

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-456/95019(DRP)

Docket Nos. 50-456

License Nos. NPF-72

Licensee: Commonwealth Edison Company
Opus West III
1400 Opus Place - Suite 300
Downers Grove, IL 60515

Meeting Conducted: December 21, 1995

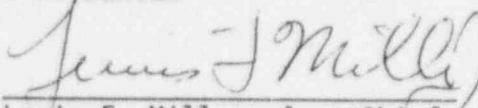
Meeting Location: Region III Office
801 Warrenville Road
Lisle, Illinois 60532-4351

Type of Meeting: Enforcement Conference

Inspection Conducted: Braidwood Station
October 23 through November 21, 1995

Inspectors: Z. Falevits
E. R. Duncan

Approved By:


Lewis F. Miller, Jr., Chief
Projects Branch 4

1-9-96
Date

Meeting Summary

Enforcement Conference on December 21, 1995 (Report No. 50-456/95019(DRP))

Areas Discussed: Apparent violations identified during the inspection were discussed, along with the corrective actions taken or planned by the licensee. The apparent violations involved (1) the failure to meet Technical Specification 3.8.1 by having both Unit 1 diesel generators inoperable in Modes 5 and 6 during core alterations, movements of irradiated fuel, positive reactivity changes, and crane operations with loads over the spent fuel pool, (2) the failure to meet 10 CFR 50, Appendix B, Criterion V, by not having adequate inspection requirements for the 4160V breaker levering-in device, and (3) the failure to meet 10 CFR 50, Appendix B, Criterion V, by not including appropriate acceptance criteria in the 4160V breaker racking-in procedure.

DETAILS

I. Persons Present at Conference

Commonwealth Edison Company (ComEd)

K. Kaup, Site Vice President
T. Tulon, Station Manager
J. Lewand, Regulatory Assurance
K. Strahm, Vice President, Pressurized Water Reactors
D. Miller, Technical Superintendent
D. Cooper, Operations Manager
C. Dunn, SQV Engineer
S. Trubatch, Attorney
T. Prendergast, Corporate Nuclear Licensing
L. Weber, Shift Operations Supervisor
T. Gierich, Byron Operations Manager
T. Simpkin, Regulatory Assurance
M. Pavey, Licensing-PWR RPA
T. Ryan, CNO Staff ComEd
E. Broccolo, PWR Operations

U.S. Nuclear Regulatory Commission

A. B. Beach, Deputy Regional Administrator
G. C. Wright, Acting Deputy Director, DRP
L. F. Miller, Jr., Chief, Reactor Projects Branch 4
R. Gardner, Chief, Engineering Branch
B. Berson, Regional Counsel
Z. Falevits, Reactor Inspector
J. E. Beall, Enforcement Specialist, OE
R. R. Assa, Project Manager, Braidwood, NRR
P. R. Pelke, Enforcement Specialist
R. B. Landsman, Project Engineer
E. R. Duncan, Resident Inspector

Illinois Department of Nuclear Safety

J. Roman, Illinois Resident Inspector
T. Esper, Illinois Resident Inspector

II. Enforcement Conference

An enforcement conference was held in the NRC Region III Office on December 21, 1995. This conference was conducted as a result of the findings of an inspection conducted from October 23 through November 21, 1995, in which apparent violations of NRC regulations were identified. Inspection findings were documented in Inspection Report No. 50-456/95016(DRP), transmitted to the licensee by letter dated December 11, 1995.

The purpose of this conference was to discuss the apparent violations, root causes, contributing factors, and the licensee's corrective actions.

The licensee's presentation included an acknowledgement of the apparent violations which had occurred, a discussion of the incident's safety significance, a discussion of the circumstances which caused the event, and an outline of corrective actions taken or planned.

A copy of the licensee's handouts for their presentation is attached to this report.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice" a copy of this summary and its enclosures will be placed in the NRC Public Document Room.

Attachment: As stated

BRAIDWOOD

IB DIESEL GENERATOR OUTPUT BREAKER

**SUMMARY OF ENFORCEMENT CONFERENCE
PRESENTATION**

DECEMBER 21, 1995

**REGION III
LISLE, ILLINOIS**

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EVALUATION OF SAFETY SIGNIFICANCE

Safety significance was considered from two perspectives: actual safety significance and potential safety significance.

There was no actual safety significance because no events occurred to challenge the system during the time that the two diesel generators were unavailable.

Evaluation shows that the unavailability of both diesel generators did have potential safety significance because it resulted in somewhat of an increase in the probability of losing the capability to remove decay heat from the shutdown reactor. The basic reliance on diesel generators for emergency on-site power is elemental in the nuclear industry. At the same time, the availability of an operating nuclear power plant on-site provided a highly reliable source of emergency power. As the plant configuration evolved during the outage, the increase in core damage probability ranged from $8E-08$ to $1E-06$. Details have been provided in LER 95-014, as will be supplemented. These probabilities are only one factor in the determination of potential safety significance. During the event, the plant also was implementing its shutdown risk program, which includes contingencies for responding to the kind of loss of equipment in protected shutdown paths that was experienced here.

VIOLATIONS: CAUSES AND CORRECTIVE ACTIONS

VIOLATIONS ADDRESSED

1. FAILURE TO MEET TECHNICAL SPECIFICATION 3.8.1
2. INADEQUATE INSPECTION FOR THE LEVERING-IN DEVICE
3. INADEQUATE ACCEPTANCE CRITERIA FOR BREAKER RACKING-IN

VIOLATION 1

Violation: Allowed outage time in Technical Specification 3.8.1 exceeded.

Root Cause: Degraded levering-in device caused diesel generator breaker not to be racked-in fully.

Contributing Causes: Inadequate identification and resolution of degradation of levering-in device.

Operator failed to notice that the breaker was not racked-in fully.

Failure to perform functional testing on breaker after racking-in.

Corrective and Other Actions: Immediate and Prompt Actions
Closed diesel breaker.

Visually checked open ESF breakers to corroborate that they were racked-in.

Position of floor trip mechanism verified for all open racked-in ESF breakers.

Replaced worn levering-in device with upgraded version.

Long Term Actions-Specific to the Event

All levering-in devices will be replaced with the upgraded version. The replacement schedule will be based on the availability of non-outage work windows and other opportunities.

Enhanced rack-in procedure by adding additional verifying acceptance criteria.

Functional testing added for automatic ESF breakers after racking-in.

Long Term Actions-Ongoing

Reinforce expectations for development of questioning attitude.

Seminars on use of design basis knowledge will be continued and expanded to other areas to facilitate operator communication of equipment condition to system engineers.

Operator and engineering personnel will be interviewed again in light of the consequences of this event for identification of material conditions that could affect operation.

Operator expectations will be communicated regarding the need to notify management of any instance in which repetitive action was needed to accomplish the intended goal.

VIOLATION 2

Violation: Inadequate inspection of the levering-in device.

Root Cause: Device considered to be capable of being inspected adequately without breaker disassembly.

Corrective Action: Inspection procedure for levering-in device enhanced by adding requirement for disassembly.

Performance Centered Maintenance Program and other actions that have been taken to implement the maintenance rule include processes for identifying symptoms of ineffective aspects of other inspection procedures. Those findings would be processed and corrected through the root cause and corrective actions programs.

VIOLATION 3

Violation: Inadequate acceptance criteria for breaker racking-in.

Root Cause: Failure to realize that reliance on light indicator and free-turning of racking-in device could result in false positive indication of complete breaker rack-in.

Corrective Actions: Enhanced rack-in procedure by adding additional verifying acceptance criteria.

Functional testing added for automatic ESF breakers after racking-in.

ATTACHMENT

SUMMARY OF RESPONSES TO NRC CONCERNS

Process for Identifying and Resolving Recurring Equipment Failures:

Several ongoing actions will improve the identification and resolution of recurring equipment failures.

- * A comprehensive Materiel Condition Improvement Plan has been adopted. It has identified and prioritized Equipment Focus Areas which will address specific materiel condition issues.
- * A Performance Centered Maintenance (PCM) program is being developed to optimize the Station's preventative maintenance program. The PCM program includes the tracking and trending of equipment performance. This will provide information that will enhance the station's ability to identify precursors to equipment failures and to take timely corrective actions which will resolve equipment problems and preclude their repetition.
- * Peer groups comprised of system engineers from the ComEd stations and corporate office have been established to share and compare information about system performance.

Functional Testing of Equipment:

- * Functional testing will be applied to all automatic ESF breakers.
- * The need to expand functional testing to additional equipment is being reviewed.