November 1, 2000

Mr. Gary Van Middlesworth
Site General Manager
Duane Arnold Energy Center
Nuclear Management Company, LLC
3277 DAEC Road
Palo, IA 52324

SUBJECT: DUANE ARNOLD ENERGY CENTER - NRC INSPECTION REPORT 50-331/00-10(DRS)

Dear Mr. Van Middlesworth:

On October 20, 2000, the NRC completed a baseline inspection at your Duane Arnold Energy Center. The results of this inspection were discussed on October 19, 2000, with Mr. G. VanMiddlesworth and members of your staff. The enclosed report presents the results of that inspection.

The inspection was an examination of activities conducted under your license as they relate to emergency preparedness and to compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel. Specifically, this inspection focused on performance during your biennial emergency preparedness exercise and your staff's capability to self-assess your participants' performance. In addition, we reviewed your staff's determinations of performance indicators for the Emergency Preparedness Cornerstone.

Based on the results of this inspection, no findings of significance were identified.

In accordance with 10 CFR 2.790 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/NRC/ADAMS/index.html (the Public Electronic Reading Room).

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

Sincerely,

/RA/

Gary L. Shear, Chief
Plant Support Branch
Division of Reactor Safety

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

Enclosure: Inspection Report 50-331/00-10(DRS)

cc w/encl: E. Protsch, Executive Vice President -
Energy Delivery, Alliant;
President, IES Utilities, Inc.
Robert G. Anderson, Plant Manager
K. Peveler, Manager, Regulatory Performance
State Liaison Officer
Chairperson, Iowa Utilities Board
The Honorable Charles W. Larson, Jr.
Iowa State Representative
E. Jenkins, FEMA, Region VII

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-331
License No:	DPR-49
Report No:	50-331/00-10(DRS)
Licensee:	Alliant, IES Utilities, Inc. 200 First Street, S.E. P. O. Box 351 Cedar Rapids, IA 52406-0351
Facility:	Duane Arnold Energy Center, Unit 1
Location:	Palo, Iowa
Dates:	October 16-20, 2000
Inspectors:	T. Ploski, Senior Emergency Preparedness Analyst R. Jickling, Emergency Preparedness Analyst P. Prescott, Senior Resident Inspector M. Kurth, Resident Inspector
Approved by:	Gary L. Shear Chief, Plant Support Branch Division of Reactor Safety

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
● Initiating Events	● Occupational	● Physical Protection
● Mitigating Systems	● Public	
● Barrier Integrity		
● Emergency Preparedness		

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.

SUMMARY OF FINDINGS

IR 05000331-00-10(DRS), on 10/16-20/00; Alliant, IES Utilities, Inc; Duane Arnold Energy Center, Unit 1; Emergency Preparedness.

The report covers a one week period of announced inspection by two regional emergency preparedness inspectors and two resident inspectors. This inspection focused on the Reactor Safety, Emergency Preparedness Cornerstone, and included the following: evaluation of licensee staff's capability to assess licensee participants' performance during the biennial emergency preparedness exercise; and review of the three emergency preparedness performance indicators.

REACTOR SAFETY

Cornerstone: Emergency Preparedness

- There were no findings of significance identified during this inspection (Section 1EP1, Section 4OA1, and Section 4OA5).

Report Details

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness (EP)

1EP1 Drill, Exercise, and Actual Events

a. Inspection Scope

The inspectors reviewed the 2000 exercise's objectives and scenario to ensure that the exercise would acceptably test major elements of the licensee's emergency plan. The inspectors verified that the simulated problems provided an acceptable framework to support demonstration of the licensee's capabilities to implement its emergency plan. An inspector also reviewed records of a practice drill conducted in the year 2000 to determine whether the associated scenarios were sufficiently different from the scenario used in the October 18, 2000, 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 (CRS)
- Technical Support Center (TSC)
- Operations Support Center (OSC)
- Emergency Operations Facility (EOF)

The inspectors also assessed the licensee's recognition of abnormal plant conditions, transfer of responsibilities between facilities, internal communications, interface 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 aforementioned facilities to evaluate the licensee's initial self-assessment of its exercise performance. The inspectors later met with the licensee's lead exercise evaluators to obtain the licensee's refined assessments of its exercise participants' and controllers' performances. These self-assessments were then compared with the inspectors' independent observations and related assessments. On October 20, 2000, an inspector made a presentation at the post-exercise, public and media briefing hosted by Federal Emergency Management Agency (FEMA) staff.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors reviewed records related to each of the three EP indicators to verify the accuracy and completeness of data submitted through June 2000 for the Alert and Notification System (ANS), Emergency Response Organization (ERO) Drill Participation, and Drill and Exercise Performance (DEP). The draft procedure for PI data gathering and data quality control was reviewed and discussed with the licensee. Documentation related to the raw data for each indicator was evaluated.

b. Findings

No findings of significance were identified.

40A5 Temporary Instruction 2515/144

a. Inspection Scope

The inspectors compared the licensee's internal guidance for identifying key ERO positions versus the guidance of the Nuclear Energy Institute (NEI) 99-02, Revision 0, publication. The inspector also reviewed records indicating the numbers of personnel assigned to these key positions.

b. Findings

No findings of significance were identified.

4OA6 Management Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. G. VanMiddlesworth and other members of licensee management and staff on October 19, 2000. The licensee acknowledged the findings presented and did not identify any information discussed as proprietary.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

K. Dunlap, EP Specialist
A. Funke, Radiological Engineer
H. Giorgio, Radiation Protection Manager
K. Huber, System Engineering Manager
D. Johnson, EP Specialist
R. Johnson, EP Specialist
K. Kleinheinz, Outage/Support Scheduling Manager
B. Lacy, Business Unit Manager
B. Lindley, Quality Assurance Auditor
R. Minear, Electrical Maintenance Supervisor
R. Murrell, Licensing Manager
K. Peveler, Engineering Manager
A. Steen, FIN Team Manager
P. Sullivan, EP Manager
L. Teien, Communications Manager
G. VanMiddlesworth, Site General Manager
C. Vogeler, EP Specialist
K. Williams, EP Specialist
K. Young, Training Manager

NRC

P. Prescott, Senior Resident Inspector
M. Kurth, Resident Inspector

Benton County

S. Hansen, Emergency Operations Center Manager

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

None

LIST OF ACRONYMS USED

ANS	Alert and Notification System
CFR	Code of Federal Regulations
CRS	Control Room Simulator
DEP	Drill and Exercise Performance
DRS	Division of Reactor Safety
EOF	Emergency Operations Facility
EP	Emergency Preparedness
EPIP	Emergency Plan Implementing Procedure
ERO	Emergency Response Organization
FEMA	Federal Emergency Management Agency
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OA	Other Activities
OSC	Operations Support Center
PI	Performance Indicator
TI	Temporary Instruction
TSC	Technical Support Center

INSPECTION PROCEDURES USED

71114	Reactor Safety-Emergency Preparedness
71114.01	Exercise Evaluation
71151	Performance Indicator Verification
TI 2515/144	Performance Indicator Data Collecting and Reporting Process Review

LIST OF DOCUMENTS REVIEWED

Miscellaneous

"Duane Arnold Energy Center Emergency Plan"
ANS monthly siren availability test results April 1999 through June 2000
Scenario manual for the EP Exercise conducted on October 18, 2000
Scenario manual and critique summary for the "Dress Rehearsal" EP drill conducted on September 20, 2000
Critique summary for the "Full Scale EP Drill II" conducted on August 16, 2000
PI-related records of licensed operator requalification training sessions conducted May - June 2000 and July - August 1999
PI-related records of the EP drills conducted in August 1999, February 2000, March 2000, and April 2000
Draft EP Department Manual 1010, "Emergency Planning Department Performance Indicators"
Memorandum, dated January 14, 2000, "Emergency Planning Performance Indicators"
Memorandum, dated September 25, 2000, "Identification of Duane Arnold Energy Center Key ERO Personnel"
NEI 99-02, Revision 0, "Regulatory Assessment Performance Indicator Guideline"

Action Requests

None

Procedures

EPIP 1.1, Revision 18, "Determination of Emergency Action Levels"
EPIP 1.2, Revision 24, "Notifications"
EPIP 1.3, Revision 8, "Plant Assembly and Site Evacuation"
EPIP 11.5, Revision 2, "Activation and Operation of the EOF"
EPIP 2.1, Revision 12, "Activation and Operation of the OSC"
EPIP 2.2, Revision 20, "Activation and Operation of the TSC"
EPIP 2.5, Revision 13, "Control Room Emergency Response Operation"
EPIP 3.1, Revision 10, "Inplant Radiological Monitoring"
EPIP 3.2, Revision 11, "Field Radiological Monitoring"
EPIP 3.3, Revision 16, "Dose Assessment and Protective Action"
EPIP 4.3, Revision 9, "Rescue and Emergency Repair Work"
EPIP 5.2, Revision 8, "Recovery and Re-entry"