ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

SALP BOARD REPORT 50-309/88-99

MAINE YANKEE ATOMIC POWER COMPANY

MAINE YANKEE

ASSESSMENT PERIOD: AUGUST 1, 1988 - OCTOBER 31, 1989

BOARD MEETING DATES: DECEMBER 13, 1989 AND JANUARY 25, 1990

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I. INTRODUCTION

The Systematic Assessment of Licensee Performance (SALP) program is an integrated NRC staff effort which supplements the normal processes used to ensure compliance with NRC requirements. SALPs evaluate licensee performance based on data and NRC observations, and include inputs based on NRC management meetings. They are intended to be diagnostic enough to provide a rational basis for allocating NRC resources and to provide meaningful guidance to licensee management on promoting quality and safety of plant activities.

This report is the August 1, 1988 through October 31, 1989 NRC assessment of safety performance at the Maine Yankee Atomic Power Station.

An NRC SALP Board, composed of the staff members listed in Appendix J, met on December 13, 1989 and January 25, 1990 to assess performance in accordance with the guidance in NRC Manual Chapter 0516, "Systematic Assessment of Licensee Performance." A summary of the guidance and evaluation criteria is provided in Appendix A to this report.

II. SUMMARY OF RESULTS

II.A Overview

Management oversight and involvement in plant activities continued to be proactive and aggressive, promoting a high level of safety consciousness. The Morning Managers' Meetings provided a strong basis for constructive interdepartmental communication and effective teamwork. Plant transients and operational occurrences attributed to personnel error or improperly performed maintenance or surveillance remained low.

Aggressive response to the occupational radiation protection program weaknesses identified by the NRC during the previous SALP period resulted in improved performance. There was an increased level of management attention to and involvement in the program. A Radiation Protection Improvement Plan was implemented to continue the overall improvement of the quality and implementation of the radiation protection program.

Security showed deterioration during approximately the first third of the assessment period. Escalated NRC enforcement action after a November 1988 inspection was followed by significant management attention which continued throughout the period. There was noteworthy equipment upgrading and a great deal of work on the part of licensee management and staff.

A good emergency response capability was demonstrated; however, emergency preparedness coordination staffing problems resulted in aspects of the program not being effectively implemented. Also, some emergency response staff was not adequately trained. These weaknesses were identified early in the period. Effective corrective actions resulted in an improving trend.

Overall, the SALP Board assessed the licensee's responsiveness to NRC initiative as consistently strong. Training was assessed as somewhat inconsistent among functional areas. Radiation Protection, Security, and Emergency Preparedness programs have shown improvement.

II.B Facility Performance Tabulation

MAINE YANKEE

Functional Area		Rating Last Period*	Trend Last Period	Rating This Period**	Trend
A.	Plant Operations	1	--	1	--
B.	Radiological Controls	3	Improving	2	--
C.	Maintenance/Surveillance	1	--	1	--
D.	Emergency Preparedness	1	--	2	Improving
E.	Security	2	--	2	--
F.	Engineering/Technical Support	2	--	2	--
G.	Safety Assessment/Quality Verification	2	--	2	--

* February 1, 1987 to July 31, 1988
** August 1, 1988 to October 31,1989

III. PERFORMANCE ANALYSIS

III.A Plant Operations (1902 hrs., 38.5%)

III.A.1. Analysis

This area was previously rated Category 1 based on the lack of operating errors and events, strong senior management involvement, good daily overview and coordination, and initiatives which contributed to good operation.

This SALP is based on resident and region-based inspection, licensed operator candidate and requalification examinations, an NRC Safety System Functional Inspection, and an Emergency Operating Procedures Team inspection.

Comprehensive oversight of daily activities was evident in the Morning Managers' Meetings. These meetings detailed operational issues, critical plant parameters, upcoming activities, and plant issues. All plant disciplines were represented. Discussions were concise and encouraged professional dialogue. Issues were well developed. Ownership responsibilities were clearly defined. The meetings were very effective in assuring general awareness, inter-departmental communications, and early resolution of potential problems.

Operational response to the four plant trips during the SALP period was professional. An example was the trip due to a fault on one of the two main output transformers. The grid disturbance prevented the reserve station power sources from energizing. The operators restored offsite power in accordance with the emergency operating procedures. A Root Cause Evaluation detailed causes for numerous discrepancies identified by this complex occurrence. Cause determinations were appropriately evaluated prior to plant restart.

During cooldown to replace reactor coolant pump seals in December 1988, an operator error resulted in two Safety Injection Actuation Signal (SIAS) actuations. An Operations Department review and an Event Review Board were conducted to identify the root cause, understand contributing circumstances, and ensure effective corrective actions were developed. Implemented corrective actions included emphasis on control room supervisory oversight of evolutions.

Prior to the SIAS actuations, an Operations Control Center (OCC) was established during long outages to reduce the control room staff administrative workload. OCC activities included interfaces for safety tagging and work authorization. OCC operation significantly reduced traffic to the control room vestibule, allowing improved on-shift operator oversight of evolutions. The OCC was not manned during the error-induced SIASs. Since then, during outages without the OCC manned, extra personnel have been provided in the control room to improve oversight. This was an instance of effective self-assessment.

No plant trips due to operator error occurred during this SALP period. During the post-refueling startup, procedure inadequacy resulted in a turbine and plant trip due to improper alignment of control air to a secondary system valve.

There were three unscheduled, controlled shutdowns. Operationally, these were performed conservatively to replace reactor coolant pump seals and address environmental qualification (EQ) concerns. For the two reactor coolant pump seal shutdowns, the plant was shut down prior to exceeding the administrative limits on seal parameters. For the EQ shutdown, the licensee conservatively chose to shut down for maintenance on several containment penetration cable connector seals as opposed to further testing to qualify the "as-installed" configuration.

Effective operator training was evident in favorable NRC results on operator candidate and requalification examinations, and in the excellent results of the emergency operating procedure team inspection. Operator candidates included two for senior reactor operator (SRO) and five for reactor operators. All except one SRO candidate passed. (The candidate who failed was a Shift Technical Advisor who had not previously been licensed.) All operators examined passed both the written and operating portions of the requalification examination. Training Department Management was closely involved in the implementation of the revised requalification examination, Operations Department Management participated in the examination process, and the Operations Vice-President was active in ascertaining NRC input during the exit meeting. The EOP inspection concluded that the procedures were well written and the operators were fully capable of using them. Also, the site specific simulator was reviewed and certified, further showing management commitment to quality training.

There was one Operations violation. After an overfill of the spent resin storage tank in August 1989, Operations identified numerous corrective actions, most of which were long term. Spent resin handling continued, and the incident recurred. This was assessed as an isolated failure to take adequate corrective action.

Only degreed individuals have been hired into the Operations Department for the past several years. All operators, with the exception of a few non-licensed operators, had degrees or were attenting courses to obtain them. The presence of degreed operators enabled the department to implement a "system expert" concept. Operators were assigned responsibility for specific plant systems. Responsibilities of the "system expert" were similar to those that would be assigned to a "system engineer." As well as providing a system-based review of the maintenance backlog from an operator's perspective, the "system expert" concept enhanced the operators' feeling of ownership and responsibility for the material condition of the facility.

The Operations Department utilized a six crew rotation. To supplement normal shift turnover, prewatch briefings were conducted for crews that were away from daily operations for more than a few days. Operator staffing levels were sufficient to allow minimal use of overtime.

Overall, the licensee demonstrated a strong orientation toward safe operation, with good management involvement and oversight. The Operations Department exhibited professionalism and technical and operational competence.

III.A.2 Performance Rating: Category 1

III.A.3 Recommendations: None.

III.B Radiological Controls (412 hrs., 8.3%)

III.B.1. Analysis

This area was rated Category 3, improving, during the previous SALP. During that SALP, weaknesses were identified in the management and supervisory oversight of the occupational radiation protection program, in the adequacy and implementation of program procedures, and in self-identification and corrective action for radiological concerns. The licensee initiated corrective actions, and overall performance improved toward the end of the period. Performance in effluent monitoring and control and radwaste handling and transportation was good during the previous SALP period.

There were four inspections by specialist inspectors during the current SALP period. The resident inspectors reviewed this area on an ongoing basis. This area was also reviewed during the NRC's maintenance team inspection.

Radiation Protection

NRC review found improved performance in radiation protection since the last SALP. The improvements included: the rewriting and upgrading of significant program procedures; increasing the number of contractor radiation protection personnel brought onsite to support the outage; improving the planning, scheduling, and control of work; and increasing the supervisory oversight of ongoing work in the field.

Problems continued to be noted, however, particularly in the implementation of radiation protection procedures. These problems included workers and radiation protection personnel not adhering to radiation work permits, weaknesses in high radiation area access control, and weaknesses in resolving self-identified concerns. Problems with procedure adherence were also identified in the licensee's self-assessment of radiation protection during the outage. The implementation problems involved various station groups and contractors, indicating a continuing general lack of appreciation for the need to strictly adhere to radiation protection requirements. These problems also indicate a need to improve training on procedure adherence and a need for more management attention to procedure adherence.

Based on self-identified and NRC-identified concerns, the licensee concluded that additional actions were necessary and implemented a Radiation Protection Improvement Plan which was reviewed and approved by the President of Maine Yankee Atomic Power Company. That plan commits to improved management support and oversight of radiation protection, to an in-depth independent audit of the program, to improved quality and implementation of the radiation protection program, to improved training of personnel, and to additional attention to ALARA.

Action was taken to improve the experience level, technical capabilities, and overall management of personnel in the radiation protection department. For example, a new dosimetry supervisor with considerable experience was hired. Also, the radiation protection department was reorganized at the end of the assessment period to improve the day-to-day management of operational and technical support activities. The effectiveness of the Radiological Controls Improvement Plan and of the new organization has not been evaluated by the NRC.

Occupational radiation protection audits were upgraded to make them more performance-based. All members of the QA group attended training on performance-based audits. Audit procedures were revised to highlight the need to thoroughly review recurrent items and determine root causes. The licensee also increased the frequency of audits of problem areas and established a program to solicit worker concerns and ensure timely review and resolution.

NRC review continued to reveal problems being identified by the licensee without appropriate review and evaluation by management. For example, problems with adherence to radiation work permits continued to be identified with no apparent follow-up by management. However, a program to track the specific programmatic and technical concerns identified by the NRC was established by the licensee to ensure that the concerns were reviewed and corrected.

The licensee was responsive to the NRC's ALARA concerns identified during the last SALP and took action to reduce both individual and collective exposures. Actions included the development and close monitoring of radiation exposure goals for station departments, the reduction of general area dose rates by decontamination of radioactive hot spots in piping, and the evaluation and revision of the route of operator rounds to minimize exposures during routine duties. Planning for major exposure tasks (e.g., recent reactor coolant pump impeller and seal work) was improved. Exposure goals for work were challenging. A three year ALARA plan was developed and implemented. The plan includes steps to reduce the overall source term at the station, and thereby reduce the aggregate exposure.

A defined external and internal exposure control program was established, but implementation problems were noted during outages and routine operations. Of particular concern was the training of radiation protection technicians in program requirements. NRC inspector questioning of technicians during the outage

indicated inconsistent understanding of radiological job coverage requirements and the need for continued attention to adherence to external and internal exposure control procedures.

Housekeeping showed improvement during this assessment period. Effective control of contamination minimized the intake of radioactive material by personnel. Aggressive decontamination resulted in only 7% of the routinely accessible areas being contaminated. The licensee has continued to reduce the number of contaminated areas and maintain them clean.

Radiological Effluent Monitoring

During the first half of the assessment period, the radioactive liquid and gaseous effluents monitoring program was inspected. Audits, documentation of releases, semiannual effluent release reports, and documentation of air handling system tests were found complete, timely and thorough. A notable strength was the program for the primary calibration of process and effluent monitors.

Radiological Environmental Monitoring Program (REMP)

During the first half of the SALP period, two inspections of the licensee's REMP were conducted. These reviewed REMP data for 1988, previous annual REMP reports, procedures, audits, quality control and meteorological monitoring. All programs and procedures were determined to be well stated, controlled and explicit. Direct radiation measurements taken by the NRC, the State of Maine, and the licensee showed good agreement. Comparison of the licensee's measurements with EPA cross check data indicated effective quality control.

Transportation and Solid Radioactive Waste

During the first half of the assessment period, the transportation and radwaste program was inspected. Errors were found by NRC in the manifests for two radwaste shipments. A licensee Quality Assurance audit had previously noted errors in radwaste manifests. No audit findings were written since the licensee did not consider the errors significant. This represents a lack of understanding of the significance of the issues with a resultant failure to correct an identified problem. After further review, the licensee concluded that other errors in radwaste manifest calculations had occurred. Also, it was routine practice for management to review shipping documentation several weeks or months after a shipment had been made. That practice was eventually changed in response to an internal licensee audit finding. Overall, transportation and solid radioactive waste functions were adequately performed, however the problems that occurred were a reflection of weaknesses in management's oversight of the program.

Summary

NRC review identified an increased level of management attention and involvement. The licensee aggressively responded to the problems in the occupational radiation protection program. A Radiation Protection Improvement Plan was implemented to improve the overall quality and implementation of the program. The plan had substantial management support. The licensee's efforts to date are commendable, but the response to self-identified problems needs additional management attention.

The licensee's reorganization of the radiation protection department and hiring of experienced technical personnel were good initiatives. However, the noted problems in procedure and RWP adherence, in high radiation area access control, and in radiation protection technician knowledge of program requirements illustrate the need to continue to improve performance and the related training.

The radiological effluent monitoring and control and the radiological environmental monitoring programs continued to be effectively implemented. Licensee's evaluations of contamination in the back yard areas indicated a good understanding of the technical issues involved in resolving this problem. The observations in the radwaste transportation area indicate the need for improvement in the oversight of this area.

III.B.2. Performance Rating: Category 2

III.B.3. Recommendations:

Licensee: None.

NRC: Conduct preoutage and mid-outage inspections to obtain tangible measures of the effectiveness of the implementation of the Radiological Controls Improvement Plan by the reorganized department.

III.C. Maintenance/Surveillance (1498 hrs., 30.3%)

III.C.1. Analysis

Maintenance and Surveillance were combined into a single area during the previous SALP and were rated Category 1. Emphasis on the coordination between operations and maintenance resulted in maintenance and surveillance activities having minimal impact on plant operations. There were no inadvertent ESF actuations or plant trips caused by inadequate surveillance control.

The current assessment is based on resident inspection, NRC regional specialist inspections of the Inservice Testing (IST) and Inservice Inspection (ISI) programs, an NRC team Safety System Functional Inspection (SSFI), and an NRC Maintenance Team Inspection.

Maintenance was controlled well during normal operation, unplanned outages, and the scheduled refueling outage. Two week, six week, and special project schedules were routinely prepared to enable coordination of resources. Outage schedules were developed for unplanned outages of sufficient duration and for scheduled refueling outages. Critical path activities were identified and coordinated with corrective and preventive activities not possible to be accomplished during normal operation. When the maintenance backlog reached predetermined levels, extended workdays and/or contractors were utilized to reduce the backlog. Generally, conservative attitudes were displayed by licensee personnel. An experienced, dedicated, stable workforce continued to be an asset to the licensee.

No maintenance activities resulted in a plant trip or inadvertent ESF actuation. However, a control rod dropped due to inadequate control of troubleshooting. Appropriate corrective action was taken. A second control rod dropped during maintenance, but the decision to work on the Control Element Drive System in this case was made with knowledge of the risk of dropping the rod. Had the work not been accomplished, damage to equipment located in a high radiation area in the upper head assembly of the reactor vessel may have occurred. Actions were taken to minimize the risk of dropping the rod, utilizing lessons learned from the previous dropped rod and input from a vendor representative onsite. This demonstrates the maintenance department was performing self-assessment and implementing appropriate corrective actions.

Routine maintenance was generally well-controlled and there were few errors by maintenance personnel. However, some errors were noted. The licensee identified that maintenance supervisors removed a packing nut on the wrong reactor coolant system pressure boundary valve, resulting in that work being accomplished with the valve unisolated from full reactor coolant system pressure. Two examples of maintenance workers failing to adhere to Radiation Work Permit requirements were identified by the Maintenance Team Inspection. Increased attention to detail in accomplishing such tasks is therefore warranted.

Management was found to be fully dedicated to a strong maintenance program. Senior management monitored personnel and performance indicators and initiated action when necessary. Adequate allocation of resources was noted. Generally, intergroup communications were good, and engineering involvement and support were evident. Weaknesses were noted in monitoring rework, failure trending analysis, and engineering input to corrective and preventive maintenance procedures. A strong refueling outage work control program was established, with adequate procedures. Improvements were noted in the maintenance history and in guidance for post-maintenance testing. A considerable effort was made to improve housekeeping. (See Radiological Controls Analysis.) A maintenance organization has been established with competent supervision, low turnover rate, and a well-established training program which resulted in providing high quality workmanship. Although some weaknesses were identified, the maintenance program and its implementation were considered good.

One plant trip was caused by faulty surveillance. While performing non-Technical Specification 345 Kilovolt breaker failure relay testing, an offsite utility worker improperly returned the relay to service and isolated the plant from the grid, causing a plant trip. The licensee implemented improved coordination with the local utility. At the end of the SALP period, the licensee was pursuing additional corrective action to increase the control of local utility activities which may impact plant operation.

No Engineering Safety Feature (ESF) actuations were attributed to faulty surveillance. There were no missed surveillances identified during the assessment period. Routine preventive maintenance was coordinated with surveillance to reduce the time equipment was out of service. Major surveillance such as the containment integrated leak rate test and the eddy current inspection of the steam generator, both of which were performed during the refueling outage, received good oversight. The Inservice Testing (IST) Program was performed by a knowledgeable and capable staff, using state of the art vibration monitoring and computerized pump data trending.

Quality Assurance Audits, Evaluations, Quality Control Inspections and Nonconformances generally reflected a good working knowledge of the maintenance, surveillance and installation processes. Well documented findings reflected detailed reviews. Emphasis was placed on conducting performance-based audits.

In summary, maintenance and surveillance activities were well coordinated and controlled, resulting in minimal adverse impact on operations. Management was dedicated to a strong maintenance program. Although some weaknesses were identified, a major strength of the organization was a stable, dedicated staff with competent supervision, a low turnover rate, and a well established training program which generally resulted in high quality work.

III.C.2 Performance Rating: Category 1

III.C.3 Recommendations: None.

III.D. Emergency Preparedness (129 hrs., 2.6%)

III.D.1 Analysis

During the previous SALP, this area was rated Category 1. That rating was based on very good performance during the partial participation exercise and on the high level of support provided to off-site state and local agencies.

During the current SALP period, a partial-participation exercise was observed, a routine inspection was conducted, and changes to the emergency plan and implementing procedures were reviewed.

Emergency Response Facilities were maintained ready and the Emergency Plan and Implementing Procedures (EPIPs) were current. The EPIPs are subject to review by senior site and corporate managers. The status of corrective actions was distributed to senior management for review and approval. Senior management was kept appraised of emergency preparedness activities by both formal and informal processes. However, in at least one instance, senior management did not adequately account for the extent of emergency preparedness activities and allowed the Emergency Preparedness Coordinator to be reassigned to the Security department for two months. As a result, portions of the program either were not performed or were untimely.

The emergency preparedness program was maintained by the Emergency Preparedness Coordinator (EPC), who was responsible for all on-site and off-site activities. The EPC was supported by the Training Department, Technical Support Department, and Simulator Department. In addition to his two month assignment to the Security Department, the EPC had no staff of his own. Despite cooperation and support from other departments, he was unable to accomplish all required tasks. That adversely affected corrective action implementation, documentation completeness and consistency, and distribution of the required annual review to appropriate off-site officials. In response, the licensee authorized increasing the EPC staff. Late in the period an on-site EPC was hired. This individual has extensive reactor operations experience. An additional position was identified with the responsibility to perform emergency preparedness training. That position was initially filled but was vacant at the end of the SALP period.

The Emergency Response Organization (ERO) demonstrated a strong emergency response capability during the partial-participation exercise. Command and control were evident at all key locations. The licensee performed its drills and exercises using the simulator in order to provide better training for operations personnel. This resulted in good performance in the exercises from an operational viewpoint. However, some program weaknesses were identified concerning the lack of definition of responsibilities of the Recovery Manager and recurring radio communications problems between in-plant teams and the Operations Support Center.

Emergency preparedness training was performed by Training Department specialists as well as the EPC. Lesson plans and training methods were reviewed by the EPC. The ERO was fully staffed and trained. Although all staff received emergency preparedness training, it was noted to be informal in many cases, and was often combined with other training such as general employee training. Walk-throughs with licensee staff indicated that personnel were unfamiliar with some basic responsibilities and had difficulty performing some required tasks, such as the use of the dose assessment computer.

The licensee maintained a close relationship with local communities and the State of Maine. In support of the State and local emergency response effort, the licensee conducted training for the communities within the Emergency Planning Zone. Late in the period, the Federal Emergency Management Agency (FEMA) issued the final report for the 1987 full-participation exercise. This report

identified several deficiencies concerning the off-site alert and notification system and communications. FEMA withdrew their interim findings of reasonable assurance based upon these concerns. The most significant deficiency concerned the use of route alerting as the primary means of notification of the public. In response to these findings, the licensee, working closely with the State of Maine and the local communities, instituted corrective action to replace route alerting with fixed sirens and tone alert radios. They will continue to utilize route alert teams as a primary alerting method only in very remote, low population areas. Corrective actions were scheduled for completion in June 1990. At the end of this assessment period, the licensee was approximately six months ahead of that schedule.

The licensee has shown a good ability to resolve technical issues. In response to the FEMA finding regarding the alert and notification system, the licensee instituted a program to accurately map existing siren coverage, and developed a plan to extend coverage by adding sirens and tone alert radios.

In response to NRC and FEMA findings, the licensee instituted an Emergency Preparedness Improvement Plan. This plan delineates tasks, establishes due dates and responsibilities, and provides status tracking and rewards. It is maintained by management and routed to all applicable parties including senior management. This plan was a positive effort to improve emergency preparedness.

In summary, a good emergency response capability was shown during exercise performance and routine inspections. However, staffing problems resulted in areas of the program not being effectively implemented. Additionally, some emergency response staff was not being properly trained. Response to FEMA concerns with respect to the alert and notification system have been technically sound and thorough. Positive staffing initiatives and response to FEMA findings resulted in an overall improving trend.

III.D.2 Performance Rating: Category 2, Improving

III.D.3 Recommendations: None.

III.E. Security (241 hrs., 4.9%)

III.E.1 Analysis

During the previous SALP, the licensee's performance was rated as Category 2. Management was found insensitive to the need for an unambiguous security plan and implementing procedures. There was an apparent lack of clear understanding of and commitment to the NRC's security objectives, as well as an overall complacent attitude.

During this SALP period, there were three region-based physical security inspections. Routine resident inspections continued throughout the period. Violations identified during a November 1988 inspection (two were recurrent from the previous assessment period), resulted in a civil penalty in February 1989. Two of the violations were identified during the last half of the period.

Plant and corporate management attention to and support for the security program increased significantly after November 1988 and continued to be strong throughout the period. That involvement was evident in improvements such as inclusion of the security program into the weekly management inspection program; weekly meetings among security contractor, plant, and corporate personnel; quarterly meetings with the NRC to discuss program improvements, commissioning a security consultant to revise and update program plans and procedures, upgrading security force training, refocusing the security audit program to increase its effectiveness, purchasing and installing state-of-the-art hardware, and making modifications to alleviate several long-standing security weaknesses. In addition, the licensee effected several personnel and organizational changes including installation of a new Security Director, hiring another proprietary supervisor, placing two contract supervisors on each shift, replacing about 40% of the previous contract supervisors with more aggressive individuals, and increasing the training staff from one full-time instructor to two full-time instructors and a part-time coordinator.

Improved responsiveness to NRC concerns and potential weaknesses was evident by prompt, thorough and technically sound corrective actions during recent NRC security inspections and by more effective resolution of outstanding issues from the 1987 Regulatory Effectiveness Review. There also were indications that the compliance-oriented and complacent attitude has been turned around by the efforts of senior level corporate and plant management and the new Security Director. However, some continued compliance orientation was perceived. This was apparent in the licensee's physical security plan which was revised in early 1989. Much of the revision contained vague commitments to NRC requirements to allow flexibility in implementing the plan. Such flexibility was assessed in the last SALP as a detriment to performance.

Current licensee staffing under the new Security Director consists of an Operations Supervisor, who has been with the program for some time, and a new Administrative Support Supervisor with extensive law enforcement experience. The security management group still needs, however, to increase its knowledge of nuclear plant security systems and program requirements.

The licensee authorized increased contractor staffing during the latter half of this SALP period. The contractor assigned a Project Manager to the plant to relieve the security force chief of some administrative duties. In addition to

hiring nine additional security officers, another supervisor was added to each shift to improve oversight. Further, the licensee added security program implementation and security force performance to its weekly management inspection program. However, a weakness exists in the licensee's program for monitoring the day-to-day contractor operation and personnel performance, and in identifying potential problems before they become issues. This weakness was recognized by the licensee and late in the period authorization was being sought to hire an individual with prior nuclear power plant security experience for the licensee's on-site security management group.

The licensee has restructured and expanded its security force initial and requalification training programs for both officers and supervisors, and revised the Training and Qualification (T&Q) Plan in response to NRC concerns. While the NRC observed a more cohesive and smoother program implementation toward the end of the period, concerns remain regarding the security officers' depth of understanding of the NRC's security requirements. For example, late in the period, a remote switch for a frequently used security door was found intentionally set in the open position to avoid having to operate the switch for individual authorized entries. While this breach was apparently well-known to members of the security force and some supervisors, the significance of the action was not understood. That indicates that training of the security force in NRC requirements was weak.

The licensee needs to address mandatory overtime. During the October 1988 to January 1989 outage, security personnel were required to work twelve hour shifts five days per week and, in some cases, beyond that. This resulted in a decrease in morale. Action has since been taken to increase the staffing level of the contractor security force and its supervision. Also, plans were developed to utilize unarmed "watchmen" to supplement the security force during future plant outages. Morale in the security force showed improvement toward the end of the period as a result of licensee efforts. The mandatory overtime issue should be alleviated by the licensee's authorization for increased contractor staffing.

On several occasions late in the period, the NRC observed plant employees display a disrespectful attitude toward security force members who were carrying out their routine duties. This made it difficult for the security personnel to carry out those duties properly. These incidents showed a poor plant staff attitude toward the security program. When the NRC discussed this with plant management, the licensee's Acting Plant Manager indicated that such attitudes would not be tolerated. He promptly counseled the involved employees, took disciplinary action, and widely disseminated his intolerance toward that attitude. The effectiveness of these corrective actions has not yet been assessed by the NRC.

During the latter portion of the period, increased support from other plant functional groups was evidenced by increased interface between those groups and the security force and the development of more effective communications channels. As an example of better interfaces and communications, the NRC observed that maintenance support for security-related equipment increased later in the period and that a preventive maintenance program for that equipment was being developed. Additionally, the licensee dedicated an Instrumentation and Controls technician to the maintenance of security equipment. These actions have benefitted the licensee by reducing out-of-service time for equipment and thereby decreasing the need for compensatory measures which reduce the need for mandatory overtime.

During NRC interviews with security force members, the security force members expressed frustration over the absence of an effective mechanism to communicate security incidents to either their management or the licensee in order to effect corrective actions. They were aware that the licensee's Security Director maintained an "open door" policy, however, they were reluctant to bypass their chain of command. Mid-way through the period, the licensee initiated weekly meetings between its security management (corporate and site) and the contractor's management. These meetings have proven to be effective in opening lines of communication between the licensee and the contractor, as indicated by the improvements and enhancements mentioned elsewhere in this assessment. However, similar open communications within the contractor's security force itself still appear to be hampered by the effects of the licensee managements' inattention to the program.

During this SALP period, the licensee submitted four security event reports. Two of the events were not reported to the NRC in the required time. All four of the events involved personnel errors. Two of the events also involved multiple errors by security force members. While the licensee's corrective actions for each event were timely and proper, these events (involving personnel error and late reporting) contribute to the NRC's concern over security performance. However, the NRC recognizes the licensee's efforts in improving implementation of 10 CFR 73.31 that were not apparent in previous assessment periods.

In summary, during approximately the first third of this assessment period, the licensee's security program showed deterioration. Escalated NRC enforcement action, as a result of findings from a November 1988 inspection, was followed by significant management attention to improving the security program which continued throughout the period. There was a sizeable expenditure of capital resources and a great deal of work accomplished on the part of licensee management and staff to improve the program. Continued attention to the program is needed to ensure that weaknesses in the program and its implementation are identified and corrected.

III.E.2 Performance Rating: Category 2.

III.E.3 Recommendations:

Licensee: (1) Continue quarterly security management meetings with the NRC.

(2) Evaluate the adequacy of training of security managers.

NRC: (1) Inspect security performance during the next refueling outage.

III.F Engineering and Technical Support (492 hrs., 10.0%)

III.F.1 Analysis

The previous SALP marked the first time that Engineering and Technical Support was assessed as a separate area. In that SALP, the board rated this area as Category 2. In general, engineering and technical support were good, with several licensee initiatives noted. Deficiencies were identified in electrical and environmental qualification. Other deficiencies were found in procurement activities. Senior licensee management attention was recommended for the electrical concerns and the procurement problems.

During this SALP period, responsiveness to NRC initiatives was evident in timely resolution of equipment qualification and electrical open issues and by the following: (1) SSFI follow-up issues were scheduled to be completed by December 31, 1991; (2) NRC Information Notices IN 88-86, Operating with Grounds in Direct Current (DC) Distribution Systems IN 88-98, Electrical Relay Degradation from Contact Oxidation, and IN 88-75, Disabling DG Output Breakers by Anti-pump Circuitry, were scheduled to be addressed and completed before the end of the 1990 refueling outage; and (3) a report responding to NRC Bulletin 88-04, Potential Safety-Related Pump Loss, was scheduled to be completed by December 31, 1989.

A review of the corrective actions and changes made to the procurement program found upgrading of the process for commercial grade items. However, the program was still evolving and additional work was needed to incorporate and verify critical performance characteristics into the dedication process. In addition, corrective actions performed in a five year "look back" review included little or no performance testing of commercial grade items procured for safety-related applications. A re-review was initiated to provide for testing of components where necessary. The licensee has since committed to include performance testing in the dedication process. Overall, good progress was made on resolving procurement concerns.

Maine Yankee received engineering support from the Corporate Engineering staff of Yankee Atomic Electric Company (YAEC) in Bolton, Massachussets, from the Corporate Engineering staff at Augusta, Maine, and from the Plant Engineering Department (PED) at the site. Contractor personnel were used on an as-needed

basis, and each contract engineer was supervised by the cognizant Maine Yankee engineering supervisor. During refueling outages, contractor employees were extensively used and were supervised by either Maine Yankee PED personnel or Yankee Atomic Electric Company engineering personnel. Oversight of contractor personnel by the YAEC engineers needs to be strengthened, however. For instance, during the Cycle 10/11 refueling outage, an unauthorized modification to the supports for instrument tubing which was part of the reactor coolant pressure boundary resulted in a violation. The unauthorized modification was caused by contractor personnel working beyond the scope of the installation instructions and inadequate supervision by the YAEC Engineer.

During routine operations, on-site support of operations by the Plant Engineering Department was coordinated with other plant departments through attendance at the Morning Managers' Meeting. The technical portions of issues identified at these meetings were routinely assigned to PED for resolution. In general, the resolutions were technically correct, conservative and consistent with current nuclear safety practices. Good communication between the PED and other departments was evident in the successful completion of 12 of the 14 actions assigned to support the 1988 corporate objectives. Also, special tests performed under the cognizance of PED received good oversight. As an example, the oversight of the Containment Integrated Leak Rate Test (CILRT) and of the Steam Generator Eddy Current Inspections was assessed as good.

or Management involvement in routine activities was evident in presence and ve participation in the Morning Managers' Meeting. Support for improved ineering effectiveness and resolving technical and safety issues was evident the decision to relocate Project Engineering from the corporate office in gusta, Maine, to the plant site. Management support of Fire Protection re- lted in program improvements and increased awareness of fire protection requirements by the plant staff.

Two forced outages occurred due to reactor coolant pump seal difficulties. Flushing of the seal water system, installation of improved filters and installation of an updated seal design were being pursued as corrective actions by the licensee at the end of the SALP period.

An NRC Safety System Functional Inspection (SSFI) conducted during the SALP period resulted in an overall positive conclusion as to the licensee's technical competence, attitude toward safety, and approach to design basis reconstitution. Despite this positive conclusion, a generally fragmented approach to safety evaluations and uncertainties in the design bases prevented confirmation of the safety-related Component Cooling Water System's capability to perform all of its intended design basis safety functions. Further, weaknesses were identified in the reliability of the direct current power busses, in useful application of probabilistic risk assessm , in effective corrective action in resolving residual heat removal (RHR) hea xchanger inlet valve reach rod design issues, and in nonconservative use component replacement procedures when the design change process would have been more appropriate. Actions were underway to address these issues but the NRC had not reviewed the corrective action during the SALP period.

PORC and NSARC oversight and review, resulted in multi-disciplinary management involvement in correction of precursors prior to their becoming programmatic problems.

Ongoing management improvement initiatives indicated a continued proactive management philosophy. These included an ongoing Design Basis Summary review, completion of a Level I Probabilistic Risk Assessment, and expansion of the Performance Assessment Program (PAP). The Design Basis Summary review examined systems to recover and document the system design basis. Systems completed to date include the emergency/auxiliary feedwater systems and the control room ventilation system. Reviews underway include the service water, component cooling water, and emergency core cooling systems. The licensee recently completed a plant specific Level 1 PRA but has not yet implemented a formal program to utilize the PRA insights in plant activities. The Performance Assessment Program was a self-assessment tool used by the operations department to improve performance of department activities. Because of the success of the program in the operations department, plant management recently expanded the program to other plant departments including maintenance and radiological controls. The program consists of peer review of the performance of specialized tasks. Overall, the licensee's improvement programs showed active management involvement and were a positive contribution to plant safety.

Analysis of plant events and of issues identified during routine operations were timely. Generally effective action was taken to address the problems identified. Depending on the nature of the issue to be reviewed, the licensee generally used Plant Root Cause Evaluations (PCREs) for equipment or hardware related issues and the Human Performance Evaluation System (HPES) process for human issues. After the main transformer fault and failure to transfer to offsite power in August 1988, a Plant Root Cause Evaluation provided a strong basis for determining appropriate corrective action. Human performance evaluation techniques were utilized in the review of the inadvertent Safety Injection Actuation Signals (SIAS) generated during a plant cooldown in December of 1988. Appropriate actions to alleviate identified deficiencies were pursued.

Management attention to weaknesses identified by the NRC in the emergency preparedness and physical security areas is warranted. In regard to emergency preparedness, although a good emergency response capability was maintained, staffing issues and training weaknesses necessitate attention. In regard to security, although a sizable expenditure of resources has improved plant security, continued attention is needed to identify and correct weaknesses in the program and its implementation.

The Quality Programs (QP) Department implemented several initiatives which enhanced the ability to measure and assess plant performance. The Quality Assurance (QA) and Quality Control (QC) functions were part of the QP Department. Audits of plant activities were also conducted by Yankee Atomic, which supplements the QP department's function and provides audits for the Offsite Committee. In an effort to increase the effectiveness of QC inspections, the Manager-Quality Programs initiated a program in which a maintenance technician and

Licensee initiatives to improve safety and performance were evident in a self-initiated SSFI program and in probabilistic risk assessment (PRA) development. Other examples of a commitment to long term strong performance in engineering and technical support included: (1) development of a Comprehensive Equipment Performance program to monitor and improve the reliability and performance of key equipment; (2) establishment of comprehensive design basis documents including verification of safety system operation to design criteria; (3) preparation of safeguard instrument loop drawings, loop accuracy calculations and set-point analyses; (4) implementation of a configuration management procedure to control and maintain the management control systems and documents reflecting the plant configuration; and (5) conversion of the ten-year In-Service Inspection (ISI) program to computer-based control.

The licensee controls engineering workload and schedules by plans covering five refueling cycles. All engineering activities during the subsequent five cycles are scheduled and assigned a priority. Priorities are established through a set of weighting factors. All priority 1, safety significant projects are on schedule.

The licensee recognizes the need for effective training and has established a well staffed training department, with the resources and authority to conduct an effective program.

The licensee's staff involved in the In-Service Testing of pumps and valves was found to be knowledgeable and generally capable. Technical resolution of Inservice Inspection issues was good, with results completely and clearly documented. Engineering evaluations and dispositions of nonconforming examination results exhibited knowledge of requirements.

Concerns identified during the previous SALP in the electrical and equipment qualification areas were adequately resolved. However, several deficiencies were noted during this SALP period. These included one case of inadequate supervision of contractor personnel, inadequate root cause analysis, and newly identified equipment qualification concerns. While these deficiencies were not major, licensee attention is warranted to preclude similar problems.

In summary, engineering and technical support were generally good, with management initiative and involvement in routine plant activities evident. The licensee's responsiveness to NRC initiatives was, for the most part, timely. Good licensee initiatives to improve performance were noted. The procurement and dedication of commercial grade items showed marked improvement during this SALP period. Better oversight of contractors, safety evaluations, PRA utilization, design change application, design bases definitions, and direct current bus reliability assurance would improve performance.

III.F.2 Performance Rating: Category 2

III.F.3 Recommendations:

Licensee: None.

NRC: Conduct SSFI follow-up inspection.

III.G Safety Assessment/Quality Verification (266 hrs., 5.4%)

III.G.1 Analysis

This section evaluates the licensee's performance in activities such as safety reviews, responses to NRC-generated initiatives such as generic letters, bulletins, information notices, and resolution of TMI items, and provides a broad assessment of the licensee's ability to identify and correct problems related to nuclear safety. This includes the effectiveness of the licensee's quality verification function in identifying and correcting substandard or anomalous performance and in monitoring the overall performance of the plant.

In the previous SALP, Safety Assessment/Quality Verification was rated Category 2. Strengths identified included licensee initiatives in self-assessment and root cause analysis. However, weaknesses in the radiation protection program and in certain procurement practices were not identified by [illegible]nal audits.

During this SALP period, management oversight and involvem[illegible]nt activities continued to be aggressive. Management presence in t[illegible]included routine inspection and observance of work. Senior plant ma[illegible] began a concerted effort to upgrade the radiological controls performance. The Vice President, Operations was relieved of his plant manager duties and is heading the effort to improve radiological controls. A new Technical Support Department Manager was appointed and is assisting in the radiological controls improvement effort.

The plant safety committees and Morning Managers' meetings were particularly effective and promoted a high level of safety-consciousness. The Morning Managers' Meeting was oriented towards problem solving, and emphasis was placed on learning from past mistakes. The issues discussed indicated an appropriate threshold for management attention. Discussions were candid and constructive, and resulted in effective communications and teamwork. The meetings identified improvement opportunities which were formally tracked and reviewed by the Plant Operations Review Committee (PORC). PORC continued to maintain a strong overview of plant activities by routinely reviewing items identified during the Morning Managers' Meetings. Good oversight of plant activities was maintained by the Nuclear Safety Audit and Review Committee (NSARC). Membership from Yankee Atomic Electric Company provided industry experience and input. Meeting discussions were of sufficient detail to allow proper consideration of issues. The issues identified for resolution at the managers' meetings, coupled with

two senior QC inspectors reviewed all maintenance procedures for adequacy of hold points and other QC involvement. The department also incorporated performance-based inspection techniques into both QA audits and QC inspections.

The licensee's QP Department provided generally active and technically sound audit and surveillance programs. A comprehensive review of QA/QC audits and inspections conducted by an NRC Safety System Functional Inspection team found that these reports contained well documented findings which reflected detailed reviews. The issues raised in audit reports were generally significant and enhanced plant operations. For example, a QP review of the shock suppressor test procedures identified a discrepancy between the operability requirements and the directions for setting the bleed rate of shock suppressors on the steam generators and main steam lines. The qualification requirements imposed on contractors and the QA evaluations of vendor onsite activities are considered a QP department strength.

Some significant weaknesses in the QP department's role in identification of certain repetitive deficiencies remain. During the previous SALP period, the NRC identified radiation protection concerns involving in-process work activities. That such deficiencies continue to occur was identified during an NRC maintenance team inspection, indicating that corrective actions were not sufficient. In addition, the NRC identified the failure to resolve several long standing problems such as the root cause of the failures associated with valves PCC-M-43 and SCC-M-165, the lack of control of instrument setpoints, and the lack of a formal program to address instruments found out of calibration. Towards the end of the SALP period, additional licensee attention to these problems produced performance improvements.

In general, the engineering and technical analyses submitted to the NRC in regard to licensing activities were sound, thorough, and of good quality. Licensee initiated licensing submittals were typically of exceptional quality; safety evaluations were thorough, technical content was excellent, and submittals were well organized. Examples of high quality submittals included the request to increase rated thermal power to 2700 MWt, an application to modify the reactor pressure-temperature limits and the request for in-place disposal of contaminated soil.

However, several of the licensee's submittals made in response to NRC initiated activities were not of the same high quality and were not timely. For example, the licensee's response to Generic Letter 88-17, addressing loss of decay heat removal during nonpower operation, lacked a number of the details addressed in the generic letter. Licensee responses to requests for additional information for both the Station Blackout Rule and the ATWS (anticipated transient without scram) Rule have not been timely.

In summary, management oversight and involvement in plant activities continued to be proactive and aggressive, promoting a high level of safety-consciousness. Plant safety committees and managers' meetings were effective and promoted a high level of safety consciousness. Management improvement initiatives demonstrated the licensee's commitment to the pursuit of performance excellence. The QP Department provided technically sound audit and surveillance programs,

but weaknesses in the identification of certain repetitive deficiencies (i.e., radiation protection concerns) remain. The licensee's submittals in regard to licensing actions were generally sound and of good quality, although a noted disparity between the quality of licensee-initiated licensing submittals and NRC-initiated licensing activities warrants management attention. Management attention to weaknesses identified by the NRC in emergency preparedness and physical security is warranted.

III.G.2 Performance Rating: Category 2

III.G.3 Recommendations: None.

REFERENCE INFORMATION/APPENDICES

APPENDIX A

A. CRITERIA

Licensee performance was assessed in areas significant to nuclear safety and the environment. The following criteria were used, as applicable, to assess each area.

1. Assurance of quality, including management involvement and control.
2. Approach to the resolution of technical issues from a safety standpoint.
3. Responsiveness to NRC initiatives.
4. Enforcement history.
5. Operational and construction events (including response to, analyses of, reporting of, and corrective actions for).
6. Staffing (including management)
7. Effectiveness of training and qualification.

Each functional area was rated as being one of the following.

1. Category 1. Licensee management attention and involvement are readily evident and place emphasis on superior performance of nuclear safety or safeguards activities, with the resulting performance substantially exceeding regulatory requirements. Licensee resources are ample and effectively used so that a high level of plant and personnel performance is being achieved. Reduced NRC attention may be appropriate.

2. Category 2. Licensee management attention and involvement in the performance of nuclear safety or safeguards activities are good. The licensee attained a level of performance above that needed to meet regulatory requirements. Licensee resources are adequate and reasonably allocated so that good plant and personnel performance is being achieved. NRC attention may be maintained at normal levels.

3. Category 3. Licensee management attention and involvement in the performance of nuclear safety or safeguards activities are not sufficient. The licensee's performance does not significantly exceed that needed to meet minimal regulatory requirements. Licensee resources appear to be strained or not effectively used. NRC attention should be increased above normal levels.

A performance trend was assigned as necessary to focus NRC and licensee attention on an area with a declining performance trend, or to acknowledge an improving trend in licensee performance. The SALP trend definitions are:

Improving: Licensee performance was determined to be improving during the assessment period.

Declining: Licensee performance was determined to be declining during the assessment period and the licensee had not taken meaningful steps to address this pattern.

APPENDIX B

B. Licensee Activities

The plant was at full power at the beginning of the period. On August 13, the plant tripped due to a fault on one of the two main output transformers. The plant was restarted on August 18, and operated at a reduced power level using the undamaged main output transformer until a shutdown was initiated on October 15 for the Cycle 10/11 refueling outage.

Cycle 11 startup commenced on December 15. The plant attained 96% power by December 20. On December 22 the plant was taken offline in order to replace all three reactor coolant pump seals. Full power was achieved on January 2.

On January 10, the plant tripped due to a loss of electro-hydraulic control power. The plant returned to 100 percent power on January 13.

After identification of discrepancies in the environmental qualification of containment penetration connectors, the plant was shut down on February 14. After repairing the connections and replacing three cracked feedwater regulating valve stems, the plant was returned to full power on February 23.

A plant trip occurred on April 5 due to an actuation of the fault relaying associated with a 345 Kilovolt breaker during breaker testing in the 345 KV switchyard. The plant was returned to power operation later the same day.

On July 20 the licensee implemented Technical Specification Amendment 113 authorizing operation at a steady state power of 2700 megawatts thermal (MWt).

On August 3 the plant dropped control rod 62 and performed a down power maneuver. The plant returned to full power on August 5.

During a routine power reduction on September 1, difficulty with the Steam Generator #2 Main Feedwater Regulating Valve Controller resulted in a power reduction to approximately twelve (12) percent power for repair. The valve controls were repaired the same day and the plant was returned to full power.

On October 10, the plant was shut down to replace the number 2 reactor coolant pump seal. Power Operation resumed on October 16 and continued to the end of the SALP period.

APPENDIX C

C. Direct Inspection and Review Activities

One NRC senior resident and one resident inspector were assigned to the Maine Yankee site throughout the assessment period.

Several team inspections were conducted. A Maintenance team inspection (October 31 to November 10, and December 5 to 9, 1988) was conducted during the refueling outage to assess the maintenance program and its implementation. A Safety System Functional Inspection was conducted from January 9 through February 10, 1989. A team review of the Emergency Operating Procedures and their implementation occurred from July 17, 1989 through July 28, 1989.

Total NRC inspection effort was 4940 hours (3952 hours on an annual basis). This represented an increase of 15.6 percent over the previous SALP period.

APPENDIX D

D. Unplanned Trips and Forced Shutdowns

Date	Power Level	Description	Root Cause	Functional Area
8/13/88	98%	Turbine trip due to fault in main output transformer.	Random Component Failure	
12/16/88	18%	Turbine trip due to improper alignment of a secondary plant system during initial startup from a refueling outage.	Inadequate Procedure	Operations
12/22/88	100%	Controlled shutdown due to failure of all three reactor coolant pump seals as a result of a seal water system filter failure.	Design Deficiency	Engineering/ Technical Support
1/10/89	100%	Turbine trip due to a spurious low voltage condition on a EHC control power bus.	Random Component Failure	
2/14/89	100%	Controlled shutdown due to questionable environmental qualification of containment penetration connector seals.	Design Deficiency	Engineering/ Technical Support
4/5/89	100%	Turbine trip due to inadvertent actuation of generator protective relays during testing.	Inadequate Procedure	Maintenance/ Surveillance
10/10/89	98%	Controlled Shutdown due to type C containment leakage in excess of TS limits.	Random Component Failure	

APPENDIX E

E. Management Conferences

On December 20, 1988, an Enforcement Conference was held in the NRC Region I Office to discuss security plan violations.

On March 29, 1989, an Enforcement Conference was held in the NRC Region I Office to discuss violations associated with the procurement program.

On June 1, 1989, a meeting was held in the NRC Region I Office to discuss off-site emergency notification issues. The State of Maine, the Federal Emergency Management Agency (FEMA), the licensee, and the NRC participated.

On October 18, 1989, a meeting to discuss power distribution issues was conducted in the NRC Region I Office.

On September 27, 1989, a meeting was held in the NRC Region I Office to discuss the findings of the Safety System Functional Inspection.

On a quarterly basis, since approximately January of 1989, licensee management has met with NRC management in the NRC Regional Office to discuss the status of the security program.

APPENDIX F

F. Licensee Event Reports

F.1. Report Quality

Licensee Event Reports (LERs) adequately described the associated events in thorough and clear detail. Narrative sections typically included event details such as valve identification numbers, model numbers, and operable redundant systems, which enabled the reader to develop a good understanding of the event. Root causes were clearly identified and previous similar events were appropriately referenced.

F.2. Causal Analysis

Eleven LERs were submitted. No trends in event causes were found.

APPENDIX G

TABLE 1

MAINE YANKEE ENFORCEMENT/SEVERITY LEVEL

AREA	1	2	3	4	5	DEV	TOTAL
Plant Operations				1			1
Radiological Controls				3			3
Maintenance/Surveillance				1			1
Emergency Preparedness							
Security			2	3			5
Engineering/Technical Support				2		1	3
Safety Assessment/Quality Verification							
Totals:	-	-	2	10	-	1	13

APPENDIX H

TABLE 2

MAINE YANKEE INSPECTION HOURS SUMMARY

Area	Hours	% of Time
Plant Operations	1902	38.5
Radiological Controls	412	8.3
Maintenance/Surveillance	1498	30.3
Emergency Preparedness	129	2.6
Security	241	4.9
Engineering/Technical Support	492	10.0
Safety Assessment/Quality Verification	226	5.0
Totals:	4940	100.0

These totals do not include NRR site visits for review of issues such as:

-- Station Blackout
-- Offsite Power Reliability
-- Pressurizer Surge Line Thermal Stratification
-- Pipe Wall Erosion/Corrosion
-- Simulator Certification

APPENDIX I

TABLE 3

MAINE YANKEE LISTING OF LERs BY FUNCTIONAL AREA

Area	A	B	C	D	E	X	Totals
Plant Operations	1	1		2	2		6
Radiological Controls	1						1
Maintenance/Surveillance					1		1
Emergency Preparedness							
Security							
Engineering/Technical Support		3					3
Safety Assessment/Quality Verification							
Totals:	2	4	-	2	3	0	11

Cause Codes:

A - Personnel Error
B - Design, Manufacturing, Construction or Installation Error
C - External Cause
D - Defective Procedure
E - Component Failure
X - Other

* Cause Codes in this table are based on inspector evaluation and may differ from those specified in the LER.

APPENDIX J

SALP BOARD MEMBERSHIP AND ATTENDANCE

DECEMBER 13, 1989

Board Chairman

W. F. Kane, Director, Division of Reactor Projects (DRP)

Board Members

J. Greeves, Acting Deputy Director, Division of Radiation Safety and Safeguards (DRSS)
W. Hodges, Director, Division of Reactor Safety (DRS)
C. Holden, Senior Resident Inspector
J. Johnson, Chief, Projects Branch No. 3, DRP
E. Leeds, Licensing Project Manager, NRR
E. McCabe, Chief, Reactor Projects Section 3B, DRP
R. Wessman, Director, Project Directorate I-3, NRR

Other Attendees (Non-Voting)

R. Bores, Chief, Effluents Radiation Protection Section, DRSS (Part-Time)
C. Conklin, Senior Emergency Preparedness Specialist, DRSS
R. Freudenberger, Resident Inspector
G. Kelly, Chief, Technical Support Staff, DRP (Part-Time)
W. Lancaster, Physical Security Inspector, DRSS (Part-Time)
R. Nimitz, Senior Radiation Specialist, DRSS (Part-Time)
W. Pasciak, Chief, Facilities Radiation Protection Section, DRSS (Part-Time)
E. Sylvester, Physical Security Inspector, DRSS