ENCLOSURE 5

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YANKEE ATOMIC ELECTRIC COMPANY

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JAY K. THAYER
VICE PRESIDENT and
MANAGER OF OPERATIONS

April 16, 1991
BYR-91-55

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

Dear Mr. Martin:

Yankee has received and reviewed the Initial Systematic Assessment of Licensee Performance (SALP) for the Yankee Nuclear Power Station for the period August 1, 1989 to January 15, 1991. Our evaluation of this initial report has concluded that key information in the Plant Operations assessment may not have been used or available to the SALP Board. Specifically, conclusions drawn on licensed operator staffing, personnel error rate and equipment degradation appear contrary to conclusions made using all available data. The SALP conclusions are also contrary to the ongoing regulatory evaluations and conclusions detailed and documented in NRC site inspection reports for the same period.

The purpose of this letter is to present the full spectrum of facts in these areas and respectfully request that the basis for the Category 2 ranking in Plant Operations be re-examined in light of this information.

Licensed Operator Staffing

The initial SALP report contends in the Plant Operations performance analysis, in the Overall Facility Evaluation, and in the cover letter to the report, that

> "Licensed operator staffing at the Reactor Operator level is marginally adequate".

This conclusion is not supported by the following facts.

In October of 1989 the previous SALP report (dated 10/16/89) concluded

> "Management initiative to develop an ample number of operators continues to be evident".

To reinforce our commitment in this area, Yankee concurrently initiated a program which would ensure that this conclusion remained valid. Six (6) new positions were authorized in the Operations Department by the Company President. These positions were staffed in late 1989 and early 1990 at the Auxiliary Operator (AO) level bringing the total number of AOs to twenty (20). This would allow for a large Reactor Operator (RO) class in 1990-91. The class size was set at eight (8) and was designated to begin in 1990, culminating with NRC license exams in late 1991. This plan was discussed with the previous Resident Inspector and the conclusions drawn in the Resident Inspector report for that period, issued on January 26, 1990, were that

> "The licensee demonstrated a high level of commitment in improving operations staffing and procedures. Several individuals of the current operating staff were advanced to increased license responsibility. Also, the licensee hired several new auxiliary operators."

The plan described above has continued as stated and is on schedule. To date, seven (7) of the eight (8) RO candidates have taken and passed the NRC's Generic Fundamentals Examination (GFE). The remaining candidate will take the exam on June 5, 1991. The eight (8) candidates for RO licenses are scheduled to be examined by NRC in November 1991. The NRC examination date has been held as the fixed milestone for this program and was established over one year ago. This staffing program was discussed with the current Resident Inspector and Region I management in June 1990. At that time, Yankee stated that this plan was considered adequate to support ongoing staffing needs. During the remainder of the SALP period, no concerns were raised by the NRC regarding the adequacy of this plan.

The Operations Department staffing level is currently based on a 5-shift, 12-hour rotation. This shift composition is fixed for the work schedule and remains the same for the regular scheduled training periods which occur once per five weeks. Based on Technical Specification license requirements, twenty (20) SRO and RO licenses are required. Four (4) more licenses would cover training schedules; however, Yankee currently has a total of twenty-eight (28) licenses. This number could actually be used to constitute a formal sixth shift; however, Yankee maintains that additional flexibility can be achieved with the extra operators for contingencies such as sickness, vacations and in the event of unacceptable individual or crew examination results.

The 12-hour shift rotation was adopted in 1990 after (1) extensive research by Yankee management and the onsite labor union which represents a portion of the licensed staff and, (2) extremely successful trial periods first with the Shift Supervisors and then the entire crews. The success of this plan has exceeded our expectations. Operator overtime has been reduced to an average of less than six hours per month per person. Sick time in the Operations Department has decreased from an average of 3.75 days per person per year to 1.8 days per person per year. Morale of on-shift Operations personnel has also increased measurably with contiguous time off, better ability to schedule vacations and fewer day-night rotations given as the most frequent reasons.

It is clear that the current and future Operations staffing plans remain consistent with the goal of maintaining a highly motivated, responsive and professional Operations staff.

Personnel Error Rate

The initial SALP report claims "An increase in the number of personnel errors occurred". The data does not support this conclusion. In 1989 it became apparent that the overall personnel error rate was increasing from past levels. Yankee management undertook an evaluation to determine if this trend was meaningful and, if so, what corrective action was appropriate. Discussions with plant staff highlighted this concern and identified the types of personnel errors occurring in the different departments at the plant. Specific objectives were outlined and goals were established intended to reduce the number of personnel errors. Evaluations of events in 1990 indicate a significant reduction in the total number of personnel errors back to the pre-1989 averages. Supporting data indicates the following numbers of personnel error by year:

1986	6
1987	5
1988	3
1989	10
1990	4

Yankee continues to reinforce the importance of minimizing personnel errors through regular training, individual goals and evaluation of events which do occur for lessons learned.

Plant Equipment Degradation

The initial SALP report states in the Overall Facility Evaluation that

> "The licensee staff responded to an increasing number of challenges to safety systems. This was due, in part, to age related degradation of plant equipment."

Again, the data does not support this conclusion. Trends for automatic scrams while critical and safety system actuations show that Yankee is performing at or better than industry averages in these areas. We are also puzzled as to why this claim is made in the Summary of Results-Overall Facility Evaluation, but is not substantiated or mentioned in any of the performance analyses for the functional areas evaluated.

Managing equipment degradation is a process which begins on the first day of plant operation. As a plant operates, the operating and maintenance history defines a large percentage of equipment replacements. Random or unanticipated failures make up the remainder. Throughout its 31-year period of operation, Yankee has actively pursued equipment replacement and upgrade. Significant systems and portions of electro-mechanical and instrumentation systems have been replaced and upgraded through Yankee initiatives. This process has been discussed with your staff many times and became particularly obvious during the Systematic Evaluation Program (SEP). Many newer regulatory requirements, since plant licensing, were met through prudent planning and conservative decision-making regarding equipment replacement.

As the evaluations are being performed in support of the license renewal process, this same philosophy is proving its merit once again. Recent replacement of the nuclear instrumentation system, the safety injection tank, the station air compressors, the addition of a remote pressurizer auxiliary spray capability and SPDS upgrades, all of which were performed during this SALP period, are examples of an aggressive equipment monitoring program. The initial SALP report, in Section E.2 Causal Analysis, states that

> " Seven LER's were generated due to compone failures. These failures were primarily the result of long term age related equipment degradation."

Of the seven, two are security reports and five are related to plant systems. Yankee has re-reviewed these events and concludes that there is no evidence of a chronic age related degradation problem indicated by any of the events. The failure of the incore detection system spire seal stands out as the only significant unanticipated failure during this period. This problem was, in fact, detected during inspections specifically performed to detect leakage of this type prior to returning the plant to service. Plans for the long-term replacement of these spires have since been developed and are scheduled for implementation during the upcoming 1992 refueling and maintenance outage.

We hope that the data presented above will help clarify the record in the areas discussed. We request that your evaluation of this information include a re-examination of the conclusions reached in the initial SALP report. If any clarification of this information or addition information is required, we are available for discussion at your convenience.

Sincerely,

Jay K. Thayer

Jay K. Thayer
Vice President and
Manager of Operations

JKT/mem

c:
C. W. Hehl, Director, Division of Reactor Projects
NRC Resident Inspector
NRC Document Control Desk

ENCLOSURE 6

SALP BOARD REPORT REVISION SHEET

PAGE	LINE	PREVIOUSLY READ	REVISION
2	8 & 9	The licensee staff responded to an increasing number of challenges to safety systems. This was due, in part, to age related degradation of plant equipment.	Delete both sentences.
2	16		Add: "An increase in the frequency and significance of equipment problems occurred."

Basis: Conclusion not supported in SALP report. However, there was an increase in the number of equipment problems.

5	8	"...minimally..."	Delete word.

Basis: Licensee supplied data in Enclosure 5 that caused our initial conclusion to change.

5	15 & 16	RO staffing was marginal with SROs occasionally filling RO shift duties.	Delete entire sentence.

Basis: Licensee supplied data in Enclosure 5 that caused our initial conclusion the change.

6	13 & 14	Licensed operator staffing level is marginal, particularly on the RO level.	Delete entire sentence.

Basis: Licensee supplied data in Enclosure 5 that caused our initial conclusion to change.

24	14 & 15	These failures were primarily the result of long term age-related equipment degradation.	Delete entire sentence.

Basis: Statement not supported by available data.