

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-331/82-04(DETP)

Docket No. 50-331

License No. DPR-49

Licensee: Iowa Electric Light and Power Company  
Security Building, P. O. Box 357  
Cedar Rapids, IL 52406

Facility Name: Duane Arnold Energy Center

Inspection At: Palo, IL

Inspection Conducted: February 8-12, March 8-10, and May 25-28, 1982

Inspectors: *M. M. Holzner*  
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10/1/82

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10/1/82

Insection Summary

Inspection on February 8-12, March 8-10, and May 25-28, 1982 (Report No. 50-331/82-04(DETP))

Areas Inspected: Special, unannounced inspection of committee activities, QA audit program; and licensed and non-licensed training, in response to Performance Appraisal Inspection No. 50-331/81-24. The inspection involved a total of 105.5 inspector-hours onsite by two NRC inspectors.

Results: Of the three areas inspected, six apparent items of noncompliance were identified: (failure to meet Technical Specification requirements, Section 3; failure to implement the requirements of 10 CFR 50, Appendix B, Criterion XVIII, Sections 3 and 4; failure to implement the requirements of 10 CFR 50, Appendix B, Criterion V, Section 5; failure to implement the requirements of 10 CFR 55, Appendix A, Section 5).

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## DETAILS

### 1. Persons Contacted

- +\*K. Meyer, Safety Committee Chairman
- \*R. Salmon, Safety Committee Vice-Chairman
- G. Ellis, Safety Committee Vice-Chairman
- +\*L. Root, Assistant Vice President, Nuclear
- +\*E. Matthews, Manager - Quality Assurance
- R. Essig, Quality Assurance Engineer
- +\*M. Green, Safety Committee Staff Engineer
- + R. Anderson, Manager - Training
- + R. York, Assistant Chief Engineer - Operations
- + J. Vinqvist, Assistant Chief Engineer - Technical Support
- +\*R. McGaughey, Director - Nuclear Generation
- R. McCracken - Quality Control Supervisor
- D. Tepley - Operations Supervisor
- \*P. Ward - Manager - Design Engineering
- \*B. Reid - Licensing Engineer
- +\*D. Mineck - Chief Engineer

In addition, the inspector interviewed several other licensee personnel including senior reactor operators, reactor operators, non-licensed operators, QA auditors and QA engineers.

\*Denotes those present at the exit interview on March 11, 1982.

+Denotes those present at the exit interview on May 28, 1982.

### 2. Followup of Potential Enforcement Findings (PEF)

An inspection by the Performance Appraisal Section, Office of Inspection & Enforcement, was conducted on September 21-October 2, 1981, and October 19-23, 1981, of activities at the Duane Arnold Energy Center (DAEC) and at the Iowa Electric Light and Power (IELP) corporate offices (Report No. 50-331/81-24). That report identified PEF's which were referred to the Region III office for followup and, if appropriate, enforcement. Paragraphs 3 through 5 below contain the results of that followup inspection for PEF's which were assigned to the Division of Engineering and Technical Programs, Region III.

### 3. Committee Activities

#### a. Audits

Audits conducted under the cognizance of the Safety Committee (SC) were reviewed for conformance to the requirements of the Technical Specifications, and applicable standards.

(1) Documentation Reviewed

Safety Committee 24-month Audits (conducted 7/79-1/80)

- TA-1, Nuclear Fuel and Procedures
- TA-2, Plant Maintenance and Modification
- TA-3, Plant Operations and Testing
- TA-4, Plant Chemistry/Radio Chemistry/Health Physics
- TA-5, Instrument and Control
- TA-6, Administrative and Security Systems
- TA-7, Reactor Engineering
- TA-8, Training
- TA-9, Environmental Surveillance
- SA-1, Off-Site Engineering & Support Group
- SA-2, Quality Assurance

Audit of DAEC Emergency Plan Drill (7/80)

Audit of DAEC Fire Protection Program (8/80)

IELP Safety Committee Charter (Draft), 3/5/82

ACP 1208.0, Safety Committee Charter, Rev. 1, 4/10/79

ACP 1208.0, Safety Committee Charter, Rev. 2, 10/4/79

DAEC Technical Specifications, Section 6

(2) Findings

Noncompliance (50-331/82-04-01): Contrary to Technical Specification section 6.5.2.8, audits were not performed under the cognizance of the safety committee encompassing:

- "(a) The conformance of facility operation to all provisions contained within the Technical Specifications and applicable license conditions at least once per 24 months. [TS 6.5.2.8.a]
- (b) The performance, training and qualifications of the entire facility staff at least once per 24 months. [TS 6.5.2.8.b]
- (c) The results of all actions taken to correct deficiencies occurring in facility equipment, structures, systems or method of operation that affect nuclear safety at least once per six months. [TS 6.5.2.8.c]
- (d) Design change request safety evaluations. [TS 6.5.2.8.h]"

The most recent 24 month audit series was conducted between July 1979, and January 1980. Areas of the

Technical Specifications which were not audited included all of Section 3 (limiting conditions for operation) and Section 4 (surveillance requirements) except for TS 3.6.b, and 3.4.c which were covered by Audit TA-4. There was no audit effort, the purpose of which was to assess "conformance of the Facility operation to all provisions contained within the Technical Specifications...once per 24 months."

Qualifications for QA auditors and some NDE personnel were examined in the 24 month audits, although not as a part of any organized effort to assess the qualifications of the entire facility staff. No other examples of audited qualifications were observed.

"Results of actions taken to correct deficiencies" were not audited in the 24 month program, nor were they audited every six months as required by technical specifications. LER's were reviewed in committee, and Deviation Reports were routed to committee members for review; however, QA audit reports, Nonconformance Reports and Corrective Action Reports were not reviewed by the committee or audited under the cognizance of the committee.

Design Change Requests and their Safety Evaluations were reviewed and approved by some Safety Committee members in the course of exercising their line authority, but no Safety Committee audits were made of these safety evaluations. Additionally, the review mentioned above did not provide adequate oversight of the safety evaluations or the safety evaluation process.

Noncompliance (50-331/82-04-04) Contrary to 10 CFR 50, Appendix B, Criterion XVIII, SC audits were not conducted as required by ANSI N45.2.12. This noncompliance was combined with a similar noncompliance identified in Section 4.b.

Few of the 24 month audit reports examined contained summary statements, as required by ANSI N45.2.12, "regarding the effectiveness of the quality assurance program elements which were audited." The audits on Instrument and Control, performed in January 1980, and Plant Maintenance and Modification, performed in July 1979, were examples. Both were audits of procedure implementation, but in neither was there a statement evaluating the effectiveness or adequacy of the procedures.

Audit followup was not accomplished in accordance to the standard, which required the audited organization to respond as requested by the audit report, giving results

of their review and investigation and clearly stating the corrective action taken or planned to prevent recurrence. The standard also requires that if corrective action cannot be completed within 30 days, the response shall include a scheduled date for corrective action. The most recently completed group of 24 month Committee audits was performed between July 1979, and January 1980. These audits were not reviewed by the Committee until May 1980, eleven months after the first audit was completed. The Committee requested responses to the audits by August 1, 1980. All but one of the audited areas had been submitted to Nuclear Generation for action. This department submitted their response in July 1981, two years after the first audit was completed.

(3) Discussion

Audits SA-2 and TA-2 covered most areas of the Quality Assurance program in the 24 month audits. Technical Specification 6.5.2.8.d requires a 24 month Safety Committee Audit of "activities required by the Quality Assurance Program to meet Appendix B of 10 CFR 50." While the audit activities were performed as required, it appeared that the depth of the audit may not have been sufficient, and that a greater sample size of the audited activity would make the findings more generally applicable. For example, the following areas related to the QA Program were audited by one person in one day:

Control of Plant Work

Procurement Process

Receiving

Materials, Parts and Components Identification and Inventory Control

Storage

Preservation

Storeroom Issues

Control of Nonconforming Items (part of this area was audited the previous day)

Control of Like-for-Like/Exact Component Replacement

D.A.E.C. Inspection Program

Preventive Maintenance Program

Maintenance Procedures

Welding, Cutting, and Hot Work

Weld Material Control

Control of Design Documents

Plant Control Documents

The auditor was acting under contract and had considerable familiarity and experience with DAEC systems and procedures. He appeared to have more than adequate knowledge of IELP QA directives and procedures, however, coverage of the above listed areas in one day indicated insufficient audit depth. It was almost certain that the average time spent on each area that day was less than 45 minutes, casting serious doubt on the credibility of the audit. It was the responsibility of the Safety Committee to ensure that audits performed under their cognizance were of adequate scope and depth. The inspector expressed this concern to members of the Safety Committee and at the exit interview. The licensee agreed to give the matter further consideration.

Corrective actions for the PAS findings cited above had begun before the inspection started on February 8, 1982, and had progressed during the inspection. The March 5, 1982, draft of the IELP Safety Committee Charter stipulated that future audits would be administered by the QA department under the cognizance of the Safety Committee. Changes in IELP's audit philosophy were also being considered. In the past, members of the Safety Committee generally felt that an audit which considered only the procedures and policies of an activity were more useful than one which examined only the activity's product and output in detail. It was felt that programmatic deficiencies could better be identified in this way. The inspector observed that Safety Committee leadership appeared to be moving toward a combination of these methods which would identify more specific deficiencies and would identify the programmatic problems which may be thus indicated at the same time.

b. Reviews

Reviews conducted under the cognizance of the Safety Committee and Operations Committee were reviewed for conformance to the requirements to the Technical Specifications and applicable standards.

(1) Documentation Reviewed

Safety Committee Meeting Minutes (SC243-SC271)

Deviation Report routing system

QA Audit Report Nos. 79-3, 80-01, 80-02, 80-03, 80-07, 80-12, and I-81-16.

(2) Findings

Noncompliance (50-331/82-04-01). Contrary to section 6.5.2.7 of the Technical Specifications, the Safety Committee failed to review the following:

- (a) Violations of applicable statutes, codes, regulations, orders, technical specifications, license requirements, or of internal procedures or instructions having nuclear safety significance. (TS 6.5.2.7.e)
- (b) All recognized indications of an unanticipated deficiency in some aspect of design or operation of safety related structures, systems, or components. (TS 6.5.2.7.h)

This noncompliance was combined with a similar noncompliance identified in Section 3.a.(2).

Seven QA audit reports from 1979-1981 were reviewed by the inspector which contained findings of violations of ANSI N45.2.2-1972; 10 CFR 50 Appendix B, Criterion VIII; Administrative Control Procedures; Section 6 of the Technical Specifications; Regulatory Guide 1.137; and 10 CFR 73.55. These violations were not reviewed by the Safety Committee since QA Audit reports were not routinely routed to the Safety Committee.

TS 6.5.2.7.h includes a broad scope of subjects requiring review: "all recognized indications...". Corrective action systems such as LER's, Deviation Reports (DR), nonconformance reports, and QA audit reports, are included in such a scope. SC members felt that compliance with this requirement was met by reviewing only DR's and LER's. Most members apparently received copies of DR's; however, an examination of SC meeting minutes for the past year showed that DR's were not reviewed in session or by any subcommittee. Distribution alone to committee members does not constitute a committee review. If a review was taking place, which was not indicated by the interviews, then no record was being furnished as required by TS 6.5.2.10.b. (See Section 3.c of this report). There was no formal screening of any activities, such as the mentioned corrective action systems, for potential inclusion in "all recognized indications," and therefore little assurance that such "indications" would be reviewed.

Noncompliance (50-331/82-04-01). Contrary to section 4.4 of ANSI N18.7-1972 the Safety Committee failed to review an audit conducted under its cognizance. This noncompliance was combined with a similar noncompliance identified in Section 3.a.(2).

A Fire Protection Program Audit was conducted on August 25-27, 1980, by Bechtel under the cognizance of the Safety Committee. The report of this audit was received by IELP on February 27, 1981, and forwarded to Safety Committee members five days later. The delay in forwarding the report appeared to be due to a clerical error external to IELP. Safety Committee meeting minutes indicated that subsequent to receipt by committee members, no committee review was conducted.

Noncompliance (50-331/82-04-02). Contrary to Technical Specification 6.5.1.6.e, Technical Specification violations were not investigated by the Operations Committee, nor was a report submitted as required.

QA audits 79-3 and I-81-16 reported the failure of the Safety Committee to conduct audits in accordance with TS 6.5.2.8.c. These reports were not distributed to the Operations Committee, and the violations were therefore not investigated as required, and consequently no report was issued.

c. Records Administration

Safety Committee records administration was reviewed to verify compliance with the technical specifications and applicable standards.

(1) Documentation Reviewed

Safety Committee 24 month audits.

Safety Committee meeting minutes (1980-present).

(2) Findings

Noncompliance (50-331/82-04-03). Contrary to TS 6.5.2.10, audit reports, reports of reviews, and Safety Committee meeting minutes were not forwarded to the President as required. For 5 of 22 meetings held during the past year, the meeting minutes were not forwarded to the President (or as described below) within 14 days following the meeting. Minutes for meetings 263, 267, 272, 273, and 274 were forwarded from 25 days to 34 days following the meetings.



Minutes of meetings held on or after February, 1981, (meeting 272) were not sent to the President as required, but to the Executive Vice President. No TS change had been submitted. A TS change request was submitted on December 23, 1981, to allow forwarding reports to the Executive Vice President instead of the President and was approved on March 5, 1982, by Division of Licensing, Office of NRR.

The Committee also failed to forward audit reports to the "President and to management positions responsible for the areas audited within 30 days after completion of the audit." The following are examples:

- (a) The July 1980, audit of an emergency plan drill performed to meet the requirements of TS 6.5.2.8.e was submitted to the President in February 1981, seven months after completion of the audit.
- (b) The bi-annual SC audits were last performed between July 1979, and January 1980, and sent to the President in June 1980, varying from five to eleven months late.
- (c) The August 1980, audit on the Fire Protection Program, performed as required by TS 6.5.2.8.i was not submitted to the President by the Committee, but was sent to the Executive Vice President in March 1981, seven months after its completion.

Interviews indicated that as of May 1981, Safety Committee reports were submitted to the Executive Vice President in lieu of the President. A TS change request was submitted and approved as described above.

No reviews of Deviation Reports (DR) performed under TS 6.5.2.7.h (reviews of indications of unanticipated deficiencies) were forwarded to the President, as required by TS 6.5.2.10.b.

#### 4. Quality Assurance

The QA program was reviewed to determine the effectiveness of the audit program, and the adequacy of QA directives and procedures; records were also reviewed to determine the qualifications of the QA Manager.

##### a. Documentation Reviewed

QAD 1301.1 Quality Assurance Directives, Rev. 4, 1/82

QAD 1301.2 Administrative Control Procedures, Rev. 2, 11/77

QAD 1301.4 QA Program Boundary, Rev. 4, 12/81

QAD 1301.5 Indoctrination & Training Program, Rev. 1, 11/77

QAD 1318.1 Audits - IELP, Rev. 3, 8/81

QA Audits 79-3, 79-5, 79-20, 79-22, I-80-06, I-80-27, I-81-27, I-81-28

QAP 1118.1 Audits IELP, Rev. A, 1/82

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Personnel Files

b. Findings

Noncompliance (50-331/82-04-04). Contrary to 10 CFR 50, Appendix B, Criterion XVIII, QA audit summaries did not include a statement evaluating the effectiveness of the QA program elements that were audited as required by ANSI N45.2.12.

Six of the eight audits examined did not contain summary statements as required by the standard. The other two audits were written following the PAS inspection and did contain summary statements. ACP 1118.1, Audits - IELP, was revised to require summary statements as required by ANSI N45.2.12 on February 11, 1982.

c. Discussion

None.

5. Training and Licensed Operator Requalification Training

Licensed operator required reading system was examined for training in design and procedure changes. Training documentation for QA personnel was examined for compliance with plant procedures. The overall training program was reviewed for compliance with regulatory requirements.

a. Documentation Reviewed

Training Program Administration Manual (TPAM)

ACP 1401.5 Plant Indoctrination and Training, Rev. 3, 4/80

QAD 1301.5 Indoctrination and Training Program, Rev. 1, 11/77

Training Records

Required Reading Files

b. Findings

Noncompliance (50-331/82-04-05). Contrary to 10 CFR 50, Appendix B, Criterion V, the inspector observed the following:

- (1) The Assistant Chief Engineer (Technical Support) was not conducting evaluations of the effectiveness of individual training programs as required by the TPAM.
- (2) A Training Program Outline had not been developed for 1981 by the QC Supervisor, and he was not maintaining a Training Program Status Log as required by QAP 1102.5.

The non-licensed training program was undergoing considerable change. Negotiations were in progress with the union to develop a formal training agreement for crafts and operators. There were also plans to completely revise the TPAM. The Assistant Chief Engineer pointed out that these changes could not possibly take place without an evaluation of the programs involved. There was, however, no deliberate evaluation of programs for the purpose of meeting the TPAM requirement, and no written reports were generated. The fact that these changes were in progress did not ensure that the entire program had been properly evaluated as required.

Discussions with the QC Supervisor revealed that the PAS findings were accurate (no training program outline for 1981 and failure to keep Training Program Status Log up to date). Training Program Outlines for the remainder of 1981 and for 1982 were examined as were up to date pages in the Status Log. These appeared to be acceptable.

Noncompliance (50-331/82-04-06). Contrary to 10 CFR 55, Appendix A, licensed operators and senior operators were not remaining cognizant of design and procedure changes.

At least two persons had failed to complete required reading in each of the four issues sampled. Two required reading issues had nine persons who failed to complete the required reading. The dates of the issues examined were June 3, 1981, July 15, 1981, November 1, 1981, and December 9, 1981, the most recent being two months old at the time of the inspection. Required reading was issued in binders, and each binder was required to be routed to each person on the list. This process causes it to take months to reach licensed staff personnel. This process was excessively slow, and the inspector discussed required reading systems in use by other licensees with the Training Manager. Additionally, design changes were not automatically sent to the training department for use in the required reading system. There were no administrative means to get that information to

training. Training on design changes was being conducted because the Training Manager acquired the information on the Design Changes on his own initiative.

6. Performance Appraisal Followup

Responses to the Performance Appraisal Inspection were submitted by IELP in letters dated December 23, 1981 and April 2, 1982. These letters described corrective actions taken and proposed to be taken by IELP for weaknesses noted in the areas rated below average by the Performance Appraisal Team (Committee Activities, Corrective Actions and Non-Licensed Training). These actions were evaluated in May 1982. The inspectors determined the following:

Safety Committee

A review of a draft Safety Committee Charter (April 30, 1982), revealed the following concerns:

- (a) Part I, Principles, Section 1.B.1.a, noted that it was not intended that the Safety Committee must perform detailed review of all material brought before them. There was no statement of intent regarding this position.

Interviews with the Safety Committee Chairman revealed that the licensee intended to use a "Screening Engineer" who would review all documentation and would recommend full Committee review for the more significant problems.

The Charter did not describe the function of a Screening Engineer and the Committee's overview responsibility for this position.

- (b) A review of Part II, Guidelines, described how the Committee would perform their review function. Had the licensee implemented their review in accordance with these guidelines, the Committee would have been in noncompliance with the Regulatory Requirements and Technical Specifications.

In general, the Committee Charter did not adequately describe the Safety Committee's functions.

A status report, dated April 2, 1982, discussed nine activities involving the Safety Committee that were either in progress or had been completed. A review of these activities at the corporate office revealed the following:

- (a) The charter was still being developed and would not be implemented by June 1, 1982, as committed.
- (b) Safety Committee instructions to define Safety Committee functions and to train members had not been completed. The licensee had not identified when this work would be completed.

- (c) The Safety Committee had assigned the Safety Committee audit function to the Quality Assurance Department. There appeared to be no analysis made regarding manpower needs or the impact this additional workload would have on the QA Department.

The licensee stated that funds were available to contract this audit workload; however, contractor audits as previously described in Section 3.a.3, did not ensure an acceptable audit program.

- (d) The licensee committed to using a full time consultant as the Committee Staff Engineer until an IELP employee could be identified. An IELP employee had not been identified, nor could the licensee state when this would occur.
- (e) The licensee had committed to review current Committee open work items and to develop a work plan to bring Safety Committee records and open items up to date. There was no indication as to when this commitment would be completed.

The above described matters are discussed in a Confirmatory Action Letter dated June 4, 1982.

#### Operations Committee

A new OC charter had been drafted and a temporary OC Administrator had been contracted to work full time on OC activities. The charter appeared satisfactory except for minor changes which were discussed with the Chief Engineer and his staff. Most of these changes would provide expansion or explanation of how certain actions prescribed in the charter would be executed. The licensee agreed to include these changes either in the charter or in procedures.

#### Corrective Action

In a letter dated December 23, 1981, (LDR-81-352), the licensee stated they were presently conducting an audit of all actions taken to correct deficiencies. Additionally, they stated that the audit would include a determination of whether conditions adverse to quality were evaluated properly for root cause and generic implications and that a schedule for corrections required would be developed with the response to the audit.

A review of this audit conducted between December 14, 1981 and February 10, 1982, revealed the following concerns:

- (a) Three of the five findings had inadequate audit finding responses.
- (b) The evaluation section of the audit report stated that "the corrective action system...was not effective as a tool for determining the root causes or generic implications of the problems."

Neither of the above concerns were resolved by corrective action, nor was a schedule for corrections required developed as committed.

This matter is addressed in a Confirmatory Action Letter dated June 4, 1982.

#### Non-Licensed Training

Several improvements had taken place or had begun in this area as a result of an aggressive program. The Training Manager appeared to be competent and motivated to execute this program. The progress in this area is noteworthy.

In general, this program would be improved by the formulation of a more detailed action plan than existed at the time of the inspection. This plan should include milestones and completion dates as goals. Additional areas which should also be addressed include:

- . Retraining.
- . Procedure revisions.
- . General statements of program bases and exceptions taken.
- . Estimated dates for personnel changes, acquisition of hardware and software, and contracts.
- . Level at which the plan is approved.

This matter is addressed in a Confirmatory Action Letter dated June 4, 1982.

#### 7. Exit Interview

The inspectors met with licensee representatives denoted in Paragraph 1 at the conclusion of the inspection on March 11 and on May 28, 1982. The inspectors summarized the purpose and the scope of the inspection and the findings.