

November 3, 2004

Mr. Mark Peifer  
Site Vice-President  
Duane Arnold Energy Center  
Nuclear Management Company, LLC  
3277 DAEC Road  
Palo, IA 52324

SUBJECT: DUANE ARNOLD ENERGY CENTER  
NRC EMERGENCY PREPAREDNESS INSPECTION REPORT  
NO. 050000331/2004007(DRS)

Dear Mr. Peifer:

On October 22, 2004, the U.S. Nuclear Regulatory Commission (NRC) completed a baseline inspection at your Duane Arnold Energy Center. The enclosed report documents the inspection findings which were discussed on October 22, 2004, with Mr. R. Anderson and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel. Specifically, this inspection focused on emergency preparedness, including your staff's determinations of performance indicators for the Emergency Preparedness Cornerstone.

On the basis of the results of this inspection, no findings of significance were identified.

In accordance with 10 CFR Part 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

*/RA/*

Kenneth Riemer, Chief  
Plant Support Branch  
Division of Reactor Safety

Docket No. 50-331  
License No. DPR-49

Enclosure: Inspection Report 05000331/2004007(DRS)

See Attached Distribution

M. Peifer

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cc w/encl: E. Protsch, Executive Vice President -  
Energy Delivery, Alliant;  
President, IES Utilities, Inc.  
C. Anderson, Senior Vice President, Group Operations  
J. Cowan, Executive Vice President and Chief Nuclear Officer  
J. Bjorseth, Plant Manager  
S. Catron, Manager, Regulatory Affairs  
J. Rogoff, Vice President, Counsel, & Secretary  
B. Lacy, Nuclear Asset Manager  
Chairman, Linn County Board of Supervisors  
Chairperson, Iowa Utilities Board  
The Honorable Charles W. Larson, Jr.  
Iowa State Senator  
D. McGhee - Department of Public Health

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cc w/encl: E. Protsch, Executive Vice President -  
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C. Anderson, Senior Vice President, Group Operations  
J. Cowan, Executive Vice President and Chief Nuclear Officer  
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B. Lacy, Nuclear Asset Manager  
Chairman, Linn County Board of Supervisors  
Chairperson, Iowa Utilities Board  
The Honorable Charles W. Larson, Jr.  
Iowa State Senator  
D. McGhee - Department of Public Health

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-331  
License No: DPR-49

Report No: 05000331/2004007(DRS)

Licensee: Nuclear Management Company, LLC

Facility: Duane Arnold Energy Center

Location: 3277 DAEC Road  
Palo, Iowa 52324-9785

Dates: October 18 through October 22, 2004

Inspectors: T. Ploski, Senior Emergency Preparedness Analyst  
R. Jickling, Emergency Preparedness Analyst  
G. Wilson, Senior Resident Inspector

Observers: R. Baker, Resident Inspector

Approved by: K. Riemer, Chief  
Plant Support Branch  
Division of Reactor Safety

## SUMMARY OF FINDINGS

IR 05000331/2004007(DRS); 10/18/2004-10/22/2004; Duane Arnold Energy Center; Emergency Preparedness Specialist Report.

The report covers a one-week baseline inspection by two regional emergency preparedness inspectors, a senior resident inspector, and a resident inspector. The inspection focused on the Emergency Preparedness Cornerstone in the Reactor Safety strategic performance area during the biennial emergency preparedness exercise. This inspection also included a review of records related to the three emergency preparedness performance indicators for the period from October 2003 through June 2004. Additionally, this inspection included a review of Revision 22 of the Emergency Plan in which Letters of Agreement with several offsite authorities were revised. No findings of significance were identified.

The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

**A. Inspector-Identified and Self-Revealed Findings**

None.

**B. Licensee-Identified Violations**

None.

## REPORT DETAILS

### 1. REACTOR SAFETY

#### Cornerstone: Emergency Preparedness

#### 1EP1 Exercise Evaluation (71114.01)

##### a. Inspection Scope

The inspectors reviewed the October 20, 2004, biennial emergency preparedness exercise's objectives and scenario to ensure that the exercise would acceptably test major elements of the licensee's radiological emergency plan and to verify that the exercise's simulated problems provided an acceptable framework to support demonstration of the licensee's capability to implement its plan. The inspectors also reviewed records of five emergency preparedness drills, which were conducted from September 2003 through September 2004, to determine whether the scenarios used in those drills were sufficiently different from the scenario used in the October 20, 2004, exercise.

The inspectors evaluated the licensee's exercise performance, focusing on the risk-significant activities of emergency classification, notification, and protective action decision making, as well as implementation of accident mitigation strategies in the following emergency response facilities:

- Control Room Simulator;
- Technical Support Center (TSC);
- Operations Support Center (OSC); and
- Emergency Operations Facility (EOF).

The inspectors also assessed the licensee's recognition of abnormal plant conditions, transfer of responsibilities between facilities, internal communications, interfaces with offsite officials, readiness of emergency facilities and related equipment, and overall implementation of the licensee's emergency plan.

The inspectors attended post-exercise critiques in the TSC and EOF to evaluate the licensee's initial self-assessment of its exercise performance. The inspectors later met with the licensee's lead exercise evaluators, staff, and managers to obtain the licensee's refined assessments of its exercise participants' performances. These self-assessments were then compared with the inspectors' independent observations and assessments to determine the licensee's ability to adequately critique its exercise performance.

##### b. Findings

No findings of significance were identified.

#### 1EP4 Emergency Action Levels and Emergency Plan Changes

##### a. Inspection Scope

The inspectors reviewed Revision 22 of Appendix 2 of the Emergency Plan and associated documents to determine whether changes made to this appendix had decreased the plan's effectiveness.

##### b. Findings

No findings of significance were identified.

#### 4. **OTHER ACTIVITIES**

#### 4OA1 Performance Indicator (PI) Verification (71151)

##### a. Inspection Scope

The inspectors reviewed the licensee's records associated with each of the three emergency preparedness PIs to verify that the licensee's program was implemented consistent with the industry guidelines in Nuclear Energy Institute publication No. 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 2, and related licensee procedures. Specifically, licensee records related to the performance of the Alert and Notification System (ANS), key Emergency Response Organization (ERO) members' drill participation, and Drill and Exercise Performance (DEP) were reviewed to verify the accuracy and completeness of the PI data submitted to NRC for the period from October 2003 through June 2004. The following PIs were reviewed:

- ANS;
- ERO Drill Participation; and
- DEP.

##### b. Findings

No findings of significance were identified.

#### 4OA6 Meetings

##### .1 Exit Meeting

An exit meeting was conducted for Emergency Preparedness with Mr. R. Anderson and other members of licensee management and staff at the conclusion of the inspection on October 22, 2004. The licensee acknowledged the information presented. No proprietary information was identified.



.2 Public and Media Briefing

On October 22, 2004, an inspector summarized the NRC's preliminary conclusions on the licensee's exercise and critique performances at a public and media briefing hosted by Federal Emergency Management Agency, Region VII staff in Cedar Rapids, Iowa.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

R. Anderson, Business Support Manager  
D. Johnson, Emergency Planner  
B. Murrell, Regulatory Affairs  
P. Sullivan, Emergency Preparedness Manager  
R. Titus, Emergency Planner  
C. Vogeler, Emergency Planner  
B. Wohlers, Project Manager  
T. Zimmerman, Emergency Preparedness Coordinator

### **LIST OF ITEMS OPENED, CLOSED AND DISCUSSED**

#### Opened and Closed

None.

#### Discussed

None.

### **LIST OF DOCUMENTS REVIEWED**

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety but rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

#### 1EP1 Exercise Evaluation

Biennial Exercise Scenario Manual; October 20, 2004  
2004 Dress Rehearsal Summary and Time Line; September 15, 2004  
Full Scale Drill II Scenario Summary and Time Line; August 11, 2004  
Full Scale Drill I Scenario Summary and Time Line; June 23, 2004  
2004 Training Drill Scenario Summary and Time Line; January 21, 2004  
Drill Scenario Summary and Time Line; September 17, 2003

EPIP 1.1; Determination of Emergency Action Level; Revision 24  
EPIP 1.2; Notification; Revision 31  
EPIP 1.3; Plant Assembly and Site Evacuation; Revision 11  
EPIP 1.5; Activation and Operation of the EOF; Revision 5  
EPIP 2.1; Activation and Operation of the OSC; Revision 14  
EPIP 2.2; Activation and Operation of the TSC; Revision 24  
EPIP 2.5; Control Room Emergency Response Operations; Revision 16  
EPIP 3.1; In-Plant Radiological Monitoring; Revision 15  
EPIP 3.3; Dose Assessment and Protective Action; Revision 21

1EP4 Emergency Action Levels and Emergency Plan Changes

Emergency Plan Appendix 2; Revision 22  
Procedure Work Request 25136; Emergency Plan Appendix 2; May 14, 2002  
10 CFR 50.54(q) Review on Revision 22 to Appendix 2; May 14, 2002  
Internal Memo; DAEC Emergency Planning Letters of Agreement Audit; May 14, 2004

4OA1 Performance Indicator Verification

EP Department Manual 1010; EP Department Performance Indicators; Revision 5  
EP Department Manual 1013; Emergency Sirens and Siren Signal Program; Revision 2  
DEP Performance Indicator Opportunities Records; October 2003 through June 2004  
DAEC ERO Drill Attendance Sheets; October 2003 through June 2004  
Duane Arnold Monthly Siren Test Data Reports; October 2003 through June 2004

## LIST OF ACRONYMS USED

ADAMS	NRC's Document System
ANS	Alert and Notification System
CRS	Control Room Simulator
DAEC	Duane Arnold Energy Center
DEP	Drill and Exercise Performance
EI	Emergency Implementing (procedure)
EOF	Emergency Operations Facility
ERO	Emergency Response Organization
NRC	Nuclear Regulatory Commission
NUREG	Nuclear Regulatory Guide
OSC	Operations Support Center
PARS	Publicly Available Records
PI	Performance Indicator
TSC	Technical Support Center