U.S. NUCLEAR REGULATORY COMMISSION

REGION I

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

FINAL REPORT NO. 50-333/92-99

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

ASSESSMENT PERIOD:
APRIL 19, 1992 - APRIL 17, 1993

BOARD MEETING DATE:
JUNE 2, 1993

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I INTRODUCTION

The Systematic Assessment of Licensee Performance (SALP) is an integrated Nuclear Regulatory Commission (NRC) staff effort to collect observations and data and to evaluate licensee performance on the basis of this information periodically. The SALP process is supplemental to normal regulatory processes used to ensure compliance with NRC rules and regulations. The SALP is to be sufficiently diagnostic to provide a rational basis for allocating NRC resources and to provide meaningful feedback to licensee management to promote quality and safety of plant operations.

An NRC SALP Board, composed of the staff members listed below, met on June 2, 1993, to review the collection of performance observations and data, and to assess the licensee's performance at the James A. FitzPatrick Nuclear Power Plant. This assessment was conducted 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 Section IV.D of this report.

This report is the NRC's assessment of the licensee's safety performance at FitzPatrick for the period of April 19, 1992, to April 17, 1993.

The SALP Board was composed of:

Chairman:
W. Lanning, Deputy Director, Division of Reactor Projects (DRP)

Members:
P. Eselgroth, Chief, Projects Section 1B, DRP
W. Cook, Senior Resident Inspector, DRP
E. Imbro, Deputy Director, DRS
S. Shankman, Deputy Director, DRSS
R. Capra, Director, Project Directorate I-1, NRR
B. McCabe, Senior Project Manager, NRR

Other Participants:
C. Cowgill, Chief, Projects Branch No. 1, DRP
R. Urban, Project Engineer, DRP
J. Tappert, Resident Inspector, DRP
B. Welling, Reactor Engineer, DRP
P. Eapen, Chief, Systems Section, DRS
K. Shembarger, License Examiner, DRS, RIII
W. Pasciak, Chief, Facilities Radiation Protection Section, DRSS
C. Gordon, Senior Emergency Preparedness Specialist, DRSS
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II SUMMARY OF RESULTS

II.A OVERVIEW

The performance of activities at FitzPatrick and the supporting functions provided by the NYPA corporate office were conducted in a safe manner with respect to public health and safety. Performance associated with FitzPatrick activities was generally improved during this assessment period and the performance levels in three functional areas, Operations, Maintenance/Surveillance and Safety Assessment/Quality Verification, improved from Category 3s to Category 2s. Additionally, although improvements were noted in the area of Engineering/Technical Support, this area remained weak. Superior performance in the functional areas of Emergency Preparedness and Security was maintained.

In the area of Operations, overall performance was improved from the previous assessment period, due mostly to much improved operations management oversight. Additionally, improvements were noted in the operations training program and in the implementation of the fire protection program. Licensed and non-licensed operator performance remained good, with few exceptions.

Performance in the Radiological Controls functional area remained good. Improvements were noted in the ALARA and radwaste/transportation programs, and the effluents and environmental monitoring programs remained strengths. However, continued weaknesses in the radiological incident reporting process were also noted.

In the area of Maintenance and Surveillance, overall performance improved from the previous assessment period. A few deficiencies were identified in the areas of work control and personnel attention to detail. Improvements were noted in root cause analyses and the material condition of the plant. A central planning group was created and contributed positively to the performance of maintenance. Inservice inspection and inservice testing, along with the Technical Specification surveillance testing program, continued to be fundamentally sound.

Emergency Preparedness and Security functional areas continued to demonstrate superior levels of performance. Management attention and support of these programs remained strong.

Performance in the Engineering and Technical Support functional area was adequate. While site and corporate engineering generally performed satisfactorily, there were weaknesses in the evaluation of emergent issues. Additionally, the initial Appendix R technical reviews were frequently inadequate and incomplete. The engineering departments demonstrated improved communications and coordination, and some overall improvement during the assessment period was noted. However, strong management attention is still warranted in this area to sustain the improving trend.

In the Safety Assessment and Quality Verification functional area, overall performance was good and improved over the previous assessment period. Management demonstrated a strong commitment to improvement and provided the necessary resources to effectively implement FitzPatrick's Results Improvement Program. Problem identification and resolution have improved during the assessment period, however, some deficiencies in these areas continued to be identified. Improvement was noted in the Quality Assurance and Quality Control programs.

II.B FACILITY PERFORMANCE ANALYSIS SUMMARY

FUNCTIONAL AREA	Rating, Trend Last Period	Rating, Trend This Period
1. Plant Operations	3	2
2. Radiological Controls	2	2
3. Maintenance/Surveillance	3 Improving	2
4. Emergency Preparedness	1	1
5. Security	1	1
6. Engineering/Technical Support	3	3 Improving
7. Safety Assessment/Quality Verification	3	2

Previous Assessment Period: February 1, 1991 to April 18, 1992
Present Assessment Period: April 19, 1992 to April 17, 1993

III PERFORMANCE ANALYSIS

III.A PLANT OPERATIONS

III.A.1 Analysis

The previous SALP rated this functional area Category 3. Overall utility performance in the area of operations was adequate, with significant weaknesses noted. The weaknesses included generally poor operations management oversight and an unsatisfactory licensed operator requalification training program. The fire protection program implementation was also considered inadequate during that assessment period and was attributed to poor corporate and station management oversight.

Overall, operations staff performance was improved this assessment period. The period was characterized by the conclusion of a year long refueling outage, a 30-day startup and power ascension program, and approximately three months of power operations. Licensed and non-licensed operator performance was good, management oversight of station activities was significantly enhanced, and the weaknesses previously identified in the licensed operator requalification training program were resolved. Implementation of the fire protection program was also significantly improved this assessment period.

Operations shift crew performance was good, although there were few challenges because the unit was shut down most of the period. The routine use of repeat-back communications effectively eliminated errors due to miscommunication or misunderstanding between crew members. As a result, command and control of routine and abnormal plant evolutions by the licensed senior reactor operators (SROs) and reactor operators (ROs) were markedly enhanced. These improved communications and coordination by the shift crews were clearly exhibited in their effective response to a number of plant events including a transformer failure, shutdown cooling system isolations, and cooling water intake structure icing events. Shift crew communication and shift supervisor command and control were similarly good during the unit startup following the refueling outage and subsequent unit shutdowns and startups near the end of the assessment period. A few performance deficiencies involving operator inattention to detail were noted this period. The more significant of these events were the untimely testing of safety relief valves and hydrogen/oxygen monitors, and the inadvertent actuation of the standby gas treatment system which went undetected for two shifts. Relative to the good performance observed during the conduct of a large volume of outage work support and plant startup activities, these types of personnel errors were few in number and of minor safety consequence.

A requalification training program evaluation and individual operator examinations were conducted early in the assessment period. All operators passed all portions of the examinations. The requalification training program, which previously had been evaluated as unsatisfactory, was returned to a satisfactory status. Later in the SALP period, initial examinations were administered to six SRO and five RO candidates. Four of six SRO and

four of five RO applicants passed the examination. Overall, requalification examinees and initial license candidates were well prepared for both types of examinations. Improved examination results were indicative of improved station management control and oversight of the licensed operator training programs.

Both strengths and weaknesses were noted in facility operating procedures. Details provided in procedures were generally adequate. Emergency Operating Procedures (EOPs) were also noted to be technically accurate and effectively used by the operators. However, during the verification of NYPA's corrective action for safe shutdown procedures, significant deficiencies were noted in fire-related Abnormal Operating Procedures (AOPs). Inattention to detail was noted in the initial preparation of some of these procedures. To correct this situation the FitzPatrick staff instituted a procedure verification program which generated good results. In addition, the development of a technical basis document and a safety evaluation for AOP changes resulting from fire protection issues was effective in assuring that good procedures were issued. These deficiencies were corrected prior to unit startup.

Improvement in management oversight was noted during the assessment period. Much of the performance improvements noted above were attributed to increased staffing and increased operations management oversight, particularly by the new operations general manager. Relief from some of the staffing resource limitations noted in the previous SALP period was achieved through the successful completion of the 1992 license class. Six shift crew rotation was restored during this period and shift engineers were hired and placed on shift. Other improvements attributable to increased management oversight included: more detailed night orders; reductions in control room deficiencies, temporary modifications, and lit annunciators; improved shift turnover meetings and pre-evolution briefings; institution of a limiting condition for operations log and an operator aid for tracking shutdown plant lit annunciators; and continued emphasis on the procedures improvement program. A noteworthy example of improved planning and evolution pre-briefs involved the relay room CARDOX testing. During the operations staff review and preparation for this test, good contingency plans were developed and implemented. These plans (prompt evacuation of non-essential personnel and the use of self-contained breathing apparatus by the control room operators) had to be implemented when carbon dioxide was inadvertently introduced into the control room during the test. Examples in the area of procedural improvement were the implementation of annunciator response cards on the front panels, and improved surveillance testing procedures.

Implementation of a certification checklist for major evolutions such as reactor vessel reassembly, reactor vessel hydrostatic pressure test and unit restart resulted in an orderly and controlled execution of these major activities. In addition to the checklists, during the startup from the refueling outage, the three key operations department managers went on 24-hour coverage to provide on-shift management support of work and testing. This action relieved the shift supervisors from much of the administrative burden of the startup plan and allowed them to focus more on plant evolutions. The increased operations management oversight of plant activities also had a positive impact on interdepartmental communication and

coordination. Besides the coordination of unit startup and shutdown activities, improved trending and prioritization of work items have resulted in reducing the number of lit annunciators, control room deficiencies and temporary modifications, as mentioned above. Operations management event critiques were generally thorough with only one noticeable exception. The post-trip review of the February 25 intake icing manual scram failed to identify a personnel performance deficiency. Overall, the post-trip review actions taken to prevent or minimize the consequences of future intake icing events were comprehensive.

Day-to-day implementation of the fire protection program (i.e., combustible loading and controls, fire equipment status, compensatory firewatches, and fire brigade) improved during this assessment period. This was due, in part, to heightened plant staff awareness of and compliance with fire protection requirements. Additionally, personnel and organizational changes were made including a newly hired fire protection (FP) supervisor and FP engineer, who now reports to the FP supervisor. These two NYPA employees, responsible for implementation of the fire protection program (FPP), report to the Technical Services Manager. Also during this assessment period, fire inspectors (contractors) were put on shift work with the firewatch supervisors (also contractors) to assist in overseeing implementation of the FPP and have been primarily responsible for improved fire protection compliance. The training and knowledge level of the station firewatches (NYPA temporary employees) were significantly improved and the number of firewatches has been reduced to approximately 25 at the end of the assessment period, from a high of nearly 125 during the refueling outage. Repair of numerous degraded fire penetrations allowed this reduction. Fire brigade performance continued to be good.

Summary

The overall performance in the operations area was good. Performance throughout this functional area was improved over last assessment period. Licensed and non-licensed operator performance was good, with few exceptions. Six shift crew rotation was restored during the period. The operations training programs proved effective with satisfactory results achieved in the 1992 license class. A number of improvements were made in abnormal operating and emergency operating procedures. Operations management oversight was much improved and considered a major factor in achieving the overall good performance in this functional area.

III.A.2 Performance Rating: Category 2

III.B RADIOLOGICAL CONTROLS

III.B.1 Analysis

Significant licensee improvement had been noted in the Radiological Controls area during the last assessment period and was rated category 2. The SALP board noted, however, that in

areas such as radiological incident investigation, procedural adherence and supervisory oversight, the licensee still demonstrated inconsistent performance and that continued strong management attention was warranted to complete the process and sustain the improvements.

During this assessment period, generally good performance was noted. Management oversight, ALARA practices, and staff training in the radiological controls area continued to improve. Some weaknesses were noted in the areas of radiological incident reporting and procedural adherence. Performance in the areas of dosimetry, respiratory protection, and effluents/environmental monitoring continued to be good.

Management and staffing of the Radiological and Environmental Services (RES) Department remained relatively constant throughout the assessment period. The large number of contractor health physics (HP) technicians normally associated with an outage were present throughout 1992, and were gradually phased out as the plant resumed normal operations in 1993. Supervisory level personnel also remained constant, although there was some shifting of personnel from within the RES Department. Notable improvements were made in the training program for all HP technicians, including the NYPA permanent and temporary technicians, and long-term contractor technicians. This included the addition of system-by-system training in the continuing training program for NYPA permanent HP technicians, and represented a significant upgrade in initial training given to long-term contractors and NYPA temporary technicians.

Management has continued to make improvements in the radiological assessment area, both through the use of performance-based audits of the radiation protection program conducted by the Quality Assurance Department, and through improvements to the radiological incident reporting process. Although weaknesses in the radiological incident reporting process associated with corrective action tracking and closeout were noted throughout most of the assessment period, towards the end of the assessment period, the licensee merged the corrective action tracking for these radiological events into the plant-wide Deviation Event Reporting system. This change was implemented too late in the assessment period to be evaluated. The Quality Assurance Department, through its auditing program, identified weaknesses in the Radiation Work Permit program, especially in the area of procedural adherence.

Throughout the assessment period the NRC observed generally good adherence to proper radiological work practices. This was evidence of a good working relationship between the HP staff and radiation workers. Radiological working conditions at job sites were generally well controlled and HP technician oversight of jobs was good, particularly for the work conducted in the drywell and on the refuel floor. Also, pre-job briefings by HPs and the ALARA staffs were good. Changing radiological conditions experienced during restart were well anticipated and monitored by the HP staff. The HP group and operations department management sensitized the operating and support staffs to the need to be alert to changing radiological conditions prior to and during the power ascension program. One notable exception was an instance of poor ALARA practice, which was observed during the conduct

of maintenance on the standby liquid control (SLC) system. Although informed during the pre-job briefing of higher radiation fields in close proximity to the SLC skid, workers involved with the maintenance tasks did not stay clear of these areas while waiting for resolution of procedure changes. Another event involved the improper use of contaminated scaffolding in an unrestricted area of the plant. These appeared to be isolated events. Further, NYPA's review of these radiological incidents was thorough and corrective actions were appropriate.

The operations and RES departments implemented a pilot program where HP technicians accompanied auxiliary operators (AOs) on several different shifts. The purpose of this pilot program, beyond building a better working relationship between the department staffs, was to improve auxiliary operator ALARA practices and to identify and minimize radiological control barriers. This program was effective and resulted in the reduction of: several contaminated area boundaries; the use of anti-contamination clothing; and personnel radiation exposure, with a savings in the time to complete plant rounds.

NYPA performance in dosimetry, respiratory protection, and survey instrumentation continued to be good. The licensee maintained its National Voluntary Laboratory Accreditation Program (NVLAP) certificate in seven of the eight available categories, and continued to maintain an aggressive quality control program in these seven areas. Respirator usage at the facility continued to be reduced through more aggressive use of engineering controls, especially the utilization of high efficiency particulate air (HEPA) portable units at job sites.

ALARA program performance at the facility continued to improve, especially in the area of work planning. Significant initiatives involved the placement of ALARA planners into the station work control group and the creation of a thirteen-week rolling maintenance and work schedule on plant systems. It resulted in better pre-job ALARA planning, and reduced time in the restricted area awaiting HP technician coverage or the securing and placement of ALARA engineering controls in the work area. NYPA also expanded its 'hot spot' reduction program into the work control process to further reduce radiation exposure from sources in overhead piping. The use of depleted zinc (vice natural zinc) in the primary water was also a good licensee initiative to further reduce exposure. However, the effects of its use could not be numerically quantified during this assessment period.

The radwaste and transportation program continued to make improvements throughout the assessment period. Previously identified weaknesses in training and procedural adherence were satisfactorily addressed during this assessment period, including the development of a new training program for the decontamination and shipping personnel. All shipments sent to waste processing facilities and disposal sites were accepted without incident.

Radiological Effluents and Environmental Monitoring

During the previous assessment period the licensee's Radiological Effluent Control Program

(RECP) and Radiological Environmental Monitoring Program (REMP) were found to be effective. Effective implementation of these programs continued during this assessment period as well. The site staff exhibited good knowledge of all RECP areas including process and effluent radiation monitor calibrations and offsite dose calculations. A new initiative to assess and evaluate Radiation Monitoring System (RMS) operability in order to determine future RMS upgrade requirements was noteworthy, indicating a clear understanding of the technical issues, and an active approach to maintaining RMS operability. Procedures were well written and resulted in effective implementation of the RECP and REMP. Quality Assurance Department audits were thorough and of sufficient technical depth to probe for programmatic weaknesses. NYPA had in place a thorough and effective program for the review of measurements and instrument quality control data.

Summary

NYPA continued to make quality improvements in the ALARA and radwaste/transportation areas. Continued good performance in the areas of dosimetry, respiratory protection and instrumentation was also observed. Weaknesses in the radiological incident reporting process continued and licensee identified weaknesses in Radiation Work Permit procedure adherence were noted. The areas of REMP and RECP continued to be licensee strengths.

III.B.2 Performance Rating: Category 2

III.C MAINTENANCE/SURVEILLANCE

III.C.1 Analysis

The previous SALP rated this functional area as Category 3 improving. NYPA demonstrated adequate performance in this area, with several weaknesses impacting the overall effectiveness of the program. Weaknesses were identified in equipment failure root cause analysis and adequacy of the preventive maintenance program. The plant material condition was generally poor and the work request backlog increased. The surveillance program was assessed to have been generally good. Several improvement initiatives were implemented late in the previous assessment period to combat the identified weaknesses.

Overall NYPA demonstrated generally good performance in the maintenance/surveillance area during this assessment period with a continuation of the improving trend; however, a few performance weaknesses remained. Performance improvements were noted in the areas of problem resolution, planning, and physical condition of the plant. Examples of weak performance were identified in the areas of work control and personnel attention to detail. The surveillance testing program was appropriately implemented.

The maintenance staffing level increased during this assessment period. Additional contract procedure writers were employed to improve the quality of instrumentation and controls procedures. Contract engineers were also added to upgrade the scope and quality of the preventive maintenance program. Preventive maintenance program improvements were noted as a result of these efforts. Maintenance personnel were observed to be knowledgeable, experienced, and professional in their performance of plant maintenance activities. First line supervisors were observed directly involved in the daily maintenance activities which contributed to the quality of the work. Communications between management and craft personnel were good. The use of overtime was properly controlled. The performance of the maintenance staff was good; however, damage to the reactor core isolation cooling (RCIC) condensate storage tank suction valve motor windings and the exacerbation of a through-wall leak on the reactor water cleanup system supply inboard containment isolation valve bonnet vent line were noted. They were the result of multiple personnel errors involving insufficient work controls, poor communications, inattention to detail, and inadequate training. Following both events, NYPA conducted critiques that were prompt, thorough, and appropriately self-critical. NYPA also developed and implemented comprehensive corrective actions.

During the last assessment period, NYPA's root cause analyses of equipment failures were found to be shallow and resulted in ineffective problem resolution. During this assessment period, good root cause analyses of equipment failures were performed and the frequency of rework was low. The FitzPatrick staff's approach to problem resolution was significantly improved. During the post-refueling startup, the RCIC turbine overspeed trip mechanism was tested and after initial failures, the maintenance engineer investigated the cause of the failures and identified a small boss in the governor cover that was interfering with the governor weight. This approach to problem resolution was in sharp contrast to the previous outage when the surveillance was run multiple times to achieve a satisfactory result. Other examples of improved problem resolution included NYPA's investigation of the effects of 125 VDC grounds on emergency diesel generator (EDG) operability, and the identification and resolution of surveillance deficiencies involving testing of the average power range monitor flow biased trips and untested EDG relays. Although failed equipment problem resolution was improved, there was one significant example involving the inservice testing of a residual heat removal minimum flow line check valve where NYPA's problem resolution was not rigorous. This example is discussed further in the Engineering/Technical Support functional area.

The material condition and housekeeping of the plant have significantly improved. The improvement was due partially to NYPA's continuing painting and preservation program. An extensive labelling program was also implemented and components are now clearly and accurately identified. The maintenance backlog was being trended and was slowly being worked off. Control of combustible materials and control of scaffolding were both identified as weaknesses by NRC. NYPA strengthened these programs and they were both improved at the end of the assessment period.

The quality of work control processes has improved. Newly written and revised maintenance procedures were of high quality, contained sound technical information, and were well written with an appropriate level of detail. Good motor-operated valve (MOV) maintenance procedures have been developed, including spring pack preventive maintenance. Plant personnel were also noted to have adequately understood what was expected of them concerning procedure adherence. Procedural deficiencies were being identified and properly addressed. Strengths were also identified in the documentation of work performed, including as-found data collection for trending and root cause analysis. Also, work tracking systems were improved and resulted in more efficient communications and shift crew turnovers. Further, communications among operations, maintenance, and performance engineering staffs were good and contributed positively to the efficient use of resources.

The surveillance testing program was appropriately implemented during the assessment period and contributed positively to the safe operation of the plant. While the general quality of the surveillance testing procedures was good, the maintenance staff was in the process of upgrading all of their surveillance tests. The quality of the newly revised procedures was improved. Test personnel were knowledgeable and successful in executing the surveillance test program. Throughout the period, when weaknesses or deficiencies were noted in surveillance testing, station management was prompt in initiating corrective actions. The inservice inspection and testing programs continued to be generally sound, with the exception of recurring instances of insufficient inservice system leakage testing and significant radiography program deficiencies which are discussed further in the SA/QV functional area. Significant improvement was achieved in emergency service water (ESW) testing, which now includes quarterly integrated flow testing of the system.

NYPA created a central planning group to coordinate all work planning activities on site. This group has improved the quality of maintenance work packages and has implemented a 13-week rolling schedule where system outages are planned and work requests involving that system are coordinated during the system outage. The central planning group has also performed a system outage risk assessment. Plant management's strong commitment to shutdown risk management was clearly demonstrated on several occasions in the 1992 outage such as the emergency diesel generator (EDG) emergency service water (ESW) modification when non-TS required safety systems were kept in an operable condition. Planning of major evolutions was generally good. Certification checklists were successfully used to focus efforts and ensure key events were safely completed. In particular, this approach led to a significant man-rem savings during vessel reassembly.

Summary

The overall performance in the maintenance/surveillance area was good. While some deficiencies and weaknesses have been identified, improvements were noted in root cause analyses and the material condition of the plant. Initiatives in the areas of procedural quality and planning have also contributed positively to the performance of maintenance. Newly

revised maintenance department surveillance tests were improved. The surveillance testing program was appropriately implemented and test personnel were knowledgeable. Station management initiated corrective actions when surveillance test weaknesses were identified.

III.C.2 Performance Rating: Category 2

III.D EMERGENCY PREPAREDNESS

III.D.1 Analysis

The previous Emergency Preparedness (EP) SALP rating was Category 1, based upon timely and proper responses to actual events, and proficient exercise performance. Management was effectively involved in qualification of the emergency response organization, in drills, and in EP program oversight. The EP training program was well defined and organized, and an ample number of personnel were well qualified to perform emergency response functions.

Overall, the quality of EP was maintained at a high level. Good administration of the EP program, including a well qualified staff within the Emergency Response Organization (ERO), and senior management involvement were evident throughout the period. Emergency response facilities were well equipped and operationally ready, drills and exercises effectively conducted, and ERO performance was notable. Interface with state, local and off-site responders remained strong.

During this SALP period, no events required implementation of the Emergency Plan. Contingency plans were developed and implemented for the March 1993 blizzard. Preparations included ensuring that food supplies, resources, and necessary staff were available. That planning and preparation effort allowed plant staff to weather the storm without significant incident.

Exercise scenario development and presentation of related information for the 1992 partial-participation exercise were excellent. Performance by the emergency response organization (ERO) was effective during the exercise. NYPA tested personnel response via unannounced, off-hours notification, with good results. Direction and control in each Emergency Response Facility (ERF) and communications between ERFs were good. There was, however, slow dispatch of a high priority in-plant repair team. Additional training of Operations Support Center (OSC) managers and repair team personnel appropriately addressed this concern. The licensee's post-exercise critique was constructive, with excellent self-examination evident. Also, an observed practice drill was assessed as well-paced and challenging for new managers. Overall, drills and the emergency exercise demonstrated effective implementation of the Emergency Plan.

Two licensed operator examinations tested operator use and implementation of the

Emergency Operation Procedures (EOPs). Although operators performed well at prioritizing actions and allocating resources, the Protective Action Recommendations (PARs) procedure did not provide sufficient guidance for operators to specify emergency response planning areas (ERPAs), which hindered their ability to develop PARs. Subsequent corrective actions were appropriate.

A strong commitment to performance-based ERO qualification was evident in upgraded training for response personnel. Prior to ERO assignment, practical demonstration of capabilities in either drills or exercises was required. A sufficient and fully qualified ERO staff was in place throughout the period, with most personnel participating in a drill or exercise during the assessment period. EP lesson plans and examination materials were excellent. ERO training was well defined and implemented.

Management knowledge of and participation in EP activities remained a strength. Station and corporate managers maintained an active involvement in EP through meetings with the site EP staff, report reviews, and tracking of outstanding items. EP overview by the corporate staff was also evident. The plant EP staff consisted of three full-time members assisted by other site personnel. Early in the SALP period, a new Emergency Preparedness Coordinator (EPC) was assigned, and the EPC transition was accomplished smoothly.

Regular interface meetings were held by the plant EP staff with State and Oswego County officials. Upkeep of the Emergency Plan and implementing procedures, readiness of emergency communications and ERFs, and coordination with both on-site and off-site support groups were well-performed. There was a strong EP staff effort to maintain administrative functions, assure availability of emergency equipment and supplies, and coordinate training and qualification of ERO staff with the training department. Use of software-based management tools for maintaining and tracking EP schedules and program actions were program enhancements. The Emergency Operations Facility had good displays and was well laid out. ERFs were maintained in an appropriate state of readiness, with good facilities and equipment available. However, some emergency equipment lockers were missing equipment. These deficiencies were promptly corrected and the administrative controls for maintenance of the lockers were upgraded. Overall EP staff functions were well-performed because the licensee effectively utilizes a small full-time EP staff.

Independent quality assurance (QA) reviews were performed at different times by the White Plains Office Audits Department and by the site QA Department. These reviews were appropriate in scope, satisfied NRC requirements, and covered previously identified followup items contained in the corrective action system. EP staff action on audit findings was timely.

Summary

The licensee maintained a highly effective emergency preparedness program. Operator examinations, the emergency exercise, and the observed practice drills showed an effective

emergency response function and a well-qualified ERO. Contingency planning for the March 1993 blizzard was good. There was continued effective program implementation and management oversight during the personnel change for the ERC position. Management involvement in EP and the commitment to performance-based training prior to specific ERO assignment were considered program strengths. Although there were two minor problems with the ERFs, the deficiencies were promptly corrected.

III.D.2 Performance Rating: Category 1

III.E SECURITY

III.E.1 Analysis

During the previous assessment period, the licensee's performance was rated as Category 1 based upon an effective security program with clear evidence of management attention. Systems and equipment as well as the security force training program were upgraded indicating the licensee's continued commitment to a quality program.

Overall, security maintained a consistent high level of performance during this assessment. Management support and oversight of the program continued to be a strength. Continued equipment upgrades, proactive communications with local law enforcement agencies and an effective training program, all contributed to a superior program. The effective utilization of self assessments ensured licensee identified weaknesses were corrected in an effective and timely manner.

Plant and security management attention to and involvement in the program were evident during this period by the continuation of improvements and enhancements to increase its effectiveness. These included the completion of a major protected area barrier upgrade, the installation of additional assessment aids, the installation of new video monitors in the central and secondary alarm stations, the procurement of portable light carts to provide for temporary and emergency lighting, and the development and implementation of a formal self-assessment program.

During this assessment period, the security program continued to be carried out effectively. The licensee's use of self-assessments and appraisals was effective; personnel errors were rare, events were not repetitive, and correction of identified deficiencies was timely and technically sound. Plant security management maintained effective communications and excellent rapport with other plant groups, remained active in industry groups involved in nuclear security matters, and maintained effective liaison with local law enforcement agencies. Such initiatives demonstrated the licensee's commitment to maintaining an effective program.

Instrumentation and control (I&C) technicians were dedicated to security equipment maintenance. Corrective maintenance was scheduled and completed with priority being given to failures which would have necessitated compensatory measures. Additionally, the licensee provided the I&C technicians with formalized vendor provided training on the newly installed assessment aids. Minimal security department overtime was required to provide compensatory actions for inoperable security equipment, which was a result of effective maintenance efforts. During the previous period, a preventive maintenance program was being established to further minimize equipment problems. The NRC notes that the licensee is still preparing some implementing procedures. No degradation resulted from the quality of preventive maintenance execution; however, continued attention to this effort is warranted. The licensee's training program was well developed and administered by a staff of experienced and knowledgeable professionals. Training facilities and training aids were appropriate and well maintained. Early in this period, a problem was identified with training record documentation. The licensee promptly and effectively corrected the problem. Interviews of security officers indicated that their training was effective and directed toward ensuring that the security objectives were being properly met. Security officers were knowledgeable of their post assignments and responsibilities and displayed high morale.

During this assessment period, a followup of the programmatic fitness-for-duty (FFD) weaknesses identified during the initial inspection of the FFD program was conducted. Corrective actions taken by the licensee to resolve the identified weaknesses were prompt and effective. The licensee's overall program was effective, proactive and directed towards assuring public health and safety.

Licensee quality assurance audits of the security program were performance-based and comprehensive in scope and depth. The licensee used a nuclear security consultant to augment their Quality Assurance audit team with additional technical expertise. No adverse findings were identified, but recommendations were made to enhance the operation and administration of the security program. The audit results were promptly reported to the appropriate levels of management and recommendations made to strengthen the program were promptly evaluated and effectively implemented where appropriate.

Event reporting procedures were clear, consistent with NRC reporting requirements and well understood and implemented by the security supervisors. The security event logs indicated that events were properly categorized, appropriately analyzed and tracked, and timely corrective actions taken, as necessary. No prompt reportable security events occurred during this period.

The licensee submitted two revisions to its Physical Security Plan which included a complete rewrite and a temporary addendum under the provisions of 10 CFR 50.54(p). The revisions were technically sound and reflected well-developed policies and procedures.

Summary

The licensee continued to maintain an effective, performance-oriented security program. Notable program strengths included excellent management support, continued equipment and system upgrades, ongoing maintenance support, excellent communications between security and other plant groups, and an effective self-assessment and corrective action program. The efforts expended to upgrade the security program and to identify and resolve discrepancies before they became problems demonstrated the licensee's commitment to maintain a high quality program.

III.E.2 Performance Rating: Category 1

III.F ENGINEERING/TECHNICAL SUPPORT

III.F.1 Analysis

This area was previously rated as Category 3. While good performance was noted in certain engineering staff and technical support group efforts, weak engineering evaluations, inadequate review of industry experience correspondence, and poor communication between site and corporate engineering staffs resulted in instances of programmatic degradation and design control deficiencies. The technical services department continued to be hampered by the existing work backlog and weak engineering resolution of past problems.

During this assessment period, the NYPA engineering organization, consisting of the corporate engineering, site engineering, and technical services departments, demonstrated generally improved performance, but still exhibited a number of performance weaknesses. This mixed performance was noted in the areas of performance enhancement initiatives, resolution of fire protection and Appendix R concerns, and resolution of various emergent technical issues. Communications and coordination within the engineering organization were generally improved.

The reorganization implemented during the previous assessment period proved to be effective in that the new engineering departments integrated their work activities more efficiently through improved communication and coordination. In an effort to address staffing limitations and a high engineering work request backlog, NYPA authorized a number of additional engineering positions early in the assessment period. However, due to a NYPA hiring freeze in the latter part of the assessment period, only the fire protection positions had been filled. NYPA still plans to fill the remaining positions at a later date. NYPA also implemented an engineering work backlog trending program, but made limited progress in reducing this backlog due to a large volume of emergent work. Finally, administrative policies were revised to clearly delineate responsibility for engineering and technical support and to resolve previously identified problems, such as the lack of organizational authority and conflicting program requirements.

Performance by the corporate and site engineering departments improved during this assessment period. The site engineering staff promoted corporate engineering involvement in plant activities with its participation at the daily planning meetings. Bi-weekly telephone conferences among corporate, site, and technical services staff assisted in coordinating emergent tasks and relevant engineering issues. Monthly project and engineering on-site meetings were particularly beneficial in communicating and prioritizing the engineering support needed to resolve outstanding unit restart issues. Generally good performance was noted in a number of programs, plant modifications, and the resolution of technical issues. Examples included: the development and validation of a thorough emergency service water (ESW) system design basis document; improved modification packages that contained detailed operability checklists and improved status of the operational readiness of modifications; and an innovative resolution of a weld leak that developed at the equalizing line for the reactor water cleanup system inboard manual isolation valve.

However, a number of specific events and plant problems surfaced or persisted this assessment period where the engineering and technical staff performance was poor. Weak engineering was identified in the design and installation of the recirculation riser decontamination connections that developed leaks in containment and in the inadequate design verification testing of the relay room CARDOX suppression system. NRC inspection of the motor-operated valve (MOV) program identified that effective actions were being taken for motor-operated valves required to close against line break flows, but a number of MOV testing and maintenance areas were identified as needing further improvement. For example, a program revision was needed to require assessment of dynamic test results prior to returning a MOV to service. In the area of drawing controls, problems persisted during this period, in spite of a NYPA self assessment and corrective actions to improve the drawing update program. Lastly, electrical cable separation concerns identified prior to unit restart in January 1993, were the result of poor initial installation and modification controls during past assessment periods. NYPA engineering staff response to this problem was satisfactory. However, the technical basis for concluding the as-found conditions were satisfactory were not initially well-substantiated by the NYPA corporate engineering staff.

A major area of concern this assessment period was the slow resolution of numerous fire protection and Appendix R Safe Shutdown problems. A significant amount of effort was expended in this area by the corporate and site engineering staffs, but frequently was not focused to ensure appropriate technical resolution of the specific issues. This reflected poor engineering management oversight and control of the engineering work processes. For example, initial technical evaluations were frequently inadequate, incomplete, or contained unsubstantiated statements. In another instance, the poor resolution of known fire door operability deficiencies demonstrated inadequate communications and cooperation between the site and corporate staffs and weak engineering management oversight. Similarly, poor initial validation and verification of revised fire-related abnormal operating procedures reflected unsatisfactory engineering quality control.

The technical services department exhibited generally good performance throughout the

assessment period. A new department manager, the rotation of several department supervisors, and the addition of a fire protection engineer and a fire protection supervisor strengthened this department. Performance engineering generally performed well as evidenced by the resolution of high vibration problems with a standby gas treatment system fan. System engineers were effective in improving their systems and resolving emergent problems. For example the systems engineers were instrumental in: improving the overall performance of the service water and emergency service water systems; resolving longstanding offgas system performance problems; and in improving the reliability of the emergency diesel generator governor control systems. A good root cause analysis was performed by the system engineer in addressing icing problems at the intake structure. The technical services department coordinated the resolution of this problem well, obtaining the needed assistance from corporate engineering and environmental experts. However, some examples of less than adequate technical services engineering work were also identified. During main condenser repairs, several discrepancies were identified with the condenser tube map where tubes that were indicated as plugged were not. Also, the resolution of inservice testing problems with residual heat removal pump minimum flow check valves lacked a rigorous evaluation. NYPA was initially planning to accept one of the check valves based on satisfactory results taken the previous day that could not be replicated. Subsequent questions from the NRC staff caused the licensee to disassemble the valve and identify an internal problem.

The quality of engineering support for licensing actions processed by the NRC staff significantly improved during this assessment period. Most licensing actions were technically sound and supported timely resolution of the requested actions or safety issues. Examples of licensing submittals that were of good quality and indicative of sound engineering support included the application for amendment of the Technical Specifications regarding analog transmitter trip system response time testing, the ASME Section XI relief request pertaining to the reactor water cleanup system equalizing line repair, and the safety analysis and engineering evaluation associated with increasing the authorized maximum power level. Also, improved communication and coordination between the engineering and licensing staffs were evident in the quality, accuracy, and timeliness of information presented to the NRC in meetings and conference calls associated with licensing activities. However, one aspect of this communication and coordination that remained weak pertained to the establishment of engineering commitment schedules documented in licensing submittals. On several occasions during this assessment period, NYPA failed to adequately assess the feasibility of performing modifications and surveillances in accordance with the commitment schedules provided to the NRC. As a result, several licensing commitments were not met or were significantly delayed in their implementation.

Summary

While performance improvements were achieved in this functional area, several engineering organization weaknesses persisted and overall performance remained mixed. The

engineering departments demonstrated generally improved communication and coordination, particularly in resolving critical restart issues and in supporting licensing actions. While the corporate and site engineering departments demonstrated satisfactory performance in several programs areas and in the resolution of emergent technical issues, a large percentage of their initial technical evaluations to resolve Appendix R concerns were weak and required additional work. With a few notable exceptions, the technical services department performed satisfactorily. Many of the NYPA engineering initiatives to enhance overall performance (e.g., engineering work request backlog trending, drawing control improvements, and engineering staff training programs) were instituted too late in the assessment period to have a measurable performance impact. Engineering support of licensing actions was good.

III.F.2 Performance Rating: Category 3, Improving

III.F.3 Board Comment

The Board acknowledges that substantial effort has been expended to improve performance and that some improvement has been noted. However, weak performance has been noted particularly in the evaluation of emergent issues and long term correction of Appendix R and fire protection issues. The Board concludes that continued strong management attention is warranted to correct these weaknesses and continue the improving trend in this area.

III.G SAFETY ASSESSMENT/QUALITY VERIFICATION

III.G.1 Analysis

The previous SALP rated this functional area as Category 3. Overall performance in this functional area was adequate; yet, several weaknesses impacted New York Power Authority's (NYPA) effectiveness in consistently ensuring quality performance. NYPA's commitment to improve performance at FitzPatrick and the corporate office was demonstrated by the development of the 1992 Business Plan and the FitzPatrick Results Improvement Program (RIP). However, observed performance throughout the assessment period did not represent discernable improvement. Even though personnel reflected a safety-conscious attitude, limited success by NYPA management to establish adequate standards of performance generally resulted in products of inconsistent quality. Several events during the assessment period demonstrated that NYPA management did not ensure effective oversight of plant activities and self-assessment efforts. These events resulted from poor communication and coordination between departments, the failure of certain programs to satisfy regulatory requirements, and corrective actions that were not always timely or effective. The QA program was not effectively used by management to improve performance.

During this assessment period, NYPA implemented several management changes which contributed to improved oversight and fostered increased staff accountability and a conservative safety conscious attitude toward operations. Furthermore, NYPA management, including the Plant Leadership Team and Nuclear Leadership Team, demonstrated a serious commitment to improvement and provided the resources necessary to effectively implement the RIP. Enhanced management involvement and an excellent safety perspective were demonstrated during refueling operations, the reactor pressure vessel test, a 2-hour safety stand-down period, and startup and power ascension activities. In contrast, instances of weak management oversight and attention to detail were noted in the fire protection and radiography programs.

In addition to implementation of the RIP, other NYPA initiatives were noteworthy. For example, NYPA's shutdown risk management efforts were commendable. Throughout the 1992 refueling outage, a complement of emergency cooling, injection, and electrical power systems were maintained available despite not being required by the technical specifications. Particularly noteworthy were NYPA's efforts to minimize the possibility of a station blackout event during an EDG emergency service water modification. The Design Basis Document program was of high quality and instrumental in identifying and resolving containment and emergency service water system design deficiencies. Contingency plans that were developed and implemented in preparation for the March 1993 blizzard were comprehensive and effective. The new engineer-on-shift program was a positive initiative that enhanced the technical expertise of the operating crews. Finally, extensive emergency service water system performance improvement efforts, including the zebra mussel monitoring program, were commendable.

The scope and quality of self-assessment efforts improved during this assessment period. NYPA management demonstrated its ability to conduct thorough and effective self-assessments and to factor the results of those assessments into improved plant, program, and personnel performance. The first semi-annual self-assessment of the RIP thoroughly evaluated the adequacy and timeliness of corrective action plans and made appropriate recommendations for improvement. The Start-up Readiness Evaluation, though somewhat limited in scope, demonstrated thorough evaluations of specific technical issues. The self-assessment of unit startup activities was comprehensive and effectively reviewed and documented the "lessons learned." Finally, thorough and objective self-assessments were instrumental in ensuring continued good performance in the radiological control program.

NYPA's approach to identification, root cause review, and resolution of problems significantly improved during this assessment period; however, performance was mixed. The improvements in these processes were facilitated by new formal Root Cause Analysis and Integrated Causal and Corrective Action programs, as well as the establishment of an Operations Review Group to manage these programs. On most occasions, NYPA exhibited a comprehensive, safety-conscious approach to resolve deficiencies. For example, when engineers identified that all four emergency diesel generators were susceptible to failure in the event of grounds on their respective safety-related 125 VDC battery bus, NYPA

performed a thorough safety evaluation and implemented a circuit modification that was of high quality to resolve the deficiency. When EHC circuitry and RCIC overspeed trip mechanism problems were experienced during unit startup activities, investigation and resolution efforts were thorough and well-coordinated. When icing conditions restricted cooling water flow to the plant, NYPA's analyses and compensatory measures were comprehensive.

In contrast, identification and resolution of relay room CO_2 system design deficiencies were initially weak resulting in the subsequent failure of the test. Ineffective and untimely corrective actions resulted in recurring instances of insufficient inservice system leakage testing. Shallow root cause analyses and weak corrective actions resulted in recurring failures to have a fire watch posted when required. Finally, inadequate review resulted in the failure to identify numerous radiography and electrical cable separation deficiencies.

NYPA's utilization of industry experience to identify and resolve potential safety concerns significantly improved during this assessment period. In response to deficiencies identified during an audit of the operating experience report program, NYPA performed comprehensive corrective measures to reduce the backlog of unreviewed industry operating experiences, assess the quality of those previously reviewed, and ensure that new industry operating experiences are adequately addressed. Comprehensive industry operating experience reviews were noted in the erosion/corrosion monitoring and motor operator valve programs as well as in response to potentially adverse conditions identified in NRC Information Notices regarding turbine failure and ECCS suction strainer clogging.

During this assessment period, improvement was noted in the Quality Assurance (QA) and Quality Control (QC) programs. QA audits were generally detailed and audit findings reflected thorough evaluation. Thorough and effective QA audits of emergency operating procedures, security, radiological environmental monitoring, and radwaste programs were noted. NYPA's review of closed QA reports over the last 6 years to determine if identified deficiencies were properly evaluated for appropriate corrective action was a high quality initiative. One notable exception to the good QA performance was identified in QA's oversight of the radiography program. QA failed to identify numerous problems regarding archivability, weld coverage, and optical density of radiographs. QC inspectors in the field generally performed well; however, they failed to prevent adverse quality conditions following a few maintenance activities.

The onsite plant operations review committee (PORC) continued to perform thorough reviews of issues and exhibit a strong safety perspective. This strong safety perspective was also demonstrated by the offsite safety review committee (SRC) during a comprehensive readiness for restart assessment following the 1992 refueling outage. Meetings of both committees included open discussion of issues and exchange of perspectives. The use of the new telecommunication system in the PORC process facilitated participation by engineering and licensing representatives from the corporate office during discussions of complex issues and resulted in more comprehensive reviews.

Licensee Event Reports (LERs) typically provided clear descriptions and appropriate details of the subject events. The root cause analyses and corrective actions were generally thorough and reflected a comprehensive and timely review. However, on occasion, inadequate management review of LERs resulted in inaccurate and/or incomplete information being provided to the NRC. Reportability determinations were accurate and telephone notifications made were comprehensive.

NYPA licensing submittals, including license amendments and responses to generic letters, bulletins, and other regulatory issues, were routinely clear, complete, and adequately addressed the significant safety issues. Significant improvement was noted in the engineering support for these licensing actions. Improved management oversight and initiatives such as enhanced monthly project and engineering meetings and a new senior licensing engineer position on site facilitated better communication and cooperation among the site, engineering, and licensing staffs and resulted in improvements in the quality, accuracy, and timeliness of most licensing actions. One exception was noted when inadequate communication between the engineering and licensing staffs hindered the resolution of some fire protection program licensing issues. The technical specification improvement efforts begun late in the assessment period were commendable; however, significant tangible improvements have yet to be recognized.

Summary

Overall performance in this functional area significantly improved over the previous period. NYPA management demonstrated a serious commitment to improvement and provided the oversight and resources necessary to effectively implement the RIP. Improved management oversight, staff accountability, and self-assessment processes fostered a safety-conscious attitude toward operations and resulted in improved plant, program, and personnel performance. However, these improvement initiatives were not always effective in ensuring that problem identification, root cause review, and resolution efforts were consistently of high quality. Enhanced effectiveness of the QA and QC programs was noted; however, some performance weaknesses remained.

III.G.2 Performance Rating: Category 2

IV SITE ACTIVITIES AND EVALUATION CRITERIA

IV.A LICENSEE ACTIVITIES

FitzPatrick began the SALP period in a shutdown condition. The plant had been shut down since November 27, 1991, to address core spray containment isolation operability concerns. On December 6, 1991, NYPA notified the NRC that they would not restart the plant before the 1992 refueling outage, which commenced on January 11, 1992, due to fire protection program concerns.

Core reload was completed on September 17, 1992, and the vessel hydrostatic test was conducted on October 1, 1992. NYPA developed a Startup Plan with seven major milestones to reach 100% reactor power. A Plant Leadership Team was formed to review activities at each milestone, and recommend continuation of plant startup.

Operators placed the mode switch in startup on January 2, 1993, and reactor criticality was achieved on January 3, 1993. Reactor power was raised to 100% on January 30. Following the final Plant Leadership Team meeting to review completion of Milestone 7 activities, and to conduct a review of the startup process, including lessons learned and recommendations for improvement, the FitzPatrick Startup Plan was successfully completed on February 3, 1993.

The plant was operated at 100% power until February 25, 1993, when the reactor was manually scrammed. At 1:40 a.m., extremely cold conditions caused frazil ice blockage of the circulating water intake structure in Lake Ontario. Lowering level in the screenwell (10 feet below normal level) caused control room operators to decrease reactor power to 70% by reducing recirculation flow, trip one of three operating circulating pumps, and subsequently manually scram the reactor. A planned maintenance outage originally scheduled for February 26 was entered one day early. Major work accomplished included replacement of the B recirculation pump seal assembly, modifications to the drywell nitrogen system, and repair of the second stage reheat steam stop valve (31 MOV-RSSV-2).

The plant was started up on March 6, and with the reactor vessel pressure at 1000 psig, a drywell inspection the same day revealed a leaking threaded cap on a one inch decontamination line located on a recirculation loop riser. The plant was shut down the following day. After modifying all of the decontamination connection, the plant started up on March 20 and reached 8% power when difficulties with APRM calibrations delayed power ascension. Power ascension resumed on March 23, and the reactor reached 100% power on March 26, and remained there through the end of the SALP period.

IV.B NRC INSPECTION AND REVIEW ACTIVITIES

Two NRC resident inspectors were assigned at FitzPatrick during the assessment period. NRC special and team inspections were conducted in the following areas:

- An emergency service water Safety System Functional Inspection (ESW SSFI) was conducted the week of April 13, 1992 to 17, 1992 and again from April 27, 1992 to May 1, 1992.

- A Restart Assessment Team Inspection was conducted between October 5, 1992 to October 13, 1992.

- The NRC provided around-the-clock inspection coverage during startup from December 29, 1992 until January 7, 1993. Augmented NRC inspection coverage continued until January 22, 1993.

- A Motor Operated Valve Team Inspection was conducted between February 1, 1993 to February 5, 1993.

IV.C ESCALATED ENFORCEMENT ACTION

On September 15, 1992, the NRC issued five Severity Level III violations and Civil Penalties totalling $500,000 for the following deficiencies: (1) inadequate control of a design modification for the analog transmitter trip system (ATTS) relays; (2) failure to identify and correct certain conditions adverse to quality; (3) inadequate implementation of the fire protection program: (4) failure to meet certain 10 CFR Part 50 Appendix R requirements; and (5) submittal of incomplete and inaccurate information to the NRC on several occasions concerning the ESW system. These violations were for events or problems which occurred prior to this assessment period. Two enforcement conferences were held (on March 18, 1992, and June 24, 1992), to address routine resident inspection findings, followup to a Diagnostic Evaluation Team Inspection, and Fire Protection Team and ESW SSFI Team findings. These findings indicated a significant breakdown had occurred in managerial and administrative controls of licensed activities at the facility.

NYPA's response dated September 15, 1992, agreed with the violations but requested full mitigation of the Civil Penalties. Our response letter dated January 29, 1993, exercised broad discretion under the Enforcement Policy to reduce the Civil Penalties to $300,000 due to extensive corrective actions taken by NYPA.

IV.D SALP EVALUATION CRITERIA

Licensee performance is assessed in selected functional areas, depending on whether the facility is in a construction or operational phase. Functional areas normally represent areas significant to nuclear safety and the environment. Some functional areas may not be assessed because of little or no licensee activities or lack of meaningful observations. Special areas may be added to highlight significant observations.

The following evaluation criteria were used, as applicable, to assess each functional area:

1. Assurance of quality, including management involvement and control;

2. Approach to the resolution of technical issues from a safety standpoint;

3. Enforcement history;

4. Operational events (including response to, analysis and reporting of, and corrective action for);

5. Staffing (including management);

6. Training and qualification effectiveness;

Based upon the SALP Board assessment, each functional area evaluated is classified into one of three performance categories. The definitions of these performance categories are:

Category 1: Licensee management attention to and involvement in nuclear safety or safeguards activities resulted in a superior level of performance. NRC will consider reduced levels of inspection effort.

Category 2: Licensee management attention to and involvement in nuclear safety or safeguards activities resulted in a good level of performance. NRC will consider maintaining normal levels of inspection effort.

Category 3: Licensee management attention to and involvement in nuclear safety or safeguards activities resulted in an acceptable level of performance; however, because of the NRC's concern that a decrease in performance may approach or reach an unacceptable level, NRC will consider increased levels of inspection effort.

Category N: Insufficient information exists to support an assessment of licensee performance. These cases would include instances in which a rating could not be developed because of insufficient licensee activity or insufficient NRC inspection.

Trends, if used, are defined as:

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.

ENCLOSURE 2

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

JUL 7 1993

Docket No. 50-333

Ralph E. Beedle
Executive Vice President - Nuclear Generation
New York Power Authority
123 Main Street
White Plains, New York 10601

Dear Mr. Beedle:

Subject: **Initial Systematic Assessment of Licensee Performance (SALP) Report No. 50-333/92-99**

An NRC SALP Board conducted on June 2, 1993, reviewed and evaluated the performance of activities at the FitzPatrick Nuclear Power Plant for the period of April 19, 1992 through April 17, 1993. The enclosed Initial SALP Report documents the results of this assessment.

Overall, we concluded that the plant was operated safely during the SALP period, with improvement in performance in several functional areas. The improvements observed during this assessment period reflected a concerted effort by NYPA senior plant and corporate management to implement the initiatives committed to in the FitzPatrick Results Improvement Program. These improvements were characterized by better management oversight, improved accountability and self assessments, enhanced problem identification and root cause analysis programs, improved staffing, better material and radiological conditions, and a strong safety perspective.

While encouraged by your overall progress, we remain concerned with the slow pace of improvement and mixed performance demonstrated in the functional area of Engineering and Technical Support. In particular, our assessment noted several examples of weak evaluations of emergent technical concerns, weaknesses in the initial evaluations and proposed resolutions of Fire Protection and Safe Shutdown deficiencies, and inadequacies in related engineering management oversight and control. Additional NYPA management attention and effort is warranted in this area to resolve these weaknesses and sustain improvements made.

A management meeting to discuss the SALP evaluation has been scheduled for July 28, 1993, at the FitzPatrick site. This meeting will be open for public observation. At the SALP meeting you should be prepared to discuss this assessment and your plans to improve performance in the areas where weaknesses were noted. Please also be prepared to

discuss your initiatives to address the root causes of recent equipment problems that precipitated four shutdowns since the January 1993 restart. The meeting is intended to be a candid dialogue wherein any comments you may have regarding our report may be discussed. Additionally, you may provide written comments regarding our assessments within 20 days after the meeting.

Your cooperation with us is appreciated.

Sincerely,

Thomas T. Martin
Regional Administrator

Enclosure: **Systematic Assessment of Licensee Performance (SALP) Report No. 50-333/92-99**

cc w/encl:
R. Schoenberger, President
H. Salmon, Jr., Resident Manager - James A. FitzPatrick Nuclear Power Plant
G. Goldstein, Assistant General Counsel
J. Gray, Jr., Director, Nuclear Licensing - BWR
J. Blau, Director, Utility Intervention, New York State Consumer Protection Bureau
Supervisor, Town of Scriba
C. Donaldson, Esquire, Assistant Attorney General, New York Department of Law
Director, Energy & Water Division, Department of Public Service, State of New York
K. Abraham, PAO (30)
The Chairman
Commissioner Rogers
Commissioner Curtiss
Commissioner Remick
Commissioner de Planque
Institute for Nuclear Power Operations (INPO)
Public Document Room (PDR)
Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
NRC Resident Inspector
State of New York, SLO Designee

Enclosure 3

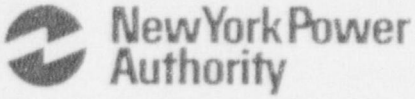
SALP Management Meeting Attendees
July 28, 1993

N. Avrakotos, Emergency Preparedness Manager, New York Power Authority (NYPA)
R. Barrett, General Manager - Operations
R. Beedle, Executive Vice President - Nuclear, NYPA
R. Capra, Director, Project Directorate I-1, Office of Nuclear Reactor Regulation (NRR)
M. Colomb, General Manager - Site Support, NYPA
W. Cook, Senior Resident Inspector - FitzPatrick, NRC
J. DeRoy, Maintenance Manager, NYPA
P. Eselgroth, Chief, Reactor Projects Section 1B, Division of Reactor Projects (DRP)
J. Kaucher, Technical Services Manager, NYPA
D. Kieper, Instrumentation and Controls Manager, NYPA
D. Lindsey, General Manager - Maintenance, NYPA
R. Locy, Operations Manager, NYPA
T. Martin, Regional Administrator, NRC Region I
G. Mavrikis, Nuclear Engineering Design Manager, NYPA
A. McKeen, Radiological Controls and Environmental Services Manager, NYPA
H. Salmon, Resident Manager - FitzPatrick, NYPA
J. Tappert, Resident Inspector - FitzPatrick, NRC
T. Teifke, Security and Safety Manager, NYPA
A. Zaremba, Operations Review Group Manager, NYPA

ENCLOSURE 4

123 Main Street
White Plains, New York 10601

914 681 6846



Ralph E. Beedle
Executive Vice President
Nuclear Generation

August 16, 1993
JPN-93-057

Mr. Thomas T. Martin
Regional Administrator
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

SUBJECT: James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
Response to Initial SALP Report

Reference: NRC letter, T. T. Martin to R. E. Beedle, dated July 7, 1993, regarding "Initial Systematic Assessment of Licensee Performance (SALP) Report No. 50-333/92-99."

Dear Mr. Martin:

This letter provides the New York Power Authority's response to the initial Systematic Assessment of Licensee Performance (SALP) for the James A. FitzPatrick Nuclear Power Plant for the period of April 19, 1992 through April 17, 1993.

The Authority agrees with the NRC's assessment of performance. The initiatives implemented through the FitzPatrick Results Improvement Program (RIP) have been effective, as recognized in the report.

The Power Authority is committed to continued improvements in performance and is confident that the cited weaknesses are being addressed through capital improvements, engineering organizational improvements, the Nuclear Generation Business Plan, as well as the FitzPatrick RIP. The Authority's detailed comments on the initial SALP are contained in the attachment to this letter.

If you have any questions, please contact me.

Very truly yours,

Ralph E. Beedle

Attachment

cc: see next page

cc: U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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Washington, DC 20555

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Project Directorate I-1
Division of Reactor Projects - I/II
U.S. Nuclear Regulatory Commission
Mail Stop 14-B2
Washington, DC 20555

New York Power Authority
James A. FitzPatrick Nuclear Power Plant

Attachment to JPN-93-057

RESPONSE to INITIAL SALP REPORT

Operations

The Authority agrees with the assessment of performance in the operations area, and is encouraged by the strengths cited. As noted in the report, the weaknesses identified during the period were effectively corrected and FitzPatrick RIP initiatives are in progress to prevent similar occurrences. These include procedure upgrades, use of procedure validation and the continued emphasis on attention to detail, self-verification, and a conservative "do it right the first time" operations philosophy.

Radiological Controls

The Authority agrees with the assessment of the radiological controls area. The Authority appreciates the NRC's recognition of continued good performance in several areas.

As stated in the report, radiological incidents are now addressed in the plant wide Deviation/Event Reporting system. This system has been effective in improving the tracking and close out of associated corrective actions. The procedures that control implementation of the Radiation Work Permit program have been improved, and further procedure improvements are being made. The need for procedure adherence in accordance with JAF Administrative Procedure 02.06, "Procedure Use and Adherence," continues to be stressed.

The program which maintains worker radiation exposure as low as reasonably achievable (ALARA) continues to improve. At the request of the Authority, the Institute of Nuclear Power Operations (INPO) performed an assist visit to the FitzPatrick plant in the ALARA area. Recommendations from the assist team will be used to further enhance the program.

The Authority is confident that the stated changes and the radiological control portion of the Results Improvement Program will further improve performance.

Maintenance/Surveillance

The Authority agrees with the assessment of Maintenance and Surveillance. Improved procedural instructions and increased emphasis on equipment failure root cause analyses with corresponding focused corrective actions, have resulted in higher work quality and a lower incidence of re-work. This emphasis continues. The preventive maintenance program is being significantly improved and several major component group evaluations have been completed.

As noted in the report, the combustible control and scaffolding programs have been strengthened.

A plant wide stand-down was conducted to reemphasize the need for attention to detail, and to reenforce the management expectation that work needs to be done right the first time.

Efforts to improve the surveillance program include procedure upgrades, an adequacy review of Logic System Functional Tests, and centralized scheduling.

These and other continuing initiatives, such as equipment failure, root cause, and shutdown risk evaluations, critiques, and enhancements in planning and scheduling will further improve our performance in maintenance and surveillance.

Emergency Preparedness

The Authority agrees with the assessment of this area. Management is committed to continued strong support and superior performance.

Initiatives taken or in progress during this SALP period include use of the plant specific control room simulator for the June 30, 1993 emergency plan drill, initiation of an upgrade of Emergency Action Levels consistent with NUMARC guidance, and implementation of an improved dose assessment model.

Security

The Authority agrees with the assessment in the security area and is committed to maintain superior performance through effective corporate support, critical self-assessment, and timely effective corrective actions.

Engineering/Technical Support

The Authority agrees with the NRC assessment of this area. We are encouraged by the acknowledgement of improved performance and are taking actions to address the weaknesses cited.

The Technical Services group is initiating an engineering on-call "duty officer" schedule to provide enhanced multi-disciplinary, timely, high quality resolution of emergent issues.

Technical Services activities are prioritized, assigned to a responsible individual and tracked. Personnel training and vacations are being scheduled a year in advance to allow better resource planning and utilization. An Issues Turnover Log has been established to improve the quality of task turnovers and to ensure availability of accurate technical information.

Technical Services staffing is being increased. Three experienced engineers have accepted offers and fourteen positions are being filled.

Several improvement initiatives are in progress in the engineering area. Improved analytical tools that have been implemented include: computerized modeling of the electrical distribution system; and computerized models for motor start circuit analysis, coordination analysis, and load studies. Improvements in modification and design control procedures and standards are ongoing.

Development of Design Basis Documents (DBDs) continues. Design information was retrieved from the NSSS supplier and the original plant architect-engineering firms and is being consolidated at the Authority's corporate office.

Engineering work backlogs are being trended and appropriate action is taken if trends are not satisfactory.

Improvements were made in the technical evaluations of Appendix R safe shutdown issues to address the weaknesses noted in the report. The lessons learned from the fire door deficiency issue were used to sensitize our engineering staff to operability concerns, and to provide better guidance in this area.

A training program for support personnel has been developed and is being implemented. Training has been completed for selected personnel in root cause analysis, observation, and human performance improvement techniques.

Effective July 30, 1993, the corporate Vice President - Nuclear Engineering position has been filled with a loanee from INPO for a term of approximately one year. The engineering organizational structure is currently being evaluated. Changes needed to ensure more effective engineering support of both of the Authority's nuclear plants are being developed and will be initiated by January 1994.

Strong management attention will be given to the engineering/technical support area to ensure performance improvements continue at an acceptable pace, and that commitment schedules are accurate and consistently met.

Safety Assessment/Quality Verification

The Authority agrees with the NRC assessment of this area. Management continues to emphasize safe, conservative operations and the need to do all tasks right the first time. Strong management oversight, the use of management observations and self-assessment programs will provide feedback and monitoring of performance. Continued training in the use of root cause analysis techniques, and timely and effective corrective actions will ensure continued improved performance.

A Nuclear Assessment group has been established and permanent positions filled at both plants. These positions report directly to the Vice President - Nuclear Operations.

The effectiveness of the Plant Operations Review Committee (PORC) will be further enhanced by improvements to the procedure review process that will allow the PORC to better focus on safety.

The process used to review Licensee Event Reports prior to submittal to the NRC has been improved to ensure submittal of accurate information.

The Authority will continue to implement performance based, in-depth quality assurance audits to identify and correct weaknesses.

The Power Authority is committed to achieve superior performance in this area.