

SEPTEMBER 1982

DUANE ARNOLD ENERGY CENTER
REGULATORY PERFORMANCE IMPROVEMENT PROGRAM

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DUANE ARNOLD ENERGY CENTER
REGULATORY PERFORMANCE IMPROVEMENT PROGRAM

INTRODUCTION

Iowa Electric (IE) is strengthening its management program to further assure the continued safe, efficient operation of the Duane Arnold Energy Center. These improvements also focus on assuring superior regulatory performance on the part of the company. This has been a subject of several discussions with the NRC Region III personnel, which have been extremely helpful.

IE will reevaluate, as described herein, current organizational responsibilities, management controls, staffing levels, staff education, training programs, communications, committee activities and operating procedures and practices at both the Duane Arnold Energy Center and the General Office.

This submittal contains numerous specific actions, dates and milestones. Additional supporting details are available for your review. We have identified the approximate dates by which we expect to complete the activities associated with each milestone. As we refine the program, some of these milestones and some of the dates may change somewhat. A number of milestones which have been identified are closely associated with the Five Year Plan we submitted to NRC on May 28, 1982.

At meetings with Region III on June 4, 1982, and September 13, 1982 Iowa Electric agreed to provide additional information in the six areas listed below. Our program addresses each area.

- I. Communications
- II. Management and Supervisory Involvement
- III. Station Procedures
- IV. Safety Committee Charter
- V. Training Plan
- VI. Corrective Action Program

In addition to these actions responding to NRC's expressed concerns, Iowa Electric has a number of other initiatives underway. We have developed a Five Year Integrated Plan to coordinate and control the numerous plant modifications required. No utility has taken a greater initiative in dealing with the retrofiting program for an operating plant. Iowa Electric has initiated development of a Health Physics record keeping program which we confidently expect to be as advanced and effective as any in the industry. We recognized the need for and developed an effective computer controlled commitment control program which is now being implemented. We have mobilized additional technical and engineering support from our Electrical Engineering Department and our Mechanical/Nuclear Engineering Department to aid our Nuclear Generation Division with the numerous retrofits required. We are engaged in a multi-year project to put in place computerized systems to aid our managers in planning, monitoring and controlling their work. We are also working closely with other organizations such as INPO and ANI to bring DAEC to the highest industry standards. We intend to utilize their knowledge and expertise to the

greatest degree possible. We are committed to high standards of excellence, and we are dedicating the effort required on a continuing basis to achieve and maintain those standards.

I. COMMUNICATIONS

A. NRC Comment --

Improve communications within and between all licensee departments including all levels of corporate management. (Improvements will include measures to ensure that items such as internal licensee commitments, NRC commitments, and routine maintenance and operations are made known to cognizant individuals.)

Iowa Electric Response --

- B. Several elements are involved in enhancing communications. They include supervisory training, organizational task definition, and reduction in administrative burdens. NRC comments focused on internal control of schedular and technical commitments to NRC and the communication of maintenance and operational commitments and requirements. We would add construction oriented or initiated commitments to our review. Additionally, communications will be enhanced with reports to management and management briefings as discussed in Section II.B.1 below.

1. As a part of a continuing program, Iowa Electric has, over the last several years, retained a professor from the University of Iowa Business Administration Department to provide supervisory training for the company. It is our intent to expand on that base with a new program tailored to the specific needs of Nuclear Generation Division. This expanded training program will include emphasis on required formal and informal communication systems as they relate to the Nuclear Generation Division, and management by objectives concept.

KEY MILESTONES

DATE

° Definition of Curriculum Objectives	Sept. 1982
° Initiate course instruction	Jan. 1983
° Conclude course instruction	May, 1983

2. Iowa Electric intends to expand and clarify earlier corporate strategic and tactical planning work initiated in 1979. Additional effort will be given to communication and modification of corporate objectives and goals which relate to the Nuclear Generation Division. This will be accomplished by a series of "workshop" meetings with appropriate functional areas. It is our intent to utilize the results of these workshops to develop a Nuclear Generation Division Management Manual. This manual will contain current

division objectives, and where appropriate, functional area objectives. This manual will also contain a current division organization chart and reference to appropriate personnel Task Statements. Periodic reviews of the Nuclear Generation Division Management Manual will be performed.

KEY MILESTONES

DATE

- ° Complete development of initial Nuclear Generation Division Objectives and goals Sept. 1982
- ° Complete "workshop" meetings with appropriate functional areas Dec. 1982
- ° Obtain Initial Management approval of Nuclear Generation Division Management Manual Jan. 1983

3. Iowa Electric has recognized the need for significantly increasing the number of personnel located at DAEC to meet evolving requirements and to strengthen site-based technical support, especially Design Engineering personnel. We have moved engineers from the corporate office to DAEC, significantly improving communications and enhancing responsiveness. We intend to retain approximately the present number of Design Engineering personnel at DAEC.

Rapid staff growth has required the use of temporary office trailers and facilities. In order to realize improvements in communications and in the ability of supervisors to concentrate on their primary responsibilities it appears that more permanent facilities are necessary. Facility studies are under way for several functional areas. They include quality control, design engineering, instrumentation repair, and electrical repair. These studies are being integrated into our overall need for additional facilities due to regulatory action following the TMI incident.

Pending completion of these facility studies, approval has been given to renovate the Change House and to construct a new Instrument Shop. The renovated Change House will provide space for construction supervisors, engineers and support staff. This is expected to improve effective control of the construction effort. The new Instrument Shop will provide more adequate facilities for this work, and will locate the supervisors with the technicians performing the work. This should greatly facilitate communications in this area and enhance supervisory control.

KEY MILESTONES

DATE

- ° Development of Nuclear Generation
Division facility plans and
integration into divisional planning
activities Nov. 1982
- ° Corporate approval of 1983 facility
expenditures Dec. 1982
- ° Renovate Change House Dec. 1982
- ° Complete Instrument Shop Dec. 1983

The need for a formal Commitment Control List was recognized. We are creating and implementing a computer controlled tracking system which will communicate commitment information to all interested persons and which will allow our managers and supervisors to reduce their time devoted to the mechanical chore of commitment tracking and spend more of their time in direct supervision of their primary responsibilities for the safety and reliability of DAEC.

4. Initial implementation of a Commitment Control Program therefore has been implemented under a Nuclear Generation Instruction. Under this program incoming and outgoing NRC correspondence is reviewed to

identify explicitly NRC requirements or requests, and commitments by Iowa Electric to take future actions. Documents such as NRC Information Notices will also be controlled under this system to ensure they receive adequate review. These items are entered into the computerized program. A manager is assigned responsibility for each item. The Commitment Control Program itself is the responsibility of the Manager, Licensing and Fuels, and he is required to be advised if any assigned due date cannot be met so that the matter may be resolved. Due dates are clearly identified in the Commitment Control Program. Periodic notifications are provided to managers regarding commitments due in the near future and any overdue commitments (if any). A report of all open commitments is also provided.

The Commitment Control Program also incorporates commitments to other outside agencies such as ANI, INPO, etc. Major Nuclear Generation Division internal commitments within Iowa Electric are also included in the program as identified by Department or Division Management.

Commitments are closed when documents are released showing that the committed action has been completed. Commitment due dates are revised within the program only when documents have been released establishing the new dates. A suspense file is maintained for closed

commitment responses to NRC but for which NRC approval is still required.

A Commitment Control Log is maintained containing the following information:

- ° Commitment Control Number
- ° Source Document and Date
- ° Summary Description
- ° Responsible Department and Assigned Action Individual
- ° Agency and/or Internal Due Date
- ° Date Closed and Closing Document
- ° References to Related Documents

Iowa Electric management recognizes and stresses the importance of meeting commitments and due dates. Commitment Control Reports are discussed at meetings between the Director of Nuclear Generation and Department Managers. Summaries of performance in meeting commitments will be provided regularly to the Director of Nuclear Generation and the Assistant Vice President, Nuclear Generation.

MILESTONES

DATE

- ° Develop Nuclear Generation Division instruction for commitment control system Sept. 1982
- ° Implement interim commitment control system Sept. 1982
- ° Evaluate System and revise as necessary June 1983

5. Management meetings are conducted on both a regular and a special Purpose basis to keep managers and others informed of activities of direct interest to their own areas as well as other matters of which they need to be aware. Meetings are held, normally on a monthly basis, by the Director of Nuclear Generation with department managers. Department managers also meet regularly with their supervisors and other personnel. The Manager, Design Engineering meets weekly with his supervisors. He also meets monthly with his entire department; those meetings not only serve for management direction but also include training activities. The Plant Superintendent - Nuclear normally meets daily with the Assistant Plant Superintendents, and he meets weekly with the Assistant Plant Superintendents and the DAEC heads of departments. A meeting is scheduled daily at DAEC to coordinate operations, maintenance, construction, health physics and quality control activities. Managers and others from the corporate office visit DAEC frequently to attend meetings, inspect and participate in other activities.

MILESTONES

DATE

- ° Facilitate communications through
regular and special meetings Complete
- ° Implement frequent corporate management
visits and inspections at DAEC Complete

II. MANAGEMENT AND SUPERVISORY INVOLVEMENT

A. NRC Comment --

Improve management and supervisory involvement in the overview and control of programs and personnel. (Improvements will include measures to ensure plant management is more involved in its primary responsibilities by relieving them of their secondary duties and that corporate management is more aware of plant requirements and operations.)

B. Iowa Electric Response --

To develop a more effective management system, a comprehensive program for management overview will be implemented, as well as removal of administrative and secondary burdens, identification of objectives and goals for each functional area, identification of primary responsibilities for each functional area, work breakdown analysis for each functional area and reporting requirements.

1. A structured management overview program will be developed for senior management having responsibilities associated with the DAEC. This is in addition to the actions discussed in I.B.5 above. This program will include regularly scheduled briefings with follow up actions as appropriate regarding one or more functional areas such as those below. The agenda for each individual briefing will be determined by the needs at the time. These briefings will be held at least quarterly. In addition

to these briefings, periodic reports will be provided to management regarding problems and activities.

Nuclear Licensing
Nuclear Fuels
Design Engineering
Construction Management
DAEC Operations
DAEC Maintenance
DAEC Major Outage Planning
DAEC Security
DAEC Health Physics
DAEC Water Chemistry
DAEC Radwaste Operations
DAEC Plant Licensing
DAEC Trend Analysis
DAEC Quality Control
DAEC Quality Assurance
DAEC Operations Committee
Safety Committee
Division Integrated Scheduling
Training
Emergency Planning

Briefings will cover, as a minimum,

- a. Discussion of functional area objectives and goals.
- b. Review of performance against stated objectives and goals, with emphasis on areas where improvement is needed.
- c. Proposed corrective action, where required.

KEY MILESTONES

DATE

- ° Initiate enhanced management briefing program Oct. 1982
- ° Initiate periodic reports to management Oct. 1982

2. Iowa Electric will re-prioritize work assignments in order to reduce administrative burdens on our supervisory staff. Consideration will be given to additional staff support, clerical support and computerization. The commitment control system discussed in I.B.4 above will also assist managers in ensuring that commitments are met properly with less of their own time spent in the manual effort of tracking those commitments.
 - a. During the last quarter of 1979 and the first quarter of 1980, Iowa Electric conducted a "work breakdown" analysis of its Nuclear Generation Division functional areas. Many staffing changes and additions were made as a result of this analysis. More recently, Iowa Electric approved 18 additional union positions at the plant. These positions are being filled with experienced personnel, transferred from our fossil power plants. Engineering and technical personnel from our Electrical Engineering Department and Mechanical/Nuclear Engineering Department are providing support to our Nuclear Generation Division. This presently includes approximately 16 personnel.

In spite of the above initiatives, in some areas management and supervisory involvement may be hindered by excessive workloads. To address this question, it is our plan to update Iowa Electric's "work breakdown" analysis. We will utilize expert assistance from consultants to help in the direction and review of this effort. The "work breakdown" analysis will consider staffing level requirements. The results of this analysis will be used to ensure that adequate personnel are available and work assignments are organized in a manner which will allow supervisors to accomplish their primary functions. Staff educational and training requirements will also be factored into the analysis.

We recognize the need to stay current with technical changes, new regulatory requirements, and training programs in the nuclear industry. This updated analysis, using the "work breakdown" technique will form the basis for our future staffing plans when completed. Portions of the analysis results may be implemented as they become available. Nuclear Generation Division staffing requirements will be filled with a combination of permanent employees, and "loaned" contract employees. Agreements have been reached with contracting companies, so that "loaned" contractor employees normally will have long term assignments with Iowa Electric, thereby minimizing the loss of experience through turnover.

Improved job descriptions and training programs for new loaned employees will also enhance effectiveness of these personnel. Excellent performance has been achieved by contract employees, who often have greater experience and background than can readily be obtained in new Iowa Electric employees. In those cases where it appears that significant advantages are achievable through conversion of loaned employee functions to Iowa Electric employees, this will be considered.

KEY MILESTONES

DATE

- ° First draft "work breakdown" analysis Dec. 1982
- ° Initial division management review Feb. 1983
- ° Final "work breakdown" analysis May 1983

b. Several months ago Iowa Electric recognized that its present cost control system had become very labor intensive in the present regulatory environment. The resulting cost in terms of management effort places a significant administrative burden on our supervisory staff. Iowa Electric is developing a new computerized accounting and budgeting

system. Iowa Electric's multi year plan to improve the accounting and cost-management system is in its second phase. This system is expected to significantly reduce the time managers and supervisors devote to manually maintaining cost data, and increase time devoted to primary responsibilities. The first phase defined user needs and set corporate system objectives. The second phase includes detailed system design. In addition, Nuclear Generation Division is developing an interim cost control system to help relieve supervisors until the final system is available for use.

KEY MILESTONES

DATE

- ° Interim cost-management system operational Sept. 1982
- ° Implementation of report system Dec. 1983
- ° Final accounting and cost-management system: Dec. 1984

c. Prioritizing of plant activities begins with effective planning. Many planning steps have been taken, including divisional overview planning activities. These plans are now being expanded into more detailed work schedules. Plans are underway to develop computerized maintenance scheduling, reporting, and trending

programs. A warehouse inventory control will also be included in this activity. Better planning and trending will allow Iowa Electric to move toward normalizing management activities and away from "crisis" management. Included in this program are preplanning activities for maintenance tasks such as (1) specifying, ordering and verifying that the needed spare parts are available, (2) identifying manpower requirements and time estimates to complete the tasks, and (3) specifying piping and electrical code requirements. Planning input will be provided to the Operations, Maintenance, Technical, Chemistry/Health Physics Departments to ensure a single plant priority is established.

A computer based scheduling system will be utilized and expanded to schedule refueling outage activities and periodic outage activities, as well as the daily plant activities during power operation. This scheduling activity will provide important communication functions as well as enhancing managerial effectiveness in operating and maintaining the plant.

A task force of Iowa Electric and contractor personnel have completed the first phase of computerization studies for power plant maintenance and inventory control. Evaluation of appropriate software packages is now underway.

<u>KEY MILESTONES</u>	<u>DATE</u>
° Complete enhancement of interim maintenance planning techniques	Sept. 1982
° Complete power plant maintenance planning program	Dec. 1983
° Complete power plant major outage planning program	June 1983
° Complete enhancement of existing power plant warehouse inventory control technique	Sept. 1983
d. Iowa Electric is in the process of selecting and developing a computer based health physics record keeping system which will, among other things, reduce supervisory time spent in record keeping. This system is being developed as part of our overall "as low as reasonably achievable" program. Iowa Electric intends that the health physics record keeping system will ultimately interface electronically with the power plant maintenance system.	

III. STATION PROCEDURES

A. NRC Comment --

Improve station procedures including operating maintenance, and surveillance procedures.

(Improvements will include measures to ensure procedures are revised as necessary to reflect operating experience.)

B. Iowa Electric's Response --

Duane Arnold Energy Center operating, emergency, maintenance and surveillance procedures are being revised to incorporate technical lessons learned from the TMI incident. Additional revisions are planned to incorporate changing management and regulatory philosophy. This effort will be accelerated. Iowa Electric personnel will be assisted by contractor personnel. A review mechanism will be developed to incorporate operating experience from Iowa Electric and other sources into Iowa Electric procedures. The priority of this effort will, in general, be as follows: operating procedures, surveillance procedures, maintenance procedures and emergency procedures. However, these areas will not necessarily be addressed sequentially. Actions have been initiated in all four areas.

It is our intention to make extensive use of information and expertise available from INPO. Safety-related procedures will be controlled through a matrix type organization. Department Heads will be responsible for technical content and scheduling of the requirements for safety-related procedures. Department heads will also be responsible for assuring that experienced personnel actually attempt complete implementation of the procedure prior to final approval of the procedure. This will include going to the appropriate work station and actually walking through the new procedure.

<u>KEY MILESTONES</u>	<u>DATE</u>
° Develop plan for updating procedures	Sept. 1982
° Initiate rewrite of procedures	Oct. 1982
° Complete first line supervisor review	June 1983
° Complete procedure "walkthrough"	Sept. 1983
° Complete final operating procedures	Dec. 1983
° Complete Surveillance Procedure Update	Dec. 1983
° Complete Emergency Operating Procedures	1984 Outage

IV. SAFETY COMMITTEE CHARTER

A. NRC Comment --

Improve Safety Committee charter and instructions. (Improvements will include a revision of the charter to reflect all applicable regulatory requirements, revision of Safety Committee instructions, and a program for review of Safety Committee open items.)

B. Iowa Electric Response --

Iowa Electric issued a revised Safety Committee charter in June 1982. The charter provides better definition for Safety Committee activities, and clarifies the distinction between the review and audit functions.

Safety Committee Instructions are being developed to provide specific guidance to the Safety Committee members and to supporting line organizations. The Instructions will address functional operation, administrative control, and training for the Committee.

The Committee is reducing the current backlog of review activities, by actions which include the following:

- ° Backlogged open items have been classified such that the items which have the greatest likelihood of containing significant information are reviewed initially. These items are being taken before the Committee concurrent with regularly scheduled review items. The remaining items will be reviewed at the next scheduled meeting for that category of items.

- ° Meeting frequency has been increased to two meetings per month, at prescheduled dates, times, and locations to reduce the existing backlog. If necessary, the Chairman may call special meetings or appoint subcommittees to maintain the review schedule.

- ° Committee efficiency has been increased by the addition of a permanent employee as a Staff Engineer, assisted by a consultant.

- ° Screening mechanisms are being established to ensure that pertinent materials are brought before the Committee. The Safety Committee Staff Engineer will review materials to determine the necessity for full Committee review. At the option of the Safety Committee Chairman, a subcommittee may be established to screen particular materials. Safety Committee Instructions will delineate which materials may

be screened and which should go directly to the full Committee. This effort will assist members by reducing "routine" review burden and by increasing the efficiency of the meetings.

- ° Committee expertise will be increased by the addition of the Plant Superintendent - Nuclear and Manager, Quality Assurance. If necessitated by additional workload which this entails, those managers will request additional assistance.

The Committee has assigned audit responsibilities to the Quality Assurance Department which will ensure audits are performed adequately in accordance with applicable requirements. Resources for these audits will be included in the annual budget. The Quality Assurance Department schedules, administers, and performs audits, and provides follow-up to ensure that findings are addressed in a timely manner.

KEY MILESTONES

DATE

- | | |
|--|------------|
| ° Revise Safety Committee Charter
to reflect guidelines of ANSI N18.7 -
1976 | Complete |
| ° Issue Safety Committee Instructions | Oct. 1982 |
| ° Complete review of present Safety
Committee open items | March 1983 |

V. TRAINING PLAN

A. NRC Comment --

Improve training and retraining plan approved by corporate management for non-licensed operators, maintenance, and corporate personnel. (Improvements will include an expansion of the existing computerized action plan.)

B. Iowa Electric Response --

Iowa Electric has developed and initiated implementation of improvements in general employee training, operator training and health physics training. We are now developing non-licensed operator training plans and maintenance training plans as an expansion of the existing training plan. A formalized and expanded training plan for corporate personnel performing nuclear work will also be developed.

Extensive discussion has occurred and is continuing at all levels of management during the development of the training plan. Technical and professional training of Nuclear Generation Division personnel will be controlled through a matrix type organizational structure. Each department head at DAEC and the

corporate offices will be responsible for ensuring that the technical content of the training program meets the needs of his/her department. At DAEC the Training Coordinator will develop the appropriate training plans to meet the requirements of the various departments. Department heads will be responsible for this at the corporate office. Information and expertise available from INPO will be utilized. Resources necessary for implementing the training plan will be included in the annual budget, where it will receive management review and concurrence.

<u>KEY MILESTONES</u>	<u>DATE</u>
° Complete development of 1983 departmental training plans	Oct. 1982
° Receive division management approval of 1983 training plans	Oct. 1982
° Receive senior management approval of 1983 training budget	Dec. 1982

VI. CORRECTIVE ACTION PROGRAM

A. NRC Comment --

Improve corrective action program. (Improvements will include measures to ensure root causes and generic implications are determined, timely corrective actions are taken, management review is adequate, and problems identified are trended, tracked and analyzed.)

B. Iowa Electric Response --

Iowa Electric will expand its overall corrective action program. This will include improved trending and analysis of operational and maintenance events as well as quality assurance program data. This expanded program will expand the investigation and evaluation of root causes and generic implications. It is our plan to request assistance and expertise from INPO in system design. Reportable occurrences and selected additional occurrences will be reviewed and/or specific determination made regarding generic implications. This review will also evaluate whether possible root causes, beyond those readily apparent in the occurrence, require further evaluation. These reviews will normally be performed by engineers and/or licensed operators.

Iowa Electric is in the initial development stages of its revised corrective action program. Subsequent effort may modify our present thinking. It is our present plan to move toward computerized trending. Some trending is being done by hand at this time. It does appear that this effort will readily lend itself to additional computerization. The appropriate functional areas will then be responsible for identification of root causes and generic implications.

KEY MILESTONES

DATE

- | | |
|---|------------|
| ° Commence improved trending and analysis of operational and maintenance events | Dec. 1982 |
| ° Scope final trending and analysis program | March 1983 |
| ° Implement final trending and analysis program | Dec. 1983 |