

# SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE REPORT

## E.I. HATCH

50-321/97-99 AND 50-366/97-99

### I. BACKGROUND

The SALP board convened on March 12, 1997, to assess the nuclear safety performance of the E. I. Hatch Nuclear Power Station for the period May 28, 1995 through February 22, 1997. The board was conducted in accordance with management Directive 8.6, "Systematic Assessment of Licensee Performance." Board Members were J. R. Johnson (Board Chairperson), Director of Reactor Projects, H. N. Berkow, Director, Project Directorate II-2, Office of Nuclear Reactor Regulation, and D. M. Collins, Acting Deputy Director, Division of Reactor Safety. This assessment was reviewed and approved by the Regional Administrator.

### II. PLANT OPERATIONS

This functional area addresses the control and execution of activities directly related to operating the facility. It includes activities such as plant startup, power operation, plant shutdown, and response to transients. It also includes initial and requalification training programs for licensed operators.

Performance in the plant operations area showed improvements in most areas. In general, plant operations have been characterized by a strong focus on safety and conservative decision making. The number of lit annunciators was maintained at a very low level with excellent actions taken by the operators to quickly review and correct annunciator problems. In addition, pre-job briefings for major evolutions and work activities were clear, concise and contained good detail to cover the activity being discussed.

Operator response and immediate actions during plant transients and reactor scrams, and problem identification and resolution continued to be strengths. Operator performance during routine evolutions and control of refueling activities demonstrated improvement.

Management was highly involved in the day-to-day operations. Plant Operations managers exhibited a safety-conscious and conservative attitude toward resolution of plant operational issues. In addition, management contingency plans for a potential strike by some union personnel were excellent. A strong safety focus was observed during Safety Review Board activities.

Improved control of refueling activities was noted. This area had been identified as a challenge in the last SALP assessment. Since that time, two refueling outages were completed with no fuel movement errors.

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identified, and with significant improvements in control of refueling floor activities.

Improved self-assessments and root cause analysis were noted in the plant operations area, including two major assessments. These assessments were performed by corporate, onsite and other utility personnel. Especially noteworthy were reviews of overall operational activities in reactivity management.

The Operations department effectively implemented new programs such as the Improved Standard Technical Specifications. Procedure adherence indicated needed improvement and some procedure technical inadequacies existed. In addition, deficiencies were observed in operator diagnostic skills.

The Plant Operations area is rated Category 1.

### III. Maintenance

This functional area includes all activities associated with diagnostic, predictive, preventive, and corrective maintenance of plant structures, systems, and components, and maintenance of the physical condition of the plant. It also includes the conduct of surveillance testing, in-service inspection and testing, instrument calibrations, equipment and system operability tests, post-maintenance testing, containment leakrate testing, and special tests.

Overall, performance in the maintenance area to support operations and engineering, with few exceptions, continued to be good, with improvement noted in addressing equipment operational reliability problems. However, balance-of-plant equipment performance continued to be a challenge.

The Licensee reorganized the maintenance department into a new performance team concept that was fully implemented during this period. This initiative has been effective and was properly controlled. This resulted in a reduction in equipment operability and reliability problems. Management has supported this initiative and has been very active in implementing and monitoring its performance.

The performance and timeliness of surveillance testing improved. Notwithstanding this improvement, there were several instances of non-compliance with TS Surveillance Requirements, indicating that additional improvements are warranted in this area. In addition, foreign material exclusion program implementation continued to be a challenge.

Several maintenance-related, self-assessments and Quality Assurance audits were completed which indicated that improvements in the maintenance area had occurred. However, management corrective actions

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were not always prompt for resolving problems identified in the assessments and audits.

Although the quality of procedures was generally good, inadequate procedures resulted in missed Technical Specification surveillance requirements and unclear procedures contributed to a lack of documentation for baseline data for reactor core shroud work activities. Deficient procedures, work orders, and personnel errors led to simultaneous work activities on the control rod drive system and resulted in control rod movement errors. Although procedure compliance improved during the last SALP period, it degraded somewhat during this SALP period.

Support for control and oversight of contractors' activities was a challenge during the last SALP period and remained a challenge this assessment period. Oversight of contract personnel performing valve modifications was not adequate and resulted in valve damage. In another activity, failure to follow a procedure during valve maintenance resulted in the work being changed without Quality Control review and a subsequent failure to perform the required VT-3 examination.

The Maintenance area is rated Category 2.

#### IV. ENGINEERING

This functional area includes activities associated with the design of plant modifications and engineering support for operations, maintenance, surveillance, testing, and licensing activities. Included in these activities are: configuration control; design basis maintenance and retrievability; the design change and 10 CFR 50.59 processes; and engineering training.

Overall performance in this functional area remained superior. Design changes and modifications were effectively implemented. This was demonstrated by the low number and limited age of temporary modifications and the effectiveness of successfully installed modifications. Management oversight and involvement were evident by the reduction in the engineering backlogs and the strong support to operations. Certain wiring and instrument setpoint issues were attributed to deficiencies in the review of design documents by cognizant engineers, suggesting an area for improvement.

Engineering evaluations of long-standing problems were thorough and recommended proper corrective actions. The effective use of Event Review Teams to implement strong event review and root cause analyses was instrumental in the resolution of these problems.

Self-assessments and audits by other personnel were effective in identifying engineering performance issues and addressing corrective

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actions. These audits were effective in identifying performance deficiencies, and alerting management to recurring problems. Corrective actions in response to the audit findings were effectively implemented.

During the last SALP period, equipment reliability was considered a challenge. Improvements have been noted; however equipment reliability continued to be a challenge, i.e., the Residual Heat Removal (RHR) system.

The quality of licensing submittals remained superior. However, the timeliness of some of the licensee's submittals could be improved to allow the NRC staff sufficient time for review.

The licensee continued to maintain the industry lead for several engineering issues, such as the digital Power Range Neutron Monitor and the scope reduction of Generic Letter 89-10. It also maintained the lead in the BWR Owners Group Vessel Internals Program.

The Engineering area is rated Category 1.

#### V. PLANT SUPPORT

This functional area addresses all activities related to the plant support function, including radiological controls, radioactive effluents, chemistry, emergency preparedness, security, fire protection, and housekeeping.

The radiological control program functioned effectively. The program to control worker doses to As Low As Reasonable Achievable was also effective, with several program enhancements initiated. Collective dose was reduced from 490 person-rem in 1995 to 441 person-rem in 1996. Radiological effluent controls and monitoring were effective, resulting in doses to members of the public that were a small percentage of limits. Multiple personnel contaminations and contaminated material that was found outside of radiological controlled areas indicate that this area remained a challenge. Audits and self-assessments were good and corrective actions were appropriate. Radiation protection training activities were effective. Solid radioactive waste control and transportation programs were effectively implemented. The chemistry program was implemented well, and long-standing corrective actions for the post-accident sampling system deficiencies were completed.

The emergency preparedness program continued to function well generally. Response organization staff and facilities were maintained in a state of operational readiness. Responses to actual events and performance during drills and exercises were good. Nonetheless, classification of events remained a challenge. In addition, emergency communication with off-site agencies was assessed as good. Self-assessments and critiques were good, but corrective actions were not always effective.

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The security program implementation was superior overall. Security equipment functioned with minimal problems, providing tools for effective detection, assessment, delay, and response. Audits were thorough and corrective actions were effective. Plans and procedures were well written and effectively implemented. Personnel, packages, and vehicles were searched appropriately. Badge issuance and escorting were effective. Security weapon control remained a challenge.

The fire protection program implementation was good overall. Fire protection and prevention procedures, including controls for ignition sources and transient combustibles, were effectively implemented, with the exception of fire watch procedure implementation. Maintenance, surveillance testing, and performance of fire protection systems and equipment were good. The fire brigade training program and performance during drills were good. Audits and self-assessments were thorough with timely corrective actions. Cleanliness of various areas and housekeeping improved during this period.

The Plant Support area is rated Category 2.