

Iowa Electric Light and Power Company

December 22, 1987

NG-87-4556

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

Subject: Duane Arnold Energy Center
Docket No: 50-331
Op. License No: DPR-49
Response to NRC Inspection Report
87-028


File: A-102, A-103

Dear Mr. Davis:

This letter is provided in response to the Notice of Deviation and additional information requested concerning inspections of activities from September 28 through October 23, 1987 at the Duane Arnold Energy Center.

If you have any questions regarding this response, please feel free to contact our office.

Very truly yours,


William C. Rothert
Manager, Nuclear Division

WCR/JCT/go

Attachment: Response to Inspection Report 87-028

cc: U. S. NRC Document Control Desk (Original)

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NRC Resident Inspector - DAEC
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Iowa Electric Light and Power Company
RESPONSE TO INSPECTION REPORT 87-028

NRC Item of Deviation

"By letters dated January 3 and March 7, 1986, from Richard W. McGaughy, Manager, Nuclear Division, to James G. Keppler, NRC, the licensee responded to violations from NRC Inspection Reports No. 85029 and No. 85035. The licensee, in the responses, committed to establish a task force to review quality level designations. Per this commitment, the task force review was to be completed by June 30, 1986; any systems identified that would merit a higher level of attention to quality than is normally associated with Quality Level IV equipment would be upgraded to Quality Level II.

Contrary to the above, the licensee failed to fully meet this commitment. Subsequent to the completion of the task force review, dated June 20, 1986, the commitment was closed and the licensee failed to implement the task force recommendations regarding the upgrade of identified systems to higher quality levels.

This is a Deviation (Supplement 1)."

Response to Deviation:

1. Corrective Actions Taken and the Results Achieved

The Iowa Electric response to Inspection Report 85-029 stated "The task force will conduct a review of plant systems. Any systems identified that merit a higher level of attention to quality than is normally associated with Quality Level IV equipment will be upgraded to Quality Level II. The review shall be complete by June 30, 1986." The task force review was completed by this date, and final corrective actions were recommended. The open commitment stemming from this Inspection Report item, which established the task force, was closed out by the task force based on completion of their review. Implementation of the task force recommendations was not ensured by assignment of further commitments with specified completion dates via the Iowa Electric Nuclear Generation Commitment Control System.

As noted within Inspection Report 87028, final review and implementation of the task force recommendations was completed during the period of this inspection. The failure to implement the task force recommendations had been noted by Iowa Electric immediately prior to the Inspector's arrival on site for this inspection, when a review of items relating to the inspection was conducted. Corrective steps were promptly initiated and the Inspector informed of the problem following the entrance meeting. The task force recommendations were reviewed and implementation of the final recommendations was completed on October 10, 1987.

The Commitment Control system tracked, documented and helped to ensure the task force review was completed by its due date. The failure to implement and complete timely corrective actions based on this review was the result of an omission and not due to a substantial failure on the part of the Commitment Control system.

Re-emphasis has been provided to Nuclear Generation Employees of the need for ensuring that all recommendations made within documents are followed up via tracking by the Commitment Control system.

As an additional measure, closure of site commitments to the NRC must now be approved by the Technical Support Supervisor or his designee. Technical Support is closely involved with the preparation of responses to NRC items, such as Inspection Reports and Licensee Event Reports, and therefore is knowledgeable as to the full intent and scope of commitments made in such documents, and aware of the need for programmatic tracking of the complete resolution. This will provide a mechanism for ensuring all work associated with such a commitment is either completed or being tracked by the Commitment Control System. Commitment Control activities for departments located on site are performed by Technical Support. Corporate Commitment Control activities are performed by the Nuclear Commitment Control Specialist, in consultation with the Manager, Nuclear Licensing.

2. Corrective Actions to be Taken

No further corrective actions are necessary beyond those outlined above.

3. Date When Full Compliance will be Achieved

Full compliance was achieved on October 10, 1987, with the completion of implementation of quality level changes and/or comments on quality level based on the task force recommendations.

Additional Information:

As per your request, this response will also address the Iowa Electric Nuclear Generation Division Commitment Control system, namely:

- 1) The programmatic and procedural controls of NRC commitments.
- 2) The assignment of responsibility for tracking and implementing NRC commitments.
- 3) Management involvement in assuring that completion and closure of NRC commitments are adequate and timely.

The Nuclear Generation Commitment Control System is administered via procedure. This enumerates the individual and departmental responsibilities in assignment, initiation and closure of commitments. Other procedures address additional review and routing of documents.

When a document is received from the NRC, it is reviewed by the Group Leader, Nuclear Licensing, and its distribution is designated. If the document requires a response, the Group Leader, Nuclear Licensing designates the person responsible for its preparation. The source, number, and date of the incoming document, its subject, the party responsible for preparation of the response, and the due date of that response are then listed in the computerized Commitment Control System. The party responsible for review is noted on the distribution list which is stamped on the document. The document is also forwarded to DAEC for determination by the Technical Support Supervisor if additional distribution or assignment is necessary.

NRC documents are also reviewed by the Group Leader, Nuclear Licensing, upon receipt to determine if they contain significant operating information. If so, this is identified on the distribution list and responsibility for assuring that the document is presented in a timely manner before the DAEC Operating Experience Review Group (OERG) is assigned to the OERG coordinator via Commitment Control. This group, composed of personnel from various plant departments, including Operations, Maintenance and Radiation Protection, will determine if special dissemination of the document or other immediate actions are warranted to ensure continued safe operation. The OERG coordinator assigns responsibility for any such actions. This OERG review is independent of the responsible party's formal review and response.

Responsibility for completion of commitments made within a document sent to the NRC is assigned by the party which developed that document. These commitments are entered into the Commitment Control system by the Nuclear Commitment Control Specialist or her designated site representative within Technical Support. Outgoing documents are routinely reviewed by the personnel directly responsible for the Commitment Control system to ensure that all commitments made have been assigned a commitment control number as necessary.

Commitments are assigned priority numbers by the Nuclear Commitment Control Specialist or her site representative based on procedural guidelines. The two highest priorities given are "Priority One" and "Priority Two".

PRIORITY ONE (Response Requested or Action Promised)

Commitments made in writing to respond to an NRC document or a response requested by an NRC document, and commitments made in such a response. Examples are Inspection Report responses and commitments made in them, and NRC mandated modifications scheduled via the Iowa Electric Integrated Plan.

PRIORITY TWO (Other commitments)

Internal commitments to evaluate NRC documents for which a response was not requested, such as NRC Information Notices, and commitments stemming from those evaluations.

The prioritizing of commitments allows them to be tracked as a whole, or those commitments made directly to the NRC can be separated and identified as such. Supervisory and Senior Management personnel have ready access to this computerized system via their terminals. This provides an easy method by which the current status of commitments may be determined.

Every two weeks a list of all NRC "PRIORITY 1" open commitments is distributed to the responsible supervisors. The cover letter is printed on bright pink paper for added visibility, and included is a list of overdue "priority one" commitments for all departments. An additional list of all non-"PRIORITY ONE" open commitments is also distributed. These lists are routed to the corporate Vice President - Production and Manager, Nuclear Division and are given considerable management attention.

Commitments are closed by the department to which responsibility for fulfilling the commitment was assigned. As previously noted, the closing support documentation is reviewed by the Technical Support Supervisor (for closure of site commitments) or Licensing personnel prior to final closure and removal of the commitment from the open commitments list to ensure the intent of the commitment has been met.

The Iowa Electric Nuclear Generation Commitment Control System successfully tracks hundreds of commitments, many of them "Priority One", to completion each year. The failure cited in Inspection Report 87-028 to complete an NRC commitment resulted from a failure to follow through on recommendations made and does not indicate a significant deficiency with this system.

Unresolved Item for which Response Requested

"4. Non-licensed Staff Training and Qualifications

With regard to non-licensed staff training and qualifications, the following licensee documents were reviewed:

- Technical Specifications, Section 6.3, "Plant Staff Qualifications."
- Quality Assurance Manual, Chapter 2, "Quality Assurance Program," Table 2-1.
- Plant Performance Department Instruction (PPDI) No. 16, "Qualifications for Nuclear Engineers at the DAEC," dated November 18, 1985, (Revision 0).

- Training Department records of selected non-licensed technical staff and management, and the associated training program.

Through review of the documents and discussions with the licensee, the inspector made the following observations:

- a. The Technical Specifications required that the qualifications of the plant staff meet or exceed those specified in ANSI N18.1-1971, "Selection and Training of Nuclear Power Plant Personnel."
- b. 10 CFR Part 50, Appendix B, Criterion II, requires that the licensee establish and implement a quality assurance program which provides for training of personnel performing activities affecting quality. The licensee quality assurance program is documented in Chapter 17.2 of the UFSAR. The Quality Assurance Manual (QAM) implements, in part, Chapter 17.2 of the UFSAR, "Quality Assurance During the Operations Phase." In Chapter 2 of the QAM, the licensee stated that they would comply with ANSI/ANS-3.1-1978 (a revision of N18.1-1971). According to the licensee, this requirement has been documented since Revision 1 to the QAM, dated November 15, 1982. The change was a result of a recommendation from an audit performed by an independent contractor in 1981-1982. The licensee stated that by complying with ANSI/ANS-3.1-1978, the requirements of N18.1-1971 would be satisfied or exceeded. The licensee did not intend to change the Technical Specification requirement.
- c. PPDI No. 16 references ANSI/ANS-3.1-1981, and states the experience requirements as those from N18.1-1971. Specifically, two years of professional nuclear engineering experience were required to certify as a Nuclear Engineer at DAEC. The licensee is proposing to revise the procedure to reference and satisfy the requirements of ANSI/ANS-3.1-1978. This change would required Nuclear/Reactor Engineers to have four years of experience, two of which are nuclear power plant related. Discussions with the licensee indicated that both of the nuclear engineers at DAEC are now certified in accordance with ANSI/ANS-3.1-1978. However, it was possible that this was not the case prior to June 1987.

The inspector noted that the inconsistencies in the requirements in Technical Specifications and the QAM resulted in confusion within the licensee's organization. In further discussions subsequent to the inspection period (via telecon), the licensee stated that the commitment was to both standards, and the intention was not to revise the Technical Specifications. However, the licensee is proposing to write an internal "letter of interpretation" to the Technical Specifications for clarification, and to ensure that personnel are aware that ANSI/ANS-3.1-1978 is the level to be satisfied, rather than N18.1-1971.

Licensee resolution of the inconsistencies identified in the Technical Specifications and the QAM is required. The training requirements in both documents are clearly enforceable. The Technical Specifications are part of the facility license and are legally binding; the QAM implements the quality assurance program for compliance with 10 CFR Part 50.

No violations or deviations were identified; however, this issue is considered an Unresolved Item (331/87028-02(DRS)), pending NRC review and evaluation of the licensee's resolution."

Response to Unresolved Item

The Technical Specifications for the Duane Arnold Energy Center state "The qualifications of individual members on the plant staff will meet or exceed qualifications referenced for comparable positions in ANSI-N18.1-1971 ." The Iowa Electric Quality Assurance manual states there is a commitment to ANSI/ANS-3.1-1978 with regards to personnel selection and training. ANSI/ANS-3.1-1978 was a revision of ANSI-N18.1-1971.

As noted in the Inspection Report, reference to two different standards was done deliberately. A corporate commitment to the revised, more stringent 1978 standard was considered to be a conservative measure to ensure compliance with the minimum requirements of the 1971 standard mandated by the plant's Technical Specifications.

1. Corrective Action Taken and the Results Achieved

Specific Instance Cited (Plant Performance)

ANSI/ANS-3.1-1978 states that "The on-site professional-technical groups shall include individuals (group leaders) with the following qualifications in the indicated disciplines". For Reactor Engineering, these are "the responsible person shall have a Bachelor's Degree in Engineering or the Physical Sciences and four years experience. Two of these years shall be nuclear power plant experience. The experience shall be in such areas as reactor physics, core measurements, core heat transfer, and core physics testing programs. Successful completion of a reactor engineering training program (such as the 12 week concentrated programs offered by NSS Vendors) may be equivalent to one year's nuclear power plant experience."

Qualifications of Plant Performance reactor engineering personnel have been reviewed. A fully qualified Reactor Engineer (group leader) whose qualifications satisfy the 1978 ANSI/ANS standard has been present on the Plant Performance staff at all times since Iowa Electric committed to this

standard in 1982. The individual(s) was, and is, responsible for recommendation of rod pattern adjustments.

The Plant Performance department's standard for individual qualification as a Reactor Engineer was based on ANSI-N18.1-1971 (which requires two years experience), not its revised version, ANSI/ANS-3.1-1978 (which requires four years experience). Although this procedural deficiency could have resulted in the Plant Performance department possessing no Reactor Engineers qualified to the 1978 standard, the department policy has been to have at least one individual with long-time experience in this field. To that end, the departure of the senior Reactor Engineer to different project in 1986 was delayed for some time until another individual with experience beyond the 1978 standard's requirements could be obtained.

During the inspection, the inspector noted that one individual may not have met the 1978 standard's experience requirements for Reactor Engineer - Group Leader at all times since he was designated a Reactor Engineer by the DAEC Plant Performance department. A review of this individual's service was conducted. The individual in question achieved full qualification as a Reactor Engineer (group leader) per the 1978 ANSI standard in October, 1986. Prior to this date the individual recommended and implemented revisions to existing rod sequences, but did not plan rod sequence exchanges without supervision. Substantial adjustments such as these were only implemented under the supervision of the senior Reactor Engineer present within Plant Performance at the time, who, as previously stated, was fully qualified by the 1978 standard.

As a specific corrective action, Plant Performance Department Instruction (PPDI) 16 was revised on November 5, 1987 to require that the qualification standards for Reactor Engineer be those of ANSI/ANS-3.1-1978. (Prior to this, the qualification standards listed were those of ANS N18.1-1971, which are less stringent in terms of experience.) Individuals within Plant Performance presently deemed qualified under the 1971 standard were re-reviewed, and all were found to be presently qualified as Reactor Engineers (group leaders) per ANSI/ANS-3.1-1978. As previously stated, the senior Reactor Engineer within Plant Performance has at all times been qualified to the ANSI/ANS-3.1-1978 standard for Reactor Engineer (group leader).

General Corrective Actions

In order to provide more positive reassurance that the 1978 ANSI/ANS standard referenced in the Quality Assurance manual has been and will be used when determining personnel qualification, the following actions have been taken:

- a) A review of non-licensed Nuclear Generation plant personnel with respect to ANSI/ANS-3.1-1978 was conducted and all supervisory personnel noted within the standard were found to meet the requirements.

b) A letter has been added to the Technical Specification interpretation file. This is an active file maintained on site and provided to help aid in full understanding of Technical Specification requirements, and additional concerns related to these. The added item clarifies Duane Arnold Energy Center's commitment to both ANS N18.1-1971 and, via the Quality Assurance Manual, ANSI/ANS-3.1-1978, pending revision of the Technical Specifications discussed in the next section.

2. Corrective Actions to be Taken

In order to provide positive assurance that the 1978 ANSI/ANS standard referenced in the Quality Assurance manual will be used when determining personnel qualification, the following actions are being taken:

- a) To eliminate the possibility of future confusion involving Iowa Electric's commitment to personnel qualification standards, a Technical Specification revision request will be submitted for change of the reference in Technical Specifications from ANSI N18.1-1971 to ANSI/ANS-3.1-1978 by April 1, 1987.
- b) Appropriate procedures will be amended to note supervisory responsibility for ensuring the qualification of employees per ANSI/ANS-3.1-1978. These revisions will be complete within 60 days.
- c) Job description listings currently under revision for Duane Arnold Energy Center will state, if applicable, that the requirements of ANSI/ANS-3.1-1978 must be met. This will be completed within 30 days.