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NRC Senior Management Meeting Summary
January 14, 15 and 17, 1997
Region IV

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-second such meeting in Region IV on January 14-15 and continued the meeting in NRC Headquarters on January 17, 1997. The last meeting was held in Region III in June 1996. The meeting in Region IV was structured to review the status of the Watch List plants identified at the last meeting and to review the performance of other plants to determine if any changes should be made to the list of facilities which require close monitoring by NRC.

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

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

1. Plants removed from the list of problem facilities.

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

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

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

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

Plants in this category have been identified as having significant weaknesses that warrant maintaining the plant in a shutdown condition until the licensee can demonstrate to the NRC that adequate programs have been established and implemented to ensure substantial improvement.

The 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:

<u>Meeting Dates</u>	<u>Category 3</u>	<u>Category 2</u>	<u>Category 1</u>
JAN 14-15, 1996	Millstone 1,2&3	Crystal River 3 Dresden 2&3 Indian Point 3 LaSalle 1&2 Maine Yankee Salem 1&2 Zion 1&2	
JUN 4-5, 1996	(1)	Dresden 2&3 Indian Point 3 Millstone 1,2&3	Browns Ferry 3

<u>Meeting Dates</u>	<u>Facilities for Priority Attention</u>
JAN 14-15, 1997	None
JUN 4-5, 1996	None

NRC senior management will continue to hold meetings to review the status of all reactor and materials licensees on an approximate six-month frequency. Recommendations will be made during those meetings to add or delete licensees from the list of facilities requiring increased NRC attention based on demonstrated performance. This program represents a concerted effort by the NRC senior management to focus NRC resources on those plants and issues that need to be addressed to assure adequate protection of public health and safety.

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

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Specific Discussion of Problem Facilities

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

None.

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

CRYSTAL RIVER 3

Declining performance at Crystal River 3 was first discussed during the June 1996 Senior Management Meeting. Performance concerns at Crystal River 3 involved Florida Power Corporation's (FPC) mishandling of several design issues, their interpretation of certain NRC regulations, and weaknesses in operator performance, corrective actions, and management oversight. Overall performance at the facility continued to decline from the previous assessment period as evidenced by reduced performance in operations, engineering and plant support. Self-assessments and quality assurance functions have been only minimally effective across the functional areas.

NRC has developed the following five areas of concern since June 1995:

Insufficient management oversight and involvement. This area includes corrective action program and quality assurance program ineffectiveness.

Marginally effective engineering organization. This area includes design control errors, design outputs missing or improper, and failure to follow procedures

Lack of an adequate understanding and knowledge of the Crystal River 3 design basis. This area includes a lack of understanding of the plant's design basis, weaknesses in the original plant design, and an inadequate understanding of design margins.

Lack of sensitivity for the need to comply with regulations. This area includes a lack of sensitivity/understanding of NRC regulations and regulatory requirements.

Operator performance. This area includes a poor safety focus on refueling activities, and poor communication within operations and with other site groups.

FPC has initiated extensive corrective actions which remain to be demonstrated as effective. The licensee's recent decision to keep the plant shut down to effect engineering evaluations of

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questionable safety systems' margins, including Emergency Diesel Generator loading and Emergency Feedwater System vulnerabilities, was prudent. Some improvement was noted in problem identification, but this was offset by relatively poor performance in root cause analysis and corrective actions. Self-assessments appeared ineffective and quality assurance involvement was insufficient. The effectiveness of the newly-revised corrective action plan will be measured by FPC's implementation of the proposed actions and actual future performance. The initiatives in this plan will be led by FPC's new site management team, which has yet to be formed.

The senior managers' review of the safety performance indicators for Crystal River 3 did not reveal any noteworthy performance insights. However, the senior managers observed that, although the prior operating history of the plant was good and plant maintenance was effective, recent balance of plant problems resulting in plant transients warrant additional licensee management attention.

The senior managers considered the merits for increasing agency attention at Crystal River. The senior managers reviewed the licensee's operational safety performance since the June 1996 SMM, the recent engineering problems, the attributes of declining performance discussed above as well as that evidenced in the recent Systematic Assessment of Licensee Performance, and the number and the severity of recent NRC enforcement actions. The senior managers acknowledged the licensee's recent management changes, process and personnel improvement initiatives, and the recent conservative decision to remain shutdown to address engineering issues. However, the recent decline in the overall safety performance at Crystal River, including the weaknesses in the licensee's design change processes which manifest significant contemporary design flaws, led the senior managers to conclude that additional agency attention was warranted. Crystal River 3 was placed on the Watch List as Category 2 plant.

COMMONWEALTH EDISON

Since the June 1996 Senior Management Meeting (SMM), Commonwealth Edison (ComEd, the licensee) has reacted to significant performance problems at almost all of its six nuclear sites. During this same period, ComEd has significantly increased its allocation of resources (on the order of \$200 Million) to address its system-wide performance problems. In addition, significant changes were made at the senior management level to provide better and more focused oversight and guidance to the nuclear sites.

In response to the findings of the NRC's Independent Safety Inspection at the Dresden Nuclear Station, and other recent NRC

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inspections and self-assessments at LaSalle, Zion and Dresden, ComEd directed that each site initiate actions to improve the quality, maintenance, and accessibility of design information. Actions in progress or planned include the following: validate the UFSAR information for selected systems against operating and surveillance procedures; establish engineering oversight teams to review operability and 10 CFR 50.59 safety evaluations; review Technical Specification interpretations against corresponding requirements; perform Safety System Functional Inspections on selected safety-related systems; review the in-service testing program against design basis criteria; establish an Engineering Assurance Group to provide oversight of key engineering activities; and, revise applicable procedures to provide specific guidance to engineering staff on actions to take in response to potential design basis discrepancies.

In addition, using a team of industry peers and INPO representatives, ComEd performed an Independent Safety Assessment (ISA) at LaSalle and Zion. The ISA, which was intended to be a comprehensive review of the historical performance of each plant, found similar performance problems at LaSalle and Zion. The ISA attributed the principal reasons for the problems to the lack of teamwork, trust, accountability and first line management involvement, poor leadership, and ineffective change management. The ISA's findings were consistent with prior NRC inspection observations and performance assessments.

ComEd has implemented a number of initiatives to improve its performance; however, as discussed in the following discussions regarding Dresden, LaSalle and Zion, significant problems persist. The senior managers expressed concern regarding the continuing history of performance problems at ComEd facilities. Also, they were concordant in their view that the improvements at Dresden must continue and that substantial improvement must be effected at LaSalle and Zion. The senior managers indicated that the needed safety performance improvements must be achieved without countervailing negative effects at the other ComEd nuclear units.

The senior managers concluded that the Executive Director for Operations should send a letter, pursuant to 10 CFR 50.54(f), to the Chief Executive Officer of Commonwealth Edison requesting information that will allow the NRC to determine if the licensee can operate six nuclear stations simultaneously while maintaining more than marginal safety performance.

DRESDEN 2 & 3

Dresden was first placed on the NRC Watch List in June 1987, removed in December 1988, and again placed on the Watch in January 1992. Significant contributors to the decision to place

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Dresden on the Watch List a second time included weaknesses in: procedure quality and adherence, communications, execution of management expectations, plant material condition, supervision and control of work activities, work performance, and engineering and licensing support. During the June 1996 Senior Management Meeting (SMM), senior managers concluded that an independent special team should be formed to evaluate the performance of Dresden station. This evaluation was conducted in the Fall 1996 and the results were presented to the senior managers at the January 1997 SMM.

The conduct of operations and the performance of control room operators continued to be good. The continued good performance appeared to be the result of management initiatives that included reinforcing standards and expectations to operations staff. Control room operators properly controlled operational activities, strictly adhered to procedures in most circumstances, and communicated effectively. Operations personnel exhibited a conservative operating philosophy in the control room during most plant evolutions and responded well to a number of significant equipment problems since the last SMM, including a failed recirculation pump motor on Unit 3, and feedwater control problems. Operators also demonstrated a questioning attitude which facilitated prompt identification of potential problems. Outside the control room, several operator errors occurred which indicated that the rigor and attention to detail seen in the control room has not been consistently implemented in the field.

During the last six months, significant improvement was made in the material condition of the plant and the knowledge, skills, and abilities of maintenance personnel. However, emergent work activities continued to hamper the licensee's ability to conduct planned work; thereby, adversely affecting the ability to reduce work backlogs to desired levels. Also, while the planning and scheduling of work activities improved, weaknesses with work control, work packages, scheduling, and rework contributed to the work backlog problem. Long-standing programmatic problems with the in-service test (IST) program and surveillance testing continued to result in the failure to detect degraded systems and components.

There was improved performance in the area of engineering support to the station, particularly associated with system engineering. Greater engineering involvement in resolving material condition deficiencies has resulted in some equipment performance improvements. However, emergent issues and the large engineering backlog diverted the focus of the Engineering organization from significant long-standing problems and was an impediment to quality engineering products. Furthermore, significant weaknesses were identified by the NRC's Independent Safety Inspection team in the area of design control. For example, the licensee failed to maintain the design basis of the containment

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cooling service water system, significant weaknesses were exhibited in the control of design basis calculations, and evaluations of plant modifications did not consistently identify system impacts.

The senior managers discussed the safety performance of Dresden in light of the above discussions and using the SMM Watch List removal evaluation factors (Attachment 7). The senior managers discussed the insights from the Dresden ISI which found that while overall safety performance had improved, the pace of improvement was slow and varied. The senior managers acknowledged that significant improvement was evident in the area of operator performance, although challenges continued in the areas of identification and resolution of material condition problems. The significant reduction in personnel exposure and contamination events was noted and some improvements were observed in the maintenance process and in the material condition of the plant. However, the senior managers recognized that Dresden continues to be challenged by the high level of emergent work and the large maintenance backlog, and that weaknesses persist in the licensee's corrective action programs. The senior managers also discussed the evidence of improvement in the identification of significant testing issues and noted progress in addressing significant design/licensing basis issues. In summary, the senior managers agreed that significant challenges to continued improvement at still exist at Dresden and that a heightened level of agency attention to Dresden should be maintained. Dresden remains on the NRC's Watch List as a Category 2 facility.

LaSalle 1 & 2

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

LaSalle's performance since the last SMM has declined. In June 1996, a risk significant event occurred involving the injection of large quantities of expandable foam sealant into the safety-related service water tunnel. This event caused two major plant transients, threatened the operability of the emergency service water system, and significantly challenged the operators. This event provided the NRC with a number of insights into licensee performance. The event demonstrated that work controls had broken down, revealed previously unidentified material condition

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problems, and disclosed significant engineering weaknesses in support of plant operations.

Overall, Operations performance declined. Performance was characterized by increased operator errors and non-conservative decisions. Procedure weaknesses contributed to poor operator performance when operators became desensitized to procedure problems, working around them instead of initiating appropriate corrective actions. Also, degraded equipment continued to challenge operators and adversely impact plant operations. For example, Unit 1 was manually scrambled due to turbine bearing high vibrations caused by improper clearances, and problems with the Unit 2 turbine control and bypass valves resulted in a forced outage.

While corrective actions have been taken to address longstanding material condition problems, work control weaknesses, a large amount of emergent work, rework, and difficulties in planning and executing maintenance activities hindered progress in implementation of the station's material condition improvement plan. Also, personnel performance errors, inattention to detail, and poor skill of the craft resulted in degraded equipment condition and significant rework. For example, inadequate maintenance performed on a reactor water cleanup valve resulted in a resin intrusion into the reactor coolant system, delaying unit startup for two weeks.

Engineering performance was characterized by weak or inaccurate root cause evaluations, untimely corrective actions, non-conservative operability determinations, tolerance of material condition deficiencies, and the failure to use the design control process properly. For example, failure to implement corrective actions following a previous RCIC rupture disc event resulted in the same event occurring in August 1996. The identification and documentation of engineering problems was considered poor and deviations between plant hardware configurations and the corresponding descriptions in the UFSAR contributed to incorrect design calculations.

Radiological control performance continued to improve and the licensees efforts have reduced the very high source term to a more manageable level. Although there were still some instances of weak ALARA planning and poor radiological work practices, the number and significance of events decreased and the station dose continued to remain at historically low levels. While this area still warrants licensee management attention, it appears to be on an improving trend.

In light of the above discussion, the senior managers debated the merits of increasing the agency's attention at LaSalle. A review of the safety performance indicators for LaSalle did not reveal any significant or compelling insights. The senior managers

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acknowledged the conservative decision by licensee management to maintain both units shut down to address the recent human performance and hardware deficiencies. The senior managers also noted that the licensee appears to understand the scope and significance of its problems due, in part, to the findings of the Independent Safety Assessment (ISA). The senior managers recognized that the licensee has developed a detailed restart action plan and a plan to effect long-term performance improvements in all functional areas. The licensee's management changes and its commitment to significant improvement initiatives in engineering were also discussed.

The senior managers discussed the results of the recent Systematic Assessment of Licensee Performance (SALP) report which resulted in Category 3 ratings in all functional areas except plant support. The senior managers also discussed the LaSalle service water event and were concerned with the non-conservative decisions by both plant operators and plant management. The senior managers also discussed the instances of failure to use the engineering design change process to control plant modifications and noted the significant weaknesses in root cause evaluations and operability determinations. The senior managers observed that because of the licensee's inability to demonstrate progress in its improvement initiatives at LaSalle, design deficiencies persisted, poor plant material condition continued to challenge operators, personnel performance errors resulted in inoperable safety equipment and loss of configuration control, and work planning and maintenance activities remained weak. The senior managers determined that it was premature to assess the impact of the licensee's restart and long-term improvement plans of the recent licensee management and organizational changes. Given the scope and significance of the performance problems at LaSalle, and considering the chronic safety performance problems of ComEd facilities, the senior managers concluded that a heightened level of agency attention was warranted. LaSalle was placed on the NRC's Watch List as a Category 2 facility.

ZION 1 & 2

Zion was on the NRC's Watch List as a Category 2 facility from January 1991 until January 1993, when it was removed from the list based upon improved performance. However, Zion stopped improving shortly after being removed from the Watch List. The licensee was unable to maintain a course of improvement; it continued to display a lack of teamwork, and lacked aggressive leadership. Efforts to improve material condition, upgrade operator performance, and efficiently plan and execute work had little effect, resulting in stagnant performance.

Zion's performance since the last SMM has not improved and remains mixed. Operator performance was inconsistent with

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frequent operational events and personnel errors. The increasing trend in personnel errors was the result of a lack of attention to detail, lack of a questioning attitude, and insufficient self-checking. There was some progress in improving control room standards and communications; however, inadvertent changes to the status of operating equipment, and lapses in plant configuration control continued. Plant management has not been successful in correcting work-arounds and poor material condition, resulting in significant challenges to operators. Management efforts to improve operator performance have also not been effective.

While the licensee took steps to address the number of significant material condition problems, including implementation of a twelve-week rolling maintenance schedule, numerous equipment problems continued to adversely affect plant operation. The maintenance backlog problem has been compounded by the inability of maintenance personnel to do work correctly the first time. A lack of attention to detail, poor adherence to procedures and work instructions, and an inadequate preventive maintenance program contributed to equipment problems. For example, two electro-hydraulic control oil spills occurred due to maintenance mechanics installing bolts of an incorrect length for the moisture separator reheat intercept and stop valve orifices. Despite the licensee's efforts to enhance the maintenance training program, significant weaknesses continue to be identified.

Recent inspections in the area of Engineering identified significant deficiencies in the overall execution of engineering activities. An ineffective 50.59 safety evaluation process, weaknesses in the ISI program, inadequate modification closeout and post-modification testing, lack of control and understanding of the Technical Specification Interpretation process, inadequate identification and resolution of recurring equipment deficiencies, and poor procedure adherence and quality reflected significant weaknesses in engineering support to the station.

A decline in performance continued to be evident in the radiological controls area. Historically, Zion has one of the highest source terms among PWRs in this country. While the licensee has made some progress in source term reduction and ALARA planning, these improvements were diminished by inadequate procedure and radiation work permit adherence, as well as weaknesses in the control of radioactive material and the posting of radiological hazards.

The senior managers debated the merits of increased agency attention at Zion, in light of the above discussion. A review of the safety performance indicators for both Units revealed above average incidences of automatic scrams while critical and, for both Units 1 and 2, above average instances of safety system failures. The senior managers noted that while Zion management

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appears to understand the scope of its performance problems, they also believe that the Independent Safety Assessment findings at Zion, which in many respects mirrored previous NRC assessments, reflect an historical view of Zion and do not necessarily represent the station's current level of performance. The senior managers acknowledged the measured improvements in problem identification, improved conduct of control room operations, and improved work control and planning. Zion's recent management and organizational changes and the licensee's commitment to significant improvement initiatives in Engineering were also noted.

The senior managers agreed that Zion's performance has declined since the plant was removed from the list in 1993 and noted that no appreciable performance improvements have occurred since the June 1996 SMM. The senior managers also commented on the tendency of ComEd to focus its attention on the plants that are receiving the most NRC attention and indicated that this may have contributed to the cyclical performance at Zion, as well as other ComEd nuclear facilities. The senior managers noted that while Zion has not experienced a significant operational event similar to the service water event at LaSalle, Zion exhibited many of the same performance attributes that contributed to the LaSalle event. For example, significant weaknesses in Engineering persist, including weak modification processes, ineffective resolution of design problems, and inadequate safety and operability evaluations. In addition, the absence of progress in improving the material condition of the plant, chronic work process problems, and the failure to stem the human error rate, represent significant operational safety concerns. Based on their discussions, the senior managers concluded that increased agency attention was warranted at Zion. Zion was placed on the NRC's Watch List as a Category 2 facility.

INDIAN POINT 3

The Indian Point 3 (IP3) Nuclear Power Plant has been discussed during every SMM since June 1992. The facility was placed on the Watch List as a Category 2 facility in June 1993. The plant was restarted in June 1995. Performance during restart was generally good. However, a series of plant events occurred over the next six months which led to two escalated enforcement actions and a long forced outage. A series of additional equipment problems coupled with extensive corrective actions initiated by the licensee to improve operator performance and the quality of operations procedures extended this forced outage until late March 1996. Since starting up in April 1996, the plant has operated continuously, although a number of power reductions have been conducted in response to equipment failures.

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NYPA management has exhibited a strong presence and effective involvement during special plant evolutions and major maintenance activities and has displayed a generally conservative approach to plant operations. The rate and significance of human errors have been reduced, but some errors continued and were related to work and configuration control processes. The ability to self-assess has been demonstrated by senior licensee managers, but performance of this function at lower management and supervisory levels has been mixed. Operator performance, particularly in the areas of problem identification, shift turnover and formality, and conduct of operations, improved in 1996.

Maintenance activities are generally well performed and the corrective maintenance backlogs were reduced over the past six months. However, plant material condition and emerging equipment issues continue to challenge the organization, particularly the operators, and impacted on plant power operations. The engineering organization has made some measurable progress in addressing performance concerns, but dealing with continual emergent work has hampered its ability to take needed actions to improve equipment reliability, reducing engineering backlogs and address long-term performance improvement efforts. Although engineering support to operations has improved substantially over the past few months, there have been inconsistencies in the quality of work. Many engineering improvements were recently implemented and require further evaluation to determine whether they can be sustained. Plant support functions continue to be excellent overall, contributing to safe plant performance.

The senior managers reviewed the safety performance indicators for IP3 and concluded that no short term performance trend for IP3 can be drawn due to the brief periods of power operation between 1993 and mid-1996. The senior managers discussed the merits of removing IP3 from the NRC Watch List in light of the above discussions and using the SMM Watch List removal evaluation factors (Attachment 6). The senior managers observed that although IP3 has demonstrated improved operational performance, equipment problems posed frequent challenges, resulting in a number of power reductions. Since the return to service in April 1996, these emerging equipment problems caused the engineering organization, in particular, to be reactive and limited their ability to take needed actions to improve equipment reliability, reduce engineering backlogs and remedy performance weaknesses. NYPA is developing plans for the upcoming refueling outage in April 1997 which will address many of these emerging equipment issues. In summary, the senior managers concluded that an additional period of monitoring is necessary to determine whether lasting improvements have been made. This will include at least an assessment of the outage scope and preparation; it will also include the monitoring of operations and work control during some portion of the outage. They concluded that Indian Point 3 would remain on the Watch List as a Category 2 plant.

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MAINE YANKEE

This is the first time that Maine Yankee Nuclear Power Station has been discussed at the Senior Management Meeting. In December 1995, Maine Yankee drew increased regulatory attention as a result of allegations that the licensee had knowingly misrepresented or failed to communicate to the NRC problems with the RELAP5YA computer code used for small break loss of coolant accident (SBLOCA) analyses and that Maine Yankee did not comply with several TMI Action Items (II.K.3.5.30 and 31) related to SBLOCA analyses. The NRC responded by issuing an order on January 3, 1996, limiting power to 2440 MWt (vice 2700 MWt) and containment pressure to 2 psig (vice 3 psig.) This issue has not yet been resolved.

Although Maine Yankee had been previously viewed as a good performing plant, inspections over the past six months revealed significant problems in facility operations. The Independent Safety Assessment (ISA) team inspection performed at Maine Yankee showed an organization with mixed performance. Although considered to be strong in some operational aspects, significant weaknesses in equipment monitoring, testing, engineering and licensing support have allowed plant material conditions to deteriorate and safety margins to be reduced. While cycle specific analytical codes were considered excellent, complex and infrequently used codes were considered weak. The relatively high threshold that plant personnel placed on problem identification prevented a number of issues from rising to management's attention. Lowering this threshold has resulted in a number of recently identified design issues. The ISA identified several root causes for the performance problems, including: (1) economic pressure to be a low-cost energy producer, thus limiting resources to address corrective actions and plant improvements; and (2) a lack of a questioning attitude resulting in the failure to identify and promptly correct problems in areas perceived by management to be of low safety significance. In a letter dated December 10, 1996, responding to the results of the ISA, Maine Yankee indicated its general agreement with the ISA findings.

As a result of reviews prompted by the NRC associated with Generic Letter 96-01, "Testing of Safety-Related Logic Circuits," the licensee recently identified deficiencies involving cable separation and additional logic testing problems. These deficiencies resulted in the licensee shutting down the plant and the region issuing a confirmatory action letter on December 18, 1996. This letter confirms Maine Yankee's intentions to remain shut down until it develops a plan for identifying and resolving all safety related cable separation problems, performs a root cause evaluation, meets with Region I management to discuss the results and conclusions, and obtains the Regional Administrator's concurrence on restart readiness.

The licensee is a small company with limited resources operating in a changing regulatory and cost-competitive environment. Over the past several years, Maine Yankee experienced substantial problems with its steam generators, leading to an extensive effort in 1994-95 in which every steam generator tube was either sleeved or plugged. Although this was generally considered a well-managed project, the lengthy shutdown and financial aspects of this effort may have played a role in diverting Maine Yankee's focus on other aspects of plant operation. In addition, to supplement its resources, Maine Yankee utilizes a prime contractor (Yankee Atomic Energy Company (YAEC)) for design engineering support. This relationship has suffered from a weak and sometimes inadequate interface between YAEC and corporate engineering.

A utility-sponsored cultural assessment of the Maine Yankee organization was conducted in 1996 by an independent party. This assessment identified that the Maine Yankee organization had an ineffective change management process and a weak integrated corrective action process. The assessment also indicated that a change in the "way of doing business" was needed to support facility operations.

To address its performance problems, the licensee recently initiated some management changes. In addition, on January 7, 1997, Maine Yankee announced that they were entering into a contractual agreement with Entergy to provide management services. This agreement is expected to be formalized in the near future after Entergy completes a due diligence review. Maine Yankee will meet with the Commission on February 4, 1997, to discuss its performance and future plans.

The senior managers deliberated vigorously on the arguments for increasing agency attention at Maine Yankee. A review of the safety performance indicators for Maine Yankee indicated a plant with generally average safety performance. The senior managers were concerned about the weaknesses in the licensee's corrective action process, the lack of a questioning attitude by plant personnel and the high threshold for problem identification, which were described in the ISA team report and the 1996 Maine Yankee cultural assessment.

While considering the matters discussed above, the senior managers were troubled by the ongoing design and configuration control issues that have been identified by both the NRC staff and the licensee. The senior managers expressed concern about the scope and significance of the engineering problems which have been exacerbated by narrow system design margins, weaknesses in surveillance and testing programs, and material condition deficiencies. While acknowledging the inherent capability in the Maine Yankee and YAEC engineering organizations, the senior managers observed that the weak interface and lack of ownership

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between these organizations have been evident in the earlier failures to deal effectively with licensing and safety issues and have contributed to weak safety evaluations. The senior managers also recognized Maine Yankee's plans to remedy engineering problems, including a commitment to additional funding, and is aware of the licensee's plans to hire new staff in the areas of engineering, maintenance and radiological controls.

The senior managers noted that a confirmatory action letter was issued to Maine Yankee Atomic Power Company (the licensee) in December 1996 to record the staff's understanding of the actions that the licensee would take prior to restart to address the identification and resolution of cable separation issues at Maine Yankee. The senior managers observed that it was premature to assess the impact of the Entergy arrangement with Maine Yankee, and noted that the licensee's overall improvement plans should include an aggressive effort to uncover any remaining engineering problems. Because of the nature of performance problems at Maine Yankee, particularly in the areas of engineering, design, testing, plant configuration control, and the fact that improvement initiatives have only recently begun, the senior managers concluded that increased agency attention was warranted. Maine Yankee was placed on the NRC Watch List as a Category 2 plant.

SALEM 1 & 2

The licensee's performance at the Salem facilities was discussed during the January 1990 and January 1991 Senior Management Meeting (SMM) and during each SMM since June 1994 due to frequent operational transients (which were initiated or complicated by equipment failures, mainly in balance of plant systems), procedural adherence problems, poor root cause determinations, and less than adequate management oversight. NRC Augmented Inspection Teams (AIT) were dispatched to Salem every year between 1991 and 1994. In March of 1995, the EDO, Director of NRR, and Regional Administrator met with the Public Service Electric and Gas (PSE&G, the licensee) Board of Directors to ensure that the Board understood NRC's concerns about Salem's equipment reliability and staff performance. Salem's two units were subsequently shut down in May and June 1995 to address equipment operability issues. PSE&G decided to keep the units shutdown to fix longstanding concerns with equipment deficiencies, personnel errors, ineffective corrective actions and weak management oversight. The NRC issued a Confirmatory Action Letter in June 1995 to confirm the licensee's agreement not to restart without NRC approval. The NRC's Salem Restart Panel has since been monitoring the licensee's progress.

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The new senior licensee management team endeavored to inculcate high safety standards into the organization. This was evidenced in the following ways: the entire management team was rebuilt with managers from other utilities with proven experience; the entire operations and maintenance staffs received extensive training through an "intervention program" to instill a stronger safety ethic and to communicate management's expectations; the threshold for entering items into the corrective action program was significantly lowered; the licensee proactively identified and corrected longstanding equipment problems and safety issues. The implementation of an employee concerns program (ECP), which recently received a favorable assessment by an independent firm familiar with ECP issues, underscored the licensee's desire to address employee concerns. Additionally, the licensee developed and implemented an extensive set of performance indicators to aid in monitoring readiness for restart.

The licensee's overall safety performance at Salem over the last six months has shown improvement. The staff observed that operators have demonstrated improved ownership of plant activities, engineering performed well in addressing licensing basis conformance issues and in developing an FSAR project plan, and the integrated test program has been staffed by a separate organization that is charged with testing corrective actions at the component, system, and plant level. However, certain weaknesses continue to emerge which hamper progress: a series of maintenance errors during the summer of 1996 prompted the "intervention program" noted above; and lapses in the performance of the Management Review Committee resulted in prematurely closing out some incomplete restart packages. Because both units have been shut down since mid-1995, a review of the safety performance indicators for Salem did not facilitate any insights regarding short term performance trends.

PSE&G is moving towards restart readiness for Salem Unit 2. The steam generator replacement project for Unit 1, in which replacement steam generators from the cancelled Seabrook Unit 2 are currently being installed, is progressing well under the management of a large project team. The region has formed a restart assessment team to evaluate restart readiness over the next few months.

The senior managers reflected on the issues discussed above and were in general agreement regarding the continuing trend in performance improvement at Salem. There is evidence of conservative decision making on the part of both management and operators, management accountability is strong, and there is a consistently low threshold for problem reporting. An extensive retraining program for operators was completed, contributing to improved operator performance, and there was a marked increase in engineering training. The licensee has also engaged in a substantial dual-unit outage in which a wide range of issues

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involving poor material condition, equipment performance, and operator work-arounds have been addressed.

The senior managers discussed openly the basis for the decisions regarding Salem from the previous SMMs. It was generally concluded that previous decisions were influenced by the significant improvement efforts being made by the new management team. As a practical matter however, given the scope and depth of equipment and human performance related problems at Salem which preceded the 1995 plant shutdowns, NRC has for the past year or so dedicated additional resources to monitoring PSE&G recovery efforts. In light of this significant NRC oversight at Salem, the senior managers reviewed the licensee's performance as if Salem were a Category 2 plant using the SMM Watch List removal evaluation factors (Attachment 6). While the improving trend in performance has continued, consistent with the licensee's projections and staff assessments, both units remain shutdown. The senior managers noted that a confirmatory action letter was issued to PSE&G in June 1995 to record the staff's understanding of the actions that the licensee would take to address the performance issues at Salem prior to restart. The senior managers concluded that Salem has yet to demonstrate a period of safe performance while at power; thus, the heightened level of agency attention should be maintained. In summary, because the significant ongoing commitment of NRC resources to the Salem facility is commensurate with that of a facility on the NRC's Watch List, Salem was placed on the Watch List as a Category 2 facility.

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

MILLSTONE 1, 2 and 3

This is the eleventh Senior Management Meeting (SMM) since June 1991 during which a Millstone facility has been discussed. Northeast Nuclear Energy Company (NNECO, the licensee) has not been effective in addressing significant performance problems such as procedural adherence, work control, employee concerns, corrective actions and engineering effectiveness. Following the January 1995 SMM, NRC senior managers met with the Northeast Utilities' (NU) Board of Trustees on March 17, 1995, to communicate the NRC's concern over Millstone's continued poor performance. In January of 1996, the three units at the Millstone Nuclear Power Station were designated as a Category 2 facility on the NRC's Watch List. In June of 1996, the plants were designated as a Category 3 facility on the NRC's Watch List.

The NRC's level of interest and involvement in assessing Millstone activities has heightened over the past 15 months. In early 1996, a senior resident inspector was dedicated to each unit, and an SES manager was placed in charge of overseeing

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Millstone Station activities. The NRC issued to NNECO a letter on December 13, 1995, requiring that before Unit 1 restarts, pursuant to 10 CFR 50.54(f), that the operation of the facility is conducted in accordance with its license, the Commission's regulations, and the plant's Updated Final Safety Analysis Report (UFSAR). Similar letters were sent to NNECO for Units 2 and 3 on March 7 and April 4, 1996, respectively.

All three Millstone units are under NRC Manual Chapter 0350 guidance with respect to restart readiness. There are two orders outstanding that require actions by the licensee before restarting any of the units. On August 14, 1996, the NRC issued a Confirmatory Order directing NNECO to establish an Independent Corrective Actions Verification Program (ICAVP) to verify the adequacy of NNECO's efforts to establish adequate design basis and design controls. On October 24, 1996, the NRC issued an order directing that before the restart of any unit, NNECO must develop and submit to the NRC a comprehensive plan for reviewing and dispositioning safety issues raised by its employees, and ensuring that employees who raise safety concerns can do so without fear of retaliation. NNECO has recently notified the NRC of its selection of Sargent and Lundy for the ICAVP effort and Little Harbor Consultants, Inc. for the employee concerns program effort. The staff is currently reviewing the qualifications and independence of these organizations and the proposed team members.

In September 1996, NNECO initiated a major reorganization. The president and all but one of the vice presidents were removed. The new president established recovery teams for each of the units, led by loaned managers from other utilities (Unit 1-PECO, Unit 2-VEPCO, and Unit 3-CP&L). The recovery managers arrived on site October 7, 1996, and essentially altered the entire approach for recovery of the units that had been in place for the previous six months. Instead of an integrated approach involving all of the NU plants, each unit recovery officer is proceeding independently. Recently, it was announced that the CP&L employee acting as the recovery manager for Unit 3 will leave the site at the end of January 1997 to become the Site Vice President at Crystal River.

Previous NRC and licensee assessments have identified several fundamental problems with the licensee's performance. These underlying problems include: ineffective management practices -- including insensitivity to employee concerns, misdirected cost savings efforts, inability to plan and schedule work, and lack of regard for the licensing and design basis; poor implementation of corrective actions -- such that they have been incapable of identifying trends, performing root causes, and achieving timely or effective corrective actions; continued problems resolving employee concerns -- even though NU has taken some corrective actions, strengthening the employee concerns program and

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improving its approach to employee relations; inadequate work control practices -- especially Units 1 and 2, such that productivity is poor and large backlogs in maintenance and engineering have persisted; problems with procedural adherence and quality -- a longstanding issue at Millstone and has been the subject of a "procedure upgrade program" since 1991; ineffective quality assurance and oversight -- to the extent that a recent JUMA audit characterized the program as "dysfunctional"; inadequate configuration management -- which came to light in the wake of investigations into Unit 1's refueling practices and has resulted in over 100 10 CFR 50.72 reports in 1996, mostly related to design issues identified during engineering configuration management reviews.

The agency has accumulated enforcement issues for the Millstone site since late 1995, combining regional issues with those from the special inspection conducted in 1996. Over 60 items were identified, ranging from engineering design issues to Office of Investigation (OI) findings from wrongdoing cases. The OI findings are still being reviewed, however, a pre-decisional enforcement conference on non-OI related issues was conducted on December 5, 1996. In addition, although agency deliberations on these matters are ongoing, a substantial civil penalty is anticipated.

On November 3, 1996, in order to consolidate the agency's efforts with respect to Millstone, the Special Projects Office (SPO) was formed. This office reports directly to the Director of the Office of Nuclear Reactor Regulation. SPO has developed a Restart Assessment Plan, which contains all of the NRC restart issues, including the salient aspects of MC 0350. In addition to assuming responsibility for all of the inspection and licensing activities at Millstone, the SPO has also assumed responsibility for oversight of the ICAVP.

In light of the above, the senior managers discussed the performance of Millstone and concluded that no change in the agency's position regarding the Millstone station was warranted. Millstone will remain on the NRC's Watch List as a Category 3 facility.

Other Plants Discussed

CLINTON

Clinton Power Station was discussed at the Senior Management Meeting for the first time since 1991, due to an overall decline in plant performance during the past year. The seriousness of the decline was clearly demonstrated in September 1996 when Clinton's operations department put into motion a sequence of events associated with a reactor recirculation pump seal failure which revealed significant deficiencies at the facility. These

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deficiencies included problems with procedural adequacy and adherence, lack of rigor in conducting operations, and weak engineering support to operations. Most significantly, the deficiencies included significant lapses in safety focus, where managers and staff were not knowledgeable of their basic responsibilities and where it appears plant management made decisions which placed plant operations ahead of plant safety.

Operations performance continued to decline over the last six months. Operational response to complex evolutions and transient conditions, as well as some routine evolutions, demonstrated a general non-conservative or inattentive approach to the conduct of operations. For example, in an effort to keep the plant operating, operators took extraordinary actions which were in violation of station procedures and contributed to the failure of a reactor recirculation pump seal. Actions necessary to place the plant in a stable condition were not taken. Also, inattention to detail resulted in operator's failure to adequately monitor suppression pool level, resulting in an EOP entry for high suppression pool level.

While the material condition of the plant improved as a result to a concerted effort by operations, maintenance, and engineering, equipment problems continued to complicate plant transients and contributed to operator work-arounds. For example, long-standing problems with the drywell floor drain sump monitoring system adversely affected control room operator response to the pump seal failure event discussed above and leaking SRVs resulted in increasing suppression pool levels which complicated a September 1996 plant shutdown. Also, weaknesses in the ability to plan, execute, and control plant configuration while performing online maintenance activities caused degraded plant conditions and transients.

Engineering support for the station also declined. Engineering performance was characterized by weak or inaccurate root cause evaluations, untimely corrective actions, non-conservative and narrowly-focused operability determinations, and tolerance of material condition deficiencies. When degraded equipment was identified, it appeared that engineers focused on justifying system operability rather than performing an in-depth evaluation to demonstrate system operability. This contributed to Clinton's failure to resolve longstanding material condition problems.

The senior managers discussed the merits for increasing agency attention at Clinton. The senior managers reviewed the licensee's operational safety performance since the June 1996 SMM, in light of the above discussion. The senior managers noted that the safety performance indicators for Clinton exhibited good performance, consistent with the agency's previous assessments of Clinton. They also discussed the fact that Clinton was currently shutdown and that confirmatory action letters were issued to the

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licensee in September 1996 and January 1997 to record the staff's understanding of the actions that the licensee would take prior to restart in response to the April 1996 reactor scram/pump seal event, and in response to the September 1996 recirculation pump seal failure event, respectively. The senior managers observed that the recent decline in Clinton's overall performance was due largely to a lack of a conservative operational focus within the organization.

The senior managers acknowledged the recent management and operating crew changes at Clinton, the licensee initiatives aimed at instilling conservative decision making, and the actions to resolve the numerous poor material condition issues. The senior managers also recognized the licensee's efforts in the engineering area, including its intention to perform an independent engineering assessment, and its commitments to develop and implement long term engineering improvements and to conduct special training and programs aimed at enhancing engineering support to operations. However, because of concern about the licensee's reduced emphasis on safe plant operation, which was apparent in the recent plant events, the willingness to accept degraded material condition, and the weaknesses in procedural adequacy and adherence, the senior managers concluded that additional agency attention was warranted. The senior managers recommended that the Executive Director for Operation send a trending letter to Illinois Power Company informing the Chief Executive Officer of the agency's concern regarding the decline in operational safety performance at the Clinton Power Station.

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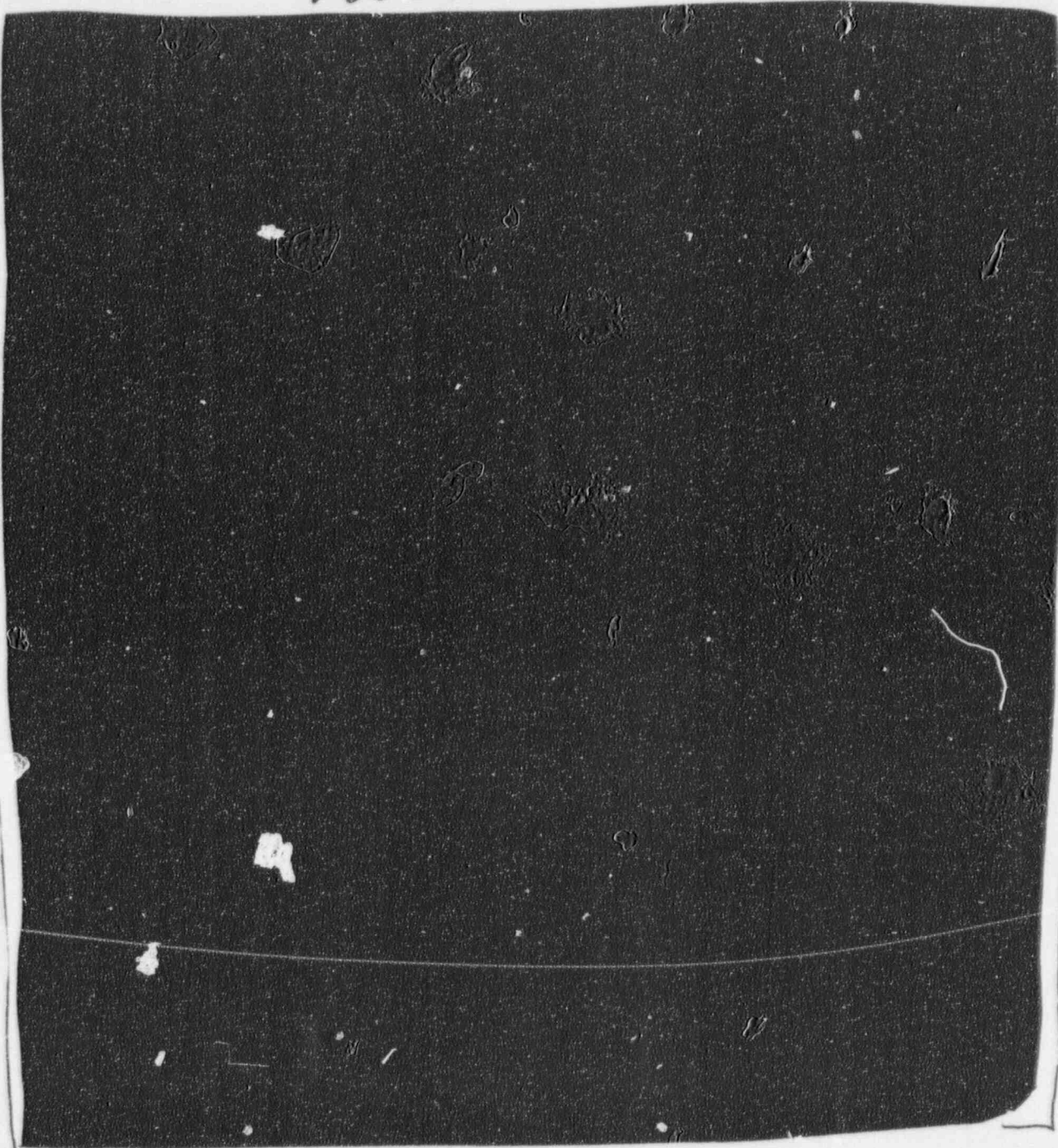
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EX. 5

POINT BEACH

Point Beach Nuclear Plant is being discussed for the first time at the Senior Management Meeting because of the significance of recently identified performance issues, management's failure to aggressively pursue identification of the full extent of these issues, and the licensee's lack of a strong safety-focused questioning attitude. The plant's performance has declined substantially since the Systematic Assessment of Performance

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(SALP) was issued in the April 1996, and longstanding problems have only recently been identified. Weaknesses in operations, engineering, and maintenance led to numerous violations and a significant enforcement actions within the last six months. The primary cause of these performance issues appears to be a pervading focus on keeping the units operating without questioning or resolving long-standing safety issues.

During the last six months, the station was plagued with inattentiveness to duty by control room operators, the failure to maintain proper equipment configuration control, and ineffective surveillance testing. At times, operations staff and plant management exhibited poor understanding of administrative procedures, technical specifications, and regulatory requirements. For example, the Unit 1 control room operator left his watch-station with no designated relief present, and Shift Technical Advisors routinely left the site in violation of technical specification requirements. Also, Unit 1 was taken critical with the turbine-driven AFW pump discharge isolation valves closed in violation of technical specification requirements. Finally, when an auxiliary operator was notified that he reported a discharge pressure on the motor driven auxiliary feedwater pump that was below surveillance requirements, he "re-read" the gauge and modified his report such that the pressure was within the requirements. Control room operators failed to recognize the non-conservative nature of these actions and declared the pump operable.

The material condition of safety-related components continued to be poor. Long-standing deficiencies in the surveillance and post-maintenance testing program contributed to degraded equipment conditions and increased out-of-service times for safety-related equipment. For example, a service water pump was returned to service with IST results in the alert range, contrary to the requirements of Section XI of the ASME Code.

There was declining performance in the area of engineering support to the station. Engineering performance was characterized by inadequate operability determinations and engineering evaluations, poor documentation of engineering evaluations, and the failure to manage plant configuration in accordance with the FSAR and design basis. Several instances were identified where lack of a questioning attitude, untimely corrective actions, and lack of engineering rigor resulted in degraded plant safety. For example, proper corrective actions were not taken after engineers identified that the number of service water pumps required to mitigate a design basis accident was greater than the number assumed in the FSAR and Technical Specification bases.

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The senior managers discussed the merits for increasing agency attention at Point Beach, in light of the above discussion. The senior managers noted that the safety performance indicators for Point Beach exhibited good performance, which was consistent with the agency's most recent SALP assessment. The senior managers recognized that the staff's current view of the licensee's performance conflicts with the recent SALP, but noted that this dichotomy reflects early intervention by the NRC through its inspection program.

The senior managers reviewed the licensee's operational safety performance since the June 1996 SMM and noted several areas of improving performance and a number of areas where the licensee has committed to improvement initiatives. The operator response to off-normal conditions remains good and control room formality has improved. An improvement in self-identification of issues was evidenced in the increase in the number of condition reports. The senior managers noted that the licensee is in the process of upgrading operations, surveillance and maintenance procedures, is relocating corporate engineering to the site and developing a system engineering program to improve ownership, and has committed to a design reconstitution effort and a review of the FSAR.

The senior managers discussed the fact that confirmatory action letters were issued to the licensee in September 1996 and January 1997, respectively, to record the staff's understanding of the actions that the licensee would take regarding spent fuel loading/unloading as a result of the Palisades hydrogen ignition event, and to confirm licensee actions to address significant weaknesses with procedures, work and test activities, licensing and design basis adherence, and the corrective action program. The senior managers also discussed, with concern, the multiple instances of poor performance in all areas of plant operations. In the operations area, the senior managers noted the examples of inattentive control room operators, and discussed the implications of marginal control room staffing and the inconsistent conservative operating philosophy. The senior managers recognized the weaknesses in maintenance and testing, as well as the poor engineering support for operations which resulted in weak operability evaluations, inadequate testing criteria and un-evaluated engineering deficiencies. The senior managers also discussed the fact that the NRC rather than the licensee continues to identify performance issues and conditions adverse to quality and that the licensee has demonstrated little self or independent performance assessment.

In light of the overall declining safety performance at Point Beach, and the fact that the licensee's response has, thus far, been ineffective in reversing the trend, the senior managers concluded that additional agency attention was warranted. The senior managers recommended that the Executive Director for

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Operation send a trending letter to Wisconsin Electric Power Company informing the Chief Executive Officer of the agency's concern regarding the decline in operational safety performance at the Point Beach Nuclear Power Plant.

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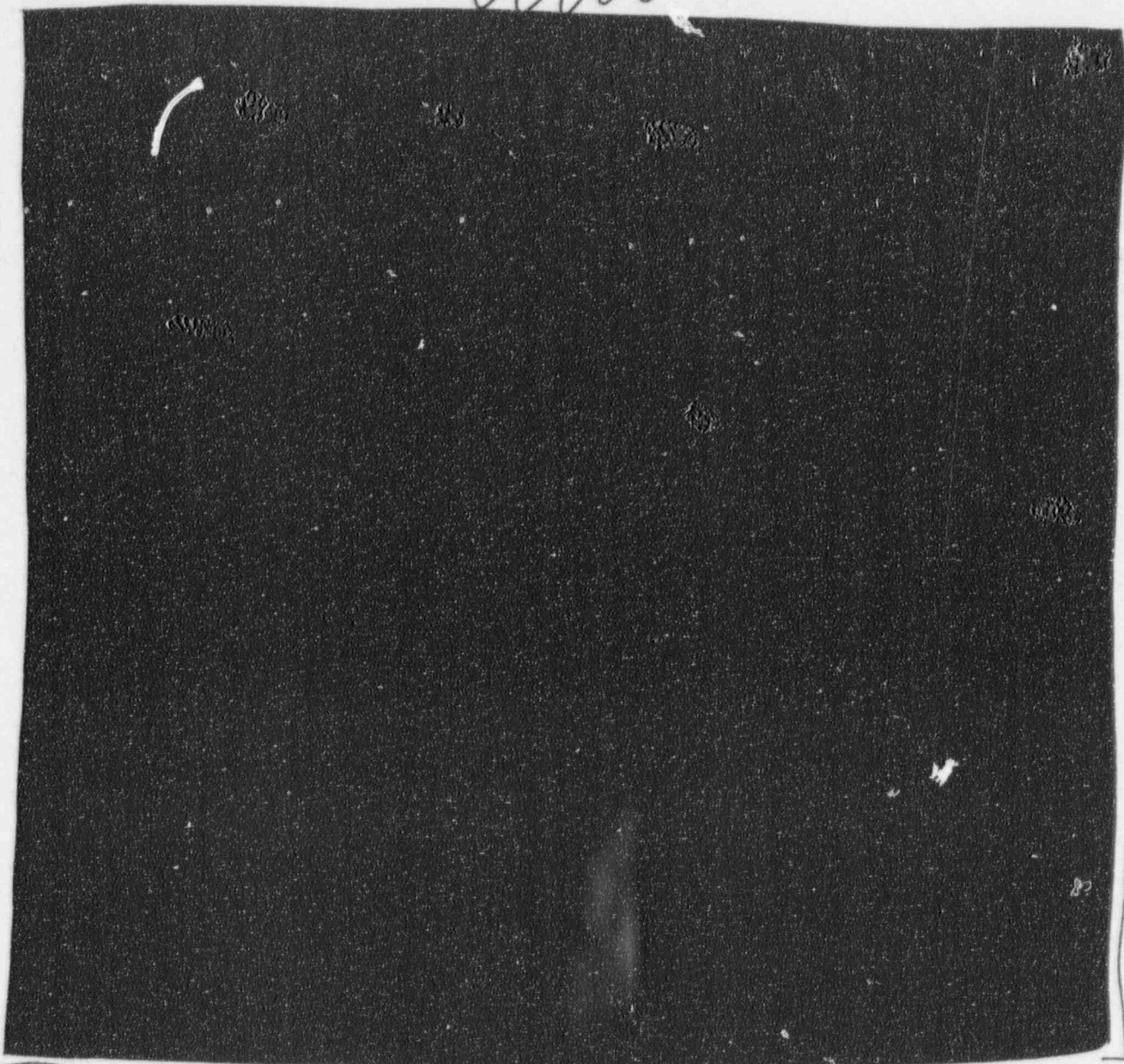
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Additional Topics Discussed

1. EDO's Opening Remarks

The Acting EDO welcomed the attendees to the Senior Management Meeting (SMM) and began his remarks by briefly highlighting the recent NRC organizational changes and emphasizing the importance of good communication to ensure a smooth transition. He indicated that because the SMM process is receiving close scrutiny, both from within and from outside the agency, it is imperative that the recommendations from the SMM be clear, understandable and defensible. He cited the significant amount of effort involved in preparing for the SMM and encouraged management to use the information appropriately and to

participate actively in the discussions. The Acting EDO reiterated the Commission's interest in the results of the SMM, but added that this interest should not, nor was it intended to, affect the recommendations from the SMM. In closing, the Acting EDO encouraged the senior managers to be responsive to the changes in the SMM process and expressed confidence that they could be made without any negative impact on the process.

2. Chairman Jackson's Opening Remarks

The Chairman greeted the senior managers and stated that she was pleased to join them again for the SMM. She indicated that the SMM offers a valuable opportunity to the issues of greatest importance for the NRC, and it is an opportunity for her to hear senior management's evaluation of the performance of NRC licensees and of NRC regulatory oversight programs. The Chairman stated that this meeting was particularly important because of the new NRC management structure and the new management team, and the challenges ahead.

The Chairman commended the senior managers for their efforts which contributed to many of the agency's accomplishments over the past year and a half.

- A strategic assessment and rebaselining of the agency (which continues).
- An agency reorganization and realignment, and the selection of a new management team.
- An action plan to improve NRC financial management and utilization of prior year funds.
- Focus and direction for the agency's efforts to expand the use of PRA through the PRA implementation plan.
- Reexamination of existing regulatory oversight practices and procedures.
- A comprehensive review of program and inspection guidance for oversight of the Updated Final Safety Analysis Report (UFSAR);
- Guidance to increase inspection of licensees' implementation of Final Safety Analysis Reports, and other improvements to the inspection program; 50.59 Action Plan;
- Spent Fuel Pool Design, Operating and Licensing Basis Surveys at Each Site;
- Design Basis Inspections re-initiation;
- Guidance regarding public responsiveness;
- An Independent staff review of Millstone Station and NRC handling of employee concerns and allegations;
- Improvements to the NRC process for evaluating the performance of nuclear power reactor licensees
- Revised guidance on the Notice of Enforcement Discretion process;

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- The Maine Yankee Independent Safety Assessment, and the Dresden Independent Safety Inspection;
- An Action Plan to examine the implications for the regulatory process of Electric Utility Industry Restructuring;
- Directed programmatic changes in HLW regulation as a result of budget reductions and increased focus on centralized interim storage;
- Initiated Lessons Learned from the Point Beach dry cask fuel loading event to improve NRC oversight of dry cask storage;
- Initiated Lessons Learned from Medical Licensee events (e.g. NIH, MIT);
- Initiated review of NAS recommendations and consideration of options for ultimate direction of the Medical Use Program;
- Undertook the Business Process Reengineering of materials licensing;
- Developed an approach for NRC/EPA risk harmonization;
- Promulgated a number of significant;
- Completed MOU with Department of Energy (DOE) addressing issues related to potential tritium production at commercial reactors.
- Completed oversight of restart of Browns Ferry Unit 3.
- Completed final oversight and ultimate approval of full power operating license for TVA's Watts Bar Unit 1 Nuclear Station.
- Assisted DOE on regulatory plans for plutonium disposition alternatives.
- Began coordination with DOE on regulating High Level Waste vitrification operations at the Hanford Reservation.
- Completed Certification of U.S. Enrichment Corporation Gaseous Diffusion Plants
- Issued Final Policy Statements on Freedom of Employees in the Nuclear Industry to Raise Safety and Compliance Concerns Without Fear of Retaliation, and Protecting the Identity of Allegers and Confidential Sources.
- Continued regulatory support for former Soviet Union and Central and Eastern European countries, and
- Initiated plans for an International Nuclear Regulator's Council.

The Chairman discussed the agency's goals for 1997. She indicated that one of our primary goals is to ensure the safety of operating commercial reactors. This is especially important with the transition occurring in the electric utility industry. Continued emphasis is needed to ensure that we appropriately identify plants warranting increased attention and that we take regulatory action with respect to plants that remain on the watch list for long periods of time.

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The Chairman emphasized that to effect permanent change to our regulatory programs and processes, all the various studies and lessons-learned activities must be completed and integrated, and the recommendations must be propagated into our regulatory program. In particular, we must complete the lessons learned from Millstone and Maine Yankee and the resolution of policy issues associated with these reviews, including licensing basis and design basis issues, review of 50.54(f) responses, follow-up to the FSAR/50.59 Action Plan, Resident Inspection program analysis, project management organization Review, SMM Plant Assessments and Performance Indicators.

The Chairman stated that we must also continue to ensure the safety of fuel cycle facilities, medical, academic, and industrial uses of nuclear materials, and the transport, storage, and disposal of nuclear materials and waste.

The Chairman emphasized the importance of the Strategic Assessment and Rebaselining, indicating that the Strategic Assessment decisions will form the basis for the agency's Strategic Plan, the FY 99 budget, the NRC Performance Plan, and the Multi-Year Implementation Plan (MYIP). She stated that the Implementation Phase will begin in the FY 99 budget cycle and will continue implementation through the use of the MYIP in subsequent budget cycles.

The Chairman noted that the CIO and CFO selections would soon be completed. She informed the senior managers that the Information Technology Management Reform Act of 1996 (ITMRA), which established the CIO position, requires the training of key NRC managers, not only in the CIO organization, but in the EDO and CFO organizations as well.

The Chairman mentioned the importance of completing development of the regulatory guide and standard review plan which will provide guidance to the industry and NRC staff on use of risk information to support regulatory decisions. She also noted similar importance to finalizing the regulatory guidance on License Renewal.

The Chairman stated that she reviewed the Arthur Andersen report, was pleased that the report was an agenda item for the SMM, and noted that many of the report recommendations are worthy of serious consideration. If accepted, many of the Arthur Andersen recommendations would require close coordination of the units of the Regulatory Effectiveness organization. The Chairman briefly shared with the senior managers her first impressions of the report, which were favorable. She stated that she looked forward to receiving the staff's response to the Arthur Andersen report and its action plan to address the accepted recommendations.

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The Chairman briefly reviewed the Department of Energy's (DOE) plans to submit legislation to transfer oversight of nuclear safety at DOE nuclear facilities to the NRC. She indicated that the proposed DOE oversight role would be one of the most significant changes in this agency's structure, size, and mission in over two decades. A budget increase of somewhere between 15 to over 30 percent of the total NRC budget and a significant staffing increase would be required. She stated that it is unclear what support this proposal will have with Congress and that the Commission is planning to make a statement of principle on the DOE external regulation proposal within the context of the Strategic Assessment Direction Setting Issue on Oversight of the Department of Energy. The Chairman also indicated that she would correspond with Secretary of Energy on this initiative, once he is confirmed. The Chairman stated that the agency will need to work closely with the DOE and the Congress on proposed legislation, transition strategy, and costs as this initiative develops so that we, in fact, can advance the protection of safety, health and the environment. She added that this interaction will most likely require an MOU between the NRC and DOE.

The Chairman stated that she would be signing an Umbrella MOU between NRC and DOE with Energy Secretary O'Leary on Wednesday, January 15, 1997, on these and other specific initiatives with the Department of Energy. She also stated that on January 16-17, 1997, a working group meeting of senior regulatory officials from around the world would be held on her International Nuclear Regulators' Council proposal.

In closing, the Chairman encouraged the senior managers to work to make the SMM process more transparent, understandable, and defensible. She stated that this is both a challenge and an opportunity and that in the face of increased statutory responsibilities, we must do the best we can. She stated that she looked forward to participating in the initial portion of the SMM discussions.

2. Senior Management Meeting Data and Process

The senior managers discussed the Arthur Andersen (AA) report recommendations and the performance trend information methodology at the beginning of the January Senior Management Meeting. The senior managers were informed that the staff is evaluating the recommendations contained in the report and will provide an evaluation with staff recommendations and implementation plan by March 28, 1997. The senior managers reviewed plant specific performance trends during each plant discussion, however, they concluded that these charts should be considered as pre-decisional, until additional development and verification studies are conducted.

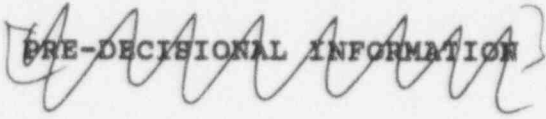
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The initial observation from those discussions was that the performance trend methodology shows promise but, consistent with AAs recommendation, validation and further development is needed.

3. Date and Location of Next Senior Management Meeting - The next SMM will be held June 10-11, 1997, in Region I.


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ATTACHMENT 7

**Senior Management Meeting Watch List Removal
Evaluation Factors**

- Dresden 2 & 3
- Indian Point 3
- Salem 1 & 2

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DRESDEN STATION, UNITS 2 & 3
EVALUATION FACTORS FOR REMOVAL OF PLANTS FROM THE WATCH LIST

Evaluation Factors	Response	Comments
I. Root Cause Identified and Corrected		
Weak performance areas are thoroughly assessed.	No	Performance weaknesses in some areas had not been thoroughly assessed.
Comprehensive and clearly defined corrective action program has been developed.	Yes	The program has all the essential elements of an effective corrective action program.
Corrective actions include sufficient measures to prevent recurrence of problems.	No	Root cause analysis is often weak, with corrective actions sometimes addressing symptoms rather than causes.
Management has allocated sufficient resources to carry out long-range corrective action programs.	No	Most corrective action initiatives are only budgeted on an annual basis. Some past initiatives not funded to completion.
NRC is satisfied that corrective action program is sufficiently implemented.	No	While there have been some corrective action successes, a number of recurring or long-standing problems have not been resolved.
Sustained, successful plant performance has been demonstrated.	No	Unit 3 was forced to shutdown because of a ground on a recirculation pump motor. Plant operators are continually challenged by equipment problems.
II. Improved Self-Assessment and Problem Resolution Evident		
Program elements that monitor and evaluate effectiveness of corrective actions have been instituted.	Yes	The licensee performs corrective action effectiveness reviews; however, there is little evidence that these effectiveness reviews are acted on because the reviews are recent.
Safety issues are being identified to appropriate management level and corrected in a timely manner.	No	Most departments, with engineering as a notable exception, are identifying issues; however, not all problems are being resolved in a timely manner.

DRESDEN STATION, UNITS 2 & 3

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Evaluation Factors	Response	Comments
Quality assurance and safety oversight groups provide timely and effective self-assessments of performance to site and corporate management.	Mixed	The Site Quality Verification group has recently become more intrusive and are adding value as evidenced by improved quality of audits and surveillances. Past assessments of vendors (architect engineers) has been weak.
III. Licensee Management Organization and Oversight Improved		
Corporate and plant management teams are fully committed to achieving improved performance.	Yes	Corporate management changes are recent and on-going. Site management conveys high standards of performance. Engineering is an exception.
Licensee has effective corporate management oversight and involvement in plant operations and problem resolution.	(Not fully assessed)	Recent corporate management oversight and involvement have improved; however, many changes are on-going or planned relative to enhancing weaknesses in oversight functions.
Management team provides strong direction and fosters a nuclear safety work ethic that is understood at all levels in the organization.	No	Not consistent throughout the organization.
IV. NRC Assessment Complete		
Senior NRC management no longer considers the plant as having weaknesses that warrant increased NRC-wide attention.	TBD	Determination to be made in the context of the January 1997 Senior management Meeting.
Significant NRC inspection and licensing activities are complete and findings properly resolved or understood.	TBD	ISI findings are still being evaluated by the staff and the licensee.

DRESDEN STATION, UNITS 2 & 3

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Evaluation Factors	Response	Comments
V. Additional Considerations		
Overall performance has improved as reflected in the most recent SALP ratings, Performance Indicators, or results from the Plant Performance Review.	Yes	SALP: Postponed in order to incorporate the results of the ISI. PIs: Some PIs indicate improvement. PPR: The last PPR indicated good performance in plant operations, with some improvement in engineering and radiological protection.
Enforcement history has indicated an improving trend.	No	The ISI has identified a number of potential violations in several different areas, particularly in radiological protection, testing, design/licensing basis, and corrective actions.
Performance has improved as demonstrated by a lack of operational problems.	No	The operators continue to be challenged by equipment problems.
Performance has improved as demonstrated by a lack of significant operator errors.	Yes	Recent operator errors have been generally minor in nature.
Procedure adherence problems are not evident.	No	Procedure adherence problems in some areas.
Simulator is operational.	Yes	None.
Known (i.e., plant specific or industry generic) aging problems have been appropriately addressed.	No	A number of balance of plant equipment problems have not been addressed through preventive maintenance. Some HPCI system recurring valve leaks and drain line piping erosion and corrosion concerns have not been resolved.
Licensee has improved its management organization.	Yes	There have been positive changes at all levels of management and supervision.
Licensee procedures are considered adequate overall.	Yes	Procedures were capable of performing the intended functions.
Licensee has an effective root cause analysis program.	No	The licensee has recognized weaknesses in this area and is taking actions to address.

DRESDEN STATION, UNITS 2 & 3

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Evaluation Factors	Response	Comments
PRA has been performed.	Yes	The staff is currently reviewing the licensee's second IPE submittal. Design basis issues may challenge adequacy.
PRA has been used.	Yes	The PRA is used to support on-line risk assessment (OSPRE [On-line Safety Predictor]) and the Maintenance Rule.

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

Evaluation Factors	Response	Comments
1. <u>Root Cause Identified and Corrected</u>		
Weak performance areas are thoroughly assessed.	Yes	NYP& and NRC assessments have identified the significant performance weaknesses. Corrective actions to address these performance weaknesses are at various stages of implementation. Many of the corrective actions to address Engineering weaknesses were recently implemented and remain to be evaluated.
Comprehensive and clearly defined corrective action program has been developed.	Yes	Improved operator performance has been noted with plant operations conducted in a safe manner in accordance with approved procedures. Corrective actions to address concerns with the implementation of the work control process and the engineering backlog were recently implemented. While progress was observed, NYP& is still encountering problems with the work control process and configuration management (e.g. trip of heater drain pumps and blocking open the EDG room fan louvers).
Corrective actions include sufficient measures to prevent recurrence of problems.	Yes	Corrective actions typically provide adequate measures to prevent recurrent problems, although some actions, particularly in Engineering, have not been implemented for a sufficient length of time to assess their long-term effectiveness.
Management has allocated sufficient resources to carry out long-range corrective action programs.	Yes	Sufficient resources have been devoted to operations to achieve improved performance. Recent increases in resources applied to reducing the maintenance backlog should allow for completion of significant planned corrective actions. However, the effect of NYP& management's recent addition of resources to reduce the engineering backlog and carry out long range corrective action programs remains to be determined.
NRC is satisfied that corrective action program is sufficiently implemented.	No	Corrective actions from previous operator performance events have been effective; the non-outage corrective maintenance backlog has

Evaluation Factors	Response	Comments
Sustained, successful plant performance has been demonstrated.	No	<p>been substantially reduced. However, effective corrective actions have not been fully implemented to address engineering program weaknesses and the large engineering backlog. NYPA needs to sustain improvements in the Engineering area while still preparing for a refueling outage (the first since 1992) that will address most of the material condition and emerging equipment issues that impacted plant operations in 1995-1996.</p> <p>Plant startup from a 6 month forced outage occurred in April 1996. Operator performance was generally good, but work control and emerging equipment problems impacted on operations. These emerging equipment problems, many of which originated in the balance of plant, resulted in plant transients, shutdowns and power reductions. Some operator errors did occur (i.e. AFW steam trap tagging, heater drain pump trip) and a large number of operator workarounds exist (e.g. PORV block valves, various plant process controllers), many of which remain to be addressed during the upcoming outage.</p>
<p>II. <u>Improved Self-Assessment and Problem Resolution Evident</u></p> <p>Program elements that monitor and evaluate effectiveness of corrective actions have been instituted.</p> <p>Safety issues are being identified to appropriate management level and corrected in a timely manner.</p> <p>Quality assurance and safety oversight groups provide timely and effective self-assessments of performance to site and corporate management.</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p>	<p>NYPA has a comprehensive DER reporting and evaluation system. Key department audits and self-assessments have been effective in monitoring corrective action performance.</p> <p>NYPA senior management demonstrated the ability to self-assess performance, be self-critical and implement timely, effective corrective action, but these abilities are mixed at the lower-level management and supervisory levels, particularly in engineering. NRC identified weaknesses in the response to deficiencies identified in some DERs are being addressed.</p> <p>The QA and safety oversight groups generally provide effective self-assessments of performance.</p>
<p>III. <u>Licensee Management Organization and Oversight Improved</u></p> <p>Corporate and plant management teams are fully committed to achieving improved performance.</p>	<p>Yes</p>	<p>The current NYPA management team is committed to improved plant performance to ensure safe plant operation.</p>

INDIAN POINT 3

PREPARED BY

Evaluation Factors	Response	Comments
Licensee has effective corporate management oversight and involvement in plant operations and problem resolution.	Yes	Corporate management is substantially involved in plant operations and has provided significant oversight during 1996, particularly during plant restart in late March/early April. Plant management's continued support for and refinement of the Operations Shift Mentor program reflects their commitment to continued involvement in and improvement of Operations performance.
Management team provides strong direction and fosters a nuclear safety work ethic that is understood at all levels in the organization.	Yes	Management decision making is conservative and management fosters a good nuclear safety work ethic. However, most senior IP-3 management positions have been stable for less than a year; NYPA is also searching for a replacement for the Chief Nuclear Officer (CNO) who intends to retire in the near future. A previous GM - Maintenance assumed the Engineering Director position in the last four months; a new GM - Maintenance was assigned. Some transitions have recently occurred in middle management, most notably a new System Engineering Manager in January. In addition, while showing signs of improvement, performance in Engineering remains mixed.

Evaluation Factors	Response	Comments
<p>IV. <u>NRC Assessment Complete</u></p> <p>Senior NRC management no longer considers the plant as having weaknesses that warrant increased NRC-wide attention.</p>	No	<p>Although improved performance was noted as 1996 progressed, continued equipment problems since the return to service in April 1996 impacted plant power operations on numerous occasions and caused Engineering to be reactive, limiting their ability to address engineering program weaknesses. NYPA made substantial gains in reducing the maintenance backlog and some progress on engineering backlogs; it remains to be determined whether this improvement can be sustained. The senior management team has been stable for less than a year, a new CNO is anticipated in the near future and lower level management changes have occurred recently. In addition, many process improvements were made during the power operation period and have not been fully tested (e.g. work control process, refueling procedures).</p>
<p>Significant NRC inspection and licensing activities are complete and findings properly resolved or understood.</p>	No	<p>Many Engineering improvements (e.g. improvements in backlog management and significant effort to support maintenance backlog reduction) were recently implemented and require further evaluation to determine whether they can be sustained. There is a need to gain more indepth insights into Engineering due to mixed performance in several areas (e.g. weak 50.59 evaluations and operability determinations, large outstanding backlogs, particularly in design engineering, and setpoint control program weaknesses). While Engineering work productivity has improved recently, Engineering must also effectively prepare for the upcoming outage. The number of emerging equipment issues in 1995-1996 has caused Engineering to be reactive and limited their ability to take needed actions to improve equipment reliability</p>

INDIAN POINT 3

PRELIMINARY

Evaluation Factors	Response	Comments
Licensee has effective corporate management oversight and involvement in plant operations and problem resolution.	Yes	Corporate management is substantially involved in plant operations and has provided significant oversight during 1996, particularly during plant restart in late March/early April. Plant management's continued support for and refinement of the Operations Shift Mentor program reflects their commitment to continued involvement in and improvement of Operations performance.
Management team provides strong direction and fosters a nuclear safety work ethic that is understood at all levels in the organization.	Yes	Management decision making is conservative and management fosters a good nuclear safety work ethic. However, most senior IP-3 management positions have been stable for less than a year; NYPA is also searching for a replacement for the Chief Nuclear Officer (CNO) who intends to retire in the near future. A previous GM - Maintenance assumed the Engineering Director position in the last four months; a new GM - Maintenance was assigned. Some transitions have recently occurred in middle management, most notably a new System Engineering Manager in January. In addition, while showing signs of improvement, performance in Engineering remains mixed.

PREPARED BY

Evaluation Factors	Response	Comments
<p>IV. <u>NRC Assessment Complete</u></p> <p>Senior NRC management no longer considers the plant as having weaknesses that warrant increased NRC-wide attention.</p>	No	<p>Although improved performance was noted as 1996 progressed, continued equipment problems since the return to service in April 1996 impacted plant power operations on numerous occasions and caused Engineering to be reactive, limiting their ability to address engineering program weaknesses. NYP&A made substantial gains in reducing the maintenance backlog and some progress on engineering backlogs; it remains to be determined whether this improvement can be sustained. The senior management team has been stable for less than a year, a new CNO is anticipated in the near future and lower level management changes have occurred recently. In addition, many process improvements were made during the power operation period and have not been fully tested (e.g. work control process, refueling procedures).</p>
<p>Significant NRC inspection and licensing activities are complete and findings properly resolved or understood.</p>	No	<p>Many Engineering improvements (e.g. improvements in backlog management and significant effort to support maintenance backlog reduction) were recently implemented and require further evaluation to determine whether they can be sustained. There is a need to gain more indepth insights into Engineering due to mixed performance in several areas (e.g. weak 50.59 evaluations and operability determinations, large outstanding backlogs, particularly in design engineering, and setpoint control program weaknesses). While Engineering work productivity has improved recently, Engineering must also effectively prepare for the upcoming outage. The number of emerging equipment issues in 1995-1996 has caused Engineering to be reactive and limited their ability to take needed actions to improve equipment reliability</p>

Evaluation Factors	Response	Comments
		and address long-term performance improvement efforts (e.g. SW issues and system engineer performance monitoring).
V. <u>Additional Considerations</u>		
Most recent set of Performance Indicators reflect overall improving performance.	N/A	No short term performance trend can be drawn due to the brief period of power operation in 1993-mid-1996. However, key longer term PI comparisons to other similar plants indicate generally average plant performance.
Overall performance has improved as reflected in the most recent SALP ratings.	No	Most recent SALP period ended March 1996. Adequate performance was seen in Operations and Engineering. Good performance was noted in Maintenance. Excellent performance noted in Plant Support. The next SALP is in April 1997. The Plant Performance Review in November and senior management site visits in December noted improved performance in Operations, improved overall plant performance and some improvement in plant material condition; performance remained adequate in Engineering as improvements in this area have been slow.
Enforcement history has indicated an improving trend.	Yes	The last escalated action (which also included a civil penalty) was issued in January 1996. Eight non-escalated violations were issued in 1996.
Performance has improved as demonstrated by a lack of operational problems.	No	Since restart in early April, there have been two shutdowns or significant transients, both of which the operators handled well. Although operator performance has improved, equipment failures challenged plant power operations, resulting in power reductions and challenges to the operators. While these equipment problems, particularly on the balance of plant, have not all been fully resolved, NYP&A has operated the plant safely.
Performance has improved as demonstrated by a lack of significant operator errors.	Yes	Overall, the Operations department performance has continued to improve, including shift leadership. The number and severity of operator errors declined over the last year, although human errors in Operations and Maintenance have impacted equipment operability (e.g. AFW steam trap tagging, heater drain pump trip).

INDIAN POINT 3

John J. G. [Signature]

Evaluation Factors	Response	Comments
Procedure adherence problems are not evident.	Yes	Observations of Operations and Maintenance in the last half of 1996 have shown good procedure adherence.
Simulator is operational.	Yes	The simulator has been operational since the late 1980's.
Known (i.e., plant specific or industry generic) aging problems have been appropriately addressed.	Yes	The principal plant material condition issues are related more to past poor plant maintenance practices than age-related degradation. Significant effort is planned during the forthcoming outage to resolve these issues (e.g. SW piping, charging system, generator rotor).
Licensee has improved its management organization.	Yes	The number of management changes in the last six months was small in contrast to the high rate of management turnover over the preceding three years. The NRC has observed that the current management team is safety focused and receptive to NYPAs staff identification of problems.
Licensee procedures are considered adequate overall.	Yes	A significant Operations procedure upgrade is ongoing. Other plant departments are making substantial improvements during the biennial review process.
Licensee has an effective root cause analysis program.	Yes	Root cause analyses are generally thorough and extent of condition evaluations are frequently performed and comprehensive. However, the NRC continues to find examples where initial root cause analyses are weak (e.g. secondary plant leaks, blocking the EDG fan louvers).
PRA has been performed.	Yes	Indian Point previously performed a PRA in the early 1980's; the IPE is complete.
PRA has been used.	Yes	Examples: Maintenance Rule implementation, Operator training, work planning and scheduling

AF 10/2/95

SALEM 1 & 2
EVALUATION FACTORS FOR REMOVAL OF PLANTS FROM THE WATCH LIST

Evaluation Factors	Response	Comments
I. <u>Root Cause Identified and Corrected</u>		
Weak performance areas are thoroughly assessed.	Yes	PSE&G conducted extensive review to identify fundamental issues which resulted in overall performance decline. Review also identified common causes for decline across organization. In addition, PSE&G conducted an extensive FSAR versus plant review. Corrective actions to address these weaknesses are at various stages of implementation.
Comprehensive and clearly defined corrective action program has been developed.	Yes	A comprehensive corrective action plan has been developed to address each of the fundamental causes of performance decline. This plan was sent to the NRC in a letter, dated November 24, 1995, and contains detailed actions in each area, as well as the management process to be used to determine if the corrective actions are effective.
Corrective actions include sufficient measures to prevent recurrence of problems.	Unknown	Although the program to address longstanding performance issues contains numerous and redundant reviews and assessments, the absence of any significant operating experience prevents determination of long-term effectiveness.
Management has allocated sufficient resources to carry out long-range corrective action programs.	Yes	Significant resources have been dedicated to address the numerous hardware and program issues during the extended outage. The ability to sustain a problem backlog reduction during power operation has not been demonstrated.
NRC is satisfied that corrective action program is sufficiently implemented.	No	PSE&G has demonstrated a resolve to correct their problems primarily through a low threshold for adding issues to the outage. While the actions to date have in general been comprehensive, the full implementation of this PSE&G plan will include an extensive monitoring and assessment process during the power ascension and testing milestones. The NRC intends to conduct a large-scale integrated readiness assessment prior to the initial criticality.
Sustained, successful plant performance has been demonstrated.	No	Plant startup has not yet occurred. Some plant hardware problems should be expected given the magnitude of the outage. In addition, the number and significance of the equipment problems that will remain after restart have not yet been evaluated.
II. <u>Improved Self-Assessment and Problem Resolution Evident</u>		

PLANT NAME

~~SECRET~~

Evaluation Factors

Response

Comments

Program elements that monitor and evaluate effectiveness of corrective actions have been instituted.

Yes

The new corrective action program includes a primary element that monitors and evaluates the effectiveness of corrective actions.

APR 20 1996

SALEM 1 & 2
EVALUATION FACTORS FOR REMOVAL OF PLANTS FROM THE WATCH LIST

Evaluation Factors	Response	Comments
I. <u>Root Cause Identified and Corrected</u>		
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Comprehensive and clearly defined corrective action program has been developed.	Yes	A comprehensive corrective action plan has been developed to address each of the fundamental causes of performance decline. This plan was sent to the NRC in a letter, dated November 24, 1995, and contains detailed actions in each area, as well as the management process to be used to determine if the corrective actions are effective.
Corrective actions include sufficient measures to prevent recurrence of problems.	Unknown	Although the program to address longstanding performance issues contains numerous and redundant reviews and assessments, the absence of any significant operating experience prevents determination of long-term effectiveness.
Management has allocated sufficient resources to carry out long-range corrective action programs.	Yes	Significant resources have been dedicated to address the numerous hardware and program issues during the extended outage. The ability to sustain a problem backlog reduction during power operation has not been demonstrated.
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II. <u>Improved Self-Assessment and Problem Resolution Evident</u>		

MR. [Signature]

SALEM 1 & 2
EVALUATION FACTORS FOR REMOVAL OF PLANTS FROM THE WATCH LIST

Evaluation Factors	Response	Comments
I. <u>Root Cause Identified and Corrected</u>		
Weak performance areas are thoroughly assessed.	Yes	PSE&G conducted extensive review to identify fundamental issues which resulted in overall performance decline. Review also identified common causes for decline across organization. In addition, PSE&G conducted an extensive FSAR versus plant review. Corrective actions to address these weaknesses are at various stages of implementation.
Comprehensive and clearly defined corrective action program has been developed.	Yes	A comprehensive corrective action plan has been developed to address each of the fundamental causes of performance decline. This plan was sent to the NRC in a letter, dated November 24, 1995, and contains detailed actions in each area, as well as the management process to be used to determine if the corrective actions are effective.
Corrective actions include sufficient measures to prevent recurrence of problems.	Unknown	Although the program to address longstanding performance issues contains numerous and redundant reviews and assessments, the absence of any significant operating experience prevents determination of long-term effectiveness.
Management has allocated sufficient resources to carry out long-range corrective action programs.	Yes	Significant resources have been dedicated to address the numerous hardware and program issues during the extended outage. The ability to sustain a problem backlog reduction during power operation has not been demonstrated.
NRC is satisfied that corrective action program is sufficiently implemented.	No	PSE&G has demonstrated a resolve to correct their problems primarily through a low threshold for adding issues to the outage. While the actions to date have in general been comprehensive, the full implementation of this PSE&G plan will include an extensive monitoring and assessment process during the power ascension and testing milestones. The NRC intends to conduct a large-scale integrated readiness assessment prior to the initial criticality.
Sustained, successful plant performance has been demonstrated.	No	Plant startup has not yet occurred. Some plant hardware problems should be expected given the magnitude of the outage. In addition, the number and significance of the equipment problems that will remain after restart have not yet been evaluated.
II. <u>Improved Self-Assessment and Problem Resolution Evident</u>		

PLANT NAME

PREPARED BY

Evaluation Factors	Response	Comments
Safety issues are being identified to appropriate management level and corrected in a timely manner.	Yes	During this outage, PSE&G has consistently demonstrated a very low threshold for identifying issues to the appropriate management level. The timeliness of the corrective actions have been commensurate with the large volume of ongoing activities.
Quality assurance and safety oversight groups provide timely and effective self-assessments of performance to site and corporate management.	Yes	Improved contribution from the QA and oversight groups. Site management has routinely utilized expertise from outside PSE&G to benchmark performance.
III. <u>Licensee Management Organization and Oversight Improved</u>		
Corporate and plant management teams are fully committed to achieving improved performance.	Yes	The current PSE&G management team has routinely demonstrated a commitment to achieving improved performance. Examples include extensive operator/maintenance training program.
Licensee has effective corporate management oversight and involvement in plant operations and problem resolution.	Yes	Corporate management is substantially involved in plant oversight and utilize an offsite Nuclear Review Board to provide objective assessment.
Management team provides strong direction and fosters a nuclear safety work ethic that is understood at all levels in the organization.	Yes	Management decision making is conservative and management fosters a good nuclear safety work ethic. New management is now in place in virtually all key corporate and plant-level positions, many of whom came from outside PSE&G with significant industry experience at solving longstanding performance problems.
IV. <u>NRC Assessment Complete</u>		
Senior NRC management no longer considers the plant as having weaknesses that warrant increased NRC-wide attention.	No	Although improved performance has been noted in all key areas, there remains some performance uncertainty given the magnitude of the effort and the absence of sustained power operation.
Significant NRC inspection and licensing activities are complete and findings properly resolved or understood.	No	Many of the specific technical issues needed for restart have been resolved. However, the larger programmatic issues are still under NRC review and assessment. The staff plans extensive inspections of the test and restart activities, including power operations. In addition, the extent of corrective actions to resolve identified design/licensing issues are still being evaluated.
V. <u>Additional Considerations</u>		

PLANT NAME

PRE-DETERMINED

Evaluation Factors

Response

Comments

Overall performance has improved as reflected in the most recent SALP ratings, Performance Indicators, or results from the Plant Performance Review.

Yes

The SALP process has been suspended until return to operation is achieved. The NRC has formed a Salem Assessment Panel to more closely monitor the progress of the corrective actions. Although the most recent Plant Performance Review indicated improving performance, there is some uncertainty that this level of performance will be sustained given the absence of integrated operational performance.

PLANT NAME

PRE-DECOMMISSIONING

Evaluation Factors

Response

Comments

Enforcement history has indicated an improving trend.

Unknown

Significant enforcement action was taken for those performance issues that preceded the current shutdown. Since the shutdown and implementation of subsequent corrective actions, including substantial management changes, discretion has been applied to enforcement actions for issues stemming from the problems that caused the shutdown. Enforcement actions involving recent performance in shutdown operations have generally been less significant, but have continued to occur. In addition, the NRC identified significant programmatic issues with security. It is, however, difficult to determine an enforcement trend given the drastic increase in the level of activity at the site.

Performance has improved as demonstrated by a lack of operational problems.

Unknown

While operational problems have continued to occur, they appeared as a result of the increased potential for human error from the extensive dual outage still in progress. Performance while operating has yet to be demonstrated.

Performance has improved as demonstrated by a lack of significant operator errors.

Unknown

The number and significance of operator errors have been reduced, and the reaction to adequately address the errors has been comprehensive. While improved, occasional lapses and human performance problems have been noted. The ability of operations to coordinate large scale plant evolutions will be challenged during the startup and power ascension testing, and thus remains to be demonstrated.

Procedure adherence problems are not evident.

Yes

Site management has emphasized the importance of procedural adherence, and the number of errors has been reduced.

Simulator is operational.

Yes

The simulator is operational with good fidelity as demonstrated by a recent NRC SSFI effort.

Known (i.e., plant specific or industry generic) aging problems have been appropriately addressed.

Yes

PSE&G is completing an extensive outage to address material condition/equipment issues throughout the plant. For issues with aging or parts availability, such as with the RPS control modules, PSE&G implemented extensive refurbishment and repair activities.

Licensee has improved its management organization.

Yes

Site management has been replaced with experienced managers from other plants. This management team has been in place now for most of the outage, and has demonstrated a conservative safety ethic through the insistence of reporting and addressing problems.

Licensee procedures are considered adequate overall.

Yes

The NRC SSFI considered the operating procedures associated with the component cooling system as good. In addition, a complete upgrade of the Abnormal and Emergency Operating Procedures has been completed.

PLANT NAME

PREPARED BY *[Signature]*

Evaluation Factors

Response

Comments

Licensee has an effective root cause analysis program.

Unknown

Root cause analyses are considered generally thorough and comprehensive. An NRC inspection in this area is pending.

PLANT NAME

PRE-DECISION

Evaluation Factors

Response

Comments

PRA has been performed.

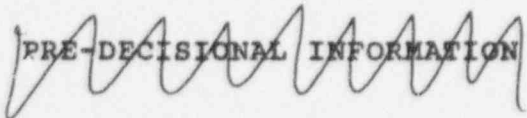
Yes

The Salem IPE is complete and evaluated by the NRC as relatively detailed.

PRA has been used.

Yes

PRA is being used with the Maintenance Rule implementation. In addition, the PRA has been updated to reflect the extensive plant modifications from this outage.

PRE-DECISIONAL INFORMATION

ATTACHMENT 8

SENIOR MANAGEMENT MEETING SLIDES

PRE-DECISIONAL INFORMATION

CLINTON POWER STATION

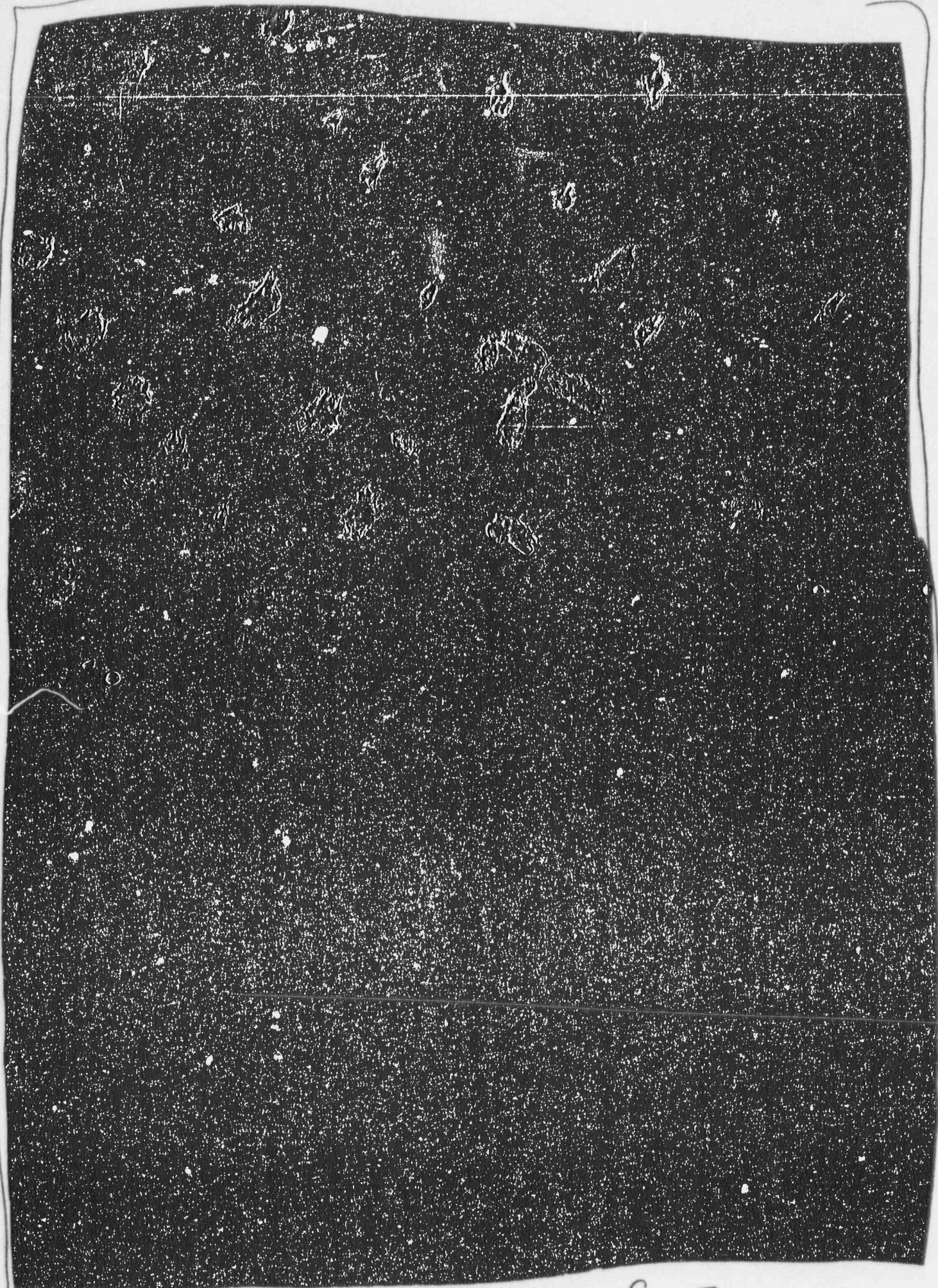
ARGUMENTS FOR INCREASING AGENCY ATTENTION

- **Safety Focus and Conservative Decision Making**
 - Reduced Emphasis on Safe Operation During the April 9 Scram and September 5 event
 - Acceptance of Degraded Equipment conditions - Recirculation Pump Seal Leaks, Radiation Monitors, Drywell Leak Monitoring
 - Weak Operator & Engineering Decisions - Restoration from April 9 Event, Feedwater Minimum Flow Valve Interaction with Feedwater Pumps
- **Procedural Adequacy and Adherence**
 - Site Considered Procedures as Guidance
 - Some Procedural Deficiencies Not Corrected
 - Significant Enforcement Action Pending Based on Region and OI Findings - Procedural Adherence/Adequacy and Operator Performance - September 5, Event
- **Engineering Support to Operations**
 - Weaknesses in the areas of 50.59 Evaluations, Operability Assessments, Design Knowledge, and Corrective Actions.
- **Rigor in Operations**
 - Inadequate Initial Assessment of September 5, 1996, Event Requiring significant NRC Involvement
 - Difficulties of Management Getting Staff's Attention following September 5, Event Especially in Areas Other Than Operations such As Radiation Protection - Pressurized Line Contamination and Rupture Disc Event.

CLINTON

ARGUMENTS FOR MAINTAINING CURRENT AGENCY ATTENTION

- **Safety Focus and Conservative Decision Making**
 - Senior Manager Changes (Plant Manager and Operations Management)
 - Different Operational Approach and Attitude, Including Conservative Decision Making, Observed during Outage
 - NRC SES Oversight Manager Assigned; Dedicated Branch Chief; Augmented Site Inspection Staff. Special Inspection and OSTI Conducted to Assess Conditions
 - Initiating Resolution of Numerous Material Condition Issues. Overall Material Condition Good
 - Startup Readiness Action Plan Developed to Address Conservative Decision Making - Living Document
- **Procedural Adequacy and Adherence**
 - Detailed Startup Readiness Action Plan Developed to Address Procedural Adequacy and Adherence
 - Observed Improvements in Both Areas - Resident Team and Independent Review Team
- **Engineering Support to Operations**
 - Independent Assessment of Engineering Contracted by Licensee
 - Long Term Improvement Plan Developed to Address Issues Not Related to Immediate Safe Startup
 - Special Training & New Programs Development for 10 CFR 50.59 and G.L. 91-18
- **Rigor In Operations**
 - Observed Increased Sensitivity to Problem Identification
 - Observed Special Training for Operations



Ex. 5

~~Predecisional~~
CRYSTAL RIVER

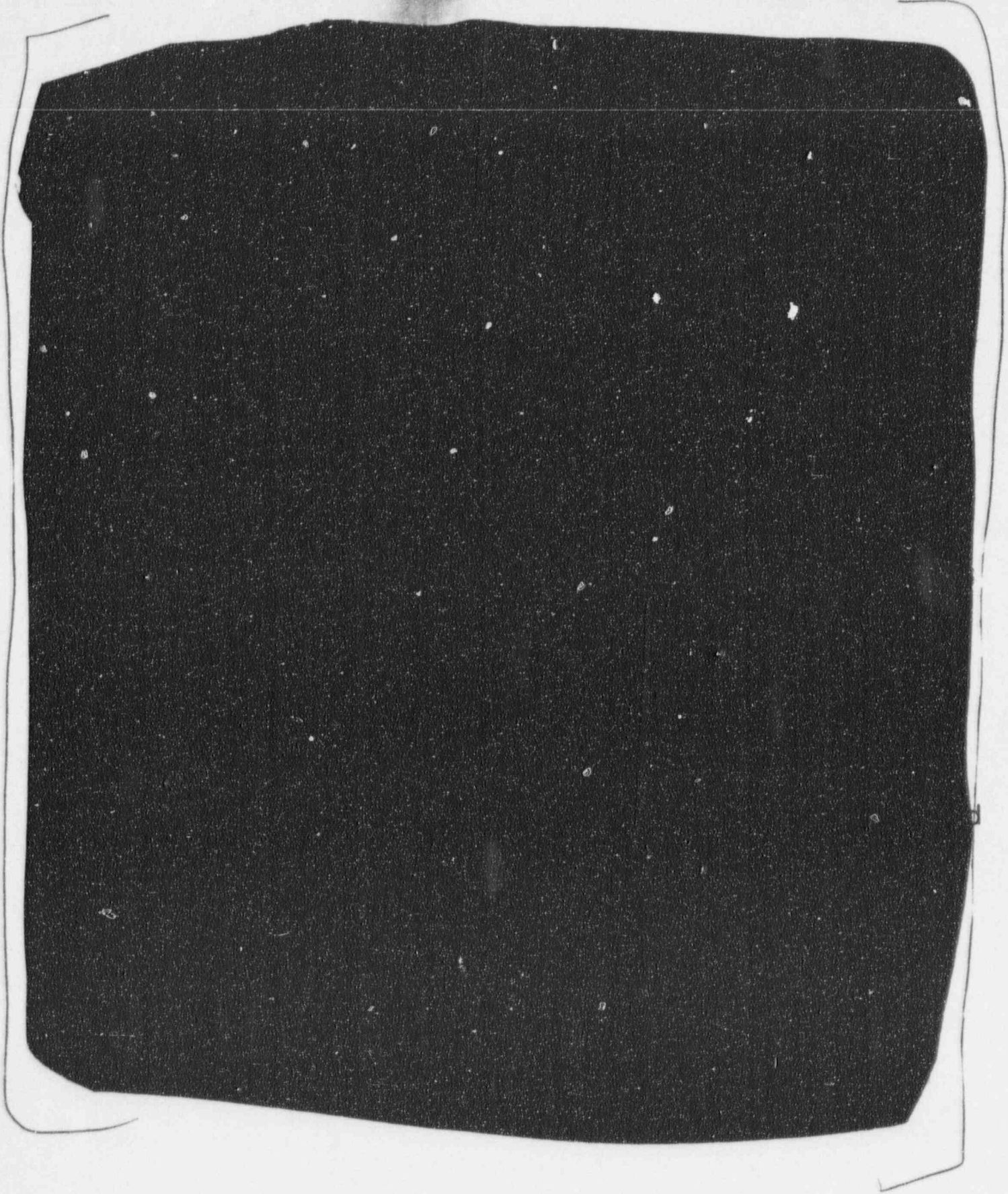
ARGUMENTS FOR INCREASED AGENCY ATTENTION

- Decreased Performance Since Last SMM
- Shutdown Due to Serious Engineering Problems
- Overall Decrease in Last Two SALPs
- Seven Severity Level III Violations
- Six Items under Review for Escalated Enforcement
- Increased Number of Allegations

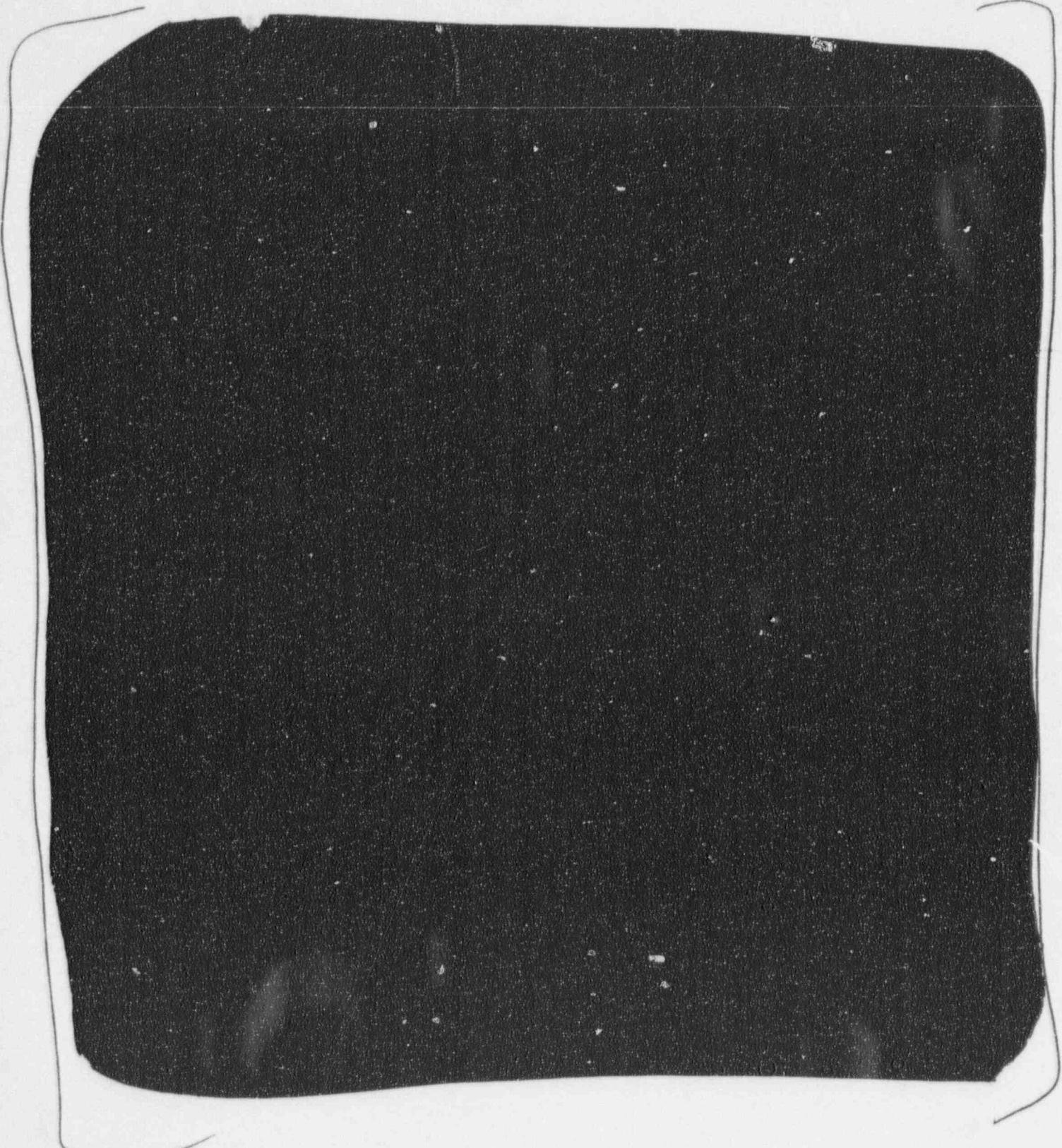
**ARGUMENTS FOR MAINTAINING CURRENT LEVEL
OF ATTENTION**

- Extensive Management Changes
- Improvements in Engineering Processes
- Improvements in Technical Competency
- Licensee Established Startup Review Process
- NRC Established 0350 Restart Panel
- Bimonthly Meetings to Monitor Progress
- Added Third Resident Inspector

~~Predecisional~~



Ex. 5

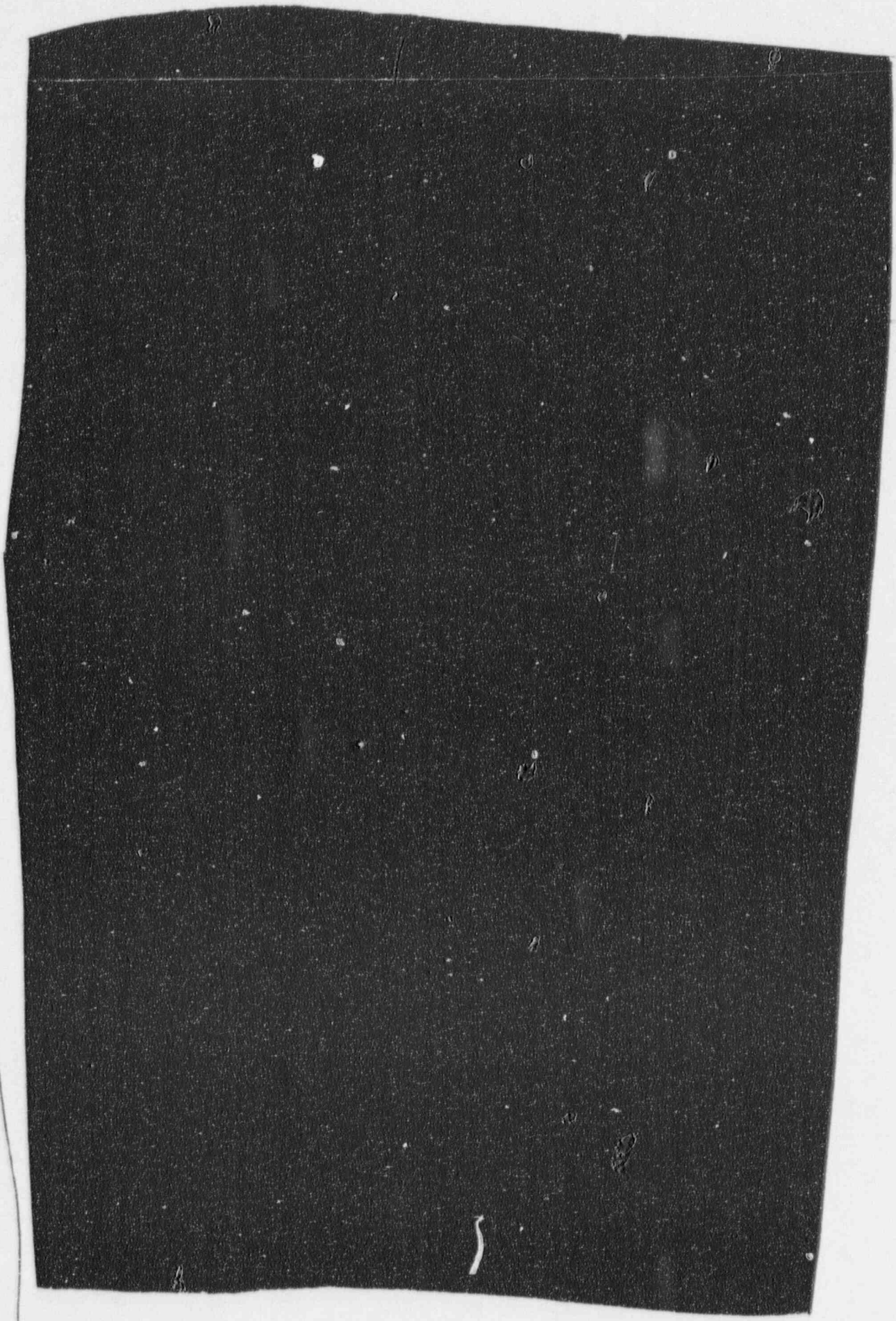


Ex. 5

Ex. 5



Ex. 5



Ex. 5

ARGUMENTS FOR INCREASING AGENCY ATTENTION

● Recognition of Performance Problems

- Non-conservative Decisions by Operators and Plant Management During a Risk-Significant Service Water Event
- Examples of Failure to Properly use the Engineering Design Change Process to Control Plant Modifications
- Significant Weaknesses in Engineering Support for Plant Operation in the Areas of Root Cause Evaluation and Operability Determinations

● Effectiveness of Improvement Initiatives

- Failure to Correct Various Equipment Design Deficiencies and Improve the Material Condition of Plant Equipment Resulting in Unnecessary Challenges to Operators
- Continued Adverse Trend in Personnel Errors Resulting in Examples of Inoperable Safety-Related Equipment and Loss of Configuration Control for Important Plant Systems
- Failure to Effectively Plan and Execute Maintenance Work Activities Limiting Material Condition Improvement
- Management and Organizational Changes have Not Yet had Time to Effect Improvement
- Implementation of Restart and Long-Term Improvement Plans has Only Begun and Past Plans were Ineffective in Improving Performance

~~Precision~~
LASALLE COUNTY STATION

ARGUMENTS FOR MAINTAINING CURRENT AGENCY ATTENTION

● Recognition of Performance Problems

- Commitment by Senior Corporate Management that Both Units will Remain Shut Down Until All Identified Human Performance and Hardware Deficiencies have Been Appropriately Resolved
- Licensee Management Appears to Understand the Scope of the Problems at Lasalle and What is Needed to Fix Them
- Positive Initiative Undertaken by the Licensee to Contract a Team of Industry Peers and INPO Representatives to Perform a Comprehensive Review of Historical Performance in Order to Determine Why Previous Improvement Initiatives have Failed (Independent Safety Assessment (ISA))

● Effectiveness of Improvement Initiatives

- Licensee Developed a Detailed Restart Action Plan to Address the ISA Issues and Similar NRC Identified Concerns
- Well-Structured Plan to Effect Long-Term Performance Improvements in Operations, Maintenance, and Engineering, as Outlined in SALP Response
- A Number of Senior Management Changes and Implementation of a Unitized Management Structure have Been Initiated
- The Licensee has Committed to Conduct Significant Improvement Initiatives in Engineering Such as Safety System Functional Inspections and Implementation of Engineering Oversight Teams for Operability and 10 CFR 50.59 Safety Evaluations

● NRC Oversight

- NRC Restart Assessment Team Inspection will be Performed to Verify Effectiveness of Licensee Corrective Actions and Readiness to Startup Both Units

~~Precision~~

MAINE YANKEE ARGUMENTS

For Increased Agency Attention

- ISA Findings: past cultural problems
 - emphasis on economic production
 - lack of questioning attitude
 - high threshold for identifying and fixing
 - large backlog of issues remains to be assessed
- Complacency and ineffectiveness in dealing with licensing/safety issues.
- ISA identified several design and configuration issues and licensee and regional followup are continuing to identify operability issues such that the extent has not been fully assessed.
- A number of design-margin issues exist along with weaknesses in testing. There is also a material condition contribution.
- Mixed picture in engineering, MY & YA capable but weak interface and lack of ownership on many issues. Safety evaluations have been weak.
- Too early to assess effect of recent improvement initiatives.
- Organization and management in transition, unknowns are MY group of problems, proposed Entergy arrangement.

For Maintaining Current Level

- Licensee acknowledge ISA and recent inspection findings
 - operations viewed as generally good
 - staff is knowledgeable and experienced
 - a number of operator workarounds have been addressed
- Issues identified since ISA have been handled timely and conservatively.
- The scope and depth of ISA review was extensive and in advance of 50.54f letter on conformance to design basis.
- Design margin issues largely addressed through power level limitation to 2440 vice 2700.
- Hiring of new staff principally in engineering, maintenance and rad controls.
- Broad plan laid out addressing process, staffing and equipment problems with additional funding committed.
- Entergy has been previously effective in causing substantial improvements in plants it operates.

POINT BEACH

ARGUMENTS FOR INCREASING AGENCY ATTENTION

● Conduct of Operation

- Inattentive Control Room Operators
 - Marginal Control Room Staffing
 - Inconsistent Operating Philosophy

● Conduct of Maintenance and Testing

- Maintenance and Testing Documents Sometimes Lack Restoration and/or Post Maintenance Testing Requirements, Resulting in Configuration Control and Operability Verification Problems

● Conduct of Engineering

- Examples of Weak Operability Evaluations, Questionable Testing Acceptance Criteria, and Un-evaluated Engineering Deficiencies were Identified.

● Licensing Bases

- Plant, Tech Specs, FSAR and Design Bases Not Always in Agreement or Conservative

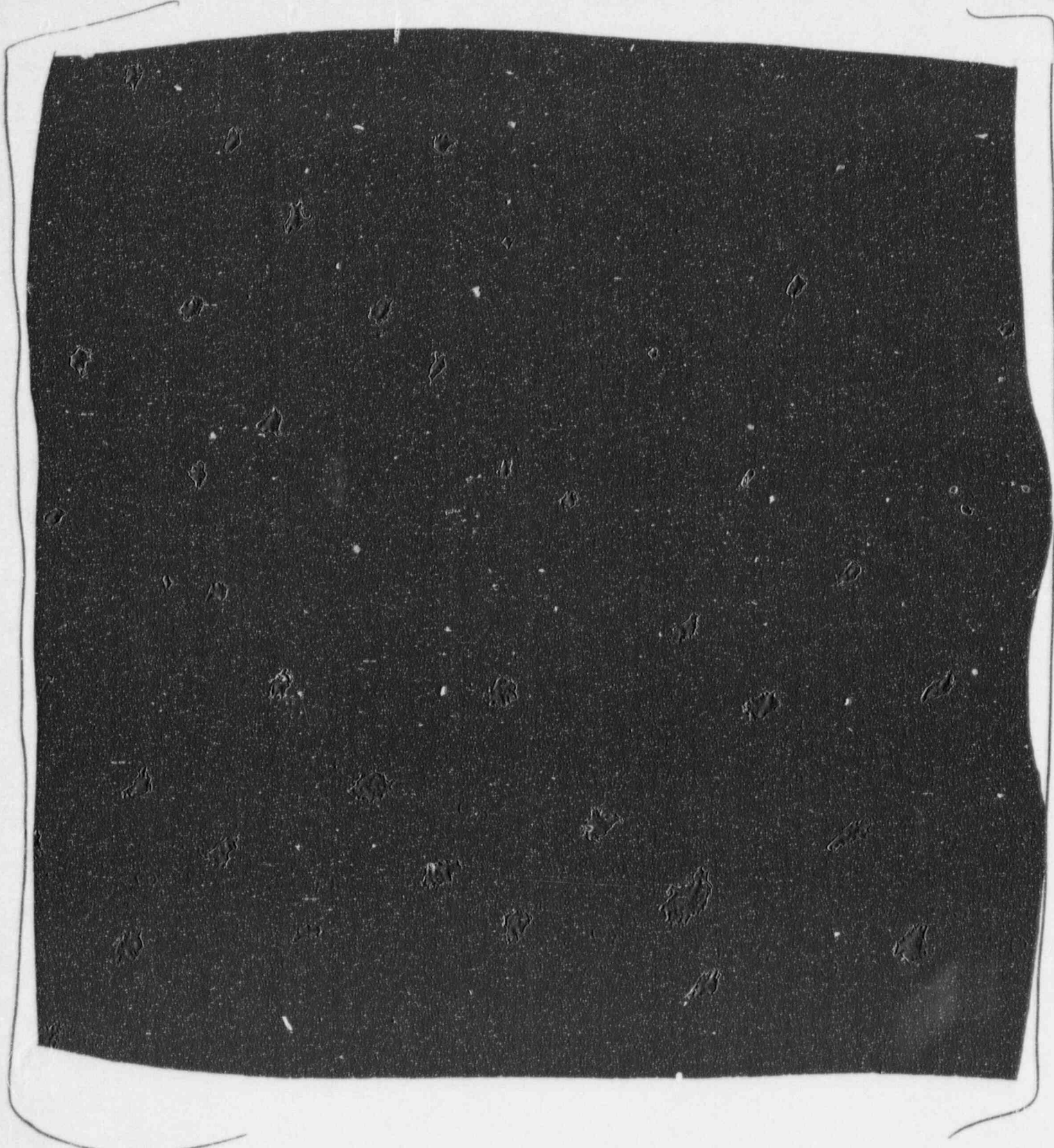
● Corrective Actions and Self Identification of Issues

- Little Self or Independent Assessment of Performance
- Corrective Actions Tended to Focus on NRC
- Identified Issues and Have Not Always Been Effective NRC Residents Continue to Find Significant Performance Issues
- OSTI Inspection Identified Many Significant Performance Issues Particularly in the Area of Identifying and Addressing Conditions Adverse to Quality and Additional Examples of Nonconservative Technical Specification Surveillance Testing

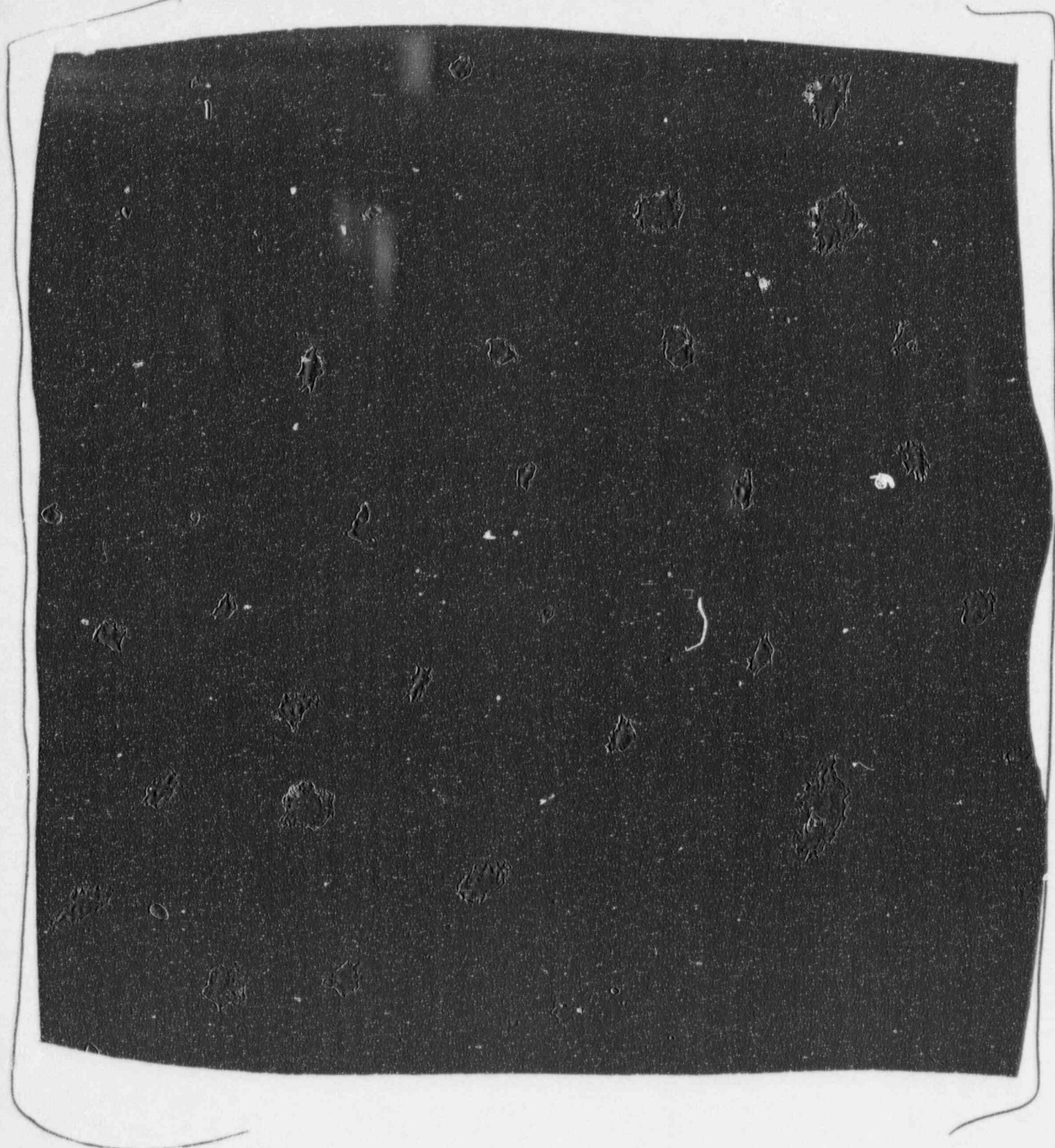
POINT BEACH

ARGUMENTS FOR MAINTAINING CURRENT AGENCY ATTENTION

- **SES Oversight Manager; Dedicated Branch Chief; Recently Assigned Resident Staff; Augmented Regional Inspection**
- **Conduct of Operation**
 - Operator Response to Off-Normal Conditions Remains Good and Some Improvements Noted in Control Room Formality
- **Conduct of Maintenance and Testing**
 - Reviewing/Upgrading OPS, Surveillance and Maintenance Procedures to Address Issues; Also Reviewing past Activities
- **Conduct of Engineering**
 - Moving Corporate Engineering to Site and Formulating a System Engineering Program to Improve Ownership
- **Licensing Bases**
 - Performing Design Reconstitution; Committed to a Full Review of FSAR - Performed Interim Review of One Chapter
 - Substantial Commitment of Resources for SG Replacement and for Additional EDGs to Improve Safety and Reliability
- **Corrective Actions and Self Identification of Issues**
 - Enhanced Performance Improvement and Restart Plan Confirmed Through a Confirmatory Action Letter
 - Number of Condition Reports Has Increased Substantially
 - Management and Staffing Changes Have Been Implemented to Better Address Performance Issues
 - Committed to Further Improve Condition Reporting, Operability Evaluation, and 50.59 Evaluation Programs



Ex. 5



Ex. 5

Ex. 5

ARGUMENTS FOR INCREASING AGENCY ATTENTION

● Recognition of Performance Problems

- Significant Weaknesses in Engineering Including Ineffective Problem Resolution and Inadequate Implementation of the 50.59 Safety Evaluation, Operability Evaluation, and Modification Processes
- Repeated Identification of Issues by Nrc Impacting on Startup for Unit 2 Despite Licensee Confidence in Readiness for Restart
- NRC Staff Versus Licensee Identifying Hardware Problems
- Differing View Between NRC and Licensee Management of Readiness to Restart Unit 2

● Effectiveness of Improvement Initiatives

- No Appreciable Change in Licensee Performance since August of 1993. New Management Team Has Not Yet Had Time to Demonstrate Improvement.
- Inability to Significantly Improve the Material Condition of Plant Equipment Resulting in Unnecessary Challenges to Operators and Operator Acceptance of Equipment Workarounds
- Continued Weaknesses with the Quality of Work Activities Due to Inattention to Detail, Inadequate Procedures, and the Failure to Follow Work Instructions
- Increased Personnel Errors and Continued Adverse Trend in Operational Events and Inadvertent Technical Specification Limiting Conditions for Operation Entries, the Majority of Which Have Either Been Self-revealing or NRC Identified
- Continued Decline in Radiation Protection Performance

Predecisional
ZION

ARGUMENTS FOR MAINTAINING CURRENT AGENCY ATTENTION

● Recognition of Performance Problems

- Management Appears to Understand the Scope of Problems at Zion
- Positive Initiative to Contract a Team of Industry Peers and Inpo Representatives to Perform a Comprehensive Review of Historical Performance to Determine Why Previous Improvement Initiatives Have Failed

● Effectiveness of Improvement Initiatives

- Several Significant Management Changes Have Been Completed and a Unitized Management Structure Has Been Initiated
- Measured Improvement in Problem Identification
- Improved Control Room Communications and Formality
- Implementation of the Twelve Week Rolling Maintenance Schedule Has Resulted in Improved Work Control and Planning
- The Licensee Has Committed to Conduct Significant Improvement Initiatives in Engineering Such as Safety System Functional Inspections and Implementation of Engineering Oversight Teams for Operability and 10 CFR Part 50.59 Safety Evaluations

● NRC Oversight

- Assignment of an Experienced Senior Resident Inspector, Resident Inspector, and Dedicated Engineering Inspector

Predecisional

ATTACHMENT 9

LIST OF ATTENDEES

NRC SENIOR MANAGEMENT MEETING - JANUARY 14,15 and 17, 1997

S. Jackson, OCM
J. Johnson, OCM
H. Thompson, Acting EDO
E. Jordan, DEDO
P. Norry, DEDM
F. Miraglia, NRR
A. Thadani, NRR
B. Sheron, NRR
R. Zimmerman, NRR
F. Gillespie, NRR
W. Borchardt, NRR
D. Ross, AEOD
C. Paperiello, NMSS
D. Morrison, RES
S. Burns, OGC
M. Malsch, OGC
G. Caputo, OI
H. Miller, RI
L. Reyes, RII
E. Merschoff, RII
A. Beach, RIII
J. Callan, RIV
S. Collins, RIV
J. Dyer, RIV
W. Beecher, OPA (Day 1)
V. McCree, OEDO