NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTY

Duke Power Company
Oconee Nuclear Station
Units 1, 2 and 3

Docket Nos. 50-269, 50-270, and 50-287
License Nos. DPR-38, DPR-47, and DPR-55
EA 96-019

During an NRC inspection conducted on January 8-25, 1996, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the Nuclear Regulatory Commission proposes to impose a civil penalty pursuant to Section 234 of the Atomic Energy Act of 1954, as amended (Act), 42 U.S.C. 2282, and 10 CFR 2.205. The particular violation and associated civil penalty are set forth below:

> 10 CFR 50, Appendix B, Criterion V, Instructions, Procedures and Drawings, requires, in part, that activities affecting quality shall be prescribed by documented instructions, procedures and drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures or drawings.
>
> Oconee Nuclear Site Directive 4.1.7(SA), Site Procedures, Step 4.2, states, in part, that procedures shall be written to a level of detail sufficient for a qualified person to perform the task with no direct supervision required. Procedure OP/0/A/1506/01, Fuel and Component Handling, was established by the licensee to implement activities affecting quality with regard to fuel and component handling, specifically, those actions required to move fuel assemblies using the fuel handling bridge in the spent fuel pool.
>
> Contrary to the above, on December 14, 1995, Procedure OP/0/A/1506/01 did not provide adequate instructions for the movement of fuel assemblies in the spent fuel pool. Specifically, the movement of an irradiated fuel assembly was not controlled in that it was not returned to its required location in the spent fuel pool after the assembly was moved on December 14, 1995, but was left suspended and attached to the refueling bridge mast until January 8, 1996. (01013)

This is a Severity Level III violation (Supplement I).
Civil Penalty - $50,000.

Pursuant to the provisions of 10 CFR 2.201, Duke Power Company, (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalty (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each alleged violation: (1) admission or denial of the alleged violation, (2) the reasons for the violation if admitted, and if denied, the reasons why, (3) the corrective steps that have been taken and the results achieved, (4) the corrective steps that will be taken to avoid further violations, and (5) the date when full compliance will be achieved. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as why the license should not be modified, suspended, or revoked or why such other action as may be proper should

not be taken. Consideration may be given to extending the response time for good cause shown. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Within the same time as provided for the response required above under 10 CFR 2.201, the Licensee may pay the civil penalty by letter addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, money order, or electronic transfer payable to the Treasurer of the United States in the amount of the civil penalty proposed above, or the cumulative amount of the civil penalties if more than one civil penalty is proposed, or may protest imposition of the civil penalty in whole or in part, by a written answer addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission. Should the Licensee fail to answer within the time specified, an order imposing the civil penalty will be issued. Should the Licensee elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalty, in whole or in part, such answer should be clearly marked as an "Answer to a Notice of Violation" and may: (1) deny the violation listed in this Notice, in whole or in part, (2) demonstrate extenuating circumstances, (3) show error in this Notice, or (4) show other reasons why the penalty should not be imposed. In addition to protesting the civil penalty in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section VI.B.2 of the Enforcement Policy should be addressed. Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in reply pursuant to 10 CFR 2.201, but may incorporate parts of the 10 CFR 2.201 reply by specific reference (e.g., citing page and paragraph numbers) to avoid repetition. The attention of the Licensee is directed to the other provisions of 10 CFR 2.205, regarding the procedure for imposing a civil penalty.

Upon failure to pay any civil penalty due which subsequently has been determined in accordance with the applicable provisions of 10 CFR 2.205, this matter may be referred to the Attorney General, and the penalty, unless compromised, remitted, or mitigated, may be collected by civil action pursuant to Section 234c of the Act, 42 U.S.C. 2282c.

The response noted above (Reply to Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: James Lieberman, Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region II and a copy to the NRC Resident Inspector at the Oconee facility.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction.

However, if you find it necessary to include such information, you should clearly indicate the specific information that you desire not to be placed in the PDR, and provide the legal basis to support your request for withholding the information from the public.

Dated at Atlanta, Georgia
this 5th day of March 1996

LIST OF ATTENDEES

NUCLEAR REGULATORY COMMISSION:

L. Reyes, Deputy Regional Administrator, Region II (RII)
J. Johnson, Deputy Director, Division of Reactor Projects (DRP), RII
A. Gibson, Director, Division of Reactor Safety (DRS), RII
S. Shankman, Acting Director, Project Directorate II-2, Office of Nuclear Reactor Regulation (NRR)
B. Uryc, Director, Enforcement and Investigation Coordination Staff (EICS), RII
R. Freudenberger, Acting Chief, Branch 1, DRP, RII
C. Evans, Regional Counsel, RII
G. Humphrey, Resident Inspector-Oconee, Branch 1, DRP, RII
L. Wiens, Senior Project Manager, Project Directorate II-2, NRR
L. Watson, Senior Enforcement Coordinator, EICS, RII
R. Carroll, Project Engineer, Branch 1, DRP, RII
R. Moore, Reactor Inspector, DRS, RII
J. Beall, Office of Enforcement (via telecommunication)

DUKE POWER COMPANY (DPC):

J. Hampton, Vice President, Oconee Nuclear Station (ONS)
B. Peele, Station Manager, ONS
W. Foster, Safety Assurance Manager, ONS
K. Canady, Nuclear Engineering Manager, DPC
T. Saville, Reactor Engineering Manager, ONS
E. Burchfield, Regulatory Compliance Manager, ONS
J. Warren, Rotating Equipment Manager, ONS
G. Rothenberger, Operations Superintendent, ONS
D. Hubbard, Maintenance Superintendent, ONS
J. Snowder, Fuel Handling Supervisor, ONS
D. Smith, Operations Staff Engineer, ONS
P. Newton, Corporate Counsel, DPC
R. Zuercher, Corporate Communications, DPC

APPARENT VIOLATION

10 CFR 50, Appendix B, Criterion V., Instructions, Procedures, and Drawings," states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings."

Oconee Nuclear Site Directive 4.1.7(SA), Site Procedures, Step 4.2 states in part, "procedures shall be written to a level of detail sufficient for a qualified person to perform the task with no direct supervision required."

Procedure OP/0/A/1506/01, Fuel and Component Handling, did not provide adequate instructions for the movement of fuel assemblies in the spent fuel pool. As a result, fuel assembly NJO6E7 was not returned to its required location in the spent fuel pool on December 14, 1995, but was left suspended in the refueling bridge mast until January 8, 1996. Combined with an accident scenario involving the Standby Shutdown Facility where water would be supplied from the spent fuel pool, the fuel assembly could have become uncovered, creating a significant radiological hazard.

NOTE: The apparent violation(s) discussed in this predecisional enforcement conference are subject to further review and are subject to change prior to any resulting enforcement decision.

APPARENT VIOLATION

10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," and the licensee's Quality Assurance Program (Duke-1-A, Section 17.3.2.13) require that measures be established to assure that conditions adverse to quality are promptly identified and corrected.

The corrective actions taken with respect to Escalated Enforcement Action 94-104 (dated August 2, 1994) to preclude further fuel assembly movements without proper procedural controls were inadequate. As a result, a fuel assembly was left suspended in the fuel bridge mast from December 14, 1995 to January 8, 1996. Combined with an accident scenario involving the Standby Shutdown Facility where water would be supplied from the spent fuel pool, the fuel assembly could have become uncovered, creating a significant radiological hazard.

NOTE: The apparent violation(s) discussed in this predecisional enforcement conference are subject to further review and are subject to change prior to any resulting enforcement decision.

Oconee Nuclear Station

Mispositioned Fuel Assembly
Predecisional Enforcement Conference
February 21, 1996

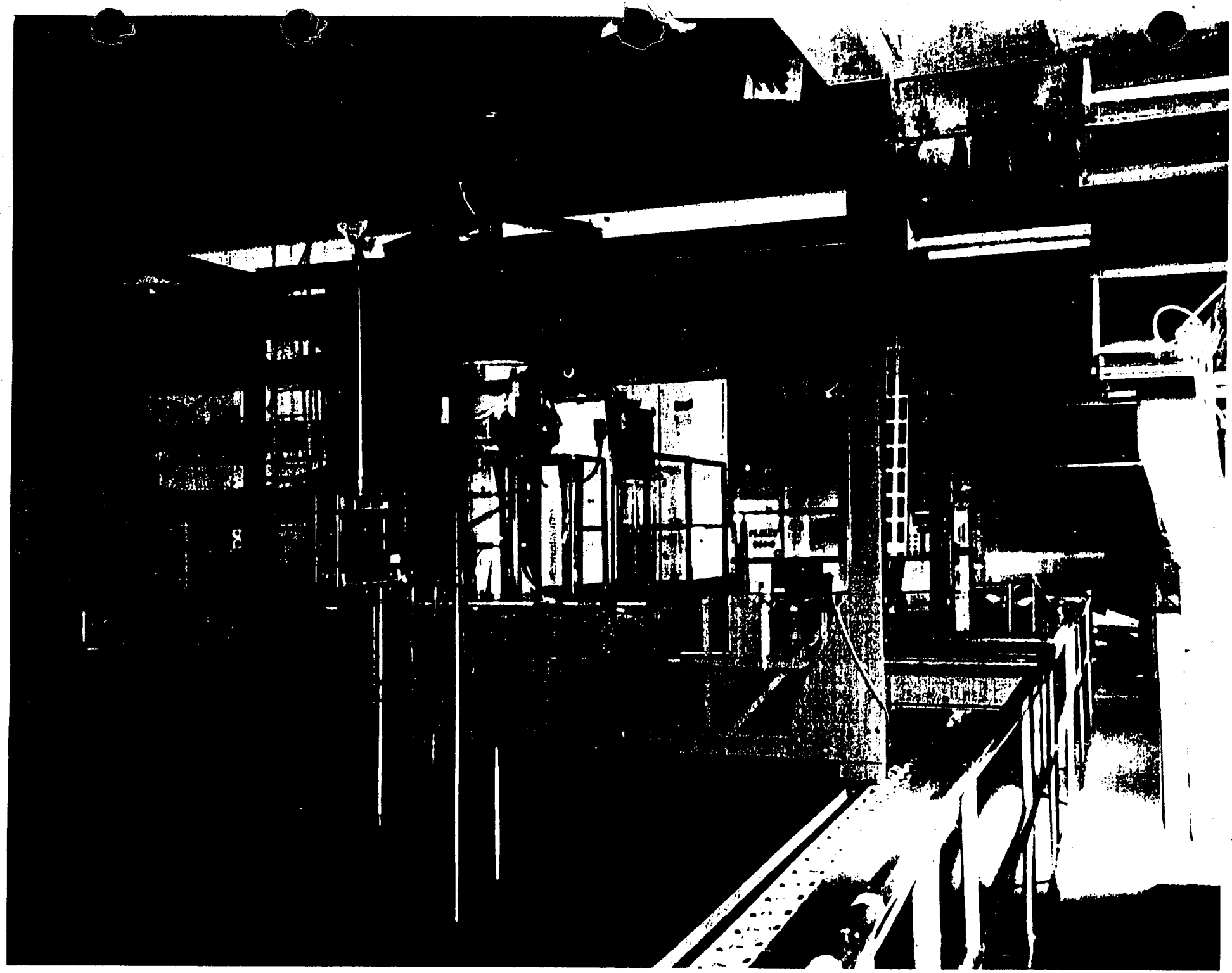
Enclosure 4

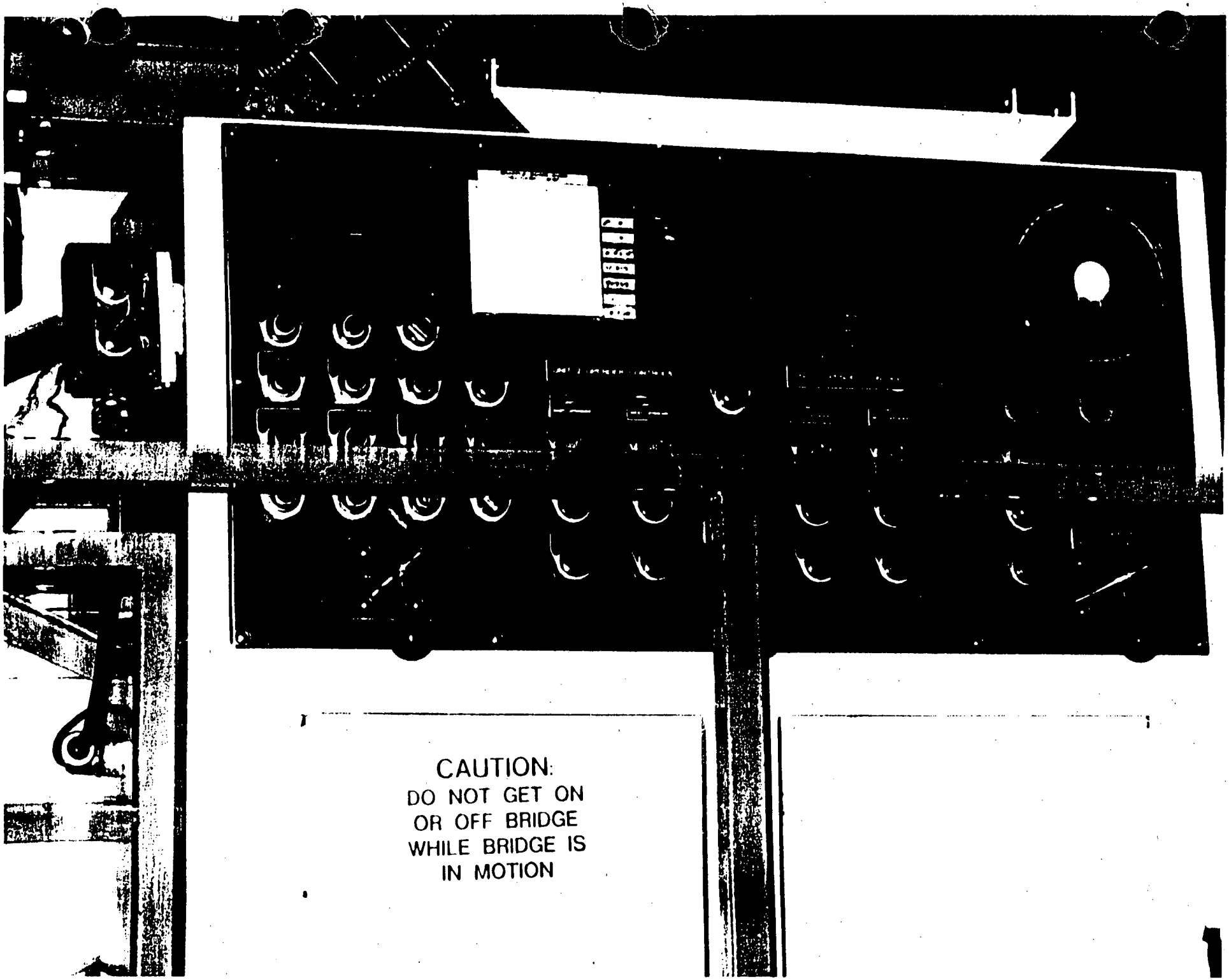
Agenda

- Introduction
- Sequence of Events
- Root Cause
- Safety Significance
- Corrective Actions
- Additional Issues
- Conclusion

Introduction

- Fuel assembly was left suspended in the Units 1 and 2 spent fuel pool fuel bridge mast on December 14, 1995
- Inspection Report 96-02 describes apparent violation involving inadequate controls over fuel assembly movement on December 14, 1995
- ONS agrees that not all controls for fuel handling were adequate
- Mispositioned fuel assembly is an unacceptable event
- We are taking broad-based, comprehensive corrective actions




CAUTION:
DO NOT GET ON
OR OFF BRIDGE
WHILE BRIDGE IS
IN MOTION

Sequence of Events

Date	Time	Description
12/14/95	~1100	- Fuel Handling Supervisor called Reactor Engineer A to schedule FA inspection
	~1305	- Reactor Engineer A directed bridge operator to move to FA at SFP location K40 - FA was raised, moved from location K40, and rotated to perform video inspection - FA was replaced in SFP location K40

Sequence of Events (cont)

Date	Time	Description
12/14/95		- Reactor Engineer A directed bridge operator to raise FA in SFP location L44 - Video inspection of FA was completed - Bridge operator stopped hydraulic pump and left control console to help Reactor Engineer A secure video equipment
	1342	- Bridge operator secured the bridge and personnel exited the SFP

Sequence of Events (cont)

Date	Time	Description
1/8/96	~1030	- Fuel Handler A energized bridge and discovered FA grappled in the mast
	~1030	- Fuel Handlers A and C lowered FA into SFP location L44
	~1030	- Fuel Handler C informed supervision of mispositioned FA
	~1800	- Senior management initiated Significant Event Investigation Team (SEIT)

Root Cause

- Lack of management expectations for formality in some fuel handling or core component movement processes
  - » Failure to write and process a work request
  - » Perception that no task-specific procedure was necessary
  - » Failure to perform an adequate pre-job briefing

Root Cause (cont)

- Failure of bridge operator to self-check actions
  - » Perceived time pressure
  - » Stopping the hydraulic pump when leaving the bridge control panel
  - » Inadequacy of procedure

Root Cause (cont)

- Scope of previous corrective actions
  - » Focused primarily on movements to and from the core
  - » Depth of root cause for special NI test

Safety Significance

- Potential for fuel handling accident was remote
  - » No fuel was moved between 12/14/95 and 1/8/96
  - » Fuel mast provides positive mechanical lock for fuel assembly
  - » Fuel bridge, mast, and grapple can withstand seismic loads

Safety Significance (cont)

- Standby Shutdown Facility (SSF) Scenario
  - » SSF was designed to maintain safe shutdown for 72 hours following a fire, flood, or sabotage event
  - » SSF Reactor Coolant Makeup Pump draws suction from the SFP
  - » Assuming no credit for actions to replenish SFP, water level at 72 hours is at least one foot above the fuel assemblies

Safety Significance (cont)

- For the postulated SSF scenario:
  - » With no actions to replenish SFP, uncovery of the fuel assembly would have initiated 36-40 hours into SSF event
  - » For uncovered assembly, detailed analyses predict a maximum cladding temperature of ~1020 degrees F
  - » Most limiting cladding failure mechanism occurs at ~ 1150 degrees F

Safety Significance (cont)

- For the postulated SSF scenario:
  - » Analyses conclude no fuel cladding failure
  - » No additional offsite dose to the public
  - » Radiation levels in SFP from raised assembly marginally increased

Immediate Corrective Actions

- Returned fuel assembly to a safe storage location
- Fuel handling activities suspended
- Thorough assessment by Significant Event Investigation Team (SEIT)

Corrective Actions Prior to Fuel Movement

- Procedure revisions implemented to require:
  - » Formalized communications with Operations
  - » Step-by-step instructions for all fuel movements
  - » Checklist to ensure fuel bridge mast is properly secured when fuel handling is suspended or concluded
- Personnel are being trained on procedures
- Pre-job briefings will be formalized for all fuel-related activities in SFP
- Personnel corrective actions have been taken in accordance with Duke policies

Longer-Term Corrective Actions

- Self Initiated Technical Audit (SITA) on SFP and fuel handling activities
  - » Broad assessment of fuel handling and SFP-related activities
    - – Activities that cross, or have the potential to cross, the SFP water line
    - – Handling of loads over irradiated fuel
  - » Verify design basis requirements are properly implemented in procedures and work practices
  - » Team consists primarily of offsite personnel, including an industry expert
  - » Emphasis on industry best practices

Other Issues

- Operations focus
- SFP water level discrepancy
- SFP/SSF Design Basis

Operations Focus

- Issue:
  - » Control room was not immediately notified of suspended fuel assembly
- Actions:
  - » Procedures revised to require:
    - – Permission from control room prior to starting SFP work
    - – Notification of control room if work is completed or suspended
    - – Immediate notification of control room if unusual conditions are discovered during work
  - » Formalized planning of SFP work activities

SFP Water Level Discrepancy

- Issue:
  - » Minimum required SFP level per procedures conflicts with levels described in FSAR
- Actions:
  - » Immediate action was to revise procedures to require a minimum water level consistent with FSAR
  - » Engineering analyses concluded level discrepancy did not affect FSAR analyses
  - » Operational impact of new level requirements being assessed

SFP/SSF Design Basis

- Issue:
  - » Minimum water level in SFP 72 hours following an SSF event is one foot above fuel assemblies
- Actions:
  - » Mod implemented on Units 1 and 2 SFP to allow remote makeup to SFP
  - » Similar mod will be implemented on Unit 3 SFP by June 1996
  - » Portable filtration unit being procured to minimize time to refill SFP
  - » Procedures being revised to maintain a minimum SFP water level ~8-9 feet above fuel
  - » A procedure was issued to require that a fuel assembly is lowered into a safe location on a loss of power

Conclusion

- Mispositioned fuel assembly is an unacceptable event
- SITA will provide a broad assessment of fuel handling and SFP-related activities
- ONS will take action on SITA findings and recommendations
- We are taking broad-based, comprehensive corrective actions to achieve event-free performance