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Iowa Electric Light and Power Company

May 3, 1989 NG-89-1189

Dr. Thomas E. Murley Director of Nuclear Reactor Regulation U.S. Nuclear Regulatory Commission Mail Station P1-137 Attention: Document Control Desk Washington, D.C. 20555

Subject:	Duane Arnold Energy Center
	Docket No.: 50-331
	Op. License No.: DPR-49
	Semi-annual Report for the "Plan for the
	Integrated Scheduling of Plant Modifications
	for the Duane Arnold Energy Center"
Reference:	W. Rothert letter to T. Murley dated November 3, 1988,
	NG-88-3658
File:	A-278

Dear Dr. Murley:

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

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

Attachment 2 identifies the changes since the last report. These changes include the revision of four Schedule B commitment dates, the addition of twelve new Schedule B items and the deletion of two Schedule B items. The reasons for the schedule changes are stated in Attachment 3.

Updated Schedules A and B are included as Attachment 4. For each item listed, the specific implementation date is stated and reference to the NRC correspondence supporting this date is identified. When available, references to NRC correspondence are cited for IELP-initiated items listed in Schedule B.

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Dr. Thomas Murley NG-89-1189 May 3, 1989 Page 2

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

Very truly yours,

Daniel L. Mineck Manager, Nuclear Division

DLM/PLB/pjv+

Attachments:

- 1. Summary of Progress in Implementing Schedule A and B Items
- 2. Changes in Schedules
- 3. Summary of Reasons for Schedule Changes
- 4. Updated Schedules A and B
- cc: P. Bell
 - L. Liu
 - L. Root
 - R. McGaughy
 - J. R. Hall (NRC-NRR)
 - A. Bert Davis (Region III)
 - G. Sharp (CIPCo)

D. Jensen (Corn Belt)

NRC Resident Office

Commitment Control: 830308, 840307, 850130, 850296, 850297, 850298, 860185, 860387, 860391, 870104, 870122, 870329, 880341, 880437



Attachment 1 NG-89-1189 May 3, 1989

Summary of Progress in Implementing Schedule A and B Items

The following items, as listed on the Schedules A and B transmitted with the November 3, 1988 semiannual report, have been completed during this reporting period:

Schedule A

• •

Station Blackout Rule Compliance Information Submittal required by 10 CFR 50.63(c)(1)

Schedule B

- Emergency Response Capabilities (Supplement 1 to NUREG-0737) Detailed (Supplement 1) CRDR Phase 2 Long Term Enhancement
- Emergency Response Capabilities (Supplement 1 to NUREG-0737) Regulatory Guide 1.97 Upgrade 1E Power Supplies
- Emergency Response Capabilities (Supplement 1 to NUREG-0737) Regulatory Guide 1.97 Upgrade Instrumentation to Category I

Improved Reactor Vessel Water Level Indication

LPCI Swing Bus Enhancement

- Drywell Steam Tunnel HVAC Modifications Phase II - Remaining Insulation
- Generator Retaining Rings and Rewind

Increased Cooling Tower Capacity

Turbine Wheel Replacement Replace Low Pressure "A"



Attachment 2 NG-89-1189 May 3, 1989 Page 1

Changes in Schedules

Changes to the Schedules fall into four categories: revised descriptions of items, revised completion dates, addition of new items and deletion of items. Item descriptions are sometimes revised to better reflect the current IELP project titles.

I. Item Descriptions

<u>Current Item Description</u><u>Revised Item Description</u>

Schedule A

None

Schedule B

None

II. Schedule Changes

Description	Current <u>Completion Date</u>	Revised <u>Completion Date</u>		
<u>Schedule A</u>				
None				
<u>Schedule B</u>				
Design Basis Program	Schedule not yet certain	September 30, 1993		
Low Level Radwaste Processing and Storage Facility Improvements	December 31, 1990	Annual Projects		
Post Event Reconstruction Upgrade Recorder Power Supplies	April 30, 1989	Prior to startup from Fall 1989 MSIV outage		
Training Simulator	June 30, 1990	December 31, 1989		



Attachment 2 NG-89-1189 May 3, 1989 Page 2

III. New Items

Description

Completion Date

Schedule A

None

Schedule B

Plant Life Extension Potential IELP initiative item Schedule not yet certain Technical Specifications Potential IELP initiative item Improvements Schedule not yet certain RWCU Piping Replacement Prior to Cycle 11 startup Recirc Pump Shaft Replacement Prior to Cycle 12 startup (Both Pumps) Prior to Cycle 12 startup Hydrogen Water Chemistry for Vessel Internals Motor Operated Valve-Operator Prior to Cycle 11 startup Upgrades (IEB 85-03 and Supplement 1 to IEB 85-03) Control Building HVAC and Prior to Cycle 12 startup Chillers Replacement of Extraction Steam Prior to Cycle 11 startup Pipe to 3A/3B Feedwater Heaters LPCI Swing Bus Enhancement Prior to Cycle 11 startup Phase II Containment Performance Schedule not yet certain, awaiting promulgation of Improvements NRC requirements



Attachment 2 NG-89-1189 May 3, 1989 Page 3

Description

Completion Date

<u>Schedule B</u> (continued)

Severe Accident Management

Schedule not yet certain, awaiting promulgation of NRC requirements/guidance

Emergency Response Capabilities (Supplement 1 to NUREG-0737) Regulatory Guide 1.97 Enhancements Schedule not yet certain evaluation of scope in progress

IV. Items Deleted

Description

<u>Schedule A</u>

None

<u>Schedule</u> B

Station Blackout Rule Compliance Modifications Implemented

Emergency Response Capabilities (Supplement 1 to NUREG-0737) Regulatory Guide 1.97 Reroute Cable for Divisional Separation



Attachment 3 NG-89-1189 May 3, 1989 Page 1

Summary of Reasons for Schedule Changes

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Summary of Acason's for Schedule ondinges					
Item Description	Change	Explanation			
<u>Schedule A</u>					
None					
<u>Schedule B</u>					
Design Basis Program	Completion Date	Pilot program initiated			
Low Level Radwaste Processing and Storage Facility Improvements	Completion Date	On-going activity for various projects, not a one-time project			
Post Event Reconstruction- Upgrade Recorder Power Supplies	Completion Date	Delay in meeting acceptance test requirement (NG-89-1202)			
Training Simulator	Completion Date	Reflect accelerated schedule			
Plant Life Extension	New Item	Commence program to maintain PLEX option			
Technical Specification Improvements	New Item	Potential item, awaiting approval of BWR Owners' Group submittal.			
Recirc Pump Shaft Replacement (Both Pumps)	New Item	Due to high cycle thermal fatigue cracking common to Byron-Jackson Pumps			
Hydrogen Water Chemistry for Vessel Internals	New Item	Attempt to mitigate IGSCC in Reactor Vessel Internals			
Motor Operated Valve-Operator Upgrades (IEB 85-03 and Supplement 1 to IEB 85-03)	New Item	Improvements being evaluated to ensure valves will reliably function over acceptable range of valve conditions (NG-89-0584)			
Control Building HVAC and Chillers	New Item	Design improvements desired to upgrade the capacity and improve the reliability of the HVAC system			



Attachment 3 NG-89-1189 May 3, 1989 Page 2

Summary of Reasons for Schedule Changes

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Item Description	Change	Explanation			
<u>Schedule B (continued)</u>					
Replacement of Extraction Steam Pipe to 3A/3B Feedwater Heaters	New Item	Erosion/Corrosion (tiger striping) found during Cycle 10/11 refueling outage			
RWCU Pipe Replacement	New Item	Pipe replacement with IGSCC resistant material			
LPCI Swing Bus Enhancements Phase II	New Item	Annunciator, voltage sensing, and breaker coordination enhancements resulting from NRC review of LPCI Swing Bus design (NG-88-3787)			
Containment Performance Improvements	New Item	NRC Integration Plan for closure of Severe Accident issues (SECY-88-147)			
Severe Accident Management	New Item	NRC Integration Plan for closure of Severe Accident issues (SECY-88-147)			
Emergency Response Capabilities (Supplement 1 to NUREG-0737) Regulatory Guide 1.97 Enhancements	New Item	Review of RG 1.97 compliance underway, enhancements may be identified (NG-89-0057)			
Emergency Response Capabilities (Supplement 1 to NUREG-0737) Regulatory Guide 1.97 Reroute Cable for Divisional Separation	Deleted	During installation, areas uncovered where further evaluation is necessary. Any necessary modifications will be communicated separately (NG-89-0057)			
Station Blackout Rule Compliance Modifications Implemented	Deleted	10 CFR 50.63(c)(1) information submittal indicates no modifications required			

Attachment 4 - Page 1 of 4 NG-89-1189 May 3, 1989

May 3, 1989				
	1989 1990 1991 1992 1993 1994			
	10			
SCHEDULE A				
 Station Blackout Rule Compliance 				
Schedule Submittal required by 10 CRF 50.63(c)(4)	(Note 4)			
SCHEDULE B				
NRC Items				
• Containment Performance Improvements	(Note 1)			
 Emergency Response Capabilities (Supplement 1 to NUREG-0737) 				
Detailed (Supplement 1) CRDR				
Phase 3 Long Term Enhancements	•Prior to Cycle 11 Startup/NG-86-4251 to NRC			
Phase 4 Long Term Enhancements	•Prior to Cycle 12 Startup/ NG-86-4251 to NRC			
Regulatory Guide 1.97 Enhancements	(Note 3)			
 Individual Plant Examination 	(Note 1)			
• LPCI Swing Bus Enhancements - Phase II	•Prior to Cycle 11 Startup/NG-88-3787 to NRC			
 Motor Operated Valve-Operator Upgrades (IEB 85-03 and Supplement 1 to IEB 85-03) 	•Prior to Cycle 11 Startup/NG-89-0584 to NRC			
 RWCU Piping Replacement 	•Prior to Cycle 11 Startup/NG-88-3593 to NRC			

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Attachment 4 - Page 2 of 4 NG-89-1189 May 3, 1989

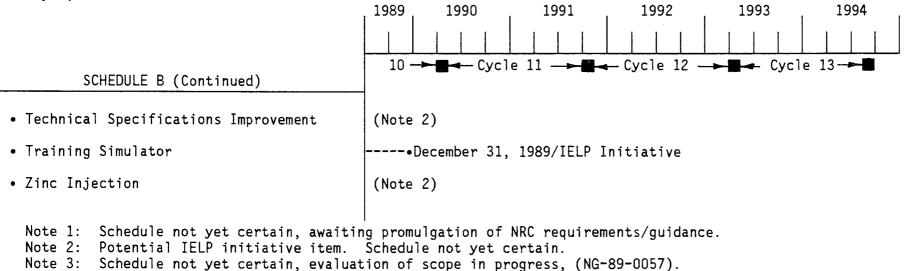
May 3, 1989	1989 1990 1991 1992 1993 1994			
SCHEDULE B (Continued)	10>- Cycle 11>- Cycle 12>- Cycle 13>-			
 Verification of Seismic Adequacy of Mechanical and Electrical Equipment (USI A-46, GL-87-02) 	•Prior to Cycle 12 Startup/ NG-88-3209 to NRC			
 Verification of Single Failure Assumptions in ECCS Analysis 	•6 months after Cycle 10 Startup/NG-88-3315 to NRC			
IELP Initiative Items				
 Additional 161 kV Service Breaker 	•Prior to Cycle 11 Startup/IELP Initiative			
 Breaker Coordination Study 	•December 31, 1989/IELP Initiative			
 Control Building HVAC and Chillers 	•Prior to Cycle 12 Startup/ IELP Initiative			
• Design Basis Program	•September 30, 1993/ IELP Initiative			
• Fire Protection (ANI Annual Projects)	Annual Projects/IELP Initiative			
 Hydrogen Water Chemistry for Vessel Internals 	•Prior to Cycle 12 Startup/ IELP Initiative			
 Hydrogen Water Chemistry Oxygen/Hydrogen Generator 	(Note 2)			

Attachment 4 - Page 3 of 4 NG-89-1189 May 3, 1989

May 3, 1969	1989 1990	1991	1992	1993	1994
SCHEDULE B (Continued)	10 Cy	cle 11 — 	⊢Cycle 12—	► E < Cycle	e 13 — —
 Instrument/Service Air Improvements 	-•August 31, 198	9/IELP Initiat	ive		
 Low Level Radwaste Processing and Storage Facility Improvements (Annual Projects) 		Annual Pro	jects/IELP I	nitiative	•
 Plant Initiated Modifications (Annual Projects) 	·····	Annual Pro	jects/IELP I	•	•••••
• Plant Life Extension	(Note 2)				
 Post Event Reconstruction (GL 83-28, Item 1.2) 					
Upgrade Recorder Power Supplies	•Prior to Startup from Fall 1989 MSIV Outage/IELP Initiative				
Verify Completion of Containment Isolation	•Prior	to Cycle 11 S	itartup/IELP	Initiative	
 Recirc Pump Shaft Replacement (Both Pumps) 		•P	Prior to Cycl	e 12 Startup,	/IELP Initiative
 Replacement of Extraction Steam Pipe to 3A/3B Feedwater Heaters 	•Prior	to Cycle 11 S	itartup/IELP	Initiative	
 Security System Upgrades 	(Note 2)				
• Severe Accident Management	(Note 1)				
• SPDS Enhancements	•During	Cycle 10/IELP	Initiative		

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Attachment 4 - Page 4 of 4 NG-89-1189 May 3, 1989



Note 4: Schedule not yet certain. Due within 30 days of the notification provided in accordance with 10 CFR 50.63(c)(3).