Enclosure 1

SALP 9

FINAL SALP REPORT

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

Inspection Report No. 50-331/91001

Iowa Electric Light and Power Company

Duane Arnold Energy Center

January 1, 1990 - March 31, 1991

9108060035 910

ADOCK

05000331 PDR

PDR

Enclosure 1

Duane Arnold Energy Center

A. <u>Summary of Meeting with Iowa Electric Light and Power Company on</u> June 26, 1991

The findings and conclusions of the SALP Board are documented in Report No. 50-331/91001 and were discussed with the licensee on June 26, 1991, at the Duane Arnold Energy Center.

While the meeting was primarily a discussion between the licensee and NRC, it was open to members of the public as observers.

The following licensee and NRC personnel were in attendance, as well as several observers.

Iowa Electric Light and Power Company

- L. Liu, Chairman of the Board and Chief Executive Officer
- L. Root, President and Chief Operating Officer
- R. McGaughy, Vice President Production
- D. Mineck, Manager Nuclear Division
- D. Wilson, Plant Superintendent

Others as designated by Iowa Electric Light and Power Company

Nuclear Regulatory Commission

A. B. Davis, Regional Administrator, RIII
W. L. Forney, Deputy Director, Division of Reactor Projects, RIII
J. N. Hannon, Director, Project Directorate III-3 NRR
R. L. Hague, Section Chief, DRP
S. Sands, Project Manager, NRR
M. E. Parker, Senior Resident Inspector
C. Miller, Resident Inspector

J. McCormick-Barger, Project Engineer, RIII

B. <u>Comments Received from Licensee</u>

Iowa Electric Light and Power Company's response to the Duane Arnold Energy Center Initial SALP 9 Report dated June 11, 1991, had no comments requiring revision to the specific content of the report. Because there is no revision, the Initial SALP Report is considered the Final SALP Report.

Iowa Electric Light and Power Company

July 24, 1991 NG-91-2147

LARRY D. ROOT PRESIDENT AND CHIEF OPERATING OFFICER

> Mr. A. Bert Davis Regional Administrator Region III U.S. Nuclear Regulatory Commission 799 Roosevelt Road Glen Ellyn, IL 60137

> > Subject: Duane Arnold Energy Center Docket No.: 50-331 Op. License No: DPR-49 Response to SALP 9 Board Report for the DAEC

Reference:

A. Bert Davis to L. Liu, Dated June 11, 1991
 D. Mineck to A. B. Davis, Dated March 29, 1991
 D. Mineck to T. E. Murley, Dated April 12, 1991

JUL 2 9 1991

File: A-102, A-103

Dear Mr. Davis:

We appreciated the opportunity to meet with you and other NRC representatives on June 26, 1991 to discuss the initial Systematic Assessment of Licensee Performance (SALP) 9 report for the Duane Arnold Energy Center (DAEC) and to describe some of the actions being taken by Iowa Electric (IE) in response to issues identified by the NRC. This letter provides our written response to the initial SALP report and your letter and confirms and supplements the information IE furnished at the meeting. We are focusing special attention on the areas identified in your report. Actions to correct these problems will be pursued aggressively and followed through with intensified management oversight at both the corporate and plant levels.

Resources

An important concern noted in the SALP pertains to resources. Increased staffing levels in several areas have been authorized to address this concern. A permanent staffing increase of seventy-five positions over October, 1990 levels is being made in the Nuclear Generation Division. This includes the conversion of twenty-four contractor positions.

General Office • P.O. Box 351 • Cedar Rapids, Iowa 52406 • 319/398-4637

Mr. A. Bert Davis NG-91-2147 July 24, 1991 Page Two

In the area of engineering, actions have been initiated to reduce reliance on long term on-site contractor support and to increase the overall staffing level within Design Engineering. The permanent approved professional staffing level in Design Engineering has been increased from 87 in November 1990 to 142 today. Twenty contractor positions were converted to permanent Iowa Electric staff and thirty-five additional staff positions have been added. All but three of these positions have been filled. The recently hired employees average over eight years technical and three years nuclear experience. The majority of the new staff positions are assigned to Systems Engineering and Discipline/Component Engineering, with additional staff also provided to Configuration Management and other engineering sections. These staffing increases should prove significant in efforts by Design Engineering to address a number of the concerns outlined in the SALP report, including equipment trending, timely resolution of technical issues, and implementation of corrective actions.

An additional Security specialist position has been authorized to increase operational oversight and reduce the strain on supervisory resources in the Security area. This position will be filled as soon as practicable.

In recent months, we have made significant improvement in our staffing of Radiation Protection with the addition of three new professional staff and the conversion of two contractor positions. We have filled four of these positions and these newlyhired employees average over seven years nuclear experience.

Since October of 1990, six additional staff positions and the conversion of three contractor positions have been authorized for Quality Assurance. Five of the nine positions have been filled, with these personnel averaging fourteen years nuclear experience. These staff additions will assist Quality Assurance in its efforts to perform critical self-assessment activities at the DAEC.

Management Oversight and Resolution of Issues

The SALP 9 report emphasized the need for increased management oversight and involvement in plant activities and for improvement in prioritization, tracking, and timely completion of significant work in progress. In this regard, we have reviewed our goals, including the items listed in our Integrated Living Schedule, (ILS) and developed task plans to meet each. The task plans have Mr. A. Bert Davis NG-91-2147 July 24, 1991 Page Three

been incorporated into a document referred to as the Business Plan. This document contains objectives and tasks required to achieve each Nuclear Generation Division goal. Each task is assigned to a specific individual to ensure ownership, and schedules of milestone events leading to completion are included. Each responsible individual is required to update the status of his or her activities on a monthly basis. Line managers, reporting directly to the Manager, Nuclear Generation, are assigned responsibility for monitoring the progress toward the goals in They also consider new issues for inclusion in the their areas. The line managers will meet monthly with the Manager, plan. Nuclear Generation to discuss the status of the goals, identify conflicts or barriers to their successful completion, and to recommend plan changes. Additionally, the line managers will be required to brief the President of Iowa Electric periodically on progress toward the goals. This frequent review of the Business Plan status by management will serve to focus continuing attention on outstanding issues until they have been fully resolved. We believe this approach, together with the staffing increases previously noted, will help to assure that the Nuclear Generation Division meets its major goals and commitments in a timely and efficient manner.

As an additional step, we have instituted a Priority Review Board. This board, which includes senior Nuclear Generation personnel, reviews emerging requirements for modifications and improvements to determine their priority in relation to previously scheduled activities so that appropriate adjustments can be made. Together, the Business Plan and Priority Review Board will be useful tools for the prioritization and completion of work. They will also serve as inputs to the ILS. We believe the ILS provides us with a valuable mechanism for communicating our long-term priorities with the NRC, and we will continue to seek improvements to this process.

The SALP 9 report noted our program implementing Regulatory Guide (RG) 1.97 as a case demonstrating the need for increased management control. We have recently devoted increased attention to this program and are progressing toward a resolution of issues in this area. As examples, a formal list of components subject to RG 1.97 requirements was finalized and our Equipment Data Base has been updated to specifically identify these components as accident monitoring instrumentation. Resolution of Regulatory Guide 1.97 issues is included as an objective in the Business Plan. Further details of the implementation program are discussed in our referenced submittal of April 12, 1991 (Reference 3). We will continue to advise you of our progress in this area. Mr. A. Bert Davis NG-91-2147 July 24, 1991 Page Four

Ì

Plant Operations

The number of operational events which occurred during the last SALP period exceeded Iowa Electric's expectations. To achieve improvement we evaluated each event to determine its root cause(s) and initiated corrective actions designed to prevent recurrence. In addition, a number of broader actions are underway which are aimed at preventing safety system challenges. An additional mechanism has been implemented to help ensure that maintenance and design/construction activities are reviewed during the planning stages to assess their potential to initiate safety feature actuations and other transients. Supplemental supervisory review and concurrence is now required for any task where such potential is identified. A special "Red" sheet with distinctive features is attached to the work control documents to alert the workers and control room crew to the sensitive nature of the work to be performed.

As part of our Scram Frequency Reduction program we are making additional equipment modifications to reduce DAEC's susceptibility to events caused by failure of a single plant component. Most of this work is being done in the balance-of-plant (BOP) side of the facility, which has been an area of particular concern. During the 1990 refueling outage, modifications were performed to our turbine trip and reactor recirculation control systems. Items currently planned for the 1992 refueling outage include feedwater control enhancements and power supply upgrades.

Personnel/Procedural Errors

Actions have been initiated to reduce the number of personnel errors and procedural difficulties. Supervisory staffing in the maintenance area has been increased and some administrative duties have been reassigned to allow supervisors more time for direct oversight of work. Guidance on procedure adherence was recently developed by a task force of management and workinglevel personnel. Industry standards and activities at other sites were reviewed and considered in developing this guidance. Training on the guidance was provided to all site personnel prior to its being issued. A working-level Maintenance Procedure Users Group was also formed to evaluate the effectiveness of procedures and to remove potential barriers to procedural adherence. An experienced individual has since been designated as the Procedure Coordinator within each maintenance shop. These individuals review the procedures scheduled for use in the near future to ensure they are adequate and can be performed as written. The

Mr. A. Bert Davis NG-91-2147 July 24, 1991 Page Five

procedures are modified if necessary. Preliminary results from this approach indicate better craft involvement in procedural upgrades and fewer procedural difficulties in the field. The effectiveness of our corrective actions regarding personnel errors and procedural difficulties will be reviewed to determine whether additional actions may be necessary.

Contractor Control

During the 1990 refueling outage, due to excessive rework and other difficulties, we recognized the need to improve control of contractor activities. Steps were taken at that time to improve the status of our contractor control. DAEC-experienced personnel were assigned to key jobs to provide additional technical oversight at the working level, and the number of surveillances on these activities by Iowa Electric Quality Assurance personnel was also increased. To identify long-term corrective actions, a task force, which included the principal contractors on site, thoroughly reviewed the problems experienced. Corrective actions based on their study are currently being evaluated. Implementation prior to our next refueling outage is already planned for a number of these improvements. One such action will be the formation of work implementation (project) teams for a broad range of The teams will be formed before the outage and will activities. include DAEC-experienced personnel to ensure transfer of necessary information to temporary contract workers. Enhanced work documentation processes and improved programs to train contractors are also being developed.

Licensing

We acknowledge the concerns expressed in the SALP 9 report about activities in the Licensing area and we will be giving increased management attention to this area. We understand the necessity for timely submittals on outage-related actions which require NRC approval. A consultant with expertise in the area of technical specifications is performing an independent review of DAEC Technical Specifications (TS), TS interpretations, and TS amendment requests currently under development to identify opportunities to improve safety. The results of this review and our plans for TS improvements will be discussed with the NRC staff promptly. We are implementing more rigorous controls for the interpretation of TS to ensure thorough, conservative reviews and to identify the TS that might be candidates for revision. A new procedure governing the writing of TS interpretations has been prepared and is Mr. A. Bert Davis NG-91-2147 July 24, 1991 Page Six

undergoing internal review which will formalize the process. We are re-examining existing written interpretations to assure that each has an adequate basis. One of our goals is to minimize the number of such interpretations that are active at any given time.

Operator Training

Following the difficulties experienced last Summer during the Requalification Program for our Reactor Operators and Senior Reactor Operators, we examined the causes of this problem and initiated corrective actions to prevent its recurrence. Actions included an increase in required simulator time and changes to our examination process. In June 1991, after the end of the SALP 9 period, the effectiveness of our corrective actions was demonstrated when the NRC assessed this year's regualification exam. All licensed operators and crews tested passed the examination.

Radiological Controls

Within the Radiation Protection area, a number of actions have been taken to reduce personnel contaminations and radiation exposure and to enhance job planning and communication between departments. These include initiatives based on an independent assessment of our program completed in November 1990. We have implemented a contamination control plan which includes improved postings and contaminated area barriers and modification of the type of protective clothing in use. We are performing a detailed review of each personnel contamination in order to develop a better understanding of contamination mechanisms and to prevent recurrence. Two ALARA staffing additions will be dedicated to outage and day-to-day planning activities to improve our planning processes and departmental communications.

Additional Items

As noted during our meeting, notwithstanding the decline in certain SALP ratings and overall performance, we continue to operate DAEC in a conservative manner with safety as our paramount concern. In this connection, we are gratified by the many positive statements concerning such matters as the technical competence of our engineering staff, plant housekeeping, our training program for technicians in Radiation Protection, our use of technological advances in the maintenance and surveillance areas, improvements in our Quality Assurance audit and surveilMr. A. Bert Davis NG-91-2147 July 24, 1991 Page Seven

lance activities, and especially by your assessment that the response of our Operations staff to off-normal events was excellent. This response reflects a conservative operating philosophy which has remained constant through the seventeen years of DAEC's operation.

We are also pleased with your recognition of improvements in Emergency Planning and its Category 1 rating. Our Emergency Planning organization had the lead role in this work but all of the departments within Nuclear Generation contributed to this success by their participation in our emergency response activities. Local, state and federal government agencies and personnel were also very helpful. We intend to maintain our high level of performance in this area. As you noted during our meeting, this is an area in which, with concentrated effort, we were able to recover from a SALP "3" rating by steady improvement over several rating periods. We now have comparable challenges in other areas of weakness noted in the SALP 9 report and we will respond with the same concentrated management attention that facilitated recovery in Emergency Planning.

We believe in recent months we are already beginning to see progress in a number of areas. Our plant's operating performance has improved, and we have completed the third longest run in our history. A significant drop in maintenance rework activities has occurred since the end of 1990. Within the last three months, we have reduced by 40% our backlog of unreviewed, overdue Industry Operating Experience reports (including vendor recommendations), and we are now using an enhanced screening mechanism for these items. We anticipate additional improvements in other areas of concern as our corrective actions progress.

We have not attempted in this letter to address every activity planned or in progress which we believe will help us achieve a higher quality of operation. Instead, we have highlighted some of the specific steps being taken that reflect our management commitment to correcting the problems which have been identified. We are confident that, in total, we have initiated the steps necessary to substantially improve the performance of the DAEC. Mr. A. Bert Davis NG-91-2147 July 24, 1991 Page Eight

We recognize that effective management attention is necessary to achieve the desired results from these steps, and that attention will be given. As we noted at the meeting on June 26, we believe it would be mutually beneficial to structure our management meetings over the near term to include reports by IE to the NRC staff on progress in the implementation of our improvement programs. We look forward to discussing this with your staff.

Very truly yours,

Dany D. Root

Larry D. Root President and Chief Operating Officer

LDR/JP/kmf*

cc: L. Liu
 R. McGaughy
 D. Mineck
 NRC Resident Inspector
 C. Shiraki (NRC-NRR)
 Document Control Desk (original)
 Commitment Control: 910141