

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

CENTRAL FILES

FEB 15 1977

Iowa Electric Light and Power
Company
ATTN: Mr. Duane Arnold
President
IE Towers
P. O. Box 351
Cedar Rapids, Iowa 52406

Docket No. 50-331

Gentlemen:

This refers to the inspection conducted by Messrs. H. B. Kister and R. C. Knop of this office on January 17-20, 1977, of activities at the Duane Arnold Energy Center authorized by NRC Operating License No. DPR-49 and to the discussion of our findings with Mr. Hammond and his staff, and Mr. Gembler of the Corporate QA staff at the conclusion of the inspection.

The enclosed copy of our inspection report identified areas examined during the inspection. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations, and interviews with personnel.

During this inspection, certain of your activities appeared to be in noncompliance with NRC requirements, as described under Enforcement Items in the Summary of Findings section of the enclosed inspection report.

This notice is sent to you pursuant to the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Section 2.201 requires you to submit to this office within twenty days of your receipt of this notice a written statement or explanation in reply, including for each item of noncompliance: (1) corrective action taken and the results achieved; (2) corrective action to be taken to avoid further non-compliance; and (3) the date when full compliance will be achieved.

Certain other activities, set forth under Other Significant Items in the Summary of Findings section of the enclosed inspection report, appear to be a deviation from commitments which you have made in previous correspondence with the



Iowa Electric Light
and Power Company

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FEB 15 1977

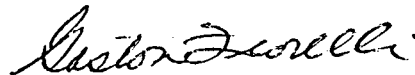
Commission. However, since we have subsequently received your response to this item we have no further questions at this time.

During our discussions at the exit interview we stated that improvement was noted in several of the areas inspected. These included auditing, site commitment followup system, progress toward implementation of work inspection program, housekeeping and general cleanliness. Less improvement was noted in such areas as corporate followup systems and evaluation of the QA program. The need to coordinate the site and corporate review of the WASH documents was also stated to need additional attention.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this notice, the enclosed inspection report, and your response to this notice will be placed in the NRC's Public Document Room, except as follows. If this report contains information that you or your contractors believe to be proprietary, you must apply in writing to this office, within twenty days of your receipt of this notice, to withhold such information from public disclosure. The application must include a full statement of the reasons for which the information is considered proprietary, and should be prepared so that proprietary information identified in the application is contained in an enclosure to the application.

We will gladly discuss any questions you have concerning this inspection.

Sincerely yours,



Gaston Fiorelli, Chief
Reactor Operations and
Nuclear Support Branch

Enclosure:
IE Inspection Report
No. 050-331/77-02

cc w/encl:
Mr. E. L. Hammond,
Chief Engineer
Central Files
Reproduction Unit NRC 20b
PDR
Local PDR
NSIC
TIC

UNITED STATES NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report of Operations Inspection

IE Inspection Report No. 050-331/77-02

Licensee: Iowa Electric Light and Power Company
IE Towers
P. O. Box 357
Cedar Rapids, Iowa 52405

Duane Arnold Energy Center
Palo, Iowa

License No. DPR-49
Category: C

Type of Licensee: BWR (GE) 538 MWe

Type of Inspection: Routine, Announced

Dates of Inspection: January 17-20, 1977

Principal Inspector:

R C Knop for
H. B. Kister

2/14/77
(Date)

Accompanying Inspector: R. C. Knop

Other Accompanying Personnel: C. E. Norelius

Reviewed By:

R C Knop
R. C. Knop, Chief
Reactor Projects Section 1

2/14/77
(Date)

SUMMARY OF FINDINGS

Inspection Summary

Inspection on January 17-20, 1977, (77-02): Followup on previously identified items of noncompliance and deviations, review of plant cleanliness, and followup on inspector identified problems. Two items of noncompliance and one deviation were identified related to documentation of inspector training, Quality Assurance auditor training, and failure to meet commitments regarding the corporate quality assurance program revisions.

Enforcement Items

A. Violations

None.

B. Infractions

None.

C. Deficiencies

1. Contrary to 10 CFR 50, Appendix B, Section V and QAP 1102.4, one of the Corporate QA auditors did not receive a course on codes within the required two years, nor was the training conducted within the past year documented for either auditor in accordance with the QAP procedure. (Paragraph 9.c, Report Details)
2. Contrary to 10 CFR 50, Appendix B, Section XVII and QDD 1450, Section VIII, the completion of training being given the General Inspectors was not being documented in the inspector training program status log. (Paragraph 6, Report Details)

Licensee Action on Previously Identified Enforcement Items

A. IE Inspection Report No. 050-331/76-01

1. Letter Item 1, Implementation of a Commitment Followup system. The inspector reviewed the DAEC and Corporate followup systems and noted that the initial corporate commitment control list did not include all commitments. (Paragraph 2.a, Report Details)

2. Letter Item 2, Review and Implementation of WASH documents 1283, 1284 and 1309. The inspector reviewed the progress of the WASH document review. (Paragraph 2.b, Report Details)
3. Infraction B.2, Implementation of a Work Inspection Program. The inspector reviewed progress toward implementation by September 1, 1977. (Paragraph 6, Report Details)
4. Deviation E.1.a, Certification of inspectors. The inspector reviewed progress toward inspector certification and noted several documentation problems. (Paragraph 6, Report Details)
5. Deviation E.1.b, Implementation of a Plant Housekeeping Program. The inspector reviewed the Licensee's recently issued Housekeeping procedure (HCP-1) and conducted a plant tour. (Paragraphs 3 and 8, Report Details)
6. Deviation E.1.c, Implementation of a System Cleanliness Control Program. The inspector reviewed the licensee's procedure (CCP-1) for maintaining system internal cleanliness. (Paragraph 7, Report Details)

B. IE Inspection Report No. 050-331/76-05

1. Infraction B.1, violation of secondary containment in the steam tunnel area during refueling. The inspector reviewed evidence that reinstruction of personnel regarding secondary containment requirements during refueling had been conducted, also that the commitment to conduct a design study was in progress. (Paragraph 2.c, Report Details)
2. Infraction B.2, corrective actions regarding repetitive diesel generator exhaust manifold fires. Corrective actions specified in IEL&P letters dated April 20, and June 3, 1976, were examined. It was noted that responsibility for performing 100% audit of corrective actions has been reassigned to the Technical Engineer in conjunction with maintaining the DAEC Commitment Punch List. This item is considered closed.

C. IE Inspection Report No. 050-331/76-12

Deviations E.1, regarding issuance of a procedure for replacement of like for like items. ACP 1405.5, which was issued on July 29, 1976, was reviewed. This item is considered closed.

D. IE Inspection Report No. 050-331/76-13

Infraction A.3.a, regarding establishment of appropriate quality requirements for procurement. The inspector reviewed the revision to ACP 1403.1, dated July 23, 1976. This item is considered closed.

E. IE Inspection Report No. 050-331/76-15

1. Infractions B.1.a and B.1.b, regarding that the Master Prestartup List and locked valve status. The inspector reviewed the licensee's corrective actions. This item is considered closed.
2. Infraction B.2, regarding failure to perform required functional testing. The inspector reviewed the licensee's corrective action. This item is considered closed.
3. Deficiency C.1, regarding failure to perform required audits. The inspector reviewed the status of corrective action. (Paragraph 9.a, Report Details)
4. Deviation 1, regarding failure to follow FSAR commitments to perform QA audits in the prescribed areas twice per year, failure to prepare QA directives for all subjects listed in the FSAR, and failure to include planned audits for several subjects located in the FSAR. The inspector reviewed the licensee's corrective actions. (Paragraph 9.b, Report Details)
5. Management Interview Concern No. 1, regarding the scope of audits. The inspector reviewed the licensee's corrective action and has no further comments regarding this matter.
6. Management Interview Concern No. 2, regarding the definition of problems in the audit findings and recommendations. The inspector reviewed the licensee's corrective action and has no further comments regarding this matter.
7. Management Interview Concern No. 3, regarding the need for Corporate quality assurance training. The inspector reviewed the licensee's corrective actions. (Paragraph 9.c, Report Details)
8. Management Interview Concern No. 4, regarding the need for a visible evaluation of the QA program effectiveness. The

inspector reviewed the licensee's corrective actions.
(Paragraph 9.c, Report Details)

F. IE Inspection Report No. 050-331/76-21

1. Infraction 1, 2.a, 2.b, 2.c and 2.d, regarding failure to promptly demonstrate redundancy after taking a diesel generator out of service, and failure to follow procedures. The inspector reviewed the licensee's commitment regarding instruction of personnel and noted that the reinstruction had been conducted. Long-term effectiveness will be evaluated on a continuing basis and further comments will be made as appropriate. This item is considered closed with regard to documenting completion of reinstruction of personnel.
2. Infraction 3, regarding failure to conduct post modification testing. The inspector reviewed the commitment to reinstruct personnel. This item is considered closed with regard to documenting completion of the reinstruction of personnel.
3. Infractions 4.a and 4.b, regarding failure to control issuance of documents. The inspector reviewed the licensee's corrective actions. This item is considered closed.
4. Infraction 5, regarding installation of pipe flanges with faulty material certification. The inspector reviewed the corrected documents. This item is considered closed.
5. Infraction 6.b, regarding the failure to include abnormal procedures in the MSIV-LCS system operating procedures. The inspector reviewed the licensee's corrective action. This item is considered closed.
6. Deficiency regarding departure from the MSIV-LCS test procedure without the required approvals. This item will remain open pending review of instruction of contractor engineers during the next refueling outage.
7. Deviation regarding failure to include an FSAR commitment to perform a test regarding one blower operation for the MSIV-LCS system. The licensee informed the inspector that their commitment to conduct the test, if possible, by the end of 1976, has been deferred until the refueling outage. This item will remain open.

G. IE Inspection Report No. 050-331/76-22

1. Letter concern regarding need for improvement in management control. The inspector reviewed the DAEC modified, management control system. (Paragraph 2.d, Report Details)
2. Infraction 1, regarding updating of Controlled Piping and Instrument Drawings. The inspector reviewed the licensee's corrective action. (Paragraph 2.e, Report Details)
3. Infraction 2.b, regarding the Technical Engineer review of Deviation Reports. The inspector reviewed the licensee's corrective action and noted that it is long-term. The inspector will continue to routinely monitor deviation reports to assure compliance with the Administrative Control Procedure. This item is considered closed for record purposes.
4. Infraction 2.d, regarding alarm card control. The inspector reviewed the licensee's corrective action. This item is considered closed.
5. Infraction 3, regarding failure to review and correctly report reportable events. The inspector reviewed the licensee's corrective action. This item is considered closed.
6. Infraction 4, regarding failure to follow surveillance procedures. The inspector reviewed the licensee's corrective action. This item is considered closed.
7. Infraction 5, regarding failure to comply with limiting condition for operation. The inspector reviewed the licensee's corrective action. This item is considered closed.
8. Infraction 7, regarding engineering personnel qualifications. This item has been resolved through discussions with the licensee and subsequent revision of ACP 1408.3.
9. Deviation 2, regarding installation of a torus level alarm system. The inspector noted that the torus level alarm system is operable. This item is considered closed.

Other Significant Findings

A. Systems and Components

Two inoperable snubbers were discovered during the plant tour portion of the inspection. One was located on the HPCI exhaust

line and one was on the auxiliary steam line to the HPCI. (Paragraph 3, Report Details)

B. Facility Items (Plans and Procedures)

Unresolved item - The certification for the General Inspectors did not meet the basis requirements of ANSI N45.2.6. (Paragraph 6, Report Details)

C. Managerial Items

Due to the retirement of Mr. G. G. Hunt, Mr. E. L. Hammond has been appointed as Chief Engineer and Mr. Dan Mineck has been promoted to Assistant Chief Engineer. The promotions were effective on January 1, 1977.

D. Deviations

1. Contrary to commitments made in the letters to J. G. Keppler, dated July 28, 1976, and September 7, 1976, the licensee failed:
 - a. To revise QAD 1318.2 by November 1, 1976, to reflect the following changes:
 - (1) That auditing would be done on a functional basis rather than a directive basis.
 - (2) That auditing would be done on an annual basis rather than a semiannual basis.
 - b. To revise applicable portions of the Final Safety Analysis Report (FSAR) to reflect the following changes by January 1, 1977.
 - (1) Revised list of audit topics and revision of the audit frequency.
 - (2) Revised list of Quality Directives.
 - (3) Methodology of auditing procedures.
 - c. Providing and implementing a QA program evaluation procedure by January 1, 1977. (Paragraph 9, Report Details)

E. Status of Previously Unresolved Items

None identified.

Management Interview

At the conclusion of the inspection, a management interview was conducted with Mr. Hammond, members of his staff, and Mr. Gembler, the Corporate Quality Assurance Supervisor. The following matters were discussed.

- A. The inspector summarized his review of corrective actions resulting from previously identified items of noncompliance and deviations. Also progress toward completing the WASH document review and implementation was discussed. In this regard the inspector stated that Corporate Quality Assurance and consultant audit findings that are resulting, in part, from audits to determine, WASH document interface, should be reviewed carefully for possible noncompliance with Technical Specifications, QAD, and ACP requirements, and if noncompliance with existing requirements is evident, prompt corrective action must be initiated. (Paragraph 2.b, Report Details)
- B. The inspector summarized his review of Reportable Occurrence 76-89 related to incorrect setting of HPCI hi steam flow instrument set points. (Paragraph 4, Report Details)
- C. The inspector summarized the results of the plant tour including the discovery of two inoperable snubbers. The licensee stated that the snubbers had since been made operable and that design evaluation of the causes were in progress. The inspector confirmed that the following corrective actions would be accomplished:
1. Conduct inspection of all accessible snubbers.
 2. Conduct a design review of the affected piping supports.
 3. Avoid conducting HPCI fast starts with the oil pump running. (Paragraph 3, Report Details)
 4. Prepare a Licensee Event Report.
- D. The inspector discussed the licensee's progress toward establishment of a "Safety Related List." (Paragraph 5.a, Report Details)
- E. The inspector stated that the progress of the inspection program in accordance with applicable WASH documents appeared to be on schedule with the commitment made by the licensee. (Paragraph 1, Report Details)

- F. The inspector stated the training records for the General Inspectors were not being maintained in accordance with QDD procedures and that this was considered to be an item of noncompliance. (Paragraph 6, Report Details)
- G. The inspector stated that the certifications used for the inspectors did not adequately define the basis for certifying in accordance with ANSI N45.2.6. The licensee stated that the appropriate basis would be attached to the certification. (Paragraph 6, Report Details)
- H. The inspector stated that the cleanliness procedure CCP-1 and housekeeping procedure HCP-1 had been reviewed and generally meet the applicable ANSI Guides with the exception of several omissions with regard to Planning and Procedure content. During a subsequent telecon, the licensee stated that additional procedures would be generated to correct these omissions. (Paragraph 7, Report Details)
- I. The inspector stated that failure to meet the commitments sent forth in their July 28, 1976 letter, were considered to be deviations from a commitment made to the NRC. Subsequent to the inspection, an updated letter^{1/} was received revising the commitments, consequently no response to this deviation is necessary.
- J. The inspector stated that a review of the Corporate QA program auditors training records indicated that the training was not being implemented and documented in accordance with the applicable QAP and that this was considered to be an item of noncompliance. (Paragraph 9.c, Report Details)

1/ IEL&P Ltr, IE-77-198 From Lee Liu to G. Fiorelli, dtd 1/27/77.

REPORT DETAILS

1. Persons Contacted

Site

E. Hammond, Chief Engineer
D. Mineck, Assistant Chief Engineer
B. York, Operations Supervisor
J. Vinquist, Electrical Maintenance Supervisor
R. Hannen, Reactor and Plant Performance Engineer
D. Tepley, Shift Supervising Engineer
D. Gipson, Shift Supervisor Engineer
D. Wilson, Technical Engineer
R. Rockhill, Mechanical Maintenance Supervisor
R. Rinderman, Quality Supervisor

Corporate

J. Wallace, Vice President, Generation
L. Root, Manager, Mechanical/Nuclear Engineering
H. Rehrauer, Supervisor, Project Engineering
H. Shearer, DAEC Project Engineer
R. Salmon, Mechanical/Nuclear Design Engineer
G. Cook, Quality Assurance Manager
D. Gemblar, Quality Assurance Supervisor
R. Youngs, Quality Assurance Auditor

2. Followup on Previously Identified Noncompliance

- a. The inspector reviewed the licensee's commitment^{2/3/4/} to establish and implement a commitment followup system.

The licensee's latest^{5/} commitment included establishment of formal administrative controls both at the site and in the corporate office; also a punch list shall be maintained at the site for site commitments including the Vice President, Generation and a corporate office commitment Control list shall be maintained for the corporate office commitments. At the site, the inspector examined the DAEC Punch list and reviewed the recently issued ACP 1401.8 and no problems were identified. At the corporate office, the inspector reviewed General Project Instruction No. 1003.2, Revision 0, dated January 20, 1977, and an initial computer run of the commitment control list. The inspector

2/ IEL&P Ltr, IE-75-112, dtd 10/17/75.

3/ IEL&P Ltr, From J. A. Wallace, dtd 3/22/77.

4/ IEL&P Ltr, From J. A. Wallace, dtd 11/12/76.

5/ Ibid.

noted that the list was short and subsequently, it was determined that the list did not include all commitments. Absent were several QA department commitments included in IEL&P's response to IE Inspection Report No. 050-331/76-15. Also commitments to NRR concerning short-term and long-term torus support inspections were not included. Additional examination of the commitment control procedure revealed that it was written to include only the Mechanical/Nuclear Department. The licensee stated that failure to include the QA department was an oversight and that a revision to the procedure would be made to include QA. Also, the necessary research would be conducted to assure that all commitments to NRC will be included on subsequent runs of the commitment list.

- b. The inspector⁶ reviewed the licensee's progress regarding their commitment⁶ to achieve full compliance with WASH documents 1283, 1284, and 1309 by September 1, 1977. It was noted that two separate reviews are being conducted. DAEC, through their consultant, EDS Nuclear, and Corporate QA, which is using Audit checklists prepared by NESCO, in conjunction with their regular audit program.

Regarding DAEC's progress, the inspector noted that the initial WASH document review had been completed and a summary of the review prepared which provides a comparison of the DAEC QA program with respect to the subject WASH documents. The licensee informed the inspector that the next step will be an on site survey by the consultant regarding the present implementation of the existing procedures to further determine compliance with the WASH Documents, resolve comments, and provide the basis for their recommendations. The licensee further stated that the completion date of September 1, 1977, is considered achievable.

Regarding the Corporate QA' progress, the inspector noted that the initial review by NESCO appeared to be completed and included a set of audit checklists which, according to licensee, included all the requirements of the WASH documents. The licensee further stated that the comparison of the existing Iowa Electric QA Program with the requirements of the WASH Documents was being conducted in conjunction with the regular QA audit program which is currently in progress, and that Audit checklists for five of the thirteen Appendix B criteria had been completed thus far. Based on the current QA audit schedule, current progress, and discussions with licensee

6/ IEL&P Ltr, IE-76-845, dtd 6/3/76.

personnel there is uncertainty that the September 1, 1977 implementation date can be met with regard to the Corporate Quality Assurance Directives and the Corporate office administrative procedures. The inspector further commented that differences with the DAEC QA program study, which is being conducted concurrently, must also be resolved prior to final revision of procedures to assure continuity of the finished product and that this particular area appears to be receiving little attention.

- c. The inspector reviewed the progress of the design study relating to secondary containment requirements in the ^{7/}steam tunnel which was included as part of DAEC's reponse^{7/} to the reported failure to maintain the secondary containment requirements of the Technical Specifications^{8/} during the previous refueling outage. The licensee informed the inspector that several alternatives are being considered which include installation of an airlock, relocation of the steam tunnel entrance, and ventilation modifications which would permit unrestricted access to the steam tunnel during refueling. The inspector inquired if corrective action will be completed in time for the upcoming refueling outage in March. The licensee stated that corrective action in the form of permanent solution, or a satisfactory temporary fix, would be provided in time for the refueling outage.
- d. The inspector reviewed the licensee's comprehensive management control system that is referred to in Iowa Electric's response^{9/10/} to NRC's concerns^{11/12/} regarding the large number of events attributable to personnel errors and failure to follow procedures. The Chief Engineer informed the inspector that progress toward the specified goals is continuing, and that criteria for measuring employee performance, reduction in noncompliance, and overall improvement in DAEC operation is being formulated. The inspector noted, in particular, progress in the area of Operations-Maintenance interface and establishment of a Plant Safety Committee. The inspector stated that he would continue to monitor the management system and provide comments as necessary.
- e. The inspector reviewed the licensee's corrective action^{13/} regarding the failure to maintain Piping and Instrument Diagrams in the Control Room that represent existing plant configuration.^{14/} The inspector noted that P&ID's 149 and 176 had been updated,

- 7/ IEL&P Ltr, From J. A. Wallace, dtd 4/20/76.
- 8/ IE Inspection Rpt No. 050-331/76-05, dtd 3/29/76.
- 9/ IEL&P Ltr, From J. A. Wallace, dtd 11/12/76.
- 10/ IEL&P Ltr, IE:76-1844, dtd 11/29/76.
- 11/ IE Inspection Rpt No. 050-331/76-22, dtd 10/15/76.
- 12/ IE Inspection Rpt No. 050-331/76-23, dtd 10/28/76.

however, 143 Revision 17 (CAD System) still did not include all the piping changes associated with the addition of the N₂ storage tank. After several discussions, the inspector was informed that a marked up copy of drawing that included the subject changes was present in the control room with a copy of the design change. The inspector stated that he would review this matter further at the next inspection.

3. Plant Tour

The inspectors conducted an extensive tour of the facility including the HPCI and RCIC rooms, and the torus room. Significant improvement in Housekeeping was noted and radiation protection control points were in good order.

During inspection of the HPCI room the inspectors discovered two inoperable snubbers. One associated with the HPCI exhaust piping and one associated with the auxiliary steam line to the HPCI. The inspector noted that the HPCI exhaust pipe snubber was one that had failed previously.^{15/} At that time, the failure was attributed to an incorrectly installed mounting bracket. Close examination of the snubber revealed that the piston shaft was broken. The auxiliary steam line snubber was broken at the clevis attachment to the pipe, also the pipe clamp appeared to have rotated upward.

The licensee took immediate corrective action including declaring the HPCI inoperable. Refer to the Management Interview section for further discussion.

4. Reportable Occurrence Review

The inspector conducted a review of the circumstances associated with Reportable Occurrence No. 50-331/76-89 regarding the incorrect setting of the HPCI Hi Steam flow instrument set points. The review included discussions with the personnel who prepared, reviewed, and approved the incorrect temporary procedure change and the Chief Engineer. The inspector commented that the procedure change was prepared and approved by the same individual. It was also approved by a shift supervising engineer, which satisfies the requirements for approving temporary changes. The inspector further commented regarding the advantages of having different individuals prepare and approve procedures which may have resulted in this error being identified. Also, the inspector commented that the subject change did not appear to comply with the temporary change criteria in the Technical Specifications in that changing set points

15/ DAEC Abnormal Occurrence Rpt 50-331/75-38, dtd 7/21/75.

is not considered a minor change. This was the subject of a noncompliance in a previous report^{16/} and the licensee's response will be evaluated in this regard. Subsequently, in a telephone conversation, the inspector requested the licensee to submit a supplemental RO report further elaborating on their corrective action to prevent recurrence regarding this event.

5. Outstanding Inspection Item Review

a. Safety Related List

The inspector reviewed with the licensee their progress toward establishing a formal detailed Safety Related List. The licensee stated that a consultant had been contracted to prepare the list and had provided them with a proposed program for accomplishing the task. The inspector inquired as to when preparation of the safety related list would be completed. The licensee stated that a time table would be established upon final agreement regarding the content of the program.

b. RHR Loop Select Instrument Problem

The inspector reviewed with the licensee their progress toward resolving the RHR A > B PDIS switch set point problem.^{17/} The licensee stated that a design change had been approved and issued to the site which calls for installation of snubbers in the instrument lines. Further discussion at the site indicated that the snubbers were being purchased, and that the design change would be accomplished when the material was available. The licensee agreed to inform the inspector when a completion date for the design change was established.

6. Work Inspection Program

During discussions with plant personnel and through a review of records, it was determined that the commitments for the DAEC Inspection Program stated in Attachment No. 1 of the June 3, 1976 letter from Duane Arnold, to J. G. Keppler, has been completed up to the present time, in that criteria for the program have been established, inspectors have been hired, scope of program established, inspection program ACP has been written and training of the inspectors initiated.

The inspectors who have been hired have been documented as certified by the Quality Supervisor. During the review of the documentation the inspector noted that the certification did not contain all of

^{16/} IE Inspection Rpt No. 050-331/76-26, dtd 1/13/77.

^{17/} DAEC Abnormal Occurrence Rpts 74-48, 74-51 and 74-52.

the elements required by Section 2.2.4 of ANSI N45.2.6. In that it did not adequately document the: (a) activities qualified to perform, (b) level of capability, (c) effective period of certification and (d) basis used for certification in lieu of the general requirements. The quality supervisor stated the sufficient documentation was available to support the certification and that this information would be pulled together and made part of the certification. The inspector stated this would considered an unresolved item.

During a review of the training requirements listed in the site Quality directives (QDD 1450, Section VIII) it was noted that the inspector training program status logs were not being completed as required in that completion of training assignments were not being documented. The inspector stated that failure to document the accomplishment of the training in accordance with the QA manual was considered to be an item of noncompliance.

Further, Section 5.4.6.2 of the training procedure listed ten topics which, as a minimum, should be completed for each inspector. In discussions with the Quality Supervisor he indicated that some of the topics, such as Nondestructive Testing, were not intended to be completed by the general inspectors. He stated that the listing would be revised to reflect the actual requirements for each type of inspector. (General and NDE)

7. Cleanliness Procedures

The inspector's review of procedure CCP-1 "Cleanliness Control Procedures" indicated general compliance to ANSI N45.2.1-1973 "Cleaning of Fluid Systems and Associated Components During Construction Phase of Nuclear Power Plants" and Regulatory Guide 1.37 "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants;" however, the inspector noted several discrepancies with the procedure relative to Sections 2.1 and 2.2 of the ANSI standard. During a subsequent telecon, the licensee stated that based on their review additional procedure changes were necessary to correct the discrepancies.

8. Housekeeping Procedure

The inspectors review of the housekeeping procedure "HCP-1" indicated general compliance to ANSI N45.2.3-1973 "Housekeeping During the Construction Phase of Nuclear Power Plants" and Regulatory Guide 1.39 "Housekeeping requirements for water-cooled Nuclear Power Plants."

The inspector noted that various sections of the procedure should address fire prevention as well as housekeeping affecting quality. The licensee's stated that this item would be reviewed.

9. Corporate QA Program

The inspector reviewed the status of corrective actions^{18/} for noncompliance and deviations related to the QA program which were identified during a previous inspection.^{19/} Comments are as follows:

a. Deficiency No. 1

Contrary to 10 CFR 50, Appendix B, Criterion V, the licensee failed to adhere to Quality Assurance Directive 1318.2, Paragraph 5.1 in that audits of corrective actions (QAD 1316.2) have not been performed as required.

Licensee's Response

Subsequent to implementation of QA Directive 1318.2, it became evident that auditing on a directive basis as implied in Paragraph 5.1 was impractical and was not the most efficient way to function. The applicable directives have been, and will continue to be, reviewed as part of the preparation for, and during performance of, functional audits. For this reason the requirements of Paragraph 5.1 of QAD 1318.2 will be reviewed to present this philosophy. This revision should be completed by November 1, 1976.

Findings

A revised draft of QA Directive 1318.2, has been prepared stating that Quality directives would be used in conjunction with functional areas for auditing purposes.

The licensee further stated that a matrix would be developed as audits are performed during the year to demonstrate that each of the Quality directives are audited each year. The inspector also noted that the commitment date to get the QAD revised by November 1, 1976, had not been met and as such would be considered a deviation from a commitment made to the NRC.

During discussions with corporate personnel it was determined that the commitment deadline was not picked up by the corporate

^{18/} IEL&P Ltr, IE-76-1150, From J. A. Wallace, and Lee Liu, dtd 7/28/76.

^{19/} IE Inspection Rpt No. 050-331/76-15, dtd 7/12/76.

commitment followup system due to the fact that QA commitments had not been entered into the program. (Paragraph 2.a, Report Details)

b. Deviation No. 1

Contrary to the Duane Arnold Final Safety Analysis Report, Appendix D, Amendment 7 and Amendment 10:

- (1) The licensee failed to conduct quality assurance audits in the prescribed areas at least twice per year.

Licensee's Response

As a result of experience gained during the initial phase of plant operation it became apparent that the audit frequency indicated in the FSAR was not practical or reasonable. The plans presented in the FSAR were prepared well in advance of plant operation, and the audit frequency was subsequently changed to once a year, to permit a more indepth investigation of more functions. The FSAR was not revised at the time due to lack of knowledge regarding the requirement to amend the QA Program material. The FSAR Amendment 10 and the QAD 1318.2 will be revised to indicate an annual audit frequency. QA 1381.2 should be revised by November 1, 1976, and the FSAR Amendment 10 should be revised by January 1, 1977.

Findings

The inspector's review determined that a draft of Amendment 10 to the FSAR has been submitted to the DAEC licensing Administrator revising the frequency of audits to a one year cycle, however, the Amendment has not yet reviewed by the Operations and Safety Committee, and as such had not been submitted to NRR.

As stated before, a revised draft of QAD 1318.2 had been prepared. This draft revised the audit frequency to one year.

The inspector stated that the failure to meet the commitment dates was considered to be a deviation.

- (2) The licensee failed to prepare Quality Assurance Directives for all the subjects listed in the FSAR.

Licensee's Response

The series of fifty-one directive titles currently in the FSAR was prepared in advance of plant operation and subsequent activity revealed that the FSAR contained redundant and/or ill-defined titles and also failed to present pertinent titles of directives that have been established. A study is underway at the present time to determine which titles should be presented in the FSAR as requiring the preparation of Quality Assurance Directives. Subsequent to this study, the FSAR will be revised by January 1, 1977. Directives shall also be prepared for each title in the revised series.

Findings

The inspector determined that the licensee had prepared a list and description of each directive title in the revised FSAR draft described above. The inspector review indicated no regulatory problems with the subject draft other than it had not been submitted in time to meet the commitment date and as such was considered a deviation. In response to the inspector's question as to when the Quality Directives would be prepared for those areas resulting from the licensee review, the licensee stated that the directives would be prepared and implemented prior to September 1977.

- (3) The licensee failed to include planned audits for several subjects committed to in the FSAR.

Licensee's Response

- (a) Report Details, Paragraphs 9.b.(2).(a) and 9.b.(2).(b)

A study is underway to formulate a current list of audit topics for inclusion in the FSAR. This list should be developed by September 1, 1976 for inclusion in an FSAR change submittal, which is expected to be submitted before January 1, 1977.

(b) Report Details, Paragraph 9.b.(2).(d)

This list will indicate those subjects which will be audited on a calendar basis and those subjects that will be audited on a periodic basis dependent on plant activities.

(c) Report Details, Paragraph 9.b.(2).(d)

The FSAR Amendment 7 response to question D1.7 (on page 7-D1.7-1) was intended to convey the message that the QA staff would review instructions, procedures, and drawings for inclusion of activities affecting quality, and assure that these requirements are being implemented, during the course of functional orientated audits. The concept of auditing procedures per se is inefficient since without reviewing the spectrum for requirements to accomplishments, determination of inclusion of activities affecting quality lacks an adequate base. Accordingly, the FSAR will be revised to clarify that instructions, procedures, and drawings have been, and will continue to be, reviewed as part of the preparation for, and during the performance of functional audits. The response to question D1.7 will be revised by January 1, 1977.

Findings

The inspector's review determined that a revised draft of the FSAR had been prepared including a list of audit topics. This list indicated those subjects which would be audited on a calendar basis and those subjects which would be audited on a periodic basis. The FSAR draft also clarified that procedures would be looked at during the conduct of the various audits rather than in specific audit. The inspector's review of the standard audit plan verified that a requirement was stated to review related procedures for each audit.

As stated before the failure to meet the commitment date of January 1, 1977 was considered to be a deviation.

c. Management Interview Concern No. 3

Provide a quality assurance training program which includes all personnel with quality assurance responsibilities.

Licensee's Response

Corporate Quality Assurance Training Program

Quality Assurance training is planned for all levels of personnel associated with DAEC. Quality Assurance personnel attend out-of-Company training courses to perfect their particular areas of responsibility and audits under surveillance. Engineering support people attend training seminars conducted yearly.

Findings

The inspector's review verified that the QA personnel were attending out-of-Company training courses as stated. However, a further review of the records indicated that one auditor had not received a course on codes within the required two years, nor were the completion of some of the training conducted during the past year being documented as required by QA Procedure QAP 1102.4. The inspector stated that this was considered to be an item of noncompliance.

d. Management Interview Concern No. 4

Provide a visible evaluation of the program effectiveness including indicators of quality trends. Evaluation of unfavorable trends should specify corrective actions on a generic basis.

Licensee's Response

Plans are being studied relative to the development of a QA Program Evaluation Procedure. Existing events and activity reporting documents will be utilized to generate statistical data upon which to evaluate effectiveness. This activity will be corporate QA function. The procedure will be developed and implemented by January 1, 1977.

Findings

During discussions with the licensee the inspector determined that QA Program Evaluation Procedure had not yet been developed. The inspector stated that this was considered to be an item of deviation from a commitment made to the NRC.