

*Reactor Facilities
Branch*

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

MAR 10 1976

Iowa Electric Light and Power Company Docket No. 50-331
ATTN: Mr. Duane Arnold, President
Security Building
P.O. Box 351
Cedar Rapids, Iowa 52405

Gentlemen:

This refers to the inspection conducted by Mr. I. N. Jackiv of this office on February 11, 12, 23 and 24, 1976, of activities at Duane Arnold Power Station authorized by NRC Operating License No. DPR-49 and to the discussion of our findings with Mr. Hammond 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 within the scope 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.

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Iowa Electric Light
and Power Company

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MAR 10 1976

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. 050-331/76-02

cc w/encl:
G. G. Hunt,
Chief Engineer

bcc w/encl:
PDR
Local PDR
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UNITED STATES NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report of Operations Inspection

IE Inspection Report No. 050-331/76-02

Licensee: Iowa Electric Light and Power Company
Security Building
P.O. Box 351
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, Unannounced

Dates of Inspection: February 11-12, 23 and 24, 1976

Principal Inspector: *I. N. Jackiw*
I. N. Jackiw

3/9/76
(Date)

Accompanying Inspectors: None

Other Accompanying Personnel: None

Reviewed By: *W. S. Little*
W. S. Little, Chief
Nuclear Support Section

3/9/76
(Date)

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OFFICE OF INSPECTION AND ENFORCEMENT

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(Date)

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Reviewed By: *W. S. Little*
W. S. Little, Chief
Nuclear Support Section

3/9/76

(Date)

SUMMARY OF FINDINGS

Inspection Summary

Inspection on February 11, 12, 23 and 24, (76-02): Reviewed preparation for refueling activities, refueling activities, and maintenance activities scheduled during refueling. No items of noncompliance were identified.

Enforcement Items

None.

Licensee Action on Previously Identified Enforcement Items

None reviewed.

Other Significant Items

A. Systems and Components

None.

B. Facility Items

None.

C. Managerial Items

None.

D. Noncompliance Identified and Corrected by Licensee

None.

E. Deviations

None.

F. Status of Previously Reported Unresolved Items

None reviewed.

Management Interview

At the conclusion of the inspection on February 24, 1976, an exit interview was conducted with Mr. E. Hammond. The following items were discussed:

- A. The inspector summarized the areas checked during this inspection.
- B. The inspector stated that he had reviewed procedures and records for pre-refueling and refueling activities and they appear to be in conformance with the technical specifications. (Paragraphs 3-5, Report Details)
- C. The inspector stated no problems were identified in the area of maintenance procedures that will be used during the refueling outage. (Paragraph 5, Report Details)

REPORT DETAILS

1. Persons Contacted

G. Hunt, Chief Engineer
E. Hammond, Assistant Chief, Engineer
R. Hannon, Reactor and Plant Performance Engineer
J. Gebert, Maintenance Supervisor
J. Vinquist, Electrical Maintenance Supervisor
B. York, Operations Supervisor
J. Weeda, Surveillance Engineer
D. Rockhill, Mechanical Maintenance Supervisor

2. General

Records and procedures were reviewed to determine whether pre-fueling activities specified in the technical specifications have been completed, whether major maintenance activities scheduled during refueling will be conducted in accordance with approved procedures and whether refueling activities are being conducted as required by technical specifications or approved procedures.

3. Pre-Fuel Handling Activities

The inspector reviewed records and verified that surveillance testing and inspections involving the following pre-refueling activities have been completed:

- a. "Refueling Interlocks" STP 49A001 - Checks were completed on February 21, 1976.
- b. Crane Testing - "Refuel Bridge Hoists Load Tests" IP-132 was completed on January 28, 1976.
- c. "Refueling Pool Exhaust Radiation Monitors" STP 42D001 - Tests for radiation monitors RE 4131 A and B were completed on January 26, 1976.
- d. "Secondary Containment Integrity" STP 47C001 - This check was performed on February 16, 1976.
- e. "SRM Trip" STP 42C005 - Tests were completed on February 22, 1976.

- f. "APRM High Flux (15% Scram)" STP 41A017 - Test was completed on February 20, 1976.
- g. "IRM Trip Functional Test and Calibration" STP 41A004 - Test was completed on February 20, 1976.
- h. "New Fuel Receiving and Inspection" FCCHP No. 9 - Fuel was inspected on December 18, 1975 using this procedure.
- i. "Receiving Inspection (Electrical) of LPRM Strings" FRCHP No. 15 - This procedure was used to inspect and test LPRM strings on December 17, 1975.

The inspector also confirmed that the following procedures exist for refueling activities:

- a. "Visual Channel Inspection Procedure" FCCHP No. 2.
- b. "Procedure for Moving Fuel Between Reactor Core and Spent Fuel Pool or Within Either the Reactor Core or Spent Fuel Pool" FRCHP No. 5.

4. Fuel Handling Activities

Review of records and direct observation of fueling activities established that the following conditions exist:

- a. SRM's are checked daily for response. Two SRM's are operable in the core quadrant where fuel is being moved. All rods are fully inserted and the SRM level is > 3 cps.
- b. The reactor mode switch is in the refuel position and the fuel pool level is > 36 feet and is recorded daily in STP 42A001.
- c. Movement of fuel assemblies is in accordance with FRCHP No. 5. Fuel moving plans are prepared under the direction of the Reactor and Plant Performance Engineer and are reviewed and approved by the operations supervisor and the operations committee.
- d. Prior to grappling any fuel assembly, the reactor engineer verifies the location of the bundle and also the serial number is verified for bundles being moved from the spent fuel pool

to the reactor core. All fuel moves are documented in the control room and on the refueling floor. Core boards are maintained in the control room and on the refueling floor.

The reactor engineer checks the fuel assembly orientation and bundle seating.

- e. Procedural requirements are being observed for storing and protecting reactor components on the refueling floor. Also, precautions are taken to protect against foreign objects falling into the reactor vessel.
- f. A minimum of three people are present on the refueling floor at all times while fuel is being moved. A minimum of two people are in the control room during this time.

A fuel handling equipment operator who holds a license, performs the actual fuel moves. A shift engineer who holds a senior reactor license, is also present on the refueling floor and directly supervises the fuel handling activities. Two additional people are also present on the refueling floor - a reactor engineer and an assistant reactor operator.

5. Maintenance

The inspector reviewed a number of maintenance activities scheduled during the refueling outage and confirmed that they will be performed using approved procedures. The following activities were selected:

- a. "Control Rod Drive Removal and Replacement" RP55.
- b. "Drywell Head Removal Procedure" RP59.
- c. "Rx Vessel Head, Steam Dryer Shroud Head and Separator Removal Procedure" RP62.
- d. "Maintenance of Steam Isolation Valves" RP83.
- e. "Removal/Installation of Control Rods" FRCHP No. 11.
- f. "Removal/Installation of Control Rod Guide Tubes" FRCHP No. 12.

No discrepancies were identified in the area of refueling activities.