September 1, 2000

Mr. Dave Wilson
Vice President, Nuclear
Alliant Tower
200 First Street SE
P. O. Box 351
Cedar Rapids, IA 52406-0351

SUBJECT: DUANE ARNOLD - NRC INSPECTION REPORT 50-331/2000007(DRS)

Dear Mr. Wilson:

On August 18, 2000, the NRC completed a routine inspection at your Duane Arnold Nuclear Plant. The results of this inspection were discussed on August 18, 2000, with Mr. Van Middlesworth and other members of your staff. The enclosed report presents the results of this inspection.

The inspection was an examination of activities conducted under your license as they relate to radiation safety 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 representative records, tours of your facility and interviews with personnel. This inspection focused on public radiation safety.

Based on the results of this inspection, no findings 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 questions you have concerning this inspection.

Sincerely,

/RA by James E. Foster Acting For/

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

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

Enclosure: Inspection Report 50-331/2000007(DRS)

See Attached Distribution

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

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-331
License No:	DPR-49
Report No:	50-331/2000007(DRS)
Licensee:	Alliant, IES Utilities Inc.
Facility:	Duane Arnold Energy Center
Location:	Palo, Iowa
Dates:	August 14 - 18, 2000
Inspector:	D. Nelson, Radiation Specialist
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 50-331/2000007(DRS); on 08/14-08/18/00; Alliant; Duane Arnold Energy Center. This inspection covered the occupational radiation safety and public radiation safety cornerstones and focused on access control, and radioactive material processing and transportation.

The inspection was conducted by a regional radiation specialist. There were no findings identified.

Report Details

Summary of Plant Status: The plant was at full power during the inspection period.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control

.1 Plant Walkdowns and Radiological Boundary Verifications

a. Inspection Scope

The inspector performed walkdowns of the radiologically controlled area to verify the adequacy of radiological controls and postings. Specifically, the inspector verified that radiologically significant work areas (high radiation areas (HRAs) and radiation areas) were properly posted and controlled in accordance with 10 CFR Part 20 and the licensee's procedures.

b. Findings

No findings were identified.

Cornerstone: Public Radiation Safety

2PS2 Radioactive Material Processing and Transportation

.1 Walkdown of Radioactive Waste Systems

a. Inspection Scope

The inspector reviewed the liquid and solid radioactive waste system description in the Updated Final Safety and Analysis Report (UFSAR) and the most recent radiological effluent release report for information on the types and amounts of radioactive waste disposal. The inspector performed walk-downs of the liquid and solid radwaste processing systems located in the Auxiliary and Radwaste Buildings, and the Low-level radwaste Processing and Storage Facility to verify that the systems agreed with the descriptions in the UFSAR and the process control program (PCP) and to assess the material condition and operability of the systems. The inspector reviewed the current processes for transferring waste resin and sludge into shipping containers to determine if appropriate waste stream mixing and/or sampling procedures, and the methodologies for waste concentration averaging provide representative samples of the waste product for the purposes of waste classification in 10 CFR 61.55 for waste disposal. During this inspection, the licensee was not conducting waste processing.

b. Findings

No findings were identified.

.2 Waste Characterization and Classification

a. Inspection Scope

The inspector reviewed the licensee's radio-chemical sample analysis results for each of the licensee's waste streams (dry active waste (DAW) and condensate resin). The inspection also reviewed the licensee's use of scaling factors to quantify difficult-to-measure radionuclides (e.g., pure alpha or beta emitting radionuclides). The reviews were conducted to verify that the licensee's program assures compliance with 10 CFR 61.55 and 10 CFR 61.56 as required by Appendix G of 10 CFR Part 20. The inspector also reviewed the licensees' waste characterization and classification program to ensure that the waste stream composition data accounts for changing operational parameters and thus remains valid between the annual sample analysis update.

b. Findings

No findings were identified.

.3 Shipment Preparation

a. Inspection Scope

Since there were no radioactive materials shipments during the inspection, the inspector reviewed the technical transportation instructions presented to workers during routine training. The review was conducted to verify that the licensee's training program provided training to personnel responsible for the conduct of radioactive waste processing and radioactive shipment preparation activities.

b. Findings

No findings were identified.

.4 Shipping Records

a. Inspection Scope

The inspector reviewed five non-excepted package shipments completed in 1999 and 2000 to verify compliance with NRC and Department of Transportation (DOT) requirements (i.e., 10 CFR Parts 20 and 71 and 49 CFR Parts 172 and 173).

b. Findings

No findings were identified.

.5 Identification and Resolution of Problems

a. Inspection Scope

The inspector reviewed the licensee's self-assessments, audits, and problem identification forms (Action Requests) concerning the radioactive material processing and transportation programs to ensure that problems were identified, characterized, prioritized, entered into a corrective action program, and resolved.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES (OA)

4OA6 Management Meetings

Exit Meeting Summary

The inspector presented the inspection results to Mr. Van Middlesworth and other licensee management and staff at the conclusion of the site inspection on August 18, 2000. The licensee representatives acknowledged the inspection findings and identified no proprietary information.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

H. Giorgio, Acting Radiation Protection Manager
J. Newman, Radiological Engineering Supervisor
K. Peveler, Manager, Regulatory Performance
K. Putnam, Supervisor, Regulatory Performance
G. Van Middlesworth, Site General Manager
T. Vine, Radwaste Supervisor

ITEMS OPENED, CLOSED AND DISCUSSED

Opened

None

Closed

None

Discussed

None

LIST OF ACRONYMS USED

CFR	Code of Federal Regulations
DOT	Department of Transportation
DAW	Dry Active Waste
HRA	High Radiation Area
PCP	Process Control Program
UFSAR	Updated Final Safety Analysis Report

LIST OF DOCUMENTS REVIEWED

Station Procedures

RWH 3410.1 (Revision 9) Process Control Program

Quality Assurance Assessments

Low-Level Radioactive Material/Waste Transfer, Packaging and Storage

Low-Level Radioactive Waste Packaging

Operations Training and Qualification

Process Control Program and Implementing Procedures

RP Follow-Up Issues

Action Request

AR #17698, AR #17924, AR #19717, AR #18149, AR #20001, AR #20218, AR #20630

Training Documents

Employee Certification for Hazardous Materials Training and Testing

"Salaried Training to Meet the Requirements of 49CFR172 Subpart H," memorandum, October 23, 1998

Computer Records for Individuals Receiving 49 CFR 172 Subpart H Training

Instructor Guides

30016 Radwaste Packaging and Shipping
- 01 - Radwaste Classification, Characterization, Sampling and Requirements
- 02 - Radioactive Materials Shipment (General Information)

30045 Radwaste Handling
- 01 - Waste Segregation and Handling
- 02 - Compactor Operation
- 03 - Handling Radwaste Containers
- 04 - Handling Casks
- 05 - Handling Miscellaneous Liquid Waste
- 06 - Handling Hazardous Waste

60045 49 CFR 172 Subpart H
- 01 - General Awareness and Safety Training
- 02 - Warehouse Personnel Function Specific
- 03 - Radwaste Function Specific
- 04 - Health Physics Function Specific

Shipping Documents

May 5, 2000, Type A LSA II, Shipment of Condensate Resin

November 18, 1999, Type A Shipment of Fuel Scrape Equipment and Samples

January 6, 2000, LSA II Shipment of DAW

August 11, 1999, Type A LSA II Shipment of Condensate Resin in a Strong Tight Container

November 23, 1999, DOT 7A, Type A Shipment of Refuel Floor and CRD Equipment

Other Documents

Updated Final Safety and Analysis Report, Chapter 11, “Radioactive Waste Management”

99-006-R, Radiological Engineering Calculation Coversheet - 10 CFR 61 Compliance Data Technical Basis for DAEC Dry Active Waste (DAW), October 20, 1999

99-003-R, Radiological Engineering Calculation Coversheet - 10 CFR 61 Compliance Data Technical Basis for DAEC Condensate Resin, August 9, 1999

Radioactive Shipments Summary Sheet (1999 - 2000)

Rad Services Manual for the 14-215 Shielded Transportation Cask