

# IES UTILITIES INC.

John F. Franz, Jr.  
Vice President, Nuclear

May 6, 1994  
NG-94-1438

Mr. William T. Russell, Director  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Station P1-137  
Washington, DC 20555

Subject: Duane Arnold Energy Center  
Docket No: 50-331  
Op. License No: DPR-49  
Semiannual Report for the "Plan for the  
Integrated Scheduling of Plant  
Modifications for the Duane Arnold  
Energy Center"

Reference: 1) J. Franz letter to T. Murley dated  
November 1, 1993, NG-93-4276,  
Semiannual Report for the "Plan for  
the Integrated Scheduling of Plant  
Modifications for the Duane Arnold  
Energy Center"

File: A-278

Dear Mr. Russell.

This letter and attachments provide the semiannual report required by Section V.A. of the "Plan for the Integrated Scheduling of Plant Modifications for the Duane Arnold Energy Center" (the Integrated Plan). This report summarizes our progress in implementing Schedule A and B items, identifies the changes since the last report, and provides updated schedules.

Attachment 1 is a summary of progress in implementing the items listed in Schedules A and B. It lists the items which have been completed since the last update (Reference 1).

Attachment 2 identifies the changes since the last report. These changes include the addition of four Schedule B items. Explanations for each of these items is included in the corresponding attachment.

Updated Schedules A and B are included as Attachment 3. For each item listed, the specific implementation date is stated and, if applicable, reference is made to the NRC correspondence supporting this date. Also, brief descriptions of those Schedule B items which are not specifically described in other correspondence are included as Attachment 4.

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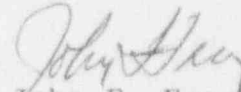
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Please inform us if you have any questions or comments concerning this submittal.

Very truly yours,



John F. Franz  
Vice President, Nuclear

JFF/DEB/pjv

Attachments:   1.   Summary of Progress in Implementing Schedule  
                  A and B Items  
                  2.   Revisions to the Integrated Plan Schedule  
                  3.   Updated Schedules A and B  
                  4.   Description of Selected Schedule B Items

cc:  D. Barta  
     L. Liu  
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     NRC Resident Office  
     DCRC

SUMMARY OF PROGRESS IN IMPLEMENTING SCHEDULE A AND B ITEMS

The following items which were listed on Schedules A and B transmitted with the November 1, 1993, Semiannual Report, have been completed during this reporting period.

Schedule A

- A1 - Revision to DAEC Radiation Protection Program to reflect new 10 CFR 20 requirements

Schedule B

- Long-Term Electrical Enhancements
  - B16 - Instrument AC Modeling
- B29 - Telemetry for emergency sirens

REVISIONS TO THE INTEGRATED PLAN SCHEDULE

Reference:

- 1) J. Franz letter to T. Murley dated June 26, 1992, NG-92-2629, Status of RG 1.97 Activities at DAEC
- 2) J. Franz letter to T. Murley dated June 4, 1993, NG-93-2078, Response to NRC Request for Review of DAEC Conformance to NEDO-31558, "Position on NRC Regulatory Guide 1.97, Revision 3, Requirements for Post Accident Neutron Monitoring System"
- 3) J. Franz letter to L. J. Callan dated February 14, 1994, NG-94-0563, Response to NRC Request for Additional Information Regarding Generic Letter 92-08, "Thermo-Lag 330-1 Fire Barriers", Pursuant to 10 CFR 50.54(f) - Duane Arnold Energy Center

<u>Item No.</u>	<u>Description of New Item</u>	<u>Explanation of New Item</u>
B50	RG 1.97 Modifications: Instrumentation Upgrades	<p>This item consists of the following: Modification of Yarway Reactor level instrumentation in the Control Room panels, upgrading HPCI and RCIC turbine inlet pressure instrumentation and upgrading the power supplies for Category 2 instrumentation. These upgrades and modification are scheduled to be completed prior to startup from RFO 13.</p> <p>This item also includes the incorporation of Primary Containment Isolation Valve Position indication into the DAEC Equipment Qualification Program by May 30, 1994. (Reference 1)</p>
B51	RG 1.97 Modifications: Neutron Monitoring System Upgrades	<p>Modifications necessary for the DAEC to conform to the criteria of NEDO-31558 will be completed prior to startup from RFO 14, currently planned for the fall of 1996. This schedule is necessary to</p>

<u>Item No.</u>	<u>Description of New Item</u>	<u>Explanation of New Item</u>
		support long-range planning and budgeting for outage scope and procurement of potentially long lead time materials. (Reference 2)
B52	Thermo-lag Fire Barriers (GL 92-08): Replace Identified Miscellaneous Applications of Thermo-lag	Currently identified miscellaneous applications of Thermo-lag installed at DAEC will be replaced with alternate materials by 07/01/95. These miscellaneous applications include five penetration seals and two door frames/jambs. (Reference 3)
B53	Thermo-lag Fire Barriers (GL 92-08): Resolve Thermo-lag issues at DAEC	All of the actions necessary to resolve the Thermo-lag issues are not presently known. The DAEC will aggressively pursue the options available. We anticipate resolution by December 31, 1996. This schedule allows for any outage related modifications to be completed during RFO 14 which is scheduled for the fall of 1996. (Reference 3)



### INTEGRATED PLAN SCHEDULE

		1994	1995	1996	1997	1998	1999
Item Number	Schedule B IESUI Initiative Items	-Cycle 13--		-Cycle 14--		-Cycle 15--	
			R		R		R
	•Long-Term Electrical Enhancements		E		E		E
B21	Electrical Distribution System Model Enhancements		-F-	12/31/95	F		F
B22	Electrical System Configuration Management Enhancements		U	12/31/95	U		U
			E		E		E
	•Ultrasonic Examination of Reactor Vessel Beltline Region Welds		L		L		L
B28	Phase 3: Vessel Weld Examination		-	*Prior to Cycle 14 Startup (Note 2)	O		O
	•Scram Frequency Reduction		O		O		O
B33	Turbine Electro-Hydraulic Control (EHC) System Improvements		U	*Prior to Cycle 14 Startup	U		U
			T		T		T
	•Long-term Instrument & Control Strategy		A		A		A
B34	Instrument Setpoint Program		-G-	06/01/95	G		G
	•Long-Term Commitment Tracking Program		E		E		E
B41	Phase 2: Implementation of Plan			12/31/95			

NOTE 1: We are currently evaluating an extension to the schedule for this item.

NOTE 2: Once RTS-261 has been approved, due date will be changed to prior to Cycle 15 Startup.

DESCRIPTION OF SELECTED SCHEDULE B ITEMS

Schedule B

I. NRC Items

- Safety-Related MOV Operability/Testing (GL 89-10)

This program provides for the testing, inspection and maintenance of MOVs as defined in GL 89-10 (and supplements thereto) to ensure they will function when subjected to conditions that are to be considered during both normal operation and abnormal events within the design basis of the plant.

Phase 2: Completion of Static/Dynamic Testing (B10)

This project involves the static and dynamic testing portion of the GL 89-10 program. Documentation and descriptions of actual test methods and justifications for the applicable methodology will be included in this phase.

We are currently evaluating an extension to the schedule for this item.

II. IESUI INITIATIVE ITEMS

The following descriptions of IESUI Initiative Items are based on preliminary evaluations of project scope and content. As these projects progress in their planning and implementation, it is expected that actual project scope for some IESUI Initiative items will deviate from the project scope described herein. Minor deviations from the following project descriptions will not be considered as deviations or changes to the Integrated Plan. We will, however, continue to advise the staff of significant changes to project scope or changes in scheduled completion dates.

- Long-Term Electrical Enhancements

Electrical Distribution System Model Enhancements (B21)

This project involves expanding the computer model to include the remaining lower-voltage AC circuits, motor overloads, and breaker and fuse coordination schemes.



Electrical System Configuration Management Enhancements  
(B22)

This project involves developing a new data base which combines the existing data with the electrical equipment data base developed in items 1 and 2 of the "Power Systems Analysis - Basic Model Development" project into a long-term configuration management program.

• Ultrasonic Examination of Reactor Vessel Beltline Region Welds  
(B28)

Phase 3: Performance of Vessel Examination

This 10 year ISI exam of the Reactor Pressure Vessel welds will be conducted in accordance with the governing requirements and regulations required by ASME Section XI and 10 CFR 50.55(a).

The 10 CFR 50.55a ruling in Federal Register 57 FR 34666, dated August 6, 1992, imposes an augmented examination of reactor vessel shell welds. According to this ruling "Licensees with fewer than 40 months remaining in the inservice inspection interval in effect on September 8, 1992 may extend that interval in accordance with the provisions of Section XI (1989 Edition) IWA-2430(d) for the purpose of implementing the augmented examination during that interval." IWA-2430(d) allows inspection intervals to be extended by as much as 1 year.

As noted in DAEC's Technical Specification (TS) Bases 3.6-36 the second 10-year interval for inservice inspections commenced on November 1, 1985 and is scheduled to end on October 31, 1995. TS Revision RTS-261 which is scheduled to be submitted this month will allow our current ISI interval to be extended by one year, until November 1, 1996, in accordance with the ruling in Federal Register 57 FR 34666 and the requirements of ASME Section XI (1989 Edition) IWA-2430(d). This ISI interval extension will allow the due date for this item to be changed to prior to Cycle 15 Startup. This will allow for additional time which is necessary to develop a strategy for implementing the required examinations.

- Scram Frequency Reduction

The purpose of this project is to examine and implement improvements to lower the scram rate of our plant. In 1989, we formed a Scram Frequency Reduction group to review plant operating experience and industry reports and identify improvements in equipment, communications, procedures, and personnel training that can be made to reduce our scram rate in order to be consistent with industry goals. Examples of improvements that have been implemented are the conversion of some turbine trip logic from single incidence to coincident logic (i.e. two-out-of-three logic) and installation of solenoid failure detection for MSIVs and turbine master trip solenoids. Additionally, the following modifications are planned:

- Turbine Electro-Hydraulic Control (EHC) System Improvements (B33)

A review of DAEC scram history (1979 - 1990) shows that over 30% of the reactor scrams have been initiated by the turbine/generator systems. The purpose of these modifications is to reduce reactor scrams due to single failure within the EHC system electronics.

- Long-Term Instrument and Control Strategy

- Instrument Setpoint Program (B34)

The purpose of this program is to reconstitute the design bases for the instrument setpoints contained in Technical Specifications, and upgrade to the extent practical to new methodology using the ISA 67.04 setpoint methodology. This effort will provide calculations that conform to the new ISA 67.04 methodology and provide the setpoint margins for applicable Technical Specification instruments. Tasks will include the formulation of detailed calculations and development of a topical design basis document detailing the setpoint methodology used at the DAEC.

- Long-Term Commitment Tracking Program

- Phase 2: Implementation of Plan (B41)

This phase of the Long-Term Commitment Tracking Program will involve activities such as researching industry good-practices, determining

hardware and software needs, procuring hardware and software, and refinement of the program plan.

Included in this phase of the Long-Term Commitment Tracking Program will be data compilation and entry. This involves the assembly and input of historical and ongoing commitments and endorsements.