

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

REGION III

Report No. 50-331/79-31

Docket No. 50-331

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

Facility Name: Duane Arnold Energy Center

Inspection At: Duane Arnold Site, Palo, IA

Inspection Conducted: December 18-20, 1979

Inspector: *W B Grant*
W. B. Grant

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

1/11/80

(Date)

1/11/80

(Date)

Inspection Summary:

Inspection on December 18-20, 1979 (Report No. 50-331/79-31)

Areas Inspected: Routine, unannounced inspection of (1) Emergency Planning, including licensee internal audits; discussions with offsite support agencies; review of emergency facilities, equipment, instrumentation, and supplies specified in the Preparedness Plan and associated procedures; review of training of emergency personnel; review records of emergency exercises; and (2) review of Environmental Technical Specification Violation 79-02. The inspection involved 18 inspector-hours onsite by one NRC inspector.

Results: Of the seven areas inspected, no items of noncompliance or deviations were identified in six areas; one apparent item of noncompliance (infraction - excessive chlorine discharge, Paragraph 8) was identified in one area.

8002250480

DETAILS

1. Persons Contacted

Principle Licensee Employees

*L. Root, Assistant Vice President, Nuclear Generation
*D. Mineck, Chief Engineer
*B. York, Assistant Chief Engineer, Operations
*K. Young, Radiation Protection Engineer
*G. Kuehn, Assistant Radiation Protection Engineer
J. Davis, Quality Engineer
R. Anderson, Training Coordinator

*Denotes those present at the exit interview.

Other Personnel

W. Bjorenson, Director, Linn County Civil Defense
B. Smith, Captain, Linn County Sheriff's Department
W. Rodgers, Assistant Administrator, Mercy Hospital
K. McDonald, RN, Head Nurse, Trauma Center, Mercy Hospital
J. Seaba, RT, Administrative Technologist, Mercy Hospital

2. Licensee Action on Previous Inspection Findings

(Open) Inspection Item (331/79-04): Problems with emergency radio and telephone communication identified during emergency drills. Additional telephone equipment was installed in the new Security Control Point (Emergency Control Center) and longer range radio equipment will be installed during the outage scheduled for February 1980. This item remains open, pending installation of longer range radio equipment and will be reviewed during a future inspection.

3. Licensee's Internal Audits

The inspector reviewed reports and documentation of licensee audits conducted since the previous emergency planning inspection, in February 1979. Four audits were conducted, including audits of quarterly and annual exercises, and of the Preparedness Plan and Preparedness Plan Implementing Procedures (PPIPs). The audit of the annual exercise and of the Preparedness Plan and PPIPs contained several recommendations. The inspector determined that corrective action had been accomplished when recommended.

4. Coordination With Offsite Agencies

The inspector reviewed records, procedures, and written agreements in effect since the last emergency planning inspection relating to the licensee's coordination of emergency planning with agencies listed in the Preparedness Plan and Procedures. The inspector discussed the subject with licensee representatives and with representatives of four offsite agencies, i.e., the Linn County Sheriff's Department, Mercy Hospital, Cedar Rapids; the Linn County Civil Defense and the Linn County Department of Health.

These discussions verified that agreements between the licensee and these offsite agencies remain in effect, and that the licensee's contact and coordination were adequate for these agencies to maintain an effective response capability.

No items of noncompliance or deviations were identified.

5. Facilities and Equipment

The following selected emergency facilities, equipment, and materials were examined for maintenance and ready condition:

a. Equipment Boxes

Examination of the emergency equipment boxes showed that they are located and supplied as specified in the Preparedness Plan, and in the PPIPs. Review of documentation established that the materials inventory of the emergency equipment boxes has been performed on a quarterly basis as specified in the procedural controls.

b. Decontamination Room and Supplies

The inspector reviewed equipment and supplies in the decontamination room. It was established that the room is located and maintained as specified in the Preparedness Plan and PPIPs.

c. First Aid Supplies

Selected first aid kits located throughout the plant and first aid supplies located in the first aid room were examined. The items were located as specified in the Preparedness Plan. The licensee representative stated that the supplies in the first aid kits and in the first aid room are inventoried and maintained on a monthly schedule, thereby ensuring the continuous availability of the minimum quantity of materials.

The representative added that the full time dayshift nurse is on duty due to the large number of contractor personnel still on site.

d. Instrumentation and Monitors

The inspector examined portable radiation monitors onsite, at the local hospital and at the licensee's corporate headquarters. It was noted that the portable radiation detection instruments were operable, and had been calibrated on a quarterly basis. The portable radiation instruments for the Emergency Control Center (ECC), are stored in the health physics area, which joins the ECC.

Equipment for communications between the Plant Security Control Point, the Control Room, Offsite Agencies, and Iowa Electric headquarters is located in the Security Control Point. This communications network is checked once each shift. Preparedness Plan Implementing Procedure No. 2 has been changed to specify the new location of the Emergency Director at the new Security Control Point. As mentioned previously, the communication problems noted in emergency drills held in 1978, have been partially corrected with the installation of the telephones in the new Security Control Point, and will be completed during the outage scheduled for February 1980 with the installation of the radio communications equipment.

Accident assessment capabilities of radioactive release monitoring instruments, area monitors, and meteorological sensors were also reviewed during the inspection. Calibrations appeared current and no problems were noted.

No items of noncompliance or deviations were noted.

6. Training

The inspector reviewed documentation generated since the last emergency planning inspection pertaining to the preparedness training of Duane Arnold Energy Center personnel. All training of new employees has been completed as specified in PPIP No. 13. American Red Cross Multi-Media first aid training has been given to all personnel needing retraining in 1979. The inspector selectively reviewed training related documentation to verify the training required by The Preparedness Plan and Procedures had been conducted.

No items of noncompliance or deviations were noted.

7. Emergency Exercise

The inspector reviewed records of the emergency exercises conducted during calendar year 1979. Two quarterly exercises involving onsite personnel and one annual general emergency type exercise involving coordination and participation by offsite agencies were conducted.

The inspector determined that the licensee used trained, qualified personnel to evaluate the organizations response. Critiques were held following each exercise. Recommendations and suggestions for possible improvements in the exercises were discussed.

It was noted that additional telephone service has been added to the security control point, and that facilities now appear adequate to handle the increased volume of telephone traffic expected during an emergency situation. Licensee representatives stated that the new radio communications system, which will enable the monitoring team to relay information to the Emergency Director, has been ordered and should be installed during the next scheduled outage in February 1980. This communication system will be reviewed during the next emergency planning inspection.

No items of noncompliance or deviations were identified.

8. Review of Environmental Technical Specification Violations

The inspector reviewed the corrective action for Environmental Technical Specification Violation (ETSV) 79-2, which was reported to the Nuclear Regulatory Commission on November 26, 1979. The licensee reported that following automatic plant shutdown on November 8, 1979, the plant cooling tower basins were observed to be overflowing. The basins were overflowing due to continuous well water addition to the circulating water system, and because the blowdown flow had been secured prior to the plant shutdown for circulating water chlorination. An analysis of the cooling tower water indicated the chlorine concentration of the water overflowing the cooling tower basins, and eventually reaching the Cedar River exceeded the limit of 0.1 mg per liter specified in Appendix B, Technical Specification, Section 2.2.1. Licensee representatives stated that the present plant design did not allow for securing or rerouting of well water discharge, after a plant shutdown, and thus, the cooling tower basin overflow was inevitable if blowdown flow was secured. In this instance, circulating water system chlorination had just been completed when the plant shutdown occurred. There was nothing operations personnel could do to rectify the situation.

Corrective action including initiating a plant design change that has been completed and is currently in the testing phase, which will provide continuous dechlorination of the circulating water system blowdown flow. This system will eliminate this type of event by providing a continuous controlled release point for the circulating water. The inspector identified no significant problem with the licensee's corrective action, and had no further questions.

9. Exit Interview

The inspector met with licensee representatives (noted in Paragraph 1) at the conclusion of the inspection on December 20, 1979. The inspector summarized the purpose and scope of the inspection, and the findings. The item of noncompliance was discussed with licensee personnel by telephone on December 27, 1979, the licensee acknowledged that the item was noncompliance because of the actual event, even though it had been identified and reported by them.