

Vijay Meghani 11/13/06

Assignment - Documenting Findings

Summary of Finding:

Green. A finding of very low safety significance was self-revealed during an event when an operator mistakenly closed two Unit 2 combined heater drain pump discharge valves instead of the corresponding Unit 3 valves. The primary cause of this finding was related to the cross-cutting area of Human Performance. Despite several unit-specific visual indications that were available, the operator did not perform adequate self-checking to ensure that he was on the correct unit.

The finding was greater than minor because it increased the likelihood of a low steam generator level reactor trip. The finding was of very low safety significance based on being screened as green using the SDP Phase 1 screening worksheets. No violation of the NRC requirements occurred. (Section 1RXX.x)

Finding Write-up

Introduction

A Green finding was self-revealed during an event when an operator mistakenly closed two Unit 2 combined heater drain pump discharge valves instead of the corresponding Unit 3 valves. There was no violation of regulatory requirements associated with the finding. The finding increased the probability of a reactor trip initiating event.

Description

During the Unit 3 shutdown for refueling, while performing actions in accordance with Windy City Operating Procedure WCOP CD/CB-4 "Condensate/Condensate Booster System Drain", Revision 15, Step E.21.a.1, an operator mistakenly closed manual valves 2CB026A and 2CB026B instead of 3CB026A and 3CB026B. These were the combined heater drain pump discharge valves. The action caused a loss of about one third of the suction flow to the Unit 2 main feedwater pumps and could have led to a low steam generator level reactor trip. Upon receiving the annunciators, the control room operators ramped power down in accordance with WCOA Sec-1, "Secondary Pump Trip Unit 2," Revision 75. Operators were sent to determine the cause of the transient and reopen the valves. Heater drain flow was restored to normal and the plant was stabilized shortly thereafter.

Analysis

The inspectors determined that failing to identify and operate the correct valves was a performance deficiency warranting a significance evaluation. The inspectors concluded that the finding was greater than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," issued on September 30, 2005.

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The finding involves the human performance attribute and the Initiating Events Cornerstone objective to limit likelihood of those events that upset the plant stability and challenge critical safety functions during shutdown as well as power operations. The finding also affected the cross-cutting area of Human Performance because the operator failed to perform adequate self-checking to identify the correct unit valves despite several unit specific visual indications, such as color coding of procedures and components.

The inspectors determined that the finding can be evaluated with an SDP in accordance with IMC 0609, "Significance Determination Process" because the finding is associated with an increase in likelihood of an initiating event. Phase 1 screening worksheets (IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Finding for At-Power Situations," dated November 22, 2005, Attachment 1) were used for significance determination. "No" box was checked for the Transient Initiators in the Initiating Event Cornerstone column on page 4 of the screening worksheet as only the likelihood of the reactor trip is affected. "No" boxes were also checked on page 5 of the screening worksheets for questions 1 and 3 for the Seismic Flooding, and Severe Weather Screening Criteria. Based on the screening

Enforcement

No violation of regulatory requirements occurred.

Worksheets for Writing Inspection Report Inputs

1. Using the attached description of a finding, develop an analysis section. Consider answering the following questions while developing your writeup:

- a. What is the performance deficiency?

Failure to identify and operate the correct valves is the performance deficiency. Based on the unit specific visual indications in the field, the operator should have been able to identify the correct valves.

- b. Is this issue more than minor? How did you make that determination? What criteria did you use?

**The finding is greater than minor.
The finding is not similar to those listed in Appendix E. However, The finding is associated with the human performance attribute and affects the Cornerstone : Reactor Safety / Initiating Event objective (limit likelihood of those events that upset the plant stability and challenge critical safety functions during shutdown as well as power operations).**

- c. How did you evaluate that the finding is Green? Did you use an SDP or management review? What cornerstone is affected? How did you reach your conclusion?

**The finding is associated with an increase in likelihood of an initiating event (reactor trip) - (section 4, SDP question 1 - Reactor Safety).
Therefore use IMC 0609 process (SDP).
The cornerstone affected is initiating event - transient initiator contributor.
Decision logic per Phase 1 screening pages 4 and 5 was used to reach the conclusion of Green finding.**

- d. Does the finding have to a cross-cutting aspect? State specifically how it affects a cross-cutting issue.

**Yes. The cross-cutting aspect is the Human Performance. The associated component is Work Practices.
The Agency concerns and findings from previous inspections will need to be reviewed to determine if there is a substantive Cross-Cutting Issue (IMC 0305)**

- e. Create your analysis section:

The inspectors determined that failing to identify and operate the correct valves was a performance deficiency warranting a significance evaluation. The inspectors concluded that the finding was greater than minor in

accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," issued on September 30, 2005. The finding involves the human performance attribute and the Initiating Events Cornerstone objective to limit likelihood of those events that upset the plant stability and challenge critical safety functions during shutdown as well as power operations. The finding also affected the cross-cutting area of Human Performance because the operator failed to perform adequate self-checking to identify the correct unit valves despite several unit specific visual indications, such as color coding of procedures and components.

The inspectors determined that the finding can be evaluated with an SDP in accordance with IMC 0609, "Significance Determination Process" because the finding is associated with an increase in likelihood of an initiating event. Phase 1 screening worksheets (IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Finding for At-Power Situations," dated November 22, 2005, Attachment 1) were used for significance determination. "No" box was checked for the Transient Initiators in the Initiating Event Cornerstone column on page 4 of the screening worksheet as only the likelihood of the reactor trip is affected. "No" boxes were also checked on page 5 of the screening worksheets for questions 1 and 3 for the Seismic Flooding, and Severe Weather Screening Criteria. Based on the screening worksheets, the finding was determined to be of very low significance.

2. Using the attached description of a finding, develop an Summary of Findings section. Consider answering the following questions while developing your writeup:

a. What was the final color?

Green

b. Who identified the finding? Did the finding have an associated violation?

The finding was self revealed. The inspectors were in the control room when operators responded to the annunciators received in the control room.

There was no violation associated with the finding as the regulatory requirements were not violated.

c. What were the immediate corrective actions? (Did the licensee correct the problem, evaluate it away, justify continued operation until they can fix it, etc.?)

Upon receipt of the annunciators, the operators ramped down the power in accordance with procedure to reduce the feedwater flow demand.

Operators were sent to determine the cause of the transient and to reopen the valves. Heater drain flow was restored and the plant was stabilized shortly thereafter.

The inspectors determined that the procedure and the components had adequate unit specific visual indications and color coding, and that the operator did not perform adequate self checking to insure that he was performing the activity on the correct unit.

The licensee entered the event into its corrective action system as CR 104628, "Heater Drain Flow Isolated Due To Personnel error," April 20, 2002.

d. Brief summary of the analysis section - why is it more than minor? How did it screen out as Green?

The finding was greater than minor because it increased the likelihood of a low steam generator level reactor trip. The finding was of very low safety significance based on being screened as green using the SDP Phase 1 screening worksheets. (Section 1RXX.x)

e. Create your Summary of Findings section.

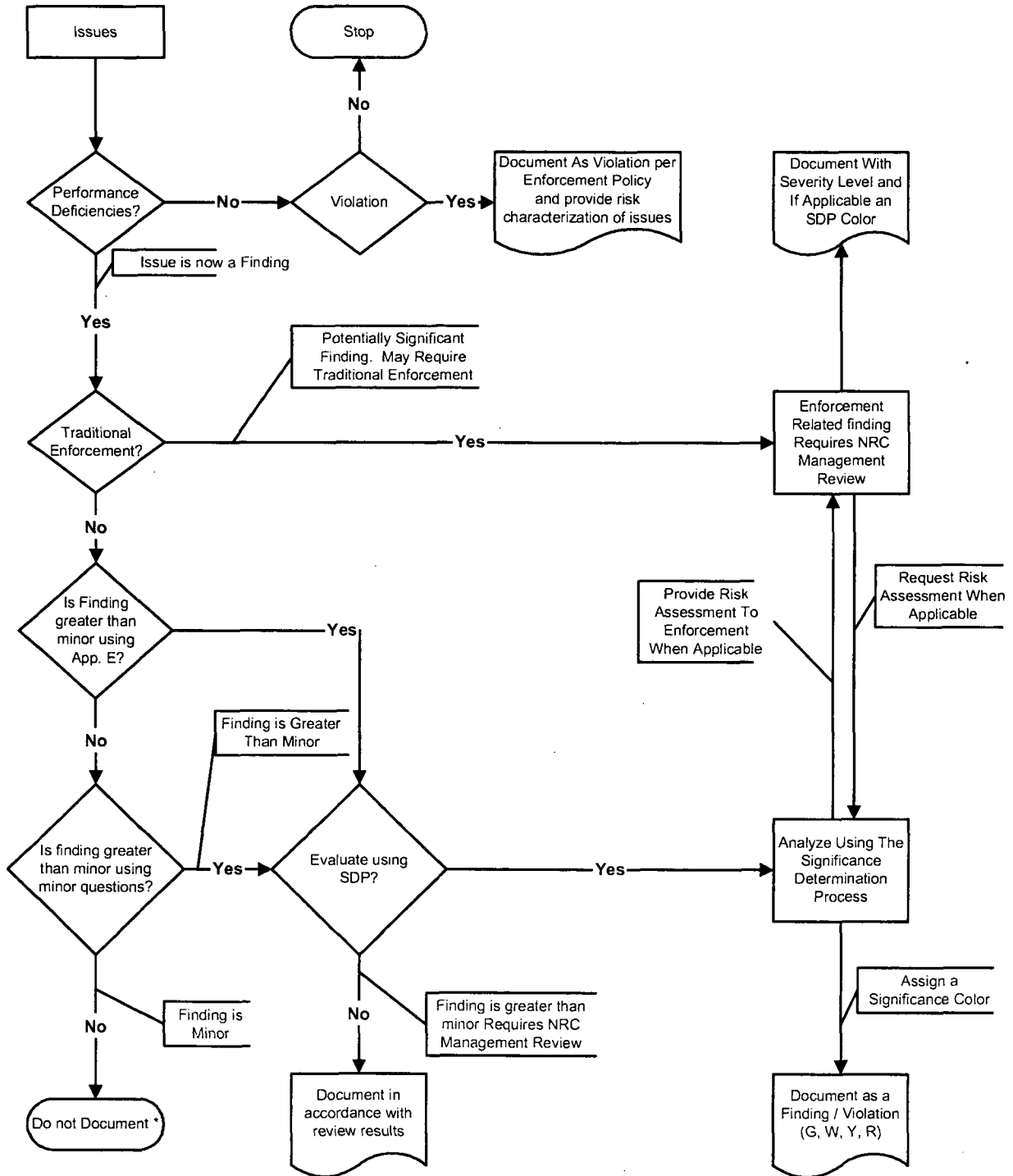
Green. A finding of very low safety significance was self-revealed during an event when an operator mistakenly closed two Unit 2 combined heater drain pump discharge valves instead of the corresponding Unit 3 valves. The primary cause of this finding was related to the cross-cutting area of Human Performance. Despite several unit-specific visual indications that were available, the operator did not perform adequate self-checking to ensure that he was on the correct unit.

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APPENDIX B Issue Screening

Use Figure 1 and the questions listed below to determine if a finding has sufficient significance to warrant further analysis or documentation.

Figure 1



* see exception in Section 05.03