



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

MAR 22 1978

Docket No. 50-331

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

Gentlemen:

This refers to the inspection conducted by Mr. W. B. Grant of this office on February 14, 15, March 6, and 7, 1978, of the activities at Duane Arnold Energy Center authorized by NRC Operating License No. DPR-49 and to the discussion of our findings with Mr. E. L. Hammond and members 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.

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.

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Iowa Electric Light
and Power Company

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MAR 22 1978

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

Sincerely,

W. L. Fisher, Acting Chief
Fuel Facility and Materials
Safety Branch

Enclosure: IE Inspection
Report No. 50-331/78-04

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

OFFICE	RIII <i>WBS</i>	RIII	RIII <i>WBS</i>	RIII <i>WBS</i>	
SURNAME	Grant/ls	Essig <i>ATC</i>	Fisher	Shafer <i>WBS</i>	
DATE	3/16/78				

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No. 50-331/78-04

Docket No. 50-331

License No. DPR-49

Licensee: Iowa Electric Light and Power Company
IE Towers
P. O. Box 351
Cedar Rapids, IA 51406

Facility Name: Duane Arnold Energy Center

Inspection At: Duane Arnold Site, Palo, IA

Inspection Conducted: February 14, 15, and March 6, and 7, 1978

Inspector: *WB Grant*
W. B. Grant

3/17/78

Approved By: *T. H. Essig*
T. H. Essig, Chief
Environmental and Special
Projects Section

3/17/78

Inspection Summary

Inspection on February 14, 15, and March 6, and 7, 1978 (Report No. 50-331/78-04)

Areas Inspected: Routine, unannounced inspection on the environmental protection program including management controls; program review and audit, radiological and nonradiological monitoring programs, water quality monitoring, and special studies. The inspection involved 23 inspector-hours onsite by one NRC inspector.
Results: No items of noncompliance or deviations were disclosed.

DETAILS

1. Persons Contacted

- *E. Hammond, Chief Engineer
- K. Young, Radiation Protection Engineer
- *G. Kuehn, Assistant Radiation Protection Engineer
- *R. Rinderman, Quality Supervisor
- J. Davis, Quality Engineer
- G. Roach, Plant Chemist
- G. Bishop, Surveillance Program Coordinator
- B. McVicker, Rad-Chem Technician
- D. Vernon, Rad-Chem Technician (Environmental)

*Denotes those present at the exit interview.

2. Management Control

The licensee's administrative and procedural controls for implementation of the environmental monitoring and nonradiological effluent control programs were examined. This examination included review of assignments, responsibilities, and authorities for program management and implementation. The licensee has maintained the same management and audit functions relating to the conduct of the environmental monitoring and nonradiological effluent control₁ programs as were in effect during the previous inspection.

a. Review and Audit

The inspector reviewed reports and documentation of licensee audits conducted during calendar year 1977. Two audits were conducted: Iowa Electric Headquarters Quality Assurance (August 1977) consultant audit; and DAEC Quality Assurance (November 1977) quality audit. The audits reviewed environmental monitoring results for determination of completeness of Appendix B, technical specification requirements. No technical specification violations were found.

b. Operational Procedure

The inspector reviewed the licensee's and the licensee contractor's environmental sampling procedures. It was

1/ IE Inspection Rpt No. 50-331/77-11.

noted that the procedures are reviewed and approved by the operations committee.

c. Calibration Procedures

The inspector reviewed procedures and documentation of the calibration of equipment utilized in the environmental monitoring program. Calibration records and records of periodic maintenance on the pH meters and the amperometric titrator were reviewed.

No items of noncompliance or deviations were identified.

3. Implementation of the Environmental Protection Program

a. Radiological Monitoring Program

Results of the licensee's radiological and environmental monitoring programs for the calendar year 1977 were selectively examined for compliance with monitoring and reporting requirements.

(1) Environmental Monitoring Reports

No unusual results or trends were identified in the inspector's review of the radiological environmental monitoring results. The inspector reviewed the environmental monitoring program draft report for 1977, and determined it was prepared according to requirements of the technical specifications.

(2) Sample Collection Stations

Selected milk sampling stations were examined and found to be located as specified.

(3) TLD Systems

Results of the Lithium Fluoride (LiF) thermoluminescent dosimeter (TLD) gamma radiation monitoring system were examined for calendar year 1977. No problems areas were observed.

No items of noncompliance or deviations were noted.

b. Nonradiological Monitoring Program

Results of the licensee's nonradiological environmental monitoring program for 1977 were selectively examined for compliance with monitoring and recording requirements.

(1). Chemical Discharges

The inspector reviewed chemical analyses of waste neutralizing tank discharges during 1977. The release data were reviewed for compliance with monitoring and effluent release limitations contained in the technical specifications. It was determined that there were no chemical releases exceeding those contained in the technical specifications. In addition, the inspector reviewed pH requirements and determined that the releases were within the allowable pH range.

The inspector reviewed chlorination records and determined that the licensee is securing the blowdown water from the cooling towers prior to chlorination. After chlorination, sampling of the blowdown is performed and no releases are made until the chlorine levels are less than 0.05 milligrams per liter.

No items of noncompliance or deviations were identified.

(2) Water Quality Monitoring

(a) General Water Analysis

The inspector reviewed the general water quality analysis program which is conducted twice per month routinely. The general water quality analysis data are presented in the 1977 Annual Cedar River Operational Ecological Study draft report. The inspector determined that the program has been conducted during 1977 in accordance with the referenced technical specifications and that the 1977 annual operating report is being prepared and will be released in accordance with reporting requirements.

(b) Complete Water Quality Analysis

In accordance with Appendix B, Technical Specification 4.1.1.2, the general water quality parameters plus eleven other chemical analyses are performed three times per year, at the five general water quality sampling locations. In addition, dissolved oxygen, pH, and alkalinity are determined at each site every four hours over a twenty-four hour period. The complete water quality analyses are done by a licensee contractor. The inspector reviewed the contractor's annual report in draft form and determined that analyses have been performed as required.

(c) Thermal Monitoring

The inspector reviewed documentation pertaining to the calibration checks of the temperature (RTD) sensors and determined that the licensee had performed annual calibration checks as required.

No items of noncompliance or deviations were identified.

c. Special Studies

(1) Plankton, Bacteriological, and Periphyton

The inspector reviewed plankton, bacteriological, and periphyton studies and determined that they are conducted and recorded as required by the technical specifications.

(2) Benthic Organisms Study

The inspector reviewed the benthic organisms studies and determined that they were conducted in accordance with technical specifications.

(c) Entrainment, Impingement, and Terrestrial Salt Drift Studies

The entrainment and impingement studies and the monthly salt drift inspection summaries were reviewed and it was determined that they were conducted in accordance with the technical specifications.

No items of noncompliance or deviations were identified.

4. Exit Interview

The inspector met with licensee representatives (as denoted in Paragraph 1) at the conclusion of the inspection on March 7, 1978. The inspector summarized the purpose and scope of the inspection and the findings.