

## SAFEGUARDS INFORMATION

October 30, 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 - PHYSICAL PROTECTION BASELINE INSPECTION AND  
OPERATIONAL SAFEGUARDS RESPONSE EVALUATION NRC INSPECTION  
REPORT 50-331/2000011(DRS)

Dear Mr. Van Middlesworth:

On September 22, 2000, the NRC completed a portion of a physical protection baseline inspection and an Operational Safeguards Response Evaluation at your Duane Arnold Nuclear Plant. The preliminary results of this inspection were discussed on September 22, 2000 with you and other members of your staff. A follow-up call was made to Mr. Findlay on October 20, 2000 during which he was informed that there were no substantive changes to the information provided during the exit meeting on September 22, 2000. The enclosed report presents the results of this inspection.

The inspection was an examination of activities conducted under your license as they relate to the Safeguards Strategic Performance Area and 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 representative records, tours of your facility, and interviews with personnel. This inspection focused on your ability to respond to an external threat.

Based on the results of this inspection, the NRC identified five issues that were evaluated under the risk significance determination process and were determined to be of low safety significance (Green). These issues have been entered into your corrective action program and are discussed in the summary of findings and in the body of the attached report. Of the five issues, none were determined to involve violations of NRC requirements.

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

Sincerely

**/RA/**

James R. Creed  
Safeguards Program Manager  
Division of Reactor Safety

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

Enclosure: Inspection Report 50-331/2000011(DRS)  
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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  
NRR/DRIS/RSGB9D

cc w/encl  
w/o SAFEGUARDS INFORMATION: State Liaison Officer  
Chairperson, Iowa Utilities Board  
The Honorable Charles W. Larson, Jr.  
Iowa State Representative

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**/RA/**  
 James R. Creed  
 Safeguards Program Manager  
 Division of Reactor Safety

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 50-331/2000011(DRS)

Licensee: Alliant, IES Utilities, Inc.

Facility Duane Arnold Energy Center

Location: Palo, Iowa

Dates: September 18 - 22, 2000

Inspection Team J. Belanger, Senior Physical Security Inspector (Team Leader)  
R. Albert, Reactor Safeguards Specialist, NRR  
R. Hsu, Nuclear Engineer, NRR  
J. Arildsen, Nuclear Engineer, NRR  
P. Prescott, Senior Resident Inspector  
NRC Contractors (3)

Approved by: James R. Creed  
Safeguards Program Manager  
Division of Reactor Safety

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# 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**

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness

## **Radiation Safety**

- Occupational
- Public

## **Safeguards**

- Physical Protection

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>.

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### **SUMMARY OF FINDINGS**

IR 50-331/2000011(DRS); on 9/14 - 15 and 18 - 22/2000; Alliant Energy, Duane Arnold Energy Center, Unit 1; Response to Contingency Events and Operational Safeguards Response Evaluation.

The team inspection was conducted by a regional security inspector, the Senior Resident Inspector, one security specialist and two reactor engineers from the Office of Nuclear Reactor Regulation, and three NRC contractors.

#### **Cornerstone: Physical Protection**

Green. Challenge testing identified vulnerabilities in several intrusion detection zones where the NRC contractors circumvented the sensors. This single issue could impact required detection of an adversary and appears to affect the required response (Section 3PP3.b.1).

Green. The picture quality of a specific video monitor was marginal. The single issue, if left uncorrected, could result in a more significant problem in the assessment of adversaries (Section 3PP3.b.2.).

Green. The inspectors observed some controller communication problems and performance problems on the part of the adversaries during the force-on-force drills conducted on September 19-20, 2000. This issue represents a matter, that if left uncorrected could result in evaluations of response performance not reflective of true capabilities (Section 40A5.4.b.2).

Green. The inspector observed that one of two weapons utilized during the weapons demonstration at the live-fire range was inoperable. This issue could have the potential to be a precursor of more significant problems relating to contingency response (Section 40A5.6.c.1).

Green. The inspectors observed some problems with weapons familiarity and manipulation on the part of three security officers selected by the licensee to demonstrate the tactical stress fire course. This observed performance could have the potential to be a precursor of more significant safety problems relative to response performance (Section 40A5.6.c.2).

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