast to the many plant trips and power reductions over the last half of 1998, Millstone 3 sustained power operations with the exception of a planned refueling outage. Licensee management's emphasis on an operational focus has been successful in reducing the number of challenges to operations, including unplanned entries into technical specification limiting condition for operation. Routine and planned work activities are being performed acceptably without an excessive diversion of resources to unexpected, emergent problems.

Since the previous SMM, Millstone 3 has reduced the number of operational challenges, and the licensee has responded well to the few weather and equipment problems. The renewed operational focus has provided direction to the unit staff to maintain safe and reliable operations, while reducing backlogs and responding to emerging work. Performance improvements in the areas of the licensee's safety conscious work environment and employee concerns programs have been demonstrated. Millstone 3 faces several challenges relating to the transition to a competitive business environment and the sale of the units. Notwithstanding these challenges, the licensee has been successful in managing transition over the past year.

Although some areas for improvement remained, the senior managers concluded that the licensee had taken effective action to correct their identified problems at Millstone 3 and to implement programs for improved performance. As a result, assessment activities for Millstone 3 will be conducted using the NRC ROP as described in IMC 0305.

CLINTON

Background Information:

Clinton Power Station (CPS) was first discussed during the January 1997 Senior Management Meeting (SMM) due to an overall decline in licensee performance during 1996, including a September 1996 event associated with a reactor recirculation pump seal failure which revealed significant deficiencies in the areas of procedural adequacy and adherence, conduct of operations, and engineering support to operations. Based on the results of the January 1997 SMM, the licensee received a trending letter.

At the June 1997 SMM, NRC senior mangers were concerned that the licensee had not taken steps to develop a comprehensive response to the January 1997 trending letter. Some short term corrective actions had been developed; however, it was not clear to the senior managers that the licencee had a full understanding of the depth and scope of the performance issues at CPS. The senior managers considered conducting a Diagnostic Evaluation Team Inspection, but instead decided that a more appropriate approach would be to permit the licensee to perform its own Integrated Safety Assessment (ISA). The licensee conducted an ISA from August through October 1997, to review its performance. The staff reviewed the effectiveness of the ISA with a Special Evaluation Team, which confirmed the ISA's findings of significant weaknesses in the areas of operations, engineering, maintenance, and plant support.

During the January 1998 SMM, NRC senior managers were concerned with the lack of progress by the licensee in developing a comprehensive plan to address the previously identified performance deficiencies. Accordingly, following that SMM, CPS was placed on the NRC Watch List as a Category 2 plant. Also in January 1998, PECo Energy Company was selected by Illinois Power to provide management services for CPS for a three-year period.

While some improvement from January 1998 to June 1998 was noted, licensee performance remained inconsistent and processes for improvements were not yet self-sustaining. The licensee struggled with managing the large backlog of condition reports and many problems remained unresolved. A new work control process was implemented, but was not yet effective in ensuring proper prioritization and accomplishment of work. Performance improvement initiatives addressing these and other areas were contained in the licensee's Plan-for-Excellence (PFE). However, the PFE was not yet fully implemented.

During the July 1998 SMM, it was noted that while management oversight at the facility had improved and a new comprehensive recovery plan and corrective action program had been developed, equipment condition and human performance problems continued to surface since the last SMM, indicating that these initiatives were still in the early stages of implementation. The NRC senior managers determined that there was a continued need for high level NRC attention at this site and that CPS would remain a Watch List Category 2 facility. From the July 1998 SMM until the SMM in April 1999, CPS remained shutdown. Steady progress was made to address restart items; however, some were not resolved because of insufficient implementation of the licensee's corrective action plans. As a result, additional NRC follow-up inspection activities were conducted.

As a result of the April 1999 SMM and the revised SMM process, CPS was identified as a regional-focus plant. The licensee had continued to make progress implementing its Plan-for-Excellence and preparing for restart. Improved performance was noted in the areas of radiological protection and quality of maintenance activities. Restart Panel activities under the NRC Manual Chapter 0350, "Staff Guidelines for Restart Activities," process, focused on the areas of operations, corrective actions, and resolution of design problems. While the licensee, through its initiatives, was successful in resolving longstanding problems in several areas, continued problems were observed with the corrective action program and in the operations area. As a result of restart inspection activities, the NRC identified recurring deficiencies with operator performance that required remediation and mentoring by contractor personnel in the control room. Similarly, through inspection of the corrective action program, the NRC identified recurring deficiencies with the resolution of problems. These recurring problems delayed completion of the NRC restart inspections pending licensee enhancements to improve performance. NRC senior managers concluded that although licensee performance appeared adequate to warrant restart, NRC monitoring and inspection should continue to assure that long-term licensee performance remained acceptable after restart. Based on this concern, the senior managers concluded that there was a continued need for regional level oversight at CPS.

Restart preparations were completed in early May 1999 and full power was reached on June 2. The plant has operated well since the restart with only a few minor challenges to operators. A smooth transition occurred as ownership of the station was transferred from Illinois Power Company to AmerGen in December 1999. The performance improvements achieved through

implementation of the actions specified in the licensee's PFE have been sustained and the licensee's corrective action program has been effective in ensuring that previously identified performance weaknesses did not develop into significant programmatic concerns. While trending as an integral part of the corrective action program has only recently been fully implemented, and certain other corrective action program elements have progressed slowly, overall, licensee performance continues to improve indicating that the corrective action program is sufficiently implemented. The PFE was subsumed in a 5-year strategic plan which was developed and implemented by AmerGen as it took over station ownership and resources have been allocated to implement the strategic plan. Licensee performance is closely monitored by the new management organization, and an overall improving performance trend exists.

SMM Discussion:

Clinton was determined to warrant oversight as a regional-focus plant following the last SMM.

The senior managers considered an evaluation matrix that analyzes current license performance in determining the appropriate agency response to the identified performance concerns. All evaluation factors were considered to have been met. The senior managers noted that Clinton had demonstrated sustained, successful plant performance since it was restarted in May 1999 and reached full power on June 2. The unit has operated continuously since then, with only two brief, non-routine power reductions to address equipment issues. No significant plant transients have occurred since plant restart. The transition from ownership by Illinois Power Company to AmerGen in December 1999, occurred without problems.

The senior managers noted that Clinton management has demonstrated its commitment to improve licensee performance through (1) the development of a strategic plan to sustain and improve licensee performance in key areas, and (2) the allocation of sufficient resources for the strategic plan to be implemented as part of the business plan. NRC inspections verified the licensee's corrective action program had been effective in ensuring that previously identified performance weaknesses did not develop into significant programmatic concerns. However, some process weaknesses continued to exist in operations and selected aspects of the corrective action program. The senior managers recognized that initiatives to improve these areas have been included in the licensee's strategic plan.

The senior managers determined that assessment activities for Clinton will be conducted using the NRC ROP as described in IMC 0305.

2. The following facilities have been categorized as Agency-Focus (e.g., Plants requiring direct attention and/or involvement by the EDO and/or Commission).

INDIAN POINT 2

Background Information:

Indian Point 2 was discussed at SMMs between June 1997 and July 1998. At the July 1998 meeting, the senior managers determined that considerations for maintaining agency attention

and giving the licensee a period of time to execute its performance improvement initiatives outweighed those for increasing agency attention and that no agency level action was required. The plant was not discussed at the April 1999 SMM.

During the last several months, Indian Point Unit 2 (IP2) operated at power for periods of time but was impacted by two significant events, each of which led to an extended outage. The first significant event involved an August 1999 automatic reactor shutdown that was complicated by an electrical transient that adversely affected important safety-related equipment and control room annunciators. The electrical transient was caused and aggravated by plant equipment deficiencies and configuration control problems. This resulted in a six-week-long plant shutdown during which Consolidated Edison (ConEd) management developed and implemented an IP2 Recovery Plan to guide not only their assessment of the event, but also the development of short and long term corrective actions. An NRC Augmented Inspection Team (AIT) performed the initial fact-finding review of the event, while a subsequent follow-up team assessed short-term corrective actions.

In February 2000, a second significant event occurred. A steam generator tube failed which resulted in declaration of an Alert. This event occurred after the end of the plant performance review (PPR) assessment period and was not evaluated as a part of the PPR sent to the licensee. However, since then, the findings have been presented in the final AIT report, dated April 28, 2000. The plant remains shut down pending completion of steam generator inspections as well as other corrective actions. Also, based on the steam generator inspection results thus far, the licensee must obtain NRC approval of restart as required by facility Technical Specifications.

Overall, events and related findings during the assessment period represented issues that were of substantial safety significance. While the August 1999 event challenged safe operation, safety margins were maintained at an acceptable level. The event was risk significant and revealed general weaknesses in communications and coordination, configuration management/control, engineering support, and the corrective action program. An AIT identified these performance issues while a follow-up inspection team verified that reasonable short term actions had been taken to address the event and its causes. Also, ConEd management developed an IP2 Recovery Plan that contained improvement plans to address the general and specific weaknesses that were revealed during the August 1999 reactor trip. Although short term actions were completed prior to restart, long term improvement efforts were slated to continue throughout the year 2000.

The significant performance issues in the reactor safety strategic performance area included weaknesses in configuration management/control, communications and coordination, engineering support, and the corrective action program. These weaknesses were evidenced for example, by equipment problems and delayed mitigative actions associated with the August 1999 event. Configuration management/control problems were evident with the improper settings of the station auxiliary transformer tap changer and a emergency diesel generator over-current device which led to the unnecessary lockout of offsite power supplies and the complete loss of power to some safety equipment during the event. In other instances, communications and coordination problems hampered the functioning of the work control process in resolving equipment degradations in a timely manner which resulted in plant backlogs continuing at high levels.

An example of weak engineering support was that prior spurious trips of the Over Temperature/Delta Temperature channel that caused the August trip had not been sufficiently analyzed. In addition, engineering did not provide adequate controls for degraded voltage relay reset values or the sequencer timing for vital bus loading on a blackout signal which contributed to the complexity of the event.

Repeat problems in the area of emergency preparedness (EP) were identified during the August event and a subsequent exercise. These problems had also been observed during previous inspections and exercises. These observations reflected continued difficulty with implementation of the corrective action program. These EP problems were of a sufficient magnitude to cause a drill and exercise performance indicator (PI) to cross a threshold requiring additional NRC inspection based on fourth quarter 1999 data. No significant performance issues were identified in the radiation safety or safeguards strategic areas.

In the reactor safety strategic performance area, The PPR letter outlined a plan to perform baseline inspections and to perform supplemental or initiative inspections of (1) plant modifications and engineering support, (2) backlog reduction efforts, (3) long-term improvements in response to the August 1999 event, (4) corrective action program self-assessment activities and (5) emergency preparedness.

The PPR letter also indicated that these plans would be revisited, and likely expanded, at the completion of the AIT review of the steam generator tube failure. The AIT report, issued April 28, 2000, concluded that initial licensee response to the event was prompt and appropriate; however, several equipment deficiencies, procedural problems, and a few operator performance lapses caused delays in plant cooldown; and, several emergency response performance issues were identified. An ongoing safety review by NRR (with input from RES) involves steam generator issues at IP2 and could lead to additional changes to NRC inspection plans.

The licensee has been attempting, for several years, to improve their performance and has been receiving close Regional attention and numerous significant enforcement issues. In 1997-98, the licensee completed an extended outage for equipment repairs and improvements; in early 1998, they also obtained an Independent Safety Assessment from industry peers and developed an improvement plan. From late 1998 to the August 1999 event, the plant was on-line for an extended time; however, during that time, NRC inspection findings continued to illustrate corrective action program performance problems, work control problems, and lapses in engineering support. During this same time frame, there was also some buildup of equipment deficiencies and some loss of licensee focus on their improvement plan. At the time of the August event, some of the licensee senior managers were relatively new hires to the utility.

From September through November 1999, the licensee developed and revised their IP2 Recovery Plan. This plan was created to address the longstanding issues that the August 1999 event revealed and continue station improvement efforts. The most recent revision described, in some detail, improvement initiatives in twelve focus areas. ConEd management transitioned the improvement efforts from the recovery plan into an integrated business plan in December 1999. Senior site management has promoted high standards and there have been performance improvements at the station. However, ConEd still has substantial room for improvement in the areas of corrective action, backlog reduction, engineering support, and

plant material condition. The NRC expects to continue to review how recovery plan commitments will be monitored and what changes, if any, to program scope and priorities will be made as ConEd makes this transition and responds to the recent steam generator tube failure.

SMM Discussion:

Indian Point 2 was not discussed at the previous SMM.

The senior managers discussed recent plant performance including two risk significant events: an August 1999 reactor trip with electrical system complications and a February 2000 steam generator tube failure. In both of these events, the senior managers noted concerns that illustrate a number of longstanding performance issues. Senior managers determined that these events revealed several interrelated problems: (1) communication and coordination weaknesses among various site organizations; (2) engineering support shortcomings that led to narrowly focused assessment of plant problems; (3) configuration management/control problems; (4) equipment reliability problems and large corrective action backlogs; and (5) operator knowledge, station training, and procedural weaknesses. The senior managers further were concerned with recurrent emergency preparedness weaknesses that have hampered performance during exercises and during the August 1999 and February 2000 events.

The senior managers concluded that the broad performance issues that have existed at Indian Point 2 for the past several years have revealed a number of deficiencies in licensee corrective action program efforts. Utility improvement initiatives have yielded some progress but, overall, have been limited in remedying the underlying problems.

Senior managers noted the current Chief Nuclear Officer has set high standards, has brought a more self-critical approach to the station, and has directed development of new improvement plans. However, achieving fundamental improvements including corrective action program efforts, and dealing with legacy issues, will require consistent corporate support to the station. Based on these concerns, the senior managers concluded that Indian Point 2 warrants oversight as an agency-focus plant.

DC COOK 1 & 2

Background Information:

D.C. Cook was first discussed at the July 1998 SMM. A significant decline in licensee performance in the area of engineering had been identified during an NRC Architect Engineering (A/E) team inspection conducted in the Fall 1997. Further review concluded that the licensee had operated both units outside the design basis on multiple occasions and that several safety systems were inoperable, including the refueling water storage tank, residual heat removal system, and portions of the service water, instrument air and component cooling water systems. The NRC identified that the installation of fibrous material inside the containment and the potential blockage of ventilation holes in the containment recirculation sump which could have rendered the emergency core cooling system inoperable, also exemplified engineering program deficiencies in design changes and licensing basis reviews.

The licensee shutdown both units in September 1997 to address these and other related concerns.

During the July 1998 SMM, senior managers primarily focused on the risk significance of the engineering and design issues identified at D.C. Cook. The senior managers also noted that the performance indicators and Licensee Event Report data revealed a declining performance trend in the first quarter of 1998 and acknowledged that there had been a slow decline in the observed performance at D.C. Cook for some time and that, combined with the risk-significant engineering issues at the site, there was a need to communicate this decline to the licensee. Thus, the senior managers agreed that a trending letter was appropriate to convey the agency's concerns with D.C. Cook's performance. In conjunction with the trending letter, a Commission meeting was held on November 30, 1998, with the NRC staff and licensee corporate management.

Initially, the licensee made limited progress towards resolving the performance problems that resulted in the decision to maintain both units shutdown. Late in 1998, the licensee realized that previous improvement initiatives were not achieving the desired goals. Following that realization, the licensee began aggressively evaluating its processes and programs to define the breadth and depth of the problem areas. A new licensee management team was established. Reviews were performed in the areas of the corrective action process and engineering assessments, and although both of these reviews identified further problems, they were considered examples of insightful self-assessments performed by third party teams chartered by the licensee. As a result of these and other self-assessment findings, important licensee programmatic activities such as engineering support, maintenance planning, and root cause evaluations were suspended in the Spring of 1999, while management planned to revise those programs and processes and retrain the individuals responsible for those functions. The licensee had planned to restart Unit 1 in March 1999, but canceled the restart and refocused their engineering program to establish an Expanded System Readiness Review Assessment of safety systems.

During the April 1999 SMM, the senior managers acknowledged that the Expanded System Readiness Review Assessments appeared to be thorough; however, concluded that validation of these assessments would be necessary. In addition, the licensee had not demonstrated an ability to resolve the issues that continued to be identified, especially those issues involving the design bases. However, the senior managers emphasized that currently the licensee appeared to be appropriately responding to these significant issues. The licensee utilized extensive external expertise and contractor support to identify long-standing design problems, instituted program changes to prevent recurrence, and delayed restart until an integrated solution was developed to resolve the identified issues.

In determining what further NRC oversight should be provided, the senior managers also considered current NRC activities and expected actions that would be needed to fully assess and support the restart of D.C. Cook. The NRC Inspection Manual Chapter (IMC) 0350 Restart Panel, directed from Region III, was considered to be providing adequate oversight during the Expanded System Readiness Review. Since the licensee was still in the problem discovery phase of their restart plan, the senior managers concluded that continued agency-level oversight was appropriate; however, no additional action was required by the NRC at that time to redirect licensee activities.

Since the April 1999 SMM, the licensee has made significant progress in resolving programmatic and technical issues that contributed to the plant shutdown. The NRC has conducted extensive inspections of licensee corrective actions to resolve restart related issues and confirmed that problems are being corrected. This was evidenced by the closure of the Confirmatory Action Letter in February 2000 and by closure of over half of the NRC IMC 0350 Case Specific Checklist items.

Currently, Unit 2 activities remaining before restart include the completion of restart related modifications, procedure revisions, and the closure of a large backlog of restart related corrective actions (approximately 10,000 items). Based on recent observations of testing activities, the licensee's approach to restart has generally been characterized by a methodical approach with emphasis on quality and safety.

Earlier in 1999, the licensee completed expanded system readiness reviews, programmatic assessments and functional area reviews. The licensee identified numerous deficiencies, some of which required repairs, system modifications, or license amendments to resolve. The NRC IMC 0350 Restart Panel focused several inspections on the licensee's problem discovery efforts and assessing the adequacy of their oversight activities. Region III also conducted a safety system functional inspection of two safety-related systems to independently validate the effectiveness of the licensee's problem discovery activities.

These inspections found the Expanded System Readiness Reviews to be effective in identifying deficiencies impacting system safety functions; confirmed that the licensee had conducted sufficiently self-critical reviews of its programs and functional areas; and that the Performance Assessment organization provided critical oversight of plant activities. Following this validation of the discovery efforts, the NRC IMC 0350 Case Specific Checklist was expanded to capture necessary licensee corrective actions to support a safe plant restart.

Throughout the past six months, inspections have been conducted to review the effectiveness of the licensee's efforts to correct the deficiencies identified through their problem discovery efforts. The inspections have confirmed progress in resolving many of the restart issues, and restart approval will follow the existing NRC IMC 0350 process. The IMC 0350 Panel will continue to evaluate Unit 2 performance following restart to ensure that improved performance is sustained, provide oversight for Unit 1 restart after the steam generator replacement, and support transition of D. C. Cook to the new oversight program.

Implementation of the Risk Informed Baseline Inspection Program and the revised assessment process will be delayed until restart of Unit 2 to minimize impact on the licensee during restart.

SMM Discussion:

D.C. Cook was an Agency-Focus facility following the last SMM.

The senior managers considered an evaluation matrix that analyzes current license performance in determining the appropriate agency response to the identified performance concerns. The licensee has made significant progress and has resolved the majority of the technical issues related to the plant shutdown as reflected in the closure of the Confirmatory Action Letter and progress toward completion of the IMC 0350, "Staff Guidance for Restart

Approval," Case Specific Checklist. Also, the licensee has made improvements to programs and processes such as the corrective action program and the design control process. NRC staff has confirmed that the licensee's corrective action processes are sufficient to identify and resolve conditions adverse to quality. However, all corrective actions necessary to address deficiencies requiring resolution prior to restart have not been completed and safe plant operation has not been demonstrated.

The staff will continue to monitor and inspect licensee performance through the NRC IMC 0350 Restart Panel. The senior managers determined that D. C. Cook continues to warrant oversight as an agency-focus plant. The staff will also ensure the Commission remains informed of licensee recovery efforts.

Additional Topics Discussed:

1. EDO's Opening Comments

The EDO welcomed the senior managers in attendance and noted that since the last SMM, the staff has worked during a time of unparalleled number of changes in both the industry and the NRC. There have been numerous accomplishments that have laid the foundation for ongoing initiatives. Although there have been a number of successes, there remain many challenges including the communication of agency decisions and the reasons behind those decisions to the staff. Staff questioning is both a strength and a challenge, and senior managers should assure that staff is included in the decision making process. The EDO welcomed the Chairman, noting that this was the last SMM. The EDO expressed the staff's appreciation for the Chairman's leadership and guidance during his first months in office.

2. Chairman Meserve's Remarks

Chairman Meserve noted a number of the agency's recent accomplishments including managing the large volume of changes, license renewals, license transfers, risk informing regulations, maximizing the use of information systems, strategic planning and budgeting, and managing the appropriate staff skills. The Chairman noted that the challenge before us is to finish the initiatives that we are working on and to be mindful of the message that we send to both our internal and external stakeholders. The Chairman concluded that this agency has talented, knowledgeable, and dedicated staff that work hard to protect public health and safety.

3. United States Enrichment Corporation

The two gaseous diffusion plants (GDPs) operated by the United States Enrichment Corporation (USEC) were placed on the agenda for general informational discussion by the senior managers.

Discussions included a February 2000 NRC initiated review of USEC's financial condition because the basis for NRC's previous determinations had changed when Standard & Poor's (S&P) downgraded USEC's corporate credit rating to below investment grade. Under a provision in USEC's agreement with the Treasury Department, USEC is required to continue operations at both of its plants until January 1, 2005, unless any one of six "significant events"

occur. One of those "significant events" is a drop in USEC's corporate rating to below investment-grade.

The discussions also included a February announcement on USEC's plan to lay-off a total of 850 [subsequently reduced to 625] individuals. Currently, USEC's staffing levels at Paducah and Portsmouth are about 1,650 and 1,900 employees, respectively. USEC met with the NRC in Region III on April 11, 2000, to discuss its plans to assure continued safe operation of the GDPs during the transition period. The NRC has developed a plan to enhance GDP oversight over the next several months while USEC implements the lay-offs.

The possibility of closure of one of the enrichment plants, announcement of staff reductions, and the resultant economic impact on the local community triggered Congressional interest from Ohio and Kentucky Senators and local Congressmen. On March 2, 2000, NRC staff briefed Congressional members and staff on NRC's plans to initiate a financial review of USEC and to ensure that planned layoffs would not adversely affect safety or safeguards at the enrichment plants. On April 13, 2000, the NRC testified before the Subcommittee on Oversight and Investigations, House Committee on Commerce, regarding the financial review of USEC.

The senior managers discussed challenges that have developed since the NRC became oversight regulator in March 1997. Included are a number of "legacy" issues requiring substantial resources to evaluate and/or disposition. For example, a special team inspection was conducted in the fall of 1999 to verify site dose was being accurately accounted for under the current health physics program. Additionally, USEC required access to a number of DOE material storage areas (DMSAs) in order to complete required seismic modification work. Significant involvement by the NRC was necessary to reach agreement on how and when the DMSAs were to be turned over to USEC for characterization.

Ongoing licensing issues include discussions on possible use of advanced technology for enrichment, a recent denial of an amendment request regarding removal of specific items from Paducah's technical safety requirements, and disagreement with USEC on their interpretation of ANSI standard definitions for criticality safety controls, i.e. use of "unlikely event."

4. Other Topics of Discussion

Overview of SMM Process Revisions and Format
Plant Discussions
Restructuring / Economic Deregulation of the Industry
Enforcement Trends/Issues
Adams Implementation
Materials License Renewal Issues
Revision of the Fuel Cycle Facility Oversight Program
Medical Inspection Streamlining
Discussion of Threshold for SMM Action
Identify Facilities Warranting Agency Focus
Post-SMM Milestones and Commission Briefing 2000
Agency Action Review Meeting - The SMM of the future
Trends Performance of Industry
Communications Issues
Human Resource Issues
Operating Plans
Cost Accounting

ATTACHMENT 3

Senior Management Meeting
Evaluation Matrices
and Pro/Con Chart

Indian Point 2
Millstone
Clinton
DC Cook

INDIAN POINT 2
PRO/CON CHART
ARGUMENTS FOR INCREASING AGENCY ATTENTION

Reactor Safety

- Two recent, risk significant events -- an August 1999 reactor trip with electrical system complications ((CCDP ~ 2E-04)(delta CDF ~ 3E-05 to 7E-05)) and a February 2000 steam generator tube failure (delta CDF& LERF ~ 7E-05 to 1E-04) – illustrate a number of longstanding performance issues. These include the following interrelated problems:

  (1) Communication and coordination weaknesses among various site organizations. (These problems have been manifested in routine station work control processes as well as during events);

  (2) Engineering support shortcomings have often led to narrowly focused assessment of plant problems;

  (3) Configuration management/control problems (e.g., transformer tap changer and diesel breaker settings not consistent with design basis);

  (4) Equipment reliability problems [e.g. RPS channel spiking (OTdT), air ejector control valve problems] and large corrective action backlogs;

  (5) Operator knowledge, station training and procedural weaknesses.

- Continuing emergency preparedness weaknesses, which have hampered performance during exercises and during the August 1999 and February 2000 events.

- There have been broad performance issues with this licensee for several years. A number of utility improvement initiatives have yielded some progress but, overall, have been limited in remedying the underlying problems. Some issues surfacing now are manifestations of past performance problems; however many reflect current performance. The combination of significant legacy issues and current performance problems is straining the organization.

- Management turnover has been a problem at the station and corporate support to improvement efforts has appeared uneven. While current management has high standards, efforts to communicate expectations throughout the station are still producing mixed results.

- While the revised reactor oversight program (RROP) is being newly implemented for IP2, applying the action matrix to performance during the August 1999 and February 2000 events would most likely result in multiple/repetitive degraded cornerstones depending on confirmation of preliminary significance reviews.

Radiation Safety and Safeguards

No performance issues have been identified in this Strategic Performance Area.

Cross-Cutting Issues

Corrective action program (CAP) deficiencies have been persistent and have contributed to the performance problems discussed above. These problems point to a CAP that allows significant problems to go unaddressed, thereby negatively impacting performance in the Reactor Safety Strategic Performance Area. CAP deficiencies have included incomplete characterization of degraded conditions, weak root cause evaluations, and overly narrow corrective actions. It is too early to judge the effectiveness of current improvement efforts.

ARGUMENTS FOR MAINTAINING AGENCY ATTENTION

Reactor Safety

- Station management has stabilized somewhat under new CNO and appears to have gotten increased corporate support. Current senior site management has high standards and is self critical. The licensee has performed several detailed self-assessments and peer reviews, which have provided some important insights (ISAT in 1998, several smaller reviews from late 99-present). It has begun to focus attention on underlying problems (such as poor training and organizational/management changes).

- The licensee revamped its improvement plans after the August 1999 event and has indicated that these efforts will receive continued support through their Business Plan and that the plans will be revised to address lessons from the February 2000 event.

- Attempts are being made to improve engineering support. Actions are planned to improve safety system availability, the modification process, and the understanding of the licensing basis.

- While plant backlogs continued at high levels, ConEd management has continued efforts to improve work control/prioritization, engineering support, and corrective action activities to support backlog reduction.

- While effectiveness of efforts have yet to be assessed, ConEd management has made changes in the emergency preparedness (EP) area (new EP manager, revised emergency response organization, new EP procedures, and more drills) to address problems.

- The region's technical divisions have conducted periodic meetings to discuss and review IP2 performance. These meetings have been effective in coordinating on-site inspection and management review activities.

Radiation Safety and Safeguards

No performance issues have been identified in this strategic performance arena.

Cross-Cutting Issues

While corrective action program (CAP) weaknesses continued, licensee management realized the importance of the corrective action program and is implementing a new set of improvement initiatives.

MILLSTONE UNIT 2
EVALUATION FACTORS FOR REMOVAL OF PLANTS FROM AGENCY LEVEL ACTION

Evaluation Factors	Response	Comments
I. Root Cause Identified and Corrected		
Weak performance areas are thoroughly assessed.	Yes	The licensee conducted reviews to identify the fundamental issues that resulted in overall performance decline. In addition, extensive reviews were conducted in response to the Independent Corrective Action Verification Program (ICAVP) Order to identify issues to restore compliance with the design and licensing bases. These evaluations thoroughly identified the programmatic areas of weak performance at Unit 2. NRC 40500 inspections found self-assessments to be self-critical and effective. Areas for performance improvement are routinely assessed by Nuclear Oversight and reported on a monthly basis to senior management.
Comprehensive and clearly defined corrective action program has been developed.	Yes	A station-wide corrective action program has been developed by the licensee and continues to be refined in order to maximize the effectiveness of problem reporting. The significance of the concern determines the need for root cause analysis. The corrective action program is a high volume, low threshold process with over 3300 condition reports (CRs) in 1999. The backlog of corrective actions, including those identified prior to restart and those which have emerged since, remain a continuing challenge to the licensee. The licensee has taken steps to streamline the corrective action process to address this situation.

Evaluation Factors	Response	Comments
Corrective actions include sufficient measures to prevent recurrence of problems.	Yes	The licensee has generally achieved success in processing and addressing a large number of issues identified by CRs. Inspections of individual issues indicate that progress has been made in preventing the recurrence of problems. The 40500, ICAVP, 40001 and operational safety team inspections have indicated the licensee has substantially addressed programmatic concerns in the areas of corrective actions, design/licensing basis configuration control and the safety conscious work environment (SCWE).
Management has allocated sufficient resources to carry out long-range corrective action programs.	Yes	While the backlog of items deferred at startup and other corrective action issues is large, management has effectively directed available resources and established priorities to carry out corrective action program improvements over the long term. Although activities to prepare for an upcoming Unit 2 refueling outage have challenged the backlog reduction efforts, licensee management decisions on schedules and priorities give evidence of the licensee's ability to operate the unit with available resources. Ongoing efforts to resolve longstanding equipment problems, such as equipment associated with the reactor trips, involves significant licensee resources. These challenges will continue through a pending reorganization, which will significantly reduce management positions, and the auction of the units.
NRC is satisfied that the corrective action program is sufficiently implemented.	Yes	Significant progress has been made in the corrective action process over the past four years when Millstone was placed on the watch list. While the overall corrective action process is sufficiently implemented to support safe operations, the NRC identified several instances where the licensee failed to initiate condition reports, which resulted in untimely or inadequate corrective actions. Notwithstanding, these lapses with condition report initiation were not determined to be pervasive. The licensee is working on a revision to the corrective action process that is designed to improve effectiveness and efficiency.

Evaluation Factors	Response	Comments
Sustained, successful plant performance has been demonstrated.	Yes	Following extensive inspections, the NRC determined that the licensee had taken appropriate corrective actions and demonstrated improved performance such that on April 29, 1999, the NRC authorized the restart of Unit 2. NRC inspections performed since the startup in May 1999 have found that the performance improvements which were realized during the three-year extended shutdown have generally been sustained. Two areas of concern that have been noted since restart involve the failure to initiate condition reports for safety systems that were degraded and instances where resolution to equipment problems were not effective. However, the concerns were not found to be pervasive and do not appear indicative of a "backsliding" in performance since restart. While emergent equipment problems have resulted in three plant trips and a plant shutdown, Millstone Unit 2 completed two four-month periods of continuous operation since the startup. Operators responded well to emergent equipment problems and displayed a conservative approach to plant operations.
II. Improved Self-Assessment and Problem Resolution Evident		
Program elements that monitor and evaluate effectiveness of corrective actions have been instituted.	Yes	Corrective action tracking and performance indicator programs have been instituted. For significant condition reports, the corrective action process specifies a six month followup to evaluate the effectiveness of corrective actions. In addition, self assessments were generally self-critical of the current work processes and were effective in identifying program and process enhancements.

Evaluation Factors	Response	Comments
Safety issues are being identified to appropriate management level and corrected in a timely manner.	Yes	Condition reports provide an effective means of communicating identified concerns to plant management in a timely manner. The NRC has found the problem identification threshold to be low, with a high volume of items being generated and processed on a daily basis. In 1999, 3322 condition reports were generated. While the NRC identified several instances where the licensee failed to initiate condition reports, which resulted in untimely or inadequate corrective actions, this problem was not determined to be pervasive. The licensee is working on a revision to the corrective action process that is designed to improve effectiveness and efficiency.
Quality assurance and safety oversight groups provide timely and effective self-assessments of performance to site and corporate management.	Yes	Both Nuclear Oversight and the Nuclear Safety Assessment Board (NSAB) have provided routine detailed and relevant assessments of unit progress, as well as self-assessments of internal performance. The Nuclear Oversight Verification Program continues to routinely evaluate unit performance using a structured process. The oversight reports to senior management are well founded, provide valid perspectives, and based on management response, appear to be well received.
III. Licensee Management Organization and Oversight Improved		
Corporate and plant management teams are fully committed to achieving improved performance.	Yes	Senior licensee management and the station directors and unit managers are all involved in the improvement process. A “continuous process improvement” initiative was started with process teams formed to evaluate different areas, like work control and corrective actions, for enhancement and the efficient use of resources. Also, the operational focus applied to the prioritization and decision-making process has resulted in clearer direction to unit personnel in the performance of daily work.

Evaluation Factors	Response	Comments
Licensee has effective corporate management oversight and involvement in plant operations and problem resolution.	Yes	Corporate level oversight of the station has been maintained. Management emphasis on an operational focus for the unit work and priorities has been effective in establishing the support necessary for safe operations and the resolution of identified problems. At daily work planning meetings, the discussions and decisions relating to ongoing or emergent problem areas are evident, with the resultant focus on the resources needed to address the noted concerns. Director level involvement is observed on a daily basis, in setting the priorities, conservative decision-making, and providing resource support. Senior level management involvement has been demonstrated in program changes and a strategic response to new problem areas.
Management team provides strong direction and fosters a nuclear safety work ethic that is understood at all levels in the organization.	Yes	Early in the shutdown period, a Virginia Power management team was put in charge of the facility. This new management team led the station to an improved nuclear safety work ethic. These cultural changes have continued as the facility made the transition to a new licensee management team when the plant restarted in May 1999. The current management team has provided direction regarding not only, the nuclear safety ethic at Millstone Station, but also the priorities for work that align with such a philosophy. The licensee has encountered some difficulties in integrating work units across the site but, overall, management expectations are being communicated to all levels. This has been shown by the conservative decision making by the licensed operators in interpreting and complying with technical specifications, and in some cases taking action to trip or shut down the reactor as a result.

Evaluation Factors	Response	Comments
IV. NRC Assessment Complete		
Senior NRC management no longer considers the plant as having weaknesses that warrant increased agency level action.	Yes	Since May 1999, the licensee has restarted the unit and successfully met several challenges to a safety conscious work environment and employee concerns program, without encountering the kind of problems that existed in the past. Like many other utilities, the licensee faces several significant challenges over the next couple of years relating to the transition to a competitive environment and the sale of the units. However, such activities will be particularly challenging at Millstone as the licensee is still in transition from the very large recovery project and organizational structure that was established during the extended shutdowns. This transition includes: significantly reducing the number of staff and management positions; completing work associated with a large (albeit lower significance) backlog of corrective action issues that emerged from the shutdown period; addressing equipment aging issues on Unit 2 that were deferred during the shutdown; and modifications needed to separate Unit 1 from the operating units. Notwithstanding these challenges, the licensee has been generally successful in managing transition over the past year.
Significant NRC inspection and licensing activities are complete and findings properly resolved or understood.	Yes	The MC 0350 process, invoked for evaluating the readiness of Unit 2 for restart, was completed in April 1999. The commitments made to the Commission regarding post-startup inspection activities have essentially been completed, with only the SCWE efforts subject to additional formal monitoring. Follow-up MC 40500 corrective action inspections have found that the corrective action program is adequately being implemented and is generally effective in problem resolution. The backlog of items deferred from completion prior to the plant restart in May 1999, is scheduled to be worked off with all items resolved by December 31, 2001. Because of emerging issues and preparations for the April 2000 refueling outage, backlog reduction has been slow. Overall, the future inspection plans for Millstone Unit 2 entail routine NRC inspection program coverage and effort.

Evaluation Factors	Response	Comments
V. Additional Considerations		
Overall performance has improved as reflected in the most recent performance indicators and Plant Performance Review.	Yes	Since the May 1999 restart, performance has improved and the licensee had demonstrated the ability to safely operate the unit. Two areas of concern involved the failure to initiate condition reports for safety systems that were degraded and instances where engineering resolution to equipment problems were not effective. However, based on findings from a recent team inspection, the concerns were not pervasive and did not appear indicative of a "backsliding" in performance since restart. Performance indicators (PIs) for the Revised Reactor Oversight Program are green for all areas.
Enforcement history has indicated an improving trend.	Yes	An improving trend has been noted. Many of the recently observed violations are legacy issues. Escalated enforcement was taken against the licensee, and also individually against some licensee employees, for some historical H&I concerns and falsification of training records issues. Although 49 non-cited violations and one Level IV violation were issued in 1999, 34 were historical. All previous enforcement issues have been closed by NRC inspection.
Performance has improved as demonstrated by a lack of operational problems.	Yes	Just prior to restart in May 1999, several performance errors occurred in the early stages of system restorations. However, the power ascension was completed without any significant events. Emergent equipment problems resulted in three plant trips and a plant shutdown since restart. Some equipment deficiencies continue to burden operators such as the lack of automatic speed control for the main feedwater pumps. However, operation of Unit 2 has improved overall with two four-month periods of continuous operation.
Performance has improved as demonstrated by a lack of significant operator errors.	Yes	Operator response to equipment problems and plant transients has been good and operators displayed a conservative approach to plant operations. None of the operator errors that have occurred since restart from the extended outage were significant.

Evaluation Factors	Response	Comments
Procedure adherence problems are not evident.	Yes	While procedure adherence problems are occasionally documented in condition reports, the unit staff, particularly the licensed operators, have properly controlled activities. A questioning attitude, by the operators on shift, resulted in work being suspended while procedural inconsistencies were corrected.
Simulator is operational.	Yes	The simulator is operational with good fidelity. In addition to licensed operator training, it is routinely used to check plant response to abnormal conditions, test non-routine evolutions, do "just-in-time-training", and determine new and revised procedure adequacy.
Known (i.e., plant specific or industry generic) aging problems have been appropriately addressed.	Yes	During the extended shutdown, the licensee addressed a number of material condition/equipment issues throughout the plant. This included actions to address the life of environmentally qualified components. However, some longstanding and recurrent equipment problems were identified in which engineering resolutions were not effective. Parts availability, particularly with the reactor protection system (RPS) and rod control system, is a problem. The licensee plans to replace some portions of the RPS during the April 2000 refueling outage and to replace additional portions in 2002. The licensee is also initiating an owners group activity to evaluate replacing components in the rod control system.

Evaluation Factors	Response	Comments
Licensee has improved its management organization.	Yes	Following the restart of Unit 2, the licensee reorganized to a more site-wide versus unit-specific structure while significantly reducing the number of management positions. The new structure allows for improved communications, better consistency, and sharing of resources between Units 2 and 3. This reorganization was implemented without significant impact on Unit 2 operations or on the safety conscious work environment. There were some difficulties integrating the two unit organizations and establishing common station processes. This has complicated the transition process. The licensee is continuing to reorganize and downsize their organization and further enhance processes, such as corrective action and work control.
Licensee procedures are considered adequate overall.	Yes	The Procedure Upgrade Program, which began in the early 1990's, was completed in early 1999. A large number of procedure changes were made during the extended shutdown. Inspections indicated these efforts were generally effective. While procedure problems contributed to a number of operational problems, the individual procedures have been corrected and no trend is evident with respect to the type of procedure or the type of procedural deficiency. Due to a higher standard regarding procedure adherence, the licensee has self-identified and corrected a number of procedure deficiencies resulting in continued improvements in procedure quality.
Licensee has an effective root cause analysis program.	Yes	The licensee's Corrective Action Process requires a root cause analysis be performed for Significance Level 1 condition reports. Although a few instances have been identified where the extent of condition reviews were too narrowly focused, NRC inspections have found root cause evaluations for significant problems to be generally thorough and the corrective actions appropriate.
PRA has been performed.	Yes	The NRC has reviewed the licensee's IPE submittal package for Unit 2 and found it meets the intent of Generic Letter 88-20.

Evaluation Factors	Response	Comments
PRA has been used.	Yes	Risk assessments are routinely used and appropriately considered in operational and maintenance activities at Unit 2. It has been used in Maintenance Rule implementation, in the conduct of work planning activities for the 12-week rolling maintenance work schedule, in licensed operator decisions on plant configurations and the authorization for emergent work, and in both event response and event review efforts. Licensee PRA personnel and services are readily accessible to the plant staff.

MILLSTONE UNIT 3
EVALUATION FACTORS FOR REMOVAL OF PLANTS FROM REGIONAL LEVEL ACTION

Evaluation Factors	Response	Comments
I. Root Cause Identified and Corrected		
Weak performance areas are thoroughly assessed.	Yes	The licensee's self-assessment program has been considered a strength, as was confirmed by independent third-party evaluations. NRC 40500 inspections found self-assessments to be self-critical and effective. Areas for performance improvement are routinely assessed by Nuclear Oversight and progress toward improvement is reported on a monthly basis to senior management.
Comprehensive and clearly defined corrective action program has been developed.	Yes	A station-wide corrective action program has been developed by the licensee and continues to be refined in order to maximize the effectiveness of problem reporting. The significance of the concern determines the need for root cause analysis. The corrective action program is a high volume, low threshold process with over 5300 condition reports (CRs) in 1998 and over 4200 in1999.
Corrective actions include sufficient measures to prevent recurrence of problems.	Yes	The licensee has generally achieved success in processing and addressing a large number of corrective action items, typically CRs. NRC inspection findings have identified some examples where problems recurred. However, the NRC programmatic team inspections, including 40500, 40001, and engineering teams, have found that the licensee has substantially addressed the past major concerns in the areas of corrective actions, configuration control and the safety conscious work environment (SCWE).

Evaluation Factors	Response	Comments
Management has allocated sufficient resources to carry out long-range corrective action programs.	Yes	The backlog of recovery items deferred at Unit 3 startup was completed. License management has effectively allocated resources and priorities to maintain most backlogged work within station goals. This has been implemented in parallel with corrective action program improvements over the long term. The competition for resources remains a continuing challenge, but recent licensee management decisions on schedules and priorities give evidence of the licensee's ability to operate the unit and implement effective corrective actions with the available resources.
NRC is satisfied that the corrective action program is sufficiently implemented.	Yes	The licensee's corrective action program has been implemented sufficiently to support safe operations. Significant enhancements have been made to the corrective action process, and more are planned. Given the high volume of corrective action items and the competing resource needs between backlog reduction and operational support, licensee management attention to this area remains high. Likewise, NRC inspection efforts have provided focus on the corrective action program, have confirmed adequate performance, and will continue to monitor progress.
Sustained, successful plant performance has been demonstrated.	Yes	Since the beginning of 1999, and in contrast to the many plant trips and power reductions over the last half of 1998, Unit 3 has remained at power with the exception of a planned refueling outage. Licensee management's emphasis on an "operational focus" has worked to reduce the number of challenges to operation, including unplanned technical specification LCO entries. Even though the work control processes are being modified and are not yet being implemented at full efficiency, routine and planned work activities are being performed acceptably without excessive diversion of resources to unexpected, emergent problems.

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	Corrective action tracking and performance indicator programs have been instituted. For significant condition reports, the corrective action process specifies a follow-up six months after closeout, to evaluate the effectiveness of corrective actions. In addition, self assessments were generally self critical of the current work processes and were effective in identifying program and process enhancements.
Safety issues are being identified to appropriate management level and corrected in a timely manner.	Yes	Licensee management cognizance of the performance indicators, corrective action trending process results, and the analysis of specific safety issues remains high, as evidenced by management team discussions at the daily meetings, as well as Nuclear Oversight activities. There is a questioning attitude and better focus on addressing the programmatic aspects of identified concerns. The initiation of corrective action is generally timely.
Quality assurance and safety oversight groups provide timely and effective self-assessments of performance to site and corporate management.	Yes	Both Nuclear Oversight and the Nuclear Safety Assessment Board (NSAB) have provided routine detailed and relevant assessments of unit progress, as well as self-assessments of internal performance. The Nuclear Oversight Verification Program continues to routinely evaluate unit performance using a structured process. The oversight reports to senior management are well founded, provide valid perspectives, and appear to be well received based on management response.

Evaluation Factors	Response	Comments
III. Licensee Management Organization and Oversight Improved		
Corporate and plant management teams are fully committed to achieving improved performance.	Yes	Senior licensee management and the station directors and unit managers are all involved in the improvement process. A “continuous process improvement” initiative was started with process teams formed to evaluate different areas, like work control and corrective actions, for enhancement. Also, the operational focus applied to the prioritization and decision-making process has resulted in clearer direction to unit personnel in the performance of daily work.
Licensee has effective corporate management oversight and involvement in plant operations and problem resolution.	Yes	Continued management emphasis on an operational focus for the unit work and priorities has been effective in establishing the support necessary for safe operations and the resolution of identified problems. At daily work planning meetings, the discussions and decisions relating to ongoing or emergent problem areas are evident, with the resultant focus on the resources needed to address the noted concerns. While improvements to the work control process have been continuing, director level involvement in these improvements and in setting priorities, conservative decision-making, and providing resource support has been routinely observed on a daily basis. Senior level management involvement in program changes and a strategic response to new problem areas has 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	The current senior management team, including officers, directors, and key managers has provided clear and strong direction regarding the nuclear safety ethic at Millstone Station and the priorities for work that align with such a philosophy. NRC inspection findings indicate this guidance has reached all levels of the Unit 3 organization and has been found in evidence in meetings, including shift turnover briefings, and in examples of conservative decision making by the licensed operators. The number of CRs initiated and the strong management response to disposition and tracking of these problems provide evidence of a good safety work ethic, backed up by support to the SCWE, at all levels in the organization.
IV. NRC Assessment Complete		
Senior NRC management no longer considers the plant as having weaknesses that warrant agency level action.	Yes	For the past year, the sustained operation of Unit 3 has reflected a plant that has not only reduced the number of operational challenges, but also responded well to the few weather and equipment problems that have arisen. The renewed "operational focus" has provided direction to the unit staff to maintain safe and reliable operations, while reducing backlogs and responding to emerging work and new condition reports. Performance improvements in SCWE and employee concerns programs have been demonstrated and continued progress in these areas will be monitored by the NRC. Like many other utilities, the licensee faces several significant challenges over the next couple of years relating to the transition to a competitive environment and the sale of the units. However, such activities will be particularly challenging at Millstone as the licensee is still in transition from the very large recovery project and organizational structure that was established during the extended shutdowns. This transition includes significantly reducing the number of staff and management positions and modifications needed to separate Unit 1 from the operating units. Notwithstanding these challenges, the licensee has been generally successful in managing transition over the past year.

Evaluation Factors	Response	Comments
Significant NRC inspection and licensing activities are complete and findings properly resolved or understood.	Yes	The MC0350 process, invoked for evaluating the readiness of Unit 3 for restart, was completed in mid-1998. The commitments made to the Commission regarding post-startup inspection activities have essentially been completed, with only the SCWE efforts subject to additional formal monitoring. Follow-up 40500 corrective action inspections have revealed a corrective action program adequately being implemented and generally effective in problem resolution. The backlog of recovery items deferred prior to plant restart in July 1998 has been dispositioned. Overall, the future inspection plans for Unit 3 entail routine NRC inspection program coverage and effort.

Evaluation Factors	Response	Comments
V. Additional Considerations		
Overall performance has improved as reflected in the most recent performance indicators and Plant Performance Review.	Yes	Several licensee performance indicators are either at or trending to pre-established licensee goals. Additionally, the current Plant Performance Review of Unit 3 indicates significant improvement over past performance, particularly with respect to sustained, reliable operations performance and backlog reduction activities. Some concerns have been identified regarding the effectiveness of the corrective action process in preventing problem recurrence, in particular with respect to engineering control or coordination problems. However, overall, the licensee's renewed "operational focus" activities, both short and long term, appear to have adequately addressed the major performance problems from the previous cycle. The licensee is currently focused on initiatives to foster process improvements in work control and corrective actions, thus, attempting to address both efficiency issues and any remaining performance problem areas from the current cycle.
Enforcement history has indicated an improving trend.	Yes	There were no technical violations cited against Unit 3 during this current assessment period, representing an improvement from past periods. Escalated enforcement was taken against the licensee, and also individually against some licensee employees, for some historical H&I concerns and falsification of training records issues. Eight non-cited violations (NCVs) identified by NRC inspection were documented, with the identified issues relating to previously suspected problem areas, such as design controls and corrective actions. All other NCVs noted during this cycle related to historical violations, reported by the licensee and for which the NRC found adequate corrective action. Over this same period, the eight LERs that were issued represent an LER generation rate about half that of the past cycle and on average, one-fourth the rate of LER generation over the 1996-97 time frame. All previous enforcement issues have been closed by NRC inspection.

Evaluation Factors	Response	Comments
Performance has improved as demonstrated by a lack of operational problems.	Yes	Except for a refueling outage, the unit operated continuously at power during this assessment period. The number of reactor transients and other operational challenges has been significantly reduced from the previous cycle. Over the last half of 1998, one plant shutdown, four reactor trips, and five immediate shutdown technical specification action statement entries were experienced by the unit. During the current period, operators have responded well to the few events, such as adverse weather conditions and a feedwater transient caused by a failed valve, with conservative decision-making and deliberate evolutions as required. The current licensee “operational focus," in concert with process improvement initiatives and continued control of the backlogs, appears to have worked in improving operational performance.
Performance has improved as demonstrated by a lack of significant operator errors.	Yes	As noted, an operational focus with a conservative decision-making process with appropriate analysis of risk perspectives, is currently in evidence. The operators on shift, particularly at the shift manager and unit supervisor, both of whom are senior reactor operators, have demonstrated good questioning attitudes to unexpected equipment conditions and some anomalous results from surveillance tests. .

Evaluation Factors	Response	Comments
Procedure adherence problems are not evident.	Yes	While procedural adherence problems are occasionally documented in CRs, the unit staff, particularly the licensed operators, has properly controlled activities. A questioning attitude by the operators on shift has led to situations where work has been suspended while procedural inconsistencies are corrected. This higher standard of operations is also in evidence in the control of protected train activities. The licensee will defer work rather than create dilemmas for the operators with respect to the conduct of surveillance or maintenance procedures with unanalyzed equipment out of service. The licensee's CR process often identified potential procedural problems prior to the use of the procedure. While some procedure errors could remain undetected until implementation, the recent performance history has shown that these are few and that they have been satisfactorily addressed by the licensee staff at that time without adverse consequences.
Simulator is operational.	Yes	The Unit 3 simulator is operational. In addition to licensed operator training, it is routinely used to check plant response to abnormal conditions, test non-routine evolutions, do "just-in-time-training", and determine new and revised procedure adequacy.
Known (i.e., plant specific or industry generic) aging problems have been appropriately addressed.	Yes	Aging problems are not a major concern at Unit 3, licensed in 1985. Material equipment and parts list (MEPL) problems were a major issue that received programmatic licensee attention and NRC review prior to the Unit 3 restart in mid-1998. Some material corrosion concerns have received appropriate licensee engineering attention and other issues, such as service water pipe wall thinning, have resulted in implementation of a periodic monitoring program. Based upon some emergent workload issues, the licensee continues to review its parts availability program to ensure the adequacy of replacement parts to support safe and reliable operation.

Evaluation Factors	Response	Comments
Licensee has improved its management organization.	Yes	Following the restart of Unit 2, the licensee reorganized to a more site-wide versus unit-specific structure while reducing the number of management positions. The licensee has also reduced its overall employee work force, considerably cutting contractor staff support positions. The licensee's reorganization was implemented without significant impact on Unit 3 operations or the safety conscious work environment. The licensee is continuing to reorganize and downsize their organization.
Licensee procedures are considered adequate overall.	Yes	Procedural adequacy was assessed as part of the MC0350 process, with the overall conclusion that the Unit 3 procedures were adequate to support safe, error-free operations. Subsequently, some operational procedure issues have been identified and corrected, case-by-case, in line with the existing plant conditions. The licensee corrective action processes, as well as the higher standard of operational controls and procedure implementation expectations, have supplemented programmatic procedure reviews in providing assurance that procedural quality does not represent a problem. Overall, the Unit 3 procedures are considered adequate.

Evaluation Factors	Response	Comments
Licensee has an effective root cause analysis program.	Yes	Licensee root cause analyses have matured as a tool in the corrective action process, with both improvements to the program and the added experience of continued usage over time. Significance level 1 condition reports, event review team evaluations, and self-assessment activities have all utilized root cause analysis techniques to provide guidance for successful corrective action implementation. The current “operational focus” activities at Unit 3 continue to reinforce the successful utilization of root cause analyses. NRC corrective action team inspections identified generally acceptable root cause evaluations, noting in some cases that the contributing causes were not always addressed. Some cases in which the licensee's corrective action did not prevent problem recurrence were identified by NRC inspection. Overall, however, licensee efforts to implement effective root cause analyses and to initiate process improvements in this area appear to have worked.
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 compares to the industry average and that the Unit 3 IPE meets the intent of Generic Letter 88-20.
PRA has been used.	Yes	Risk assessments are routinely used and appropriately considered in operational and maintenance activities at Unit 3. The IPE is considered a “living PRA” document at Millstone Unit 3. It has been used in Maintenance Rule implementation, in the conduct of work planning activities for 12-week rolling maintenance work schedule, in licensed operator decisions on plant configurations and the authorization for emergent work, and in both event response and event review efforts. Licensee PRA personnel and services are readily accessible to the plant staff.

CLINTON POWER STATION
EVALUATION FACTORS FOR REMOVAL OF PLANTS FROM REGIONAL LEVEL ACTION

Evaluation Factors	Response	Comments
I. Root Cause Identified and Corrected		
Weak performance areas are thoroughly assessed.	Yes	Weak performance areas have been thoroughly assessed. Actions to address these areas were originally included in Illinois Power Company's Plan-for-Excellence (PFE) which has been subsumed by AmerGen's 5-year strategic/business plan. After reassessing station performance, AmerGen developed the strategic plan to sustain and improve licensee performance in key areas.
Comprehensive and clearly defined corrective action program has been developed.	Yes	Performance indicators are used to evaluate the effectiveness of the corrective action program and the licensee has revised the program as appropriate to address identified weaknesses. An NRC corrective action program inspection (40500) was conducted in January 2000 and based on the results of this inspection, the region concluded that the corrective action program is sufficiently comprehensive and defined.
Corrective actions include sufficient measures to prevent recurrence of problems.	Yes	The quality of the licensee's apparent and root cause evaluations for conditions adverse to quality has improved which has generally resulted in the effective resolution of issues identified in condition reports.
Management has allocated sufficient resources to carry out long-range corrective action programs.	Yes	AmerGen has allocated resources to implement the 5-year strategic plan in its business plan which is indicative of the licensee's commitment to continue performance improvement initiatives at Clinton Power Station.

NRC is satisfied that corrective action program is sufficiently implemented.	Yes	As verified by the NRC corrective action program inspection (40500) and the Operational Safety Team Inspection (OSTI) which was conducted in March 2000, the licensee's corrective action program has been effective in ensuring that previously identified performance weaknesses did not develop into significant programmatic concerns. However, trending as an integral part of the corrective action program has only recently been fully implemented. In addition, the Corrective Action Review for Effectiveness (CARE) program, which is used to evaluate the effectiveness of corrective actions implemented to prevent repetitive events, is an aspect of the licensee's corrective action program that has progressed slowly. Overall, licensee performance continues to improve, indicating that the corrective action program is sufficiently implemented.
Sustained, successful plant performance has been demonstrated.	Yes	The unit was restarted in May 1999 and reached full power on June 2. The unit has operated continuously since then, with only two brief, non-routine downpowers to address equipment issues. No significant plant transients have occurred since plant restart.
II. <u>Improved Self-Assessment and Problem Resolution Evident</u>		
Program elements that monitor and evaluate effectiveness of corrective actions have been instituted.	Yes	A management team conducts weekly reviews and assesses the quality of root and apparent cause evaluations developed to address identified conditions adverse to quality. Performance indicators are used to evaluate the effectiveness of the corrective action program and the licensee has revised the program as appropriate to address identified weaknesses. For example, through its evaluation of performance indicators, the licensee

		identified and is addressing weaknesses in its trending and CARE programs.
Safety issues are being identified to appropriate management level and corrected in a timely manner.	Yes	Appropriate management is routinely informed of emerging safety issues. To date, these issues have been addressed in a timely manner and effective actions have generally been implemented to correct the deficiencies.
Quality assurance and safety oversight groups provide timely and effective self-assessments of performance to site and corporate management.	Yes	Quality assurance and safety oversight groups have been effective in providing in-depth, accurate assessments of performance. Each departmental strategic plan contains a self-assessment element which supports the station-wide 5-year strategic plan.
III. Licensee Management Organization and Oversight Improved		
Corporate and plant management teams are fully committed to achieving improved performance.	Yes	Management, at both the corporate and plant levels, has demonstrated its commitment to improve licensee performance through the development of the strategic plan and allocation of sufficient resources for its implementation as part of the business plan.
Licensee has effective corporate management oversight and involvement in plant operations and problem resolution.	Yes	The effective oversight of plant operations and problem resolution by corporate management has been accomplished through the development of a new offsite nuclear review board composed of officers from AmerGen. The board conducted its initial quarterly review of licensee performance in February 2000, providing a critical assessment. In addition, an evaluation of the effectiveness of corrective actions to address identified weaknesses is presented by plant management to the board members at each board meeting.

Management team provides strong direction and fosters a nuclear safety work ethic that is understood at all levels in the organization.	Yes	Departmental strategic plans, which support the overall station strategic plan, were developed with the involvement of personnel from all levels within each respective department. The Vice President held meetings with the entire plant workforce to describe the philosophy behind the 5-year strategic plan. While there still is a tendency for plant workers to compare current performance in selected areas to previous licensee performance rather than to the standards of excellence set as a performance goal by management, licensee management has been effective in instilling a nuclear safety work ethic within all levels of the organization.
IV. NRC Assessment Complete		
Senior NRC management no longer considers the plant as having weaknesses that warrant agency level action.	Yes	Prior to the Manual Chapter 0350 panel disbandment, the panel recommended that after a period of continuous plant operation, a corrective action team inspection (40500) and an OSTI be conducted to determine whether or not the licensee was able to sustain performance improvements realized prior to plant restart. These inspections have been accomplished and based on their results, coupled with continuing observations by the resident staff, the region concluded that the corrective action program improvements have been sustained and licensee performance in the area of conduct of operations is consistent with that observed at restart (no backsliding). No significant safety items were identified by either the residents or the inspection teams.
Significant NRC inspection and licensing activities are complete and findings properly resolved or understood.	Yes	The licensee was already aware of most of the weaknesses that were identified by the NRC 40500 and OSTI teams and actions to address them are included in the strategic plan. Other previously identified weaknesses were entered into the licensee's corrective action program.

V. Additional Considerations

Most recent set of Performance Indicators reflect overall improving performance.	Yes	The last set of NRC performance indicators reflected improving trends. In addition, an overall improving trend was reflected in the performance indicators voluntarily submitted by the licensee pursuant to the revised reactor oversight program.
Overall performance has improved as reflected in the most recent Plant Performance Review.	Yes	The licensee performance assessment resulting from the March 2000 plant performance review reflected an overall improvement in licensee performance. However, some process weaknesses continued to exist in operations and selected aspects of the corrective action program (trending and CARE) have either recently been fully implemented or are progressing slowly. Initiatives to improve these areas have been included in the licensee's strategic plan.
Enforcement history has indicated an improving trend.	Yes	The number of violations has declined and no technical issues have resulted in escalated enforcement over the past year.
Performance has improved as demonstrated by a lack of operational problems.	Yes	There have not been any significant problems affecting plant operations. However, the Division III (High Pressure Core Spray) diesel generator was damaged during a routine surveillance test primarily due to a design error concerning the static var compensators which were installed during the extended plant shutdown. While this did not affect plant operations, the generator was damaged to the extent that it had to be replaced.
Performance has improved as demonstrated by a lack of significant operator errors.	Yes	No significant operator errors have occurred since plant restart. Operator performance during requalification training has significantly improved.

Procedure adherence problems are not evident.	Yes	Strict procedural compliance has been emphasized by licensee management and plant staff generally understand the expectations. Procedural adherence continues to improve at the station.
Simulator is operational.	Yes	The simulator has continued to function properly.
All identified aging problems have been addressed to the NRC's satisfaction.	N/A	There are no major aging issues at Clinton Power Station.
The licensee has improved its management organization.	Yes	AmerGen has put in place a competent, safety-conscious management team that continues to make progress in addressing performance weaknesses at the station and overall licensee performance is on an improving trend.
Licensee procedures are considered adequate overall.	Yes	The licensee's procedures are generally adequate. The licensee is reducing its procedure change backlog and is evaluating the procedure change process in an attempt to make it more efficient.
Licensee has an effective root cause analysis program.	Yes	Improvements have been made to the root cause and apparent cause analysis programs which, coupled with appropriately targeted corrective actions, have generally resulted in the effective resolution of issues identified in condition reports.
PRA has been performed.	Yes	The licensee performed an IPE analysis in 1992 which showed a core damage frequency (CDF) of 2.6E-5. The licensee has subsequently performed an updated analysis in 1995 which showed a CDF of 6E-6. The licensee submitted an IPEEE fire analysis in 1995 which showed a CDF of 3.26E-6.

PRA has been used.	Yes	The licensee has developed and implemented shutdown risk and online risk programs during which PRA is used to analyze activities. These programs were evaluated during maintenance rule inspection activities and were considered to be adequate.

DC COOK
EVALUATION FACTORS FOR REMOVAL OF PLANTS FROM AGENCY LEVEL ACTION

Evaluation Factors	Response	Comments
I. Root Cause Identified and Corrected		
Weak performance areas are thoroughly assessed.	Yes	During the Discovery phase of the licensee's Restart Action Plan, the licensee conducted multiple self assessments, including Expanded System Readiness Reviews and functional area and programmatic assessments. The NRC has conducted routine and special inspections which have confirmed that the licensee performed satisfactory assessments and reviews, identified deficiencies, and established corrective action plans to address the weak performance areas.
Comprehensive and clearly defined corrective action program has been developed.	Yes	The licensee developed a comprehensive Restart Plan with clearly defined expanded management oversight. Implemented under this plan are detailed Restart Action Plans to address the major performance areas. Restart Action Plans have been reviewed by NRC staff and were considered comprehensive with clearly defined corrective actions. One of the Restart Action Plans specifically addresses the corrective action program. As a result of self assessments in this area, significant programmatic and process weaknesses were identified. The licensee subsequently developed a new corrective action program which contains sufficient checks and balances to ensure that corrective actions are completed and their effectiveness is subsequently assessed. The NRC staff has confirmed that the program is effectively resolving

		identified conditions adverse to quality in a manner sufficient to support the plant's return to operation.
Corrective actions include sufficient measures to prevent recurrence of problems.	Yes	The licensee's Restart Plan includes Leadership Plans that capture long term corrective actions for each department, including actions to address functional, programmatic, and organizational weaknesses. Some aspects of the Leadership Plans are already being implemented. The licensee has incorporated the Leadership Plans into the AEP Nuclear Business Plan (2000-2004). The Business Plan was reviewed by the 0350 Panel and considered comprehensive.
Management has allocated sufficient resources to carry out long-range corrective action programs.	No	Licensee management has made a clear commitment to expend the necessary resources to resolve the deficiencies at the Cook plant needed for restart. Long-range resource commitments will be reviewed by the NRC staff prior to restart.
NRC is satisfied that corrective action program is sufficiently implemented.	No	NRC staff has confirmed that the licensee's corrective action processes are sufficient to identify and resolve conditions adverse to quality. However, all corrective actions in the Restart Action Plans necessary to address deficiencies requiring resolution prior to restart have not been completed.
Sustained, successful plant performance has been demonstrated.	No	Both units have been shut down since September 1997. Both reactors were defueled during the summer of 1999. Unit 2 was refueled successfully in April 2000 and restart of Unit 2 is scheduled for late in the second quarter of 2000, while the restart of Unit 1 is scheduled for the fall 2000.

II. Improved Self-Assessment and Problem Resolution Evident

Program elements that monitor and evaluate effectiveness of corrective actions have been instituted.	Yes	The licensee has developed and implemented a set of performance indicators to monitor the effectiveness of corrective actions including the trending of self-identified condition reports and root cause quality. To evaluate the effectiveness of the corrective actions, the licensee has utilized a Corrective Action Review Board to assess the adequacy of root cause evaluations. In addition, the Performance Assurance group has conducted effective periodic assessments of the corrective action program.
Safety issues are being identified to appropriate management level and corrected in a timely manner.	Yes	Appropriate management is routinely informed of emerging safety issues. In general, these issues are addressed in a timely manner. On several occasions, management has demonstrated the willingness to stop work, including critical path activities, to correct emerging safety issues in a timely manner.
Quality assurance and safety oversight groups provide timely and effective self-assessments of performance to site and corporate management.	Yes	The Performance Assurance organization and other site safety oversight groups have been strengthened and are effective in providing assessments of performance.

III. Licensee Management Organization and Oversight Improved

Corporate and plant management teams are fully committed to achieving improved performance.	Yes	The licensee's management team has acknowledged the performance problems and is committed to addressing identified issues. The licensee implemented the Discovery phase of their Restart Plan in a deliberate manner and identified a large number of technical and programmatic deficiencies. The licensee has devoted an extensive amount of resources and has demonstrated a commitment to quality and safety in resolving these issues.
Licensee has effective corporate management oversight and involvement in plant operations and problem resolution.	Yes	American Electric Power has demonstrated effective corporate management oversight of the restart effort. The Senior Vice President - Nuclear, is normally on site and is involved with the day-to-day activities at the plant. In addition, the Board of Directors has established a diverse nuclear oversight committee which meets periodically to assess plant performance and advise the Board of Directors on nuclear related matters.
Management team provides strong direction and fosters a nuclear safety work ethic that is understood at all levels in the organization.	Yes	The management team, particularly the Senior Vice President - Nuclear, the Site Vice President, and the Vice President of Engineering, have communicated expectations for individual and organizational performance at all levels in a variety of forums. The nuclear safety work ethic being fostered by the management team is gradually being adopted by the organization.

IV. NRC Assessment Complete		
Senior NRC management no longer considers the plant as having weaknesses that warrant increased agency level action.	No	The licensee has made significant progress towards resolving the majority of the technical issues related to the plant shutdown as reflected in the closure of the Confirmatory Action Letter. Also the licensee has made improvements to programs and processes such as the corrective action program and the safety evaluation process. However, implementation of corrective actions to address several Manual Chapter 0350 Case Specific Checklist items continues.
Significant NRC inspection and licensing activities are complete and findings properly resolved or understood.	No	Most major inspection and licensing activities have been completed with findings properly resolved or understood. However, several Manual Chapter 0350 Case Specific Checklist items remain open pending the completion of licensee corrective actions and NRC inspections. Augmented inspection coverage of the plant restart is planned and implementation of the Risk Informed Baseline Inspection program will be phased in after restart.
V. Additional Considerations		
Most recent set of Performance Indicators reflect overall improving performance.	No	The NRC Office of Nuclear Regulatory Research performance indicators reflect procedure and design deficiencies. However, those performance indicators were based primarily on issues that occurred in the past and were identified during the extended outage. As a result, these indicators may not be a true reflection of current performance. The licensee is developing performance indicators under the revised reactor oversight process. Performance indicators will be reported following the restart of Unit 2.

Overall performance has improved as reflected in the most recent plant performance review.	N/A	The September 1997 SALP rated Operations, Maintenance, and Plant Support at Category 2 and Engineering at Category 3. Along with all other operating reactors, D.C. Cook has been assessed using a transition phase Plant Performance Review (PPR) in March 2000 as the NRC begins to implement the Revised Reactor Oversight Process. The PPR concluded that performance has improved in each of the strategic areas.
Enforcement history has indicated an improving trend.	N/A	Consistent with other long term shutdown plants, during the extended outage, enforcement discretion has been applied to issues being identified and addressed by the licensee.
Performance has improved as demonstrated by a lack of operational problems.	No	With both Units being shutdown since September 1997, and in a defueled condition for most of the past year, the majority of plant systems have been undergoing evaluation and modification. As a result, there have not been sufficient opportunities for the NRC staff to assess operational performance.
Performance has improved as demonstrated by a lack of significant operator errors.	No	With both Units being shutdown since September 1997, and in a defueled condition for most of the past year, the plant staff has not been challenged to operate the plant. However, the defueling and recent Unit 2 refueling and testing activities were performed in a deliberate and controlled manner without any significant operator errors.
Procedure adherence problems are not evident.	No	Consistent procedural compliance has yet to be demonstrated at the site. Although strict procedural adherence has been emphasized by licensee management, not all of the plant staff understand the

		expectations. When procedural adherence issues are identified, the management team takes timely corrective actions which re-enforce their expectations.
Simulator is operational.	Yes	The simulator has been observed to function properly.
All identified aging problems have been addressed to the NRC's satisfaction.	N/A	There are no major aging issues at DC Cook. Unit 2 steam generators were replaced in 1988 and Unit 1 steam generators are currently undergoing replacement.
The licensee has improved its management organization.	Yes	Since the plant shutdown in September 1997, the licensee has replaced all of the key managers on site, including the Senior Vice President Nuclear, the Site Vice President, the Vice President Engineering, Plant Manager, Operations Manager, Maintenance Manager, and Engineering Manager. The licensee has established a safety-conscious management team at DC Cook that has been making steady progress in addressing the issues at the station.
Licensee procedures are considered adequate overall.	Yes	In general, the licensee's procedures are considered adequate. The new management team at DC Cook has established new expectations regarding the quality of procedures and plant modifications have necessitated the revision of numerous operations and maintenance procedures. As a result, initiatives are in progress to revise procedures and improve the quality of procedures in support of plant restart. As a result, there is a backlog of procedures that need to be revised and approved for use prior to plant restart.

Licensee has an effective root cause analysis program.	Yes	Improvements have been made in the quality of root cause determinations. As part of the new corrective action process, a Corrective Action Review Board was established to assess the adequacy of root cause evaluations. In addition, increased management oversight in this area has contributed to the thoroughness and timeliness of root cause determinations. Root cause effectiveness is routinely monitored by management.
PRA has been performed.	Yes	The licensee performed an IPE analysis in 1992 which showed a core damage frequency (CDF) of 6.26E-5. The licensee has subsequently performed an updated analysis in 1996 which showed a CDF of 7.09E-5/yr. The licensee submitted an IPEEE fire analysis in 1995 which showed a CDF of 3.26E-6. While these analyses have been completed, they have not been updated to incorporate all recent modifications and the structure of the analyses makes them difficult to use in assessing varying plant conditions. The licensee has recently initiated actions to develop a new flexible PRA, including improved shutdown and online risk tools for the operators.
PRA has been used.	Yes	The licensee developed and implemented shutdown risk and online risk programs. These programs were assessed as adequate, but weak in the area of online risk during a 1996 maintenance rule inspection.

ATTACHMENT 4

LIST OF ATTENDEES
NRC SENIOR MANAGEMENT MEETING - MAY 10-11, 2000

Chairman Meserve (Day 1)
M. Tschiltz, OCM (Day 1)
W.Travers, EDO
F. Miraglia, DEDR
C. Paperiello, DEDMRS
P. Norry, DEDM
S. Collins, NRR
W. Kane, NMSS
A. Thadani, RES
H. Miller, RI
L. Reyes, RII
J. Dyer, RIII
E. Merschoff, RIV
G. Caputo, OI
W. Borchardt, OE
E. Baker, AAA
J. Johnson, NRR
W. Dean, NRR (Day 2)
M. Johnson, NRR (Day 1)
R. Frahm, NRR
J. Funches, CFO
S. Reiter, CIO
S. Burns, OGC
K. Cyr, OGC
W. Beecher, OPA
P. Bird, HR (Day 2)
M. Satorius, OEDO
K. Landis, OEDO