

June 8, 2000

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

SUBJECT: DUANE ARNOLD INSPECTION REPORT 50-331/2000002(DRP)

Dear Mr. Wilson:

On May 16, 2000, the NRC completed an inspection at your Duane Arnold Energy Center facility. The enclosed report presents the results of that inspection. The results of this inspection were discussed on May 16, 2000, with Mr. R. Anderson and other members of your staff.

This inspection was an examination of activities conducted under your license as they relate to safety, verification of performance indicators, 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 procedures and representative records, observations of activities, and interviews with personnel.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room and will be available on the NRC Public Electronic Reading Room (PERR) link at the NRC homepage, <http://www.nrc.gov/NRC/ADAMS/index.html>.

Sincerely,

/RA/

Melvyn Leach, Chief
Reactor Projects Branch 2

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

Enclosure: Inspection Report 50-331/2000002(DRP)

See Attached Distribution

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 Vice President, Nuclear
 IES Utilities, Inc.
 Alliant Tower
 200 First Street SE
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D. Wilson

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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

ADAMS Distribution:

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 50-331/2000002(DRP)

Licensee: Alliant, IES Utilities Inc.
200 First Street S. E.
P. O. Box 351
Cedar Rapids, IA 52406-0351

Facility: Duane Arnold Energy Center

Location: Palo, Iowa

Dates: April 2 through May 16, 2000

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

Approved by: Melvyn Leach, Chief
Reactor Projects Branch 2
Division of Reactor Projects

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 |
|---|---|---|
| <ul style="list-style-type: none">● Initiating Events● Mitigating Systems● Barrier Integrity● Emergency Preparedness | <ul style="list-style-type: none">● Occupational● Public | <ul style="list-style-type: none">● 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>.

SUMMARY OF FINDINGS

Duane Arnold Energy Center NRC Inspection Report 50-331/2000002(DRP)

The report covers a 6-week period of resident inspection. The significance of issues is indicated by their color (green, white, yellow, or red) and was determined by the Significance Determination Process in Inspection Manual Chapter 0609.

Cornerstone: Initiating Events

- No Color. The inspectors identified several apparent procedural weaknesses in the licensee's flooding mitigation abnormal operating procedure. The combined effect of these procedure deficiencies was under review by the inspectors using the significance determination process. This issue was viewed as an unresolved item pending completion of the significance determination process (Section 1R06).

Report Details

Summary of Plant Status: The plant was operated at or near full power at the beginning of the inspection period. On May 13, 2000, operators commenced a downpower to 69 percent for a control rod sequence exchange, and main turbine and main steam isolation valve testing. Operators completed a return to full power on May 15.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R04 Equipment Alignments

a. Inspection Scope

The inspectors performed a walkdown of accessible portions of the Residual Heat Removal (RHR) system to verify system operability. That portion inside containment was not accessible. The inspectors verified the correct valve position of all the valves in the primary system flowpath and verified breaker alignments using the system piping and instrumentation drawings (P&ID) M-119 and RHR system mechanical and electrical checklists (Operating Instruction (OI) 149, "Residual Heat Removal," Revision 69). Instrumentation, valve configurations, and appropriate meter indications were also observed. Lubrication and cooling of major components were verified by direct observation of the components. Proper installation of hangers and supports was periodically observed during the walkdown, and operational status of support systems was verified by direct observation of various parameters. The inspectors observed control room switch positions for the RHR system. The inspectors also evaluated other conditions such as adequacy of housekeeping, the absence of ignition sources, and proper labeling.

The inspectors performed a partial walkdown of the "B" train of the residual heat removal system when preventive maintenance was performed on the "B" core spray system. The system was selected due to the increase in core damage frequency caused by taking one train out-of-service for maintenance.

b. Issues and Findings

There were no findings identified and documented during this inspection.

1R05 Fire Protection

a. Inspection Scope

The inspectors walked down the listed risk significant areas looking for any fire protection degraded conditions. The inspectors placed emphasis on control of transient combustibles and ignition sources; the material condition, operational lineup, and operational effectiveness of the fire protection systems, equipment, and features; and the material condition and operational status of fire barriers used to prevent fire damage or fire propagation.

In particular, the inspectors verified that all observed transient combustibles were being controlled in accordance with the licensee's administrative control procedures. In addition, the inspectors observed the physical condition of fire detection devices, such as overhead sprinklers, and verified that any observed deficiencies did not impact the operational effectiveness of the system. The inspectors also observed the physical condition of portable fire fighting equipment, such as portable fire extinguishers. The inspectors verified the equipment was located appropriately, and that access to the extinguishers was unobstructed. The inspectors verified that fire hoses were installed at their designated locations and the physical condition of the hoses was satisfactory and access unobstructed. The inspectors inspected and verified the physical condition of passive fire protection features such as fire doors, ventilation system fire dampers, fire barriers, and fire zone penetration seals and verified the items were properly installed and in good physical condition. The systems present in the fire zones inspected were risk-significant systems.

The inspectors walked down the following risk significant areas looking for any fire protection degraded conditions:

- The reactor feedwater pumps and electro-hydraulic control skid areas using Fire Plan Volume II, "Fire Brigade Organization," Area Fire Plan (AFP)-14, Revision 22
- The "A" and "B" emergency service water system pump rooms, "A", "B", "C", and "D" residual heat removal service water system pump rooms, and electric and diesel fire pumps areas, using Fire Plan Volume II, "Fire Brigade Organization," AFP-28, Revision 23

b. Issues and Findings

There were no findings identified and documented during this inspection.

1R06 Flood Protection

a. Inspection Scope

The inspectors reviewed the licensee's flooding mitigation plans and equipment to determine their consistency with design requirements and the risk analysis assumptions. The inspectors performed walkdowns of the interior and exterior walls of the intake structure, pump house, cooling towers, reactor building, turbine building, and the low level radiation waste processing and storage facility. Also, the following documents were reviewed:

- Individual Plant Examination
- Individual Plant Examination of External Events
- Abnormal Operating Procedure (AOP) 902, "Flood," Revision 13
- Updated Final Safety Analysis Report (UFSAR), Section 3.4, "Water Level (Flood) Design"
- DAEC Document No. NG-93-1864, "Summary of 1993 Flood at DAEC"

b. Issues and Findings

The inspectors reviewed the above mentioned procedures and identified several discrepancies between the process described in the UFSAR and the implementing procedure AOP 902. The discrepancies are listed below:

- The UFSAR stated that the emergency service water and residual heat removal service water system pump hatch openings located in the pump house will be sealed. The procedure provided no information regarding the need or method for sealing the hatches.
- The UFSAR described the need to install stoplogs for doors 136, 154, 243, 500, and 846 to prevent water from entering plant buildings during flooding conditions. The procedure instructed individuals to install the stoplogs prior to flooding conditions. However, during plant walkdowns, the inspectors identified that door handles, electrical conduit, and exterior siding located near the stoplog guides would prevent the installation of the stoplogs.
- The UFSAR stated that turbine building doors 121 and 122 were to be caulked and temporarily braced. The procedure instructed individuals to only sandbag the door areas.
- The flooding procedure AOP 902 did not contain instructions for installing the stoplogs in the proper configuration, caulking between the stoplogs, and the necessity of using a crane to put the stoplogs in place.

The licensee initiated Action Request 19711 to track resolution of the procedure deficiencies. The combined effect of these procedure deficiencies was under review by the inspectors using the significance determination process. The apparent lack of adequate procedural guidance was viewed as an unresolved item (50-331/00-002-01(DRP)) pending completion of the significance determination process.

1R07 Heat Sink Performance

a. Inspection Scope

The inspectors reviewed and observed the surveillance tests of the residual heat removal heat exchangers IE201A and B that were performed in response to Generic Letter 89-13, "Service Water Problems Affecting Safety-Related Equipment." The inspectors reviewed the completed calculations that determined the heat exchangers' performance and discussed the matter with the project engineer responsible for the heat exchanger performance program.

c. Issues and Findings

There were no findings identified and documented during this inspection.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors independently verified the licensee's implementation of the maintenance rule for the systems listed below by verifying that these systems were properly scoped within the maintenance rule in accordance with 10 CFR 50.65; that all failed structures, systems, or components (SSCs) were properly categorized and classified as (a)(1) or (a)(2) in accordance with 10 CFR 50.65; the appropriateness of performance criteria for SSCs classified as (a)(2); and the appropriateness of goals and corrective actions for SSCs classified as (a)(1). The inspectors also verified that identified issues were identified at an appropriate threshold and entered in the corrective action program. The systems were selected based upon the risk significance classification of the systems in the maintenance rule program and were as follows:

- High pressure coolant injection system
- Offsite power (startup and standby transformers and associated switchyard breakers)
- Fire protection system

b. Issues and Findings

There were no findings identified and documented during this inspection.

1R13 Maintenance Risk Assessment and Emergent Work Evaluation

.1 Startup Transformer and Associated Switchyard Breaker Maintenance

a. Inspection Scope

The inspectors reviewed the licensee's evaluation of plant risk, scheduling, configuration control, and performance of planned maintenance associated with the planned and emergent work activities listed below and verified that scheduled and emergent work activities were adequately managed. In particular, the inspectors reviewed the licensee's program for conducting maintenance risk safety assessments and verified the licensee's planning, risk management tools, and the assessment and management of online risk. The inspectors also verified that licensee actions to address increased online risk during these periods, such as establishing compensatory actions, minimizing the duration of the activity, obtaining appropriate management approval, and informing appropriate plant staff, were accomplished when online risk was increased due to maintenance on risk-significant SSCs.

The inspectors reviewed the licensee's evaluation of plant risk, scheduling, configuration control, and performance of maintenance activities on the startup transformer and associated circuit breakers CB5550 (K switchyard breaker) and CB5560 (J switchyard breaker). The inspectors reviewed the following work packages:

- Corrective Work Order (CWO) A43367, startup transformer circuit breaker CB5560: replace terminal block
- Preventive Work Order (PWO) 1112112, startup transformer circuit breaker CB5550: oil circuit breaker inspection

The inspectors chose to evaluate this maintenance activity based on its contribution to the increase in core damage frequency.

b. Issues and Findings

There were no findings identified and documented during this inspection.

.2 Reactor Core Isolation Cooling (RCIC) Steam Supply Drain Line Replacement

a. Inspection Scope

The inspectors reviewed the licensee's evaluation of plant risk, scheduling, and performance for emergent work to repair the RCIC steam supply drain line. The following documents were reviewed:

- Engineered Maintenance Action A50536, "Change Piping From Chrome-Moly to Carbon Steel"
- Work Order A50536, drain trap line for TD2408: repair leak

The inspectors discussed the repairs with the responsible system engineer and work planner.

b. Issues and Findings

There were no findings identified and documented during this inspection.

.3 Replacement of 345KV Lightning Arrestors

a. Inspection Scope

The inspectors reviewed the licensee's evaluation of plant risk, scheduling, configuration control, and performance of maintenance activities on one of the offsite power lines to the DAEC switchyard. The inspectors reviewed the following documents:

- CWO A40739, replace remaining two GE Alugard lightning arrestors on the Hazelton 345KV line
- Action Request (AR) 14469, "Loss of 345KV Hazelton Line in the Switchyard due to Catastrophic Failure of Lightning Arrestor"

b. Issues and Findings

There were no findings identified and documented during this inspection.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the technical adequacy of operability evaluations (OEs) to ensure that the system operability was properly justified and the system remained available, such that no unrecognized increase in risk occurred. The following operability evaluations were reviewed:

- CWO A37529, "A" Emergency diesel generator jacket cooling pump motor bearing needs replacement"
- System Engineer - Reference Test - Evaluation 2000-01, for CV 4910A dilution line isolation valve from river water system. Stroke time increased, due to Work Order A38829, beyond American Society of Mechanical Engineers close stroke time limit. Determine if the new stroke time was acceptable.

b. Issues and Findings

There were no findings identified and documented during this inspection.

1R16 Operator Workarounds

a. Inspection Scope

The licensee had no open operator workarounds during the inspection period. The inspectors reviewed two recently closed operator workarounds for adequacy of the corrective actions. The inspectors also reviewed the closed operator workarounds (OWAs) to identify any potential affect on the function of mitigating systems, or the operators' ability to respond to an event and implement abnormal and emergency operating procedures. The individual workarounds evaluated were:

- AR 9726, "During Reactor Startups Electronic Noise is Causing APRM [Average Power Rand Monitor] Downscale Annunciator Alarm"
- AR 9108, "Revise OI [Operating Instruction] 149 to Permit Shutdown Cooling at a Pressure (Reactor Dome) Greater Than 110 psig"

b. Issues and Findings

There were no findings identified and documented during this inspection.

1R19 Post Maintenance Testing

a. Inspection Scope

During post-maintenance testing observations, the inspectors verified that the test was adequate for the scope of the maintenance work which had been performed, and that the testing acceptance criteria was clear and demonstrated operational readiness consistent with the design and licensing basis documents. The inspectors also verified that the impact of the testing had been properly characterized during the pre-job briefing; the test was performed as written and all testing prerequisites were satisfied; and that the test data was complete, appropriately verified, and met the requirements of the testing procedure. Following the completion of the test, the inspectors verified that the test equipment was removed, and that the equipment was returned to a condition in which it could perform its safety function.

The inspectors reviewed and observed the following post-maintenance testing activities involving risk significant equipment:

- 161 KV east bus to startup transformer “J” circuit breaker planned maintenance retest in accordance with PWO 1112112, “Oil Circuit Breaker Annual Inspection.”
- 1P209B control rod drive pump maintenance retest in accordance with CWO A45697, “Work on PWO 1112062 Revealed Possible Damage to Thrust Bearings, Replace Bearings.”

b. Issues and Findings

There were no findings identified and documented during this inspection.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed surveillance testing on risk-significant equipment and verified that the SSCs selected were capable of performing their intended safety function and that the surveillance tests satisfied the requirements contained in Technical Specifications, the Updated Final Safety Analysis Report, and licensee procedures. During surveillance testing observations, the inspectors verified that the test was adequate to demonstrate operational readiness consistent with the design and licensing basis documents, and that the testing acceptance criteria were clear. The inspectors also verified that the impact of the testing had been properly characterized during the pre-job briefing; the test was performed as written and all testing prerequisites were satisfied; and that the test data was complete, appropriately verified, and met the requirements of the testing procedure. Following the completion of the test, the inspectors verified that the test equipment was removed and that the equipment was returned to a condition in which it could perform its safety function.

The inspectors observed the performance of the following surveillance testing on risk significant equipment:

- Standby Diesel Generators Operability Test (Fast Start),” Revision 7

b. Issues and Findings

There were no findings identified and documented during this inspection.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the following temporary modification package, safety evaluation, and installation work order associated with the “A” control room chiller IVAC030A:

- Temporary Modification 99-075, “Jumper Installed for SV6108A Humidifier PCH-6108A Steam Supply”

b. Issues and Findings

There were no findings identified and documented during this inspection.

4. OTHER ACTIVITIES

Cornerstones: Initiating Events and Mitigating Systems

4OA5 Other

.1 Temporary Instruction (TI) 2515/144, “Performance Indicator Data Collecting and Reporting Process Review”

a. Inspection Scope

The inspectors performed TI 2515/144 to review the licensee’s performance indicator (PI) data collecting and reporting process. The inspectors performed the review to determine if the licensee was appropriately implementing the NRC/Industry guidance. The inspectors reviewed the following documents:

- Nuclear Energy Institute (NEI) 99-02, “Regulatory Assessment Performance Indicator Guideline,” Revision 0
- DAEC 1st Quarter 2000 NRC PI Summary
- Administrative Control Procedure 1402.4, “NRC Performance Indicator Collection and Reporting,” Revision 0

The inspectors discussed performance indicator verification with licensing personnel, the PI coordinator, and the cognizant system engineers responsible for the trended mitigation systems' PIs.

b. Issues and Findings

The inspectors identified one significant process issue with the safety system unavailability hours for the residual heat removal system. This issue would result in the performance indicator exceeding the 1.5 percent green unavailability threshold. The revised unavailability would be in the white threshold, at 1.9 percent.

During the last refueling outage (RFO 16), approximately 175 hours of residual heat removal (RHR) train unavailability occurred during the common RHR shutdown cooling (SDC) suction window. At the time, the licensee concluded that these hours would not be counted against system availability. The rationale was based on the licensee's interpretation of the guidance contained in NEI 99-02. Specifically, it was concluded that the hours were not reportable because: (1) the reactor cavity was flooded up, (2) temperatures were maintained less than 150°F Fahrenheit (F), and (3) the fuel pool cooling system was in service with the fuel pool gates removed. Engineering analysis showed that pool temperatures would not increase above 150°F and, therefore, ambient losses were sufficient to offset decay heat load. The NEI 99-02 document stated that the RHR SDC system may be removed from service without incurring unavailability under the following conditions:

"With fuel still in the reactor vessel, when decay heat is so low that forced flow for cooling purposes, even on an intermittent basis, is no longer required (ambient losses are enough to offset the decay heat load), any train providing shutdown cooling may be removed from service without incurring planned or unplanned unavailable hours."

Subsequent to the January 2000 submittal of PI data to the NRC, the resident inspectors questioned this rationale. As a result, a question was submitted to NRR/NEI to resolve this issue. In NEI 99-02, it was concluded (Frequently Asked Question (FAQ) #148), that if the spent fuel pool cooling system is required to maintain reactor coolant temperatures less than 150°F, then ambient losses are not sufficient to offset the decay heat load, and therefore, the unavailable hours would be counted.

Subsequent to the determination of FAQ #148, the licensee submitted another question:

"At our plant, Tech Specs allow RHR SDC to be removed from service at times when RPV [reactor pressure vessel] water level is ≥ 21 ft-1inch above the top of the RPV flange and reactor coolant temperature is $\leq 150^\circ\text{F}$. Therefore, at times when RHR SDC is removed from service as allowed by Tech Specs (level and temperature requirements met), are unavailability hours required to be reported?"

The inspectors' position was that during the common RHR SDC work window, the core was partially off-loaded to the spent fuel pool. Because the spent fuel pool was connected (open) to the reactor cavity, the pool of water in the spent fuel pool and reactor was common. The common pool would be cooled by the spent fuel pool cooling system. Therefore, as stated in FAQ #148, some form of cooling would be required to

offset the decay heat load. As directed by guidance in TI 2515/144, the inspectors submitted this issue for internal NRC review. Also, in accordance with the TI 2515/144 instructions, this is considered an unresolved item pending internal review (50-331/00-002-02 (DRP)).

The inspectors noted an additional process issue. The licensee did not include the standby diesel generators as being unavailable when paralleled to the grid during the monthly surveillance. Operator recovery actions would likely involve more than the requirements specified in NEI 99-02. According to NEI 99-02, "restoration actions must be contained in a written procedure, must be uncomplicated (a single action or a few simple actions), and must not require diagnosis or repair. Credit for a dedicated operator can be taken only if (s)he is positioned at the proper location throughout the duration of the test for the purpose of restoration of the train should a valid demand occur."

The inspectors discussed this with licensee personnel. The licensee generated an Action Request (AR 19750) to review the standby diesel generator availability while paralleled to the grid. The licensee agreed recovery actions would not meet the requirements of NEI 99-02 of simple operator actions restoring system availability. The licensee decided to review other systems as well for the same potential concern related to unavailability of a system during surveillance testing. Addition of the surveillance testing availability hours would not have resulted in crossing the green threshold.

.2 Safety System Unavailability, Reactor Core Isolation Cooling System

a. Inspection Scope

The inspectors verified the reactor core isolation cooling system unavailability performance indicator data reported by the licensee for the first quarter of the year 2000. This was accomplished, in part, through review of control room operator logs, action request system, and the "DAEC 1st Quarter 2000 NRC PI Summary" document. The inspectors also held discussions with the system engineer.

b. Issues and Findings

There were no findings identified and documented during this inspection.

.3 Safety System Unavailability, High Pressure Coolant Injection System

a. Inspection Scope

The inspectors verified the high pressure coolant injection system unavailability performance indicator data reported by the licensee for the first quarter of the year 2000. This was accomplished, in part, through review of control room operator logs, action request system, and the "DAEC 1st Quarter 2000 NRC PI Summary" document. The inspectors also held discussions with the system engineer.

b. Issues and Findings

There were no findings identified and documented during this inspection.

40A6 Meetings, Including Exit

The inspectors presented the inspection results to Mr. R. Anderson and other members of licensee management at the conclusion of the inspection on May 16, 2000. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

R. Anderson, Plant Manager
J. Bjorseth, Engineering Superintendent
D. Curtland, Operations Manager
R. Hite, Manager, Radiation Protection
K. Peveler, Manager, Regulatory Performance
W. Simmons, Maintenance Superintendent
G. Van Middlesworth, Site General Manager
D. Wilson, Vice President Nuclear

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-331/00002-01	URI	Lack of guidance in the flood mitigation procedure
50-331/00002-02	URI	Interpretation of RHR System Unavailability PI

Closed

None

Discussed

None

LIST OF ACRONYMS USED

AFP	Area Fire Plan
AOP	Abnormal Operating Procedure
AR	Action Request
CFR	Code of Federal Regulations
CWO	Corrective Work Order
DAEC	Duane Arnold Energy Center
DRP	Division of Reactor Projects
F	Fahrenheit
FAQ	Frequently asked question
GE	General Electric
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
NRR	Nuclear Reactor Regulations
PERR	Public Electronic Reading Room
PI	Performance indicator
psig	Pounds per square inch gauge
PWO	Preventive Work Order
RCIC	Reactor core isolation cooling
RFO	Refueling Outage
RHR	Residual heat removal
RPV	Reactor pressure vessel
SDC	Shutdown cooling
TI	Temporary Instruction
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item

LIST OF BASELINE INSPECTIONS PERFORMED

The following inspectable-area procedures were used to perform inspections during the report period. Documented findings are contained in the body of the report.

Inspection Procedure		Report Section
<u>Number</u>	<u>Title</u>	<u>Section</u>
71111-04	Equipment Alignment	1R04
71111-05	Fire Protection	1R05
71111-06	Flood Protection Measures	1R06
71111-07	Heat Sink Performance	1R07
71111-12	Maintenance Rule Implementation	1R12
71111-13	Maintenance Work Prioritization & Control	1R13
71111-15	Operability Evaluations	1R15
71111-16	Operator Workarounds	1R16
71111-17	Permanent Plant Modifications	1R17
71111-19	Post Maintenance Testing	1R19
71111-22	Surveillance Testing	1R22
71111-23	Temporary Plant Modifications	1R23
TI 2515/144	Performance Indicator Data Collecting and Reporting Process Review	4OA5
(none)	Management Meetings	4OA6