

Iowa Electric Light and Power Company

May 26, 1987
NG-87-2054

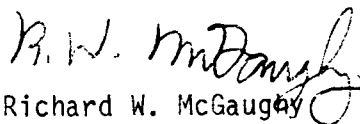
Mr. A. Bert Davis
Regional Administrator
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Duane Arnold Energy Center
Docket No: 50-331
Op. License No: DPR-49
Response to NRC Inspection Report 87012
File: A-102, A-103

Dear Mr. Davis:

This letter is provided in response to the subject report concerning inspections of activities at the Duane Arnold Energy Center. Attachment 1 provides our response in accordance with your request.

Very truly yours,



Richard W. McGaughey
Manager, Nuclear Division

RWM/JPR/go

Attachment: 1. Response to IR 87012
2. NRC Inspection Report 87012

cc: L. Liu
L. Root
A. Cappucci
NRC Resident Inspector
Commitment Control 870097
File A-102

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PDR ADOCK 05000331
Q PDR

MAY 29 1987

Iowa Electric Light and Power Company
RESPONSE TO INSPECTION REPORT 87-012

NRC Item of Violation (Severity Level V)

"10 CFR 50, Appendix B, Criterion IV, as implemented by Section 17.2.4.4(1) of the Duane Arnold Operational QA Program, requires that suppliers provide a QA Program consistent with the pertinent provisions of Appendix B.

Contrary to the above Janda Electric Motor Services was listed as an approved supplier of electrical rewinding parts and services but did not have an approved QA Program." (331/87012-01.)

Response to Violation:

1. Corrective Action Taken and the Results Achieved

As an immediate corrective action, Janda Electric Motor Service has been removed from the Iowa Electric Nuclear Approved Vendors List (NAVL) as an approved supplier of electrical rewinding parts and services.

Iowa Electric Quality Assurance has now separated the NAVL into two sections: 1) Quality Level I, Safety Related, and 2) Quality Level II, not safety related, but for which certain quality assurance controls are established by Iowa Electric. This action is designed to clarify the NAVL and eliminate possible misinterpretation of vendor requirements. Quality Level I vendors are required to have an approved quality assurance program.

2. Corrective Actions to be Taken

Future repairs of safety-related electrical apparatus at Janda will be inspected with revised source inspection procedures. If acceptable, the repaired item may then be dedicated for use as a basic component after receipt based upon the in-process monitoring and inspections at Janda's facility by Iowa Electric Quality Assurance personnel. This will enable immediate compliance with 10 CFR 50, Appendix B, Criterion IV, as implemented by UFSAR Section 17.2.4.4(1).

To assist us in determining and correcting the root cause of the problem which resulted in this violation, Iowa Electric has retained the services of an independent consulting firm to review our vendor evaluation program and make recommendations for improvement. The report from that review is expected the week of

June 8, 1987. Iowa Electric will evaluate and utilize appropriate recommendations made by this report.

Iowa Electric has reviewed the safety related procurements from the date of DAEC commercial operation (February 1975) to determine which vendors lacked an approved quality assurance program. These vendors have been removed from the Quality Level I, Safety Related section of the NAVL. Procurements from those vendors are being identified and evaluated for acceptability by Engineering and Quality Assurance. We intend to complete the evaluations by June 1, 1987.

3. Date When Full Compliance will be Achieved

Full compliance has been achieved with the removal of Janda Electric Motor Services from the Nuclear Approved Vendors List, and the determination and removal from the Quality Level I, Safety Related section of the NAVL of the remaining vendors which lack a fully approved quality assurance program.

NRC Item of Violation (Severity Level V)

"10 CFR 50, Appendix B, Criterion XVIII, as implemented by Section 17.2.18 of the Duane Arnold Operational QA Program, requires that a system of planned and periodic audits be performed to determine the effectiveness of and compliance with all aspects of the QA program.

Contrary to the above no audits were performed of Janda Electric Motor Services who had been a supplier of electrical motor rewinding and repair since 1973." (331/87012-05).

Response to Item of Violation

1. Corrective Action Taken and the Results Achieved

As noted in the previous response, Janda Electric Motor Service has been removed from the Nuclear Approved Vendors List as an approved supplier of electrical rewinding parts and services. Any repairs of safety related electrical apparatus at Janda will be source inspected and dedicated as described in the previous response. Should an approved Quality Assurance program be implemented at Janda Electric, and Janda be reinstated on the Nuclear Approved Vendors List, formal audits would be conducted in accordance with ANSI N45.2.12-1977.

2. Corrective Actions to be Taken

During the initial qualification of Janda Electric Motor Service by Iowa Electric and Bechtel, inspections and reviews of the company's facilities were performed. These activities, commencing in 1973, were audits at the time but would not now qualify as audits in accordance with our present commitment to ANSI N45.2.12-1977. There have been no recent audits of Janda. For the purpose of monitoring repairs, Iowa Electric made repeated shop visits and performed annual reviews of Janda Electric based on performance history.

As noted in the prior response, Iowa Electric has reviewed previous Quality Level I (safety-related) procurements to determine which vendors involved lacked an approved quality assurance program. Safety-related procurements from vendors so identified are being evaluated for their acceptability.

In accordance with the Operational Quality Assurance Program, the vendors within the Quality Level I, Safety Related section of the NAVL are part of a system of planned, periodic audits, and an audit report is on file for each vendor. In addition to the review undertaken in response to the previous violation, Iowa Electric has obtained the services of independent consultants to review the overall Quality Assurance program and make recommendations. Improvement of vendor audit requirements and practices will be considered. This independent evaluation has commenced and is expected to be completed by September 15, 1987. Iowa Electric will examine the evaluation's conclusions and implement corrective actions as appropriate.

3. Date When Full Compliance will be Achieved

Full compliance has been achieved with the removal of Janda Electric Motor Services from the Nuclear Approved Vendors List as an approved supplier of electrical rewinding parts and services.

NRC Item of Violation (Severity Level IV)

"10 CFR 21, as implemented by Sections 17.2.4.4(8) and 17.2.16.4 of the Duane Arnold Operational QA Program requires that the NRC be notified when a defect is noted in a component which could create a substantial safety hazard, and that procurement documents contain a statement notifying the supplier that 10 CFR Part 21 applies.

A. Contrary to the above, a Westinghouse Electric Corporation (Westinghouse) motor failed due to defective welds that attached the stator core to the motor case. No notification was made to the NRC by the licensee or Westinghouse.(331/87012-02B).

B. Contrary to the above, three purchase orders to Janda Electric Motor Services did not contain the statement that 10 CFR 21 applied.(331/87012-02A)."

Response to Item of Violation

A.

1. Corrective Action Taken and the Results Achieved

LER 87-012 was submitted earlier this month to document the failure of the river water supply pump cited in this Inspection Report. The LER included a description of the cause and corrective actions taken.

2. Corrective Actions to be Taken

We are conducting an engineering evaluation of the specific failure identified, which occurred in 1979, to determine whether the failure resulted from a design or manufacturing defect or from in-service failure, and whether the failure could affect other licensees. This determination and any additional reports required will be made by June 1, 1987.

The Deviation Report with its companion Deviation Report Evaluation is used for evaluation of plant problems. These reports with their evaluations address such items as root cause, corrective actions, and long term failure trending. In order to strengthen Iowa Electric's Part 21 identification mechanism the Deviation Report Evaluation process will be upgraded to include consideration of Part 21 reportability. The control procedure for this process will be modified by June 30, 1987.

Plant items are repaired onsite via Corrective Maintenance Action Requests (CMARS). Iowa Electric personnel will now periodically review for 10 CFR 21 reportability all completed CMARs which identify manufacturer defect as a root cause. A procedure is being developed to provide controls for this task and will be complete by June 30, 1987.

The Corporate Quality Assurance Procedure for reporting receiving inspection discrepancies is being upgraded to contain instructions regarding review of the discrepancy for Part 21 reportability. This procedure revision will be completed by June 30, 1987.

3. Date when Full Compliance will be Achieved

LER 87-012 has been submitted. In addition, an evaluation and determination of 10 CFR Part 21 reportability for this event will be complete by June 1, 1987. Upon completion of the evaluation, appropriate reports will be made if required.

B.

1. Corrective Action Taken and the Results Achieved

The Design Engineering and Quality Assurance Engineering personnel involved in reviewing procurement documents have been notified concerning this violation. Further procurements of safety related items and services will be more carefully screened for 10 CFR 21 applicability.

2. Corrective Actions to be Taken

As a corrective measure, retraining sessions in the application of 10 CFR 21 will be conducted for personnel involved in initiating and reviewing safety related procurement documents. These training sessions will be held prior to June 30, 1987. In addition, the related internal procedures pertaining to initiating and reviewing procurement documents will be reviewed with regards to 10 CFR Part 21 consideration instructions. This review, along with any appropriate procedure clarifications, will be accomplished by June 30, 1987.

3. Date When Full Compliance will be Achieved

Completion of the corrective actions to prevent recurrence of the omission of the Part 21 applicability statement from procurement documents will be achieved by June 30, 1987.



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

Attachment 2
Page 1 of 10

APR 24 1987

Docket No. 50-331

Iowa Electric Light and Power
Company

ATTN: Mr. Lee Liu
President and Chief
Executive Officer

IE Towers
P. O. Box 351
Cedar Rapids, IA 52406



Gentlemen:

This refers to the special safety inspection conducted by Messrs. H. A. Walker and R. N. Sutphin of this office on April 13-16, 1987, of activities at Duane Arnold Energy Center authorized by License No. DPR-49 and to the discussion of our findings with Mr. D. L. Mineck and others of your staff at the conclusion of the inspection.

The enclosed copy of our inspection report identifies 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 violation of NRC requirements, as specified in the enclosed Notice. A written response is required.

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter, the enclosures, and your response to this letter will be placed in the NRC Public Document Room.

The responses directed by this letter and the accompanying Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.

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Iowa Electric Light and Power
Company

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APR 24 1987

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

Sincerely,

Ronald N. Gardner for

J. J. Harrison, Chief
Engineering Branch

Enclosures:

1. Notice of Violation
2. Inspection Report
No. 50-331/87012(DRS)

cc w/enclosures:

D. Mineck, Plant Superintendent
Nuclear
R. Salmon, Technical Services
Superintendent
DCS/RSB (RIDS)
Licensing Fee Management Branch
Resident Inspector, RIII
Thomas Houvenagle, Iowa State
Commerce Commission

NOTICE OF VIOLATION

Iowa Electric Light and Power Company

Docket No. 50-331

As a result of the inspection conducted on April 13-16, 1987, and in accordance with 10 CFR Part 2, Appendix C - General Statement of Policy and Procedure for NRC Enforcement Actions (1985), the following violations were identified:

1. 10 CFR 50, Appendix B, Criterion IV, as implemented by Section 17.2.4.4(1) of the Duane Arnold Operational QA Program, requires that suppliers provide a QA Program consistent with the pertinent provisions of Appendix B.

Contrary to the above Janda Electric Motor Services was listed as an approved supplier of electrical rewinding parts and services but did not have an approved QA Program (331/87012-01).

This is a Severity Level V violation (Supplement 1).

2. 10 CFR 50, Appendix B, Criterion XVIII, as implemented by Section 17.2.18 of the Duane Arnold Operational QA Program, requires that a system of planned and periodic audits be performed to determine the effectiveness of and compliance with all aspects of the QA Program.

Contrary to the above no audits were performed of Janda Electric Motor Services who had been a supplier of electrical motor rewinding and repair since 1973. (331/87012-05).

This is a Severity Level V violation (Supplement 1).

3. 10 CFR 21, as implemented by Sections 17.2.4.4(8) and 17.2.16.4 of the Duane Arnold Operational QA Program requires that the NRC be notified when a defect is noted in a component which could create a substantial safety hazard, and that procurement documents contain a statement notifying the supplier that 10 CFR Part 21 applies.

- A. Contrary to the above, a Westinghouse Electric Corporation (Westinghouse) motor failed due to defective welds that attached the stator core to the motor case. No notification was made to the NRC by the licensee or Westinghouse (331/87012-02B).
- B. Contrary to the above, three purchase orders to Janda Electric Motor Services did not contain the statement that 10 CFR 21 applied. (331/87012-02A).

This is a Severity Level IV violation (Supplement 1).

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JPP

Notice of Violation

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Pursuant to the provisions of 10 CFR 2.201, you are required to submit to this office within thirty days of the date of this Notice a written statement or explanation in reply, including for each violation: (1) corrective action taken and the results achieved; (2) corrective action to be taken to avoid further violations; and (3) the date when full compliance will be achieved. Consideration may be given to extending your response time for good cause shown.

4/24/87
Dated

Ronald A. Gardner for
J. J. Harrison, Chief
Engineering Branch

U. S. NUCLEAR REGULATORY COMMISSION
REGION III

Report No. 50-331/87012(DRS)

Docket No. 50-331

License No. DPR-49

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

Facility Name: Duane Arnold Energy Center

Inspection At: Palo, Iowa

Inspection Conducted: April 13-16, 1987

Inspectors: *F. J. Jablonski* for
H. A. Walker

4-24-87
Date

F. J. Jablonski for
R. W. Sutphin

4-24-87
Date

Approved By: *F. J. Jablonski*
F. J. Jablonski, Chief
Quality Assurance Program Section

4-24-87
Date

Inspection Summary

Inspection on April 13-16, 1987 (Report No. 50-331/87012(DRS))

Areas Inspected: Announced inspection by two regional inspectors of procurement control activities. This inspection was conducted per NRC inspection procedures 30703 and 38701.

Results: Three violations were identified (failure to properly qualify supplier, Paragraph 3.A(1); failure to provide 10 CFR 21 notification, Paragraph 3.A(2); failure to perform supplier audits, Paragraph 3.B).

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DETAILS

1. Persons Contacted

Iowa Electric Light and Power Company

- *R. Essig, Supervising QA Engineer
- *R. Hannen, Assistant Plant Manager - Operations
- *C. Hill, Senior QA Engineer
- *E. Matthews, QA Manager
- *R. McCracken, QC Supervisor
- *D. Mineck, Plant Superintendent
- *J. Probst, Technical Support Engineer
- *R. Salmon, Technical Services Superintendent
- *J. Thorsteinson, Technical Support Supervisor
- *D. Wilson, Manager Nuclear Licensing

Janda Electric Motor Services

L. Janda, Owner and Manager

*Indicates those attending the exit meeting at the Duane Arnold Energy Center on April 16, 1987.

Other individuals were contacted as a matter of course during the inspection.

2. April 9, 1987. Meeting at Region III between Licensee Personnel and NRC Staff

On Thursday, April 9, 1987, at 10:00 a.m., Mr. D. Mineck and others of Iowa Electric Light and Power Co. (IE) met with Mr. W. G. Guldemond and others of the NRC staff at the NRC R-III office in Glen Ellyn, Illinois, to review IE procurement commitments and activities that established the background and guidelines for subcontracting of electric motor repair services.

Attending for DAEC were:

- D. L. Mineck, Plant Superintendent
- R. F. Salmon, Technical Support Superintendent
- R. D. Essig, Supervisory QA Engineer
- B. C. Klotz, QA Engineer
- N. Peterson, Licensing Engineer

Attending for NRC were:

- W. G. Guldemond, Branch Chief, DRP
- I. N. Jackiw, Section Chief, DRP
- F. J. Jablonski, Section Chief, DRS
- R. N. Sutphin, Reactor Inspector, DRS
- J. S. Wiebe, SRI, DAEC (By phone)

IE personnel presented a review of the Duane Arnold Energy Center (DAEC) QA Program and other programmatic commitments relating to procurement polices and procedures, particularly applied to electric motor repair services at a local motor repair shop. A discussion followed and the NRC decided that a special inspection would be conducted at the DAEC site by two NRC regional inspectors during the week of April 12-16, 1987.

3. Areas Inspected

This inspection was conducted to determine if procurement practices were in compliance with regulatory requirements and operational QA program commitments. Special emphasis was placed on procurements to and work performed by Janda Electric Motor Services. The inspection was performed by reviewing applicable procedures and records, conducting personnel interviews and observing work activities. The inspection also included a tour of a local suppliers facility. Inspection results are documented in the following sections of this report.

a. Procurement Control

The inspectors reviewed the methods used by the licensee to evaluate and qualify suppliers, to assess the effectiveness of suppliers quality and for inspecting and accepting supplied materials.

(1) In reviewing licensee methods for evaluating and qualifying suppliers the following documents were reviewed.

- (a) Quality Assurance Procedure No. 1104.3, "Vendor Evaluation," Revision 3.
- (b) Nuclear Generation Division Procedure No. 104.3, "Nuclear Approved Vendors List," Revision 2 with change notice "A".
- (c) "Iowa Electric Vendor Listing" issued April 10, 1987. (Note: The title is not consistent with the procedure in item (b).

The procedures noted in (a) and (b) appeared to be acceptable as written. In reviewing the IE Vendor Listing the inspector noted that several suppliers, including Janda Electric, were on the list without an approved QA program. Paragraph 3.2.3 of ANSI N45.2.13 and Criterion IV of 10 CFR 50, Appendix B require suppliers to have a QA program that addresses areas applicable to the work performed. The inspector noted that several purchase orders to Janda Electric, including PO S-29850 and PO S-30187, required that work be performed under the IE approved QA program. It was evident that the controlling procedures were being implemented contrary to ANSI N45.2.13 and Appendix B. Failure to require an approved QA program consistent with applicable criteria of 10 CFR 50, Appendix B was considered a violation of Criterion IV of 10 CFR 50, Appendix B (331/87012-01).

(2) The inspectors reviewed safety related purchase orders (POs) and respective receiving inspection packages issued to Janda Electric since 1983. The POs included:

- PO No. 009190 for rewinding motor for MOV MO-2401, completed 10/14/83.
- PO No. 009880 for rewinding RCIC turbine trip solenoid, completed 10/29/83.
- PO No. 014009 for rewinding motor for MOV MO-1998B, completed 6/8/84.
- PO No. 014228 for rewinding 125 HP river water supply pump motor, completed 6/19/84.
- PO No. 022896 for rewinding 125 HP river water supply pump motor, completed 9/26/85.
- PO No. 029850 for rewinding motor for MOV MO-4629, completed 10/8/86.
- PO No. 030187 for rewinding motor for MOV MO-2322, completed 10/25/86.

- (a) In reviewing POs 022896, 029850 and 030187 the inspectors noted that the POs did not contain the supplier notification required by 10 CFR 21.31. This was an example of a violation of 10 CFR 21 (331/87012-02A).
- (b) In reviewing previous Janda work history on the 125 HP Westinghouse Electric Corporation (Westinghouse) vertical shaft river water supply pump motors the inspectors noted that the first motor failure (PO No. 30333 repair completed 10/23/79) was due to a failure of welds attaching the stator core to the motor case. The correction of the problem consisted of drilling and pinning the stator to the case. This appeared to be a failure mechanism that could involve other medium size vertical shaft Westinghouse motors. There was no objective evidence that the licensee or Westinghouse reported this problem to the NRC as required by 10 CFR 21. This is a second example of a violation of 10 CFR 21 requirements (331/87012-02B).
- (c) In reviewing PO 009880 the inspector noted that the RCIC turbine trip solenoid was nonconforming but conditionally released for operations. Since the nonconformance consisted of a change in plant configuration, a 10 CFR 50.59 review was required prior to release for operations. A 10 CFR 50.59 review was performed in accordance with Nuclear Generation Division Procedure No. 112.2,

"Conditional Release," Revision 0; however, Chapter 12 of the Operations QA Manual did not require a such a review on conditional releases for operations. This matter is unresolved pending revision of the Operations QA Manual to include this requirement (331/87012-03).

- (d) In reviewing records submitted to the licensee by Janda Electric the inspectors noted that in some cases calibration data indicated some instruments were out of calibration and required adjustment to meet required tolerances. There was no evidence that the licensee was using this data and evaluating plant equipment to determine the impact of testing with out-of-tolerance equipment. This matter is unresolved pending review on a subsequent inspection (331/87012-04).

b. Quality Assurance Audits

The inspectors reviewed licensee audits of Janda Electric. The inspectors noted that all the audits had not met current IE operation QA program audit requirements. The audits were more appropriately classified as surveillances per Section 17.2.7.3 of the operations QA program. Current audit requirements were included in Section 17.2.18 of the operations QA program in 1983. A "desk top" evaluation of Janda was performed by IE; however, the evaluation was performed without benefit of a Janda QA program. Criterion XVIII of 10 CFR 50, Appendix B requires that planned and periodic audits be performed to determine the effectiveness of and compliance with all aspects of the QA program. The inspector was informed that license personnel do not perform supplier audits at established intervals but only when considered to be needed. Failure to perform audits of Janda Electric is a violation of Criterion XVIII of 10 CFR 50, Appendix B (331/87012-05).

c. Assessment of Janda Supplied Hardware

The inspectors observed the Janda Electric facilities in Cedar Rapids, Iowa. Although Janda did not have a QA program, the facility appeared to be well controlled and employed an adequate number of experienced personnel. Janda management appeared very cooperative and conscientious. Both Janda and the licensee indicated that safety related work was covered by IE QC personnel.

The inspector reviewed licensee records of equipment repaired by Janda. There were no failures that could be attributed to poor workmanship by Janda. Much of the Duane Arnold Plant equipment repaired by Janda has operated satisfactorily for years.

Based on the above reviews and observation the inspectors concluded that there did not appear to be a safety concern with Janda Electric even though some programmatic problems existed with the licensee's implementation of the QA program.

Three violations and two unresolved items were identified.

4. Unresolved Items

Unresolved items are matters that require more information to ascertain whether the matters are acceptable items, violations or deviations. Unresolved items disclosed during this inspection are included in Paragraphs 3.a(2)(c) and 3a(2)(d) of this report.

5. Exit Meeting

The inspectors met with licensee representatives (denoted in Paragraph 1) at the Duane Arnold Energy Center on April 16, 1986, and summarized the purpose, scope and findings of the inspection. The inspectors discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspectors during the inspection. The licensee did not identify any such documents or processes as proprietary.