

CENTRAL FILES

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

NOV 17 1976

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. W. J. Key and H. B. Kister of this office on October 21, 1976, of activities at Duane Arnold Energy Center authorized by NRC Operating License No. DPR-49 and to the discussion of our findings with Mr. K. Harrington 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.

No items of noncompliance with NRC requirements were identified during the course of this inspection.

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 letter and the enclosed inspection report 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 letter, 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.



Iowa Electric Light and
Power Company

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

Sincerely yours,



R. F. Heishman, Chief
Reactor Construction and
Engineering Support Branch

Enclosure:
IE Inspection Report
No. 050-331/76-24

cc w/encl:
Mr. G. G. Hunt,
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 Construction Inspection

IE Inspection Report No. 050-331/76-24

Licensee: Iowa Electric Light and Power Company
P. O. Box 351
Cedar Rapids, Iowa 52406

Duane Arnold Energy Center
Palo, Iowa

License No. DPR-49
Category: C

Type of Licensee: BWR 538 MW \bar{e}

Type of Inspection: Special, Announced

Dates of Inspection: October 21, 1976

Principal Inspector: *W. J. Key*
W. J. Key

11/15/76
(Date)

Accompanying Inspector: *H. B. Kister*
H. B. Kister

11/16/76
(Date)

Other Accompanying Personnel: None

Reviewed By: *E. L. Jordan*
E. L. Jordan, Acting Chief
Engineering Support Section

11/15/76
(Date)

SUMMARY OF FINDINGS

Inspection Summary

Inspection on October 21, 1976, (76-24): Evaluate licensee commitment to NRR in their Plant Unique Analyses Report relative to Containment Short Term Program modifications to the Mark 1 torus support structures. Review modification records, inspect selected items of installed supports and welds.

Enforcement Items

None.

Licensee Action on Previously Identified Enforcement Items

Not applicable.

Other Significant Items

A. Systems and Components

None.

B. Facility Items (Plans and Procedures)

Short Term Program modifications to the torus support structures are complete. The licensee has not, at this time, performed all dimensional inspections committed to in Iowa Electric letter IE-76-1318 dated September 1, 1976. It is planned that they will be completed prior to the next fueling outage. The licensee plans to empty and inspect the interior of the torus during the next refueling outage.

C. Managerial Items

None.

D. Noncompliance Identified and Corrected by Licensee

None.

E. Deviations

None.

F. Status of Previously Reported Unresolved Items

Not applicable.

Management Interview

- A. The following personnel attended a management interview held at the conclusion of the inspection.

Iowa Electric Light and Power Company

K. Harrington, Supervising Engineer, Construction

- B. Matters discussed during the interview were as follows:

1. The inspectors stated, that their inspection of selected column welds for measurement and evaluation of the as built condition and modifications indicated that they were in accordance with the commitment to NRR in their Plant Unique Analyses Report with the exception of welds indicated on the attached record.
2. The inspectors stated, that since procedures and records of torus modifications had been reviewed during a previous inspection, there was no need to re-review them during this inspection. (Inspection Report No. 050-331/76-17)
3. The licensee stated, that they planned to measure and document all welds to torus structures prior to the next refueling outage.
4. The inspector stated that the licensee's commitment to NRR for maintaining a differential pressure between the drywell and the torus was reviewed. It was noted that the commitment was being fulfilled.

REPORT DETAILS

1. Persons Contacted

No personnel, other than those listed under the Management Interview section of this report were contacted.

2. Observation and Measurement of Modification

The following columns were randomly selected and welds measured. Results of the measurements are included as Attachment I.

Outside Columns

No. 5
No. 10
No. 15

Inside Columns

No. 3
No. 8
No. 14

Attachment:
Attachment I, Inspection
of Torus Support Structure

INSPECTION OF TORUS SUPPORT STRUCTURE

Column No.	INSPECTION ITEMS															
Outside	1a	1b	1c	1d	2a	2b	3a	3b	3c	3d	3e	3f	4	5	6	
5	L	Full Penet. 3ft	10 1/4"	10 1/4"	NA	8 1/4"	NA	NA	NA	NA	NA	25" x 25" x 1/2"	All Around	2	Loose Tack	
	S	Full Penet.	Fillet 3/8"	Fillet 3/8"	NA	Full Penet.	NA	NA	NA	NA	NA	1/2"	1 3/4"	Welded to Bolt	Yes	
10	L	3ft	10 1/4"	10 1/4"	NA	7 3/4"	NA	NA	NA	NA	25" x 25" x 1/2"	All Around	2			Yes
	S	Full Penet.	Fillet 3/8"	Fillet 3/8"	NA	Full Penet.	NA	NA	NA	NA	2 1/2"	1/2"	1 3/4"			Yes
15	L	3ft	10 1/4"	10 1/4"	NA	8"	NA	NA	NA	NA	25" x 25" x 1/2"	All Around	2			Yes
	S	Full Penet.	Fillet 3/8"	Fillet 3/8"	NA	Full Penet.	NA	NA	NA	NA	2 1/2"	1/2"	1 3/4"			Yes
Column No.	Inside															
3	L	3ft	10 1/4"	10 1/4"	NA	8 1/4"	NA	NA	NA	NA	25" x 25" x 1/2"	All Around	2	Loose Tack		Yes
	S	Full Penet.	Fillet 3/8"	Fillet 3/8"	NA	Full Penet.	NA	NA	NA	NA	2 1/2"	1/2"	1 3/4"	Welded to Bolt		Yes
8	L	2ft	10 1/4"	10 1/4"	NA	8"	NA	NA	NA	NA	25" x 25" x 1/2"	All Around	2			Yes
	S	Full Penet.	Fillet 3/8"	Fillet 3/8"	NA	Full Penet.	NA	NA	NA	NA	2 1/2"	5/8"	1 3/4"			Yes
14	L	3ft	10 1/4"	10 1/4"	NA	7 3/4"	NA	NA	NA	NA	25" x 25" x 1/2"	All Around	2			Yes
	S	Full Penet.	Fillet 3/8"	Fillet 3/8"	NA	Full Penet.	NA	NA	NA	NA	2 1/2"	5/8"	1 3/4"			Yes

Column No.		7a	7b	7c	7d	7e	7f	7g	7h	NOTE-43	4b	4c				
Outside																
5	L	NA	NA	NA	NA	NO	NA	NA	NA		5 1/2-7 1/2	6 1/2-7 1/2				
	S					NO				3/4"	1/2"	1/2"				
10	L					NO					4-4 1/2	5 1/2-7 1/2				
	S					NO				3/4"	1/2"	1/2"				
15	L					NO					8" 5/8"	8 1/2-7 1/2				
	S	✓	✓	✓	✓	NO	✓	✓	✓	3/4"	1/2"	1/2"				
Column No.																
Inside																
3	L	NA	NA	NA	NA	NO	NA	NA	NA		4-4	5 1/2-7 1/2				
	S					NO				3/4"	1/2-3/8	5/8				
8	L					NO					4-4 1/2	5 1/2-7 1/2				
	S					NO				3/4"	1/4-3/8	1/2				
14	L					NO					7 1/4-6"	5 1/2-7 1/2				
	S	✓	✓	✓	✓	NO	✓	✓	✓	3/4"	3/8	3/8				