

PDR

Public

March 13, 1997

Mr. H. G. Stanley
Site Vice President
Braidwood Station
Commonwealth Edison Company
RR #1, Box 84
Braceville, IL 60407

SUBJECT: BRAIDWOOD MANAGEMENT MEETING

Dear Mr. Stanley:

This refers to the meeting conducted at the NRC Region III Office in Lisle, Illinois on January 27, 1997. The meeting was to discuss your actions related to the inadvertent pressurizer power operated relief valve actuation during cooldown on the Braidwood Unit 1 reactor. This issue is discussed in detail in Inspection Report (50-456/96018(DRP)). The topics discussed included our findings and your related corrective actions both completed and planned.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter with Enclosures 1 and 2 will be placed in the NRC's Public Document Room.

We appreciated your cooperation in this matter. If you have any questions regarding this meeting, please contact me at 630/829-9631.

Sincerely,

/s/ R. D. Lanksbury

Roger D. Lanksbury, Chief
Reactor Projects Branch 3

Docket No. 50-456
Docket No. 50-457

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Enclosures

1. List of Attendees
2. Licensee Presentation

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H. G. Stanley

cc w/o encl: T. J. Maiman, Senior Vice President
Nuclear Operations Division
D. A. Sager, Vice President,
Generation Support
H. W. Keiser, Chief Nuclear
Operating Officer
T. Tulon, Station Manager
T. Simpkin, Regulatory
Assurance Supervisor
I. Johnson, Acting Nuclear
Regulatory Services Manager

cc w/encl: Richard Hubbard
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DRS (3)

List of Attendees

Licensee

E. Stanley, Site Vice President, Braidwood
D. Sager, Vice President, Generation Support
T. Tulon, Station Manager, Braidwood
R. Wegner, Operations Manager, Braidwood
R. Lemke, Offsite Review
D. Hoots, Unit 1 Operating Engineer, Braidwood
T. Simpkin, Regulatory Assurance Supervisor, Braidwood
H. Pontious, Jr. Nuclear Licensing Administrator

NRC

J. Grobe, Deputy Director, Division of Reactor Projects, RIII
R. Lanksbury, Chief, Branch 3, Division of Reactor Projects, RIII
T. Tongue, Project Engineer, Division of Reactor Projects, RIII
C. Phillips, Senior Resident Inspector, Braidwood

Braidwood Station

Management Meeting

January 27, 1997

Inadvertent Pressurizer
PORV Actuation
October 12, 1996

Agenda

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|----------------------|--------------|
| • Opening Remarks | Tim Tulon |
| • Overview of Event | Bob Wegner |
| • Causes | Bob Wegner |
| • Corrective Actions | Bob Wegner |
| • Other Issues | All |
| • Closing Comments | Gene Stanley |

Event Narrative

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Event Narrative

- 10/12/96 - U1 Shutdown for Planned Maintenance Outage (Steam Generator Midcycle)
- Plant Cooldown Using Steam Dumps and Steam Generator PORVs

Event Narrative

- Pressurizer Level Maintained at approximately 80% per BwGP 100-5
- Demand on Charging Flow Control Valve 1CV121 was Reduced to Maintain Pressurizer Level
- HLA Briefing Was Held to Discuss Evolution of Placing 1B RH Train in Shutdown Cooling Mode

Event Narrative

- NSO controlling Pressurizer Level Noted Charging Flow Oscillations
 - Flow was Difficult to Control due to Large DP Across Valve 1CV121
 - Pressurizer Level had Begun to Slowly Increase
 - NSO Received Permission from Unit Supervisor to Bypass 1CV121 to Allow Finer Control of Charging Flow - 1BwOA PRI-1 was Referenced

Event Narrative

- CV Excess Letdown Placed in Service to Aid in Controlling Pressurizer Level. Actions Were Progressing to place 1B RH Train in Shutdown Cooling Mode

Event Narrative

- 1CV121 Bypass Valve 1CV8387B was Manually Cracked Open
 - Pressurizer Level Increased at Higher Rate
 - Unexpected Difficulty Encountered in Operating 1CV8384A (Upstream Isolation to 1CV121) and 1CV8387B

Event Narrative

- Pzr Pressure Continued to Increase
 - Demand Manually Increased on Pressurizer Sprays
 - Pressurizer Heaters were Manually Deenergized
 - 1CV8105 was Closed by NSO to Isolate Charging Flow as Plant Approached Solid Conditions
 - Pressurizer PORV 1RY455A Automatically Opened One Time to Relieve RCS Pressure

Event Narrative

- 1B CV Pump was Manually Tripped to Halt Input to RCS
- RCPs Tripped due to loss of Seal Injection
- Shift Engineer Directed Crew to Stabilize Conditions - Plant Conditions Verified Stable
- Established RH Letdown to Restore Pressurizer Level

Causes

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Causes

- CV121 Behavior is Unstable Under Low Flow / High DP Conditions
- Inadequate Communications
 - HLA Did Not Address Effects of Past Operating Characteristics of 1CV121
 - Insufficient Details Were Provided to Operator Instructed to Crack Open 1CV8387B to Bypass 1CV121

Causes

- Procedure Guidance
 - BwGP 100-5 Allowed Level to Be Maintained at 80% with Reduced Letdown and Charging Control
 - No Hold Point for Evolution
 - Sufficient Instructions were Not Available to Bypass CV121

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Corrective Actions

Corrective Actions

- Engineering and Operations Evaluating Possible Improvements to Flow Control of CV121 Valves for High DP Evolutions
 - CV121 has been added to Operator Workaround list
 - Survey of Industry Experience with CV121 in Progress

Corrective Actions

- Communications
 - HLA Enhancements
 - Hold Points added to BwGP 100-5
 - Scorecard Program

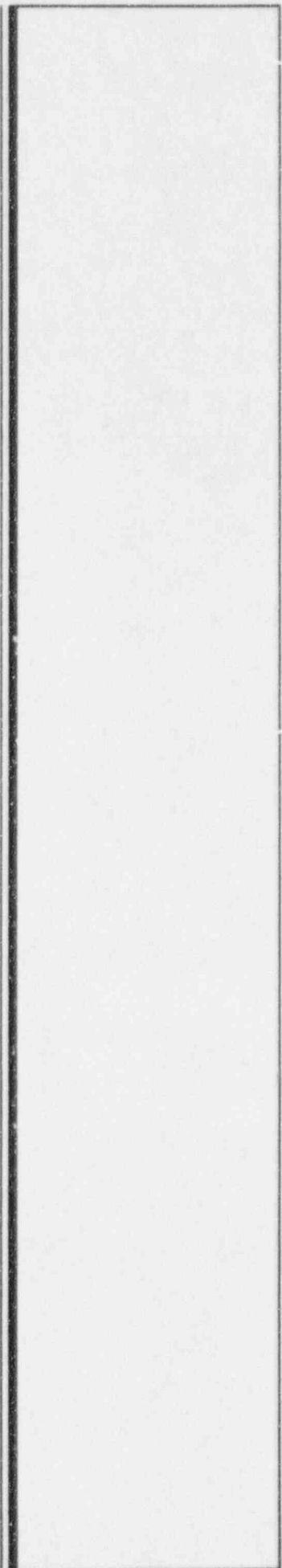
Corrective Actions

- BwGPs Reviewed and Revised
 - Lowered Pressurizer Level to 50%
 - Addition of Hold Points
- 1/2 BwOP CV-27 Written to Provide Guidance on CV121 Manipulation at High DP

Corrective Actions

- Training
 - Startup/Shutdown Evolutions were Evaluated
 - “Just in Time” Training
- Event details were provided to Operating personnel

Other Issues



Other Issues

- Schedule
 - Outage Template
 - Planned Evolution was Safe and Conservative
 - Operations Planning

Closing Comments

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Closing Comments

- We understand the issues of concern to the NRC and I believe we have demonstrated to you that we have a thorough understanding of the issues, as we have discussed, and are taking appropriate corrective actions.