



UNITED STATES  
ATOMIC ENERGY COMMISSION  
DIRECTORATE OF REGULATORY OPERATIONS  
REGION III  
799 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60137

TELEPHONE  
(312) 858-2660

A. RO Inspection Report No. 050-331/73-19

Transmittal Date : January 25, 1974

Distribution:  
RO Chief, FS&EB  
RO:HQ (5)  
~~DR~~ Central Files  
Regulatory Standards (3)  
Licensing (13)  
RO Files

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RO Chief, FS&EB  
RO:HQ (4)  
L:D/D for Fuels & Materials  
DR Central Files  
RO Files

B. RO Inquiry Report No. \_\_\_\_\_

Transmittal Date : \_\_\_\_\_

Distribution:  
RO Chief, FS&EB  
RO:HQ (5)  
DR Central Files  
Regulatory Standards (3)  
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DR Central Files  
RO Files

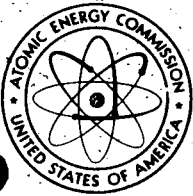
C. Incident Notification From: \_\_\_\_\_  
(Licensee & Docket No. (or License No.))

Transmittal Date : \_\_\_\_\_

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DR Central Files  
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TELEPHONE  
(312) 858-2660

JAN 25 1974

Iowa Electric Light and Power Company  
ATTN: Mr. Charles W. Sandford  
Vice President, Engineering  
Security Building  
P. O. Box 351  
Cedar Rapids, Iowa 52405

Docket No. 50-331

Gentlemen:

This refers to the inspection conducted by Mr. G. T. Lonergan of this office on December 4-7, 1973, of activities at the Duane Arnold site authorized by AEC Construction Permit No. CPPR-70 and to the discussion of our findings with Messrs. Hunt, Graybeal and others of your staff at the conclusion of the inspection.

A copy of our report of this inspection is enclosed and identifies the areas examined during the inspection. Within these areas, the inspection consisted of a selective examination of procedures and representative records, interviews with plant personnel, and observations by the inspector.

No violations of AEC requirements were identified within the scope of this inspection. However, certain items in the Duane Arnold Energy Center Emergency Plan were identified as needing further action. These items are contained in Paragraphs 4 through 13 of the Report Details Section of the enclosed inspection report. It is our understanding that appropriate action will be taken to resolve these matters. We will examine these actions during a subsequent inspection.

In accordance with Section 2.790 of the AEC'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 AEC's Public Document Room. If this report contains any information that you or your contractors believe to be proprietary, it is necessary that you make a written application to this office, within twenty days of your receipt of this letter, to withhold such information from public disclosure. Any such application must include a full statement of the reasons for which it is claimed that the information is proprietary, and should be prepared so the proprietary information identified in the application is contained in a separate part of the document. Unless we

Iowa Electric Light  
and Power Company

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JAN 25 1974

receive an application to withhold information or are otherwise contacted within the specified time period, the written material identified in this paragraph will be placed in the Public Document Room.

Should you have any questions concerning this inspection, we will be glad to discuss them with you.

Sincerely yours,

James G. Keppler  
Regional Director

Enclosures:  
RO Inspection Rpt No.  
050-331/73-19

cc: G. Hunt, Chief Engineer  
DAEC Site w/o encl

bcc: RO Chief, FS&EB  
RO:HQ (4)  
Licensing (4)  
✓ DR Central Files  
RO Files  
PDR  
Local PDR  
NSIC  
DTIE  
OGC, Beth P-506A

U. S. ATOMIC ENERGY COMMISSION  
DIRECTORATE OF REGULATORY OPERATIONS

REGION III

RO Inspection Report No. 050-331/73-19

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. CPFR-70  
Category: B

Type of Licensee: BWR - 538 Mwe

Type of Inspection: Special, Announced

Dates of Inspection: December 4 - 7, 1973

Dates of Previous Inspection: July 9 - 11, 1973

Principal Inspector: *J. A. Pagliaro for*  
Mr. G. T. Lonergan

1/24/74  
(Date)

Accompanying Inspector: None

Other Accompanying Personnel: None

Reviewed By: *J. A. Pagliaro*  
Mr. J. A. Pagliaro  
Senior Environmental Scientist  
Environment and Special Projects

1/24/74  
(Date)

## SUMMARY OF FINDINGS

Enforcement Action: None

Licensee Action on Previously Identified Enforcement Items:

No previously identified enforcement items within the scope of this inspection.

Unusual Occurrences: None

Other Significant Findings:

### A. Current Findings

This inspection included a review of the licensees emergency preparedness plan as well as the facilities, equipment, procedures and capabilities to implement the plan. No unresolved items were identified during this inspection. However, the following items were identified as requiring action prior to initiation of fuel loading operations.

1. Updating of Table 1, "Off-site Emergency Support Groups" of The Preparedness Plan. (Paragraph 4)
2. Placement of emergency equipment and supplies. (Paragraph 5)
3. Updating of letters of agreement. (Paragraph 6)
4. Completion of procedures for testing and test of the communications systems designated for use in emergencies. (Paragraph 7)
5. Installation of testing of audible evacuation alarm signal system. (Paragraph 8)
6. Documentation of a personnel accountability procedure. (Paragraph 9)
7. Training of onsite personnel covering appropriate response to evacuation alarm and personnel accountability procedures. (Paragraph 10)
8. Development of detailed written procedures to effectively implement the objectives of the preparedness plan. (Paragraph 11)

9. Referencing of procedures for coping with bomb threats and civil disturbances in the implementing procedures. (Paragraph 12)

10. Conduct a radiation emergency drill. (Paragraph 13)

These items will be examined in a subsequent inspection.

B. Status of Previously Unresolved Items

RO Inspection Report No. 050-331/73-08 dated August 23, 1973, indicated three unresolved items. The current status of each is discussed below:

1. Contamination control at the off-site emergency treatment/decontamination facilities.

The facility at Mercy Hospital in Cedar Rapids was not visited during the inspection of December 4-7, 1973, however, representatives of IELP indicated plans have been made to provide appropriate, exhaust air filtration, liquid waste collection and shower facility contamination control.

2. Location of the alternate emergency coordination center (AECC). The licensee had agreed to evaluate the location of the AECC. Upon completion of this evaluation the licensee reached the conclusion that the location of the AECC in the Switchyard Control Building is justified.

3. Communications equipment to be utilized in the re-entry procedure. The licensee had agreed to perform a test of communication equipment with the operators of the communications equipment wearing respirators prior to fuel loading. The test had not been accomplished at the time of this inspection due to unavailability of the transceivers planned for use. The licensee plans to accomplish the test prior to fuel loading.

Management Interview

The results of the discussions, tour of the facility, and review of procedures were discussed with Messrs. Hunt, Hammond, Graybeal, Root, Wilson, Wallace and Rinderman at the conclusion of the inspection on December 7, 1973. Those items listed under item A in Current Findings above were discussed during the Management Interview.

## REPORT DETAILS

### 1. Personnel Contacted

G. Hunt, Chief Engineer, DAEC  
E. Hammond, Assistant Chief Engineer, DAEC  
R. Graybeal, Radiation Protection Engineer, DAEC  
C. Campbell, Department of Environmental Quality, State of Iowa  
C. Miller, Department of Environmental Quality, State of Iowa  
S. Zison, Department of Environmental Quality, State of Iowa  
E. Staneck, Department of Environmental Quality, State of Iowa  
E. Haars, Department of Environmental Quality, State of Iowa  
L. Crane, Department of Environmental Quality, State of Iowa  
H. Boccella, Communications and Warning Officer, Iowa Civil Defense  
P. Hamlin, Coordinator, Office of Planning and Programing, State of Iowa.

### 2. General

The inspection of December 4-7, 1973, by Mr. Lonergan RO:III, included (1) a review and discussion of the findings contained in Inspection Report No. 050-331/73-08, (2) a review of the current status of emergency plan implementing procedures, (3) a familiarization tour of the plant which was directed primarily toward those areas, facilities and equipment which could be expected to be utilized in response to an emergency involving radiation at DAEC.

Representatives of the state of Iowa's Department of Environmental Quality, Office of Civil Defense and Office of Planning and Programing were visited by the inspector, and the current status of Iowa's radiologic emergency response plan was reviewed.

Copies of the GUIDE AND CHECKLIST FOR THE DEVELOPMENT AND EVALUATION OF STATE RADIOLOGICAL EMERGENCY RESPONSE PLANS FOR FIXED NUCLEAR FACILITIES, dated November 16, 1973, were provided representatives of the Iowa Department of Environmental Quality (DEQ) and Mr. P. Hamlin, Coordinator of the Office of Planning and Programing (OP&P). Following a joint meeting in Des Moines, Iowa on December 5, 1973, with representatives of DEQ, OP&P, and Iowa Civil Defense, Hamlin informed the inspector that effort would be expended toward the development of a state radiological response plan within the framework of the guidance. Conversations with representatives of DEQ following the inspection indicated progress is being made in this area.

### 3. Organization and Authority

The DAEC Emergency Plan as ammended 12/72 in general provides definition

of the organization, authorities and responsibilities of individuals within Iowa Electric Light & Power Company (IELP) necessary for coping with emergencies.

4. Notification of Off-site Emergency Support Groups

A review of Table 1 in Section 6.0 of the DAEC Preparedness Plan as amended 12/72 revealed a necessity for updating the listing of agencies to be contacted in terms of certain organizational names, responsible individuals, addresses and phone numbers, and the addition of other contacts e.g. Iowa Department of Environmental Quality, Benton County agencies and residence phone number of DAEC Radiation Protection Engineer. The licensee should consider preparing an implementing procedure to update this listing.

5. Placement of Emergency Equipment and Supplies

In the course of the tour and during discussions regarding the Emergency Coordination Center, The First Aid Room and Personnel Decontamination area, the following conditions were noted.

- a. The Emergency Coordination Center was not equipped as indicated in Section 4.2.1 of the DAEC Preparedness Plan.
- b. The First Aid Room was not equipped as indicated in Section 12.4 of the DAEC Preparedness Plan.
- c. Materials and Supplies necessary for decontamination of personnel were not available in the Decontamination area.

6. Letters of Agreement

Review of the letters of agreement indicated the following:

- a. No letter of agreement exists with pertinent representatives of Benton County which adjoins Linn County approximately three miles west of DAEC. This item was listed as an item of discussion in the previous emergency planning inspection, RO:III Inspection Report No. 050-331/73-08, Paragraph 12. IELP representatives indicated contact with the Benton County Sheriff had been made on November 30, 1973.
- b. Restructuring and reassignment of certain functions with the Iowa Department of Health has occurred within the past year. Based on information obtained during the inspector's visit with



representatives of Iowa's Department of Environmental Quality (DEQ), Office of planning and Programing (OP&P) and Civil Defense, it appears the Iowa plan for responding to radiological incidents will require interface between certain of these state agencies and DAEC, Particularly DEQ. Upon contact, exchange of information and resolution of responsibilities with the agencies involved, letters of agreement should be obtained.

- c. It was pointed out by an IELP representative that recontact of listed agencies was currently in progress. However, it is noted that the majority of letters of agreement were dated approximately eighteen months prior to this inspection. The inspector recommended that letters of agreement be updated during current recontact of off-site support groups

#### 7. Emergency Communications Systems

The public address system which covers both indoor and outdoor areas of the facility has been installed and is in operation. The test of this system had not been conducted as of the date of this inspection. Test procedures were being prepared, according to an IELP representative.

The facility is served by five telephone trunk lines to Palo and Cedar Rapids, Iowa. In addition, a private red phone line links the facility with company offices in Cedar Rapids via microwave.

FM radio communications system which is voice actuated is installed in the control room and is capable fo contacting Iowa State Police Headquarters in Cedar Rapids, Linn County Sheriff's Department, and Cedar Rapids Fire Department in addition to the IELP Load Dispatcher in Cedar Rapids. This system is installed but had not been tested at the time of the inspection. The inspector was informed that test procedures were being prepared.

#### 8. Evacuation Alarm Signal

An audible evacuation alarm signal system had not been installed at the time of this inspection. Representatives of IELP indicated plans call for the installation of such a system. Procedures should be prepared for testing of the audible evacuation alarm system once installed to ensure adequate coverage in all areas under operational noise levels. Similarly, implementing procedures should be prepared which would provide guidance in terms of recognition of the audible evacuation alarm signal for all personnel who may be on site.

## 9. Personnel Accountability

Draft Preparedness Procedure No. 2 entitled Emergency Evacuation of Onsite Personnel Section 4.2, refers to the responsibility of the Emergency Director for assuring that all personnel are accounted for. However, a documented system of personnel accountability was not available for review at the time of the inspection. A personnel accountability procedure should be developed which will contain provisions for assuring optimal effectiveness for plant and site evacuation as well as provision to prevent unauthorized re-entry into the evacuated area during an emergency situation.

## 10. Training

The inspector expressed his concern about the planned availability of personnel on the back shifts with capabilities for evaluating health physics aspects of any radiation incident. IELP representatives stated that their plans call for utilization of the Radwaste Technicians in this area following additional training in radiation protection subjects.

Upon completion of all approved personnel accountability procedures and the installation of all evacuation alarm systems, appropriate training should be provided all site personnel to ensure prompt recognition of the alarm and desired individual response.

## 11. Implementing Procedures for DAEC Preparedness Plans

Seventeen implementing procedures were available for review at the time of this inspection and according to representatives of IELP several additional procedures and currently being prepared. All of the procedures available for review were in draft format. A significant effort remains prior to initiation of fuel loading operations in the area of procedure development and approval in accord with Preparedness Procedure No. 1 entitled, "Review of an Changes to the DAEC Preparedness Plan.

## 12. Bomb Threats and Civil Disturbances

A check list has been prepared for use in the event a bomb threat is received at the facility. The checklist contains a requirement for notification of Regional Regulatory Office of the AEC. Currently available emergency plan implementing procedure do not reference procedures for coping with bomb threats or civil disturbances at DAEC.

### 13. Drills

The effectiveness of the DAEC Preparedness Plan, associated preparedness procedures and individual response should be evaluated by means of a radiation emergency drill. The drill should involve the participation of off-site emergency support groups and should be conducted prior to the initiation of fuel loading.