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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

January 16, 1998

MEMORANDUM TO: Chairman Jackson  
Commissioner Dicus  
Commissioner Diaz  
Commissioner McGaffigan

FROM: L. Joseph Callan   
Executive Director for Operations

SUBJECT: RESULTS OF THE NRC SENIOR MANAGEMENT MEETING  
HELD JANUARY 6-7, 1998

The purpose of this memorandum is to provide the Commission with (1) a summary of discussions held at the January 6-7, 1998, NRC Senior Management Meeting, (2) copies of letters to be sent to the licensees of plants on the Watch List that will be discussed at the January 21, 1998, Commission Meeting, (3) copies of letters to be sent to plants whose performance was trending downward or whose previously identified adverse performance trend has been arrested, and (4) copies of letters to be sent to plants to recognize superior performance in accordance with the program described in SECY-94-291.

As the Commission is aware, NRC senior managers meet semiannually to review the performance of operating nuclear power plants and materials facilities licensed by the NRC. For this meeting, the senior managers implemented the guidance described in Management Directive (MD) 8.14, "Senior Management Meeting (SMM)." MD 8.14 provides interim guidance for the preparation and conduct of the SMM while the process is undergoing review and modification, as described in SECY 97-122, "Integrated Review of the NRC Assessment Process for Operating Commercial Nuclear Reactors."

As a result of the number of plants that were scheduled to be discussed during this SMM, nuclear power plant performance was the predominant topic of discussion at this Senior Management Meeting. In keeping with the initiatives to enhance the process that were first implemented during the January 1997 SMM, and as discussed during a Commission briefing on September 19, 1997, and in SECY 97-294, the senior managers continued efforts to increase the use of objective performance indicators, increase the emphasis on obtaining and integrating the views of each senior manager by utilizing initial view sheets, and enhance the application of information summaries (pro/con charts) used to facilitate the discussions related to the appropriateness of applying increased agency attention.

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Act, exemptions outside scope  
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~~PRE-DECISIONAL INFORMATION~~

The Senior Management Meeting is conducted to focus agency-wide resources on those plants and issues that need to be addressed, to communicate the concerns of senior NRC managers to licensees with poor performance or adverse performance trends, and to ensure that coordinated courses of action are developed and implemented for licensees of concern before problems reveal themselves as significant events. 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. I provided the Commission with a summary of the results of this meeting in a memorandum dated January 13, 1998.

On January 16, 1998, the following notifications and actions, which are timed to give licensee management an opportunity to attend the January 21, 1998, Commission Meeting, will occur (note that these actions typically take place the Monday before the Commission Meeting, but are being conducted earlier due to the holiday on Monday, January 19):

- the Regional Administrators will place a telephone call to the licensee of each plant in Categories 1, 2, and 3, or whose plant was determined to have an adverse performance trend informing them of the staff's assessment of their plants, and the basis for the conclusions made by the NRC Senior Managers; and
- the staff will transmit (by facsimile) letters to the Chief Executive Officer for the plants in Categories 1, 2, and 3, or whose plant was determined to have an adverse performance trend (Attachment 1).

Attachment 2 is a summary of the January 1998 NRC Senior Management Meeting. Copies of the Senior Management Meeting Watch List Removal Evaluation Factors are provided in Attachment 3 and Attachment 4 is a list of meeting attendees.

Please note that the information contained with this memorandum is PRE-DECISIONAL and will be first discussed publicly at the January 21, 1998, 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 Watch List Removal Evaluation Factors
4. List of Attendees

**cc w/attachments:**

SECY  
OGC  
OCA  
OPA  
CFO  
CIO

- **Engineering and Design**

- System engineering program fully staffed
- Moving design engineering to the site
- Completed modifications have improved system safety

In reviewing the plant's performance, the senior managers acknowledged that there has been a substantial effort to improve performance at Point Beach, driven by a influx of new managers and an improved capability in the area of self-assessment. Though the plant has still experienced some problems, there has been a noticeable decrease in personnel errors, good control of operations, considerable attention given to identifying their own problems, and better operability evaluations. The senior managers observed that Point Beach's improved self-critical attitude has resulted in a large backlog of work, but the licensee seems to be identifying and correcting some longstanding deficiencies.

It was noted that the NRC's performance indicators indicated a large number of design and procedure related problems, but it was determined that this is due in great part to the licensee's self-assessment efforts. The licensee has enervated its engineering department by establishing a program to hire a large number of system engineers, significantly enlarging their staff. The design engineering staff is also being increased to enable the licensee to pursue correction of old design issues.

### **POINT BEACH SUMMARY**

In summary, in reviewing the considerations for maintaining agency attention at Point Beach, the senior managers noted that it may be beneficial to allow its improvement initiatives to continue for a longer period of time. In reviewing the considerations for decreasing agency attention at Point Beach, the senior managers acknowledged the licensee's efforts to conduct critical self-assessments, improve human performance and the conduct of operations, and improve the material condition of its systems as a substantial response to the trending letter. The fact that these efforts have resulted in substantive improvements strongly convinced the senior managers that, on balance, the licensee had arrested its declining trend. The senior managers determined that Point Beach would be sent a letter acknowledging that its trend had been arrested.

### **INDIAN POINT 2**

#### **Background Information:**

This is the second SMM at which Indian Point 2 (IP2) has been discussed. The SALP report issued on March 31, 1997, noted that many plant equipment problems were experienced during the September 1995 to February 1997 SALP period due to the poor condition of a number of systems. The unit experienced nine trips and shutdowns as well as several power reductions as a result of equipment problems. An Integrated Plant Assessment Process (IPAP) was completed in November 1996 and this confirmed that there was clear evidence of a performance decline. The IPAP final report, published in late January 1997, identified and

confirmed concerns in six programmatic areas: lack of a full understanding of the plant's design basis for the sample of systems reviewed, document control weaknesses associated with the Final Safety Analysis Report, a common theme of informality in a number of station processes, weaknesses in the implementation of the root cause program and corrective actions, weaknesses in problem identification reporting systems, and weaknesses with procedures and procedural adherence.

Human performance issues continue to occur across station departments and staff levels. Managers and supervisory personnel have been involved in a significant number of events. The 1997 refueling outage was completed in July 1997 and was generally well controlled; however, configuration and foreign material control problems occurred which were repetitive issues from the previous refueling outage. During the 1997 outage, significant equipment problems were identified which were the result of ineffective corrective actions from prior problems. During plant restart and post-outage operation, equipment problems adversely affected operation. Several plant shutdowns were necessary due to emergent and repetitive equipment problems. In October 1997, the plant was shutdown to address on-demand failures of some additional DB-50 breakers. These failures were not adequately resolved following the earlier failures in May and August 1997. During this October shutdown many additional significant equipment problems were identified requiring resolution prior to restart.

Very recently the licensee has taken steps to address the narrow scope of previous corrective actions and has made some senior management changes. However it is too early to determine the success of these changes.

SMM Discussion:

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

ARGUMENTS FOR INCREASING AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**
  - Significant weaknesses in problem identification. NRC continues to identify many problems not found by the licensee.
  - Root cause and corrective actions frequently narrow in scope.
- **Operational Performance (Frequency of Transients)**
  - Equipment issues continue to adversely impact plant operations and challenges to the operators (i.e. multiple Rx/turb. trips and forced outages).

- **Human Performance**

- Informalities in station processes, particularly procedure adherence, continue to occur across the station. Managers and supervisory personnel involved in events. Weaknesses in management oversight of field activities.
- Frequent failure to exhibit questioning attitude (e.g. recirculation pump flow anomalies)
- Poor procedure quality and work planning contributing factors to some events.

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

- Numerous, repetitive equipment problems in risk significant systems (e.g. EDG problems, DB-50 breaker failures)
- Maintenance backlogs are high.
- Poor work practices impacting on plant equipment (e.g. numerous FME problems)

- **Engineering and Design**

- Engineering frequently failing to effectively identify and resolve equipment issues. Root cause analysis process recently improved, but implementation mixed.
- NRC identified problems with engineering programs for Motor-Operated Valves, Fire Protection, and In service Testing.
- Weaknesses in the availability of design basis information.

### ARGUMENTS FOR MAINTAINING CURRENT AGENCY ATTENTION

- **Effectiveness of Licensee Self-Assessment**

- Very recent management changes made (e.g. Plant manager, VP - Ops and Engr.). Initial impact on equipment issues was good
- Very recent changes made aimed at improving offsite review committee role.
- Actions underway to improve corrective action processes.
- Some recent self-assessments strong.

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

- **Human Performance**

- Overall operator response to the numerous plant shutdowns and transients was good.
- The 1997 refueling outage was generally well-controlled .

- **Material Condition (Safety System Reliability/Availability)**
  - Recently, some areas of the plant, most notably the pipe penetration area in the PAB, have undergone improvement in appearance and condition.
  - Following the October 14, 1997, shutdown, Con Ed pursued resolution of long-standing equipment issues - shutdown ongoing as of mid-December.
- **Engineering and Design**
  - Changes were made to enhance root cause process since early 1997
  - Effort in response to the 50.54(f) letter appears to be sound.

In reviewing the plant's performance, the senior managers acknowledged that there has been mixed performance at Indian Point 2 since the last SMM. A fairly well executed outage that was extended during the summer to fix material condition is counterbalanced by continuing equipment problems affecting plant operations. There have been several strong self-assessments performed recently, but a number of issues continue to be identified by the resident inspectors. Changes have been made to the root cause analysis process, but engineering is still not effectively identifying and resolving equipment issues consistently. Equipment problems are occurring, some in risk-significant systems, but the licensee shut down the plant in October for a maintenance outage to address the DB-50 breaker issues. Subsequently, this evolved into an extended maintenance outage to address many longstanding equipment issues.

As noted in the last SMM, many of the issues at Indian Point 2 were associated with ineffective work control and corrective action processes, which allow a more measured regulatory approach, rather than performance and safety value issues, such as at Zion or Clinton) which would necessitate a strong and swift regulatory message. The senior managers acknowledged that there has been a declining trend, at least in terms of material condition problems that have emerged over the past year or so at Indian Point 2. However, the senior managers had difficulty in ascertaining the depth and breadth of other areas of concern, such as human performance issues. Much of the discussion among the senior managers centered around trying to determine what would be the appropriate regulatory tool to gather the needed information to make an appropriate judgement about Indian Point 2's performance, especially emerging human performance concerns. It was noted at the last senior management meeting that the region had recently provided a strong message to the licensee through a critical SALP report and a recent enforcement action resulting in a civil penalty. This was thought to be an appropriate level of action rather than sending a trending letter, as it would give the licensee time to respond to the message transmitted by the region and initiate appropriate actions. The senior managers noted that there are some indications that the licensee has responded to this message, though a definitive improvement trend is not yet apparent. It was recognized that there is an AE inspection and a corrective action program inspection scheduled in the near future, which would allow for further insights to be gathered. It was also recommended that a focused operationally oriented inspection (such as an Operational Safety Team Inspection (OSTI)) be conducted in the near future to determine if some of the recently identified examples regarding human and operational performance issues are indicative of deeper-seated problems.

## INDIAN POINT 2 SUMMARY

In summary, in reviewing the considerations for maintaining agency attention at Indian Point 2, the senior managers noted that concerns about operational performance problems are just recently emerging, and that a focused inspection to better assess the breadth and depth of this concern is warranted. The senior managers also viewed positively recent actions by the licensee to improve areas noted as weaknesses by the region in its SALP report, such as the root cause identification process, self-assessments, corrective actions and longstanding equipment problems. In reviewing the considerations for increasing agency attention at Indian Point 2, the senior managers were most concerned with the continued material condition deficiencies, indications of human performance issues, and the licensee's lack of effectiveness in recognizing its performance problems. On balance, the senior managers agreed that there are indications that the licensee's performance may still be declining, but that more focused inspections are needed before the senior managers could adequately characterize the depth and breadth of the issues. The senior managers determined that no agency-level action would be taken at this time, but that Indian Point 2 would continue to be watched closely, particularly the results of the currently scheduled inspections (including an OSTI).

### OCONEE 1, 2, AND 3

#### Background Information:

Oconee Units 1, 2, and 3 were first discussed at the January 1992 SMM and have not been discussed since. During the past six months, the facility has experienced one reactor trip, six shutdowns, and six power reductions as a result of equipment related problems. Several of these occurrences were determined to have been risk significant and self-revealing events resulting in unnecessary transients. These events include: a crack in a high pressure injection (HPI) line which resulted in an unisolable reactor coolant leak, the catastrophic failure of an HPI pump performance due to inadequate NPSH, an inaccurate level indication and operation of the plant outside of the "letdown storage tank level vs. pressure" curve, and emergency power supply issues. Significant escalated enforcement (Severity Level II with \$330,000 Civil Penalty) was issued for the events involving the HPI system.

There has been a general decline in performance in the operations and engineering areas. Performance of complex and special evolutions by operators was generally good, however routine evolutions were characterized by instances of performance problems and longstanding problems with procedure quality, which have yet to be resolved. Engineering performance has been challenged by a large workload, including extensive modifications to the safety-related low pressure service water system and other longstanding design issues. Overall maintenance performance was satisfactory, although a significant number of examples of poor performance were identified that negatively affected plant operations and personnel safety. Several of these involved programmatic shortcomings in maintenance programs.

#### SMM Discussion:

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