SIGNIFICANCE DETERMINATION

Diablo Canyon Fire Protection Triennial Inspection
IR 50-275/03-02; 50-323/03-02

Issue Dispositioning Screening (IMC 0612, Appendix B and Appendix E)

Performance Deficiency: The licensee failed to implement a procedure that would ensure operators could complete required actions in a timely manner in order to achieve and maintain hot shutdown conditions, in the event of a control room fire requiring control room evacuation and remote shutdown. Specifically, during a simulated fire in the control room, operators could not close PORVs within 5 minutes as analyzed, and could not establish AFW within 30 minutes, as analyzed.

[redacted]

PHASE 1 (IMC 0609, Appendix A)

Step 1.1 - Performance Deficiency: The licensee failed to implement a procedure that would ensure operators could complete required actions in a timely manner in order to achieve and maintain hot shutdown conditions, in the event of a control room fire requiring control room evacuation and remote shutdown. Specifically, during a simulated fire in the control room, operators could not [redacted] as analyzed, and could not establish AFW within 30 minutes, as analyzed.

Step 1.2 - Initial Screening of the Inspection Finding

Using the "SDP Phase 1 Screening Worksheet for IE, MS, and B Cornerstones"

Reference/Title: Inspection Report 50-275/03-02; 50-323/03-02

Performance Deficiency: The licensee failed to implement a procedure that would ensure operators could complete required actions in a timely manner in order to achieve and maintain hot shutdown conditions, in the event of a control room fire requiring control room evacuation and remote shutdown. Specifically, during a simulated fire in the control room, operators could not [redacted] as analyzed, and could not establish AFW within 30 minutes, as analyzed.

Information in this record was deleted
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Act, exemptions 5
FOIA- 2003-358

BB-16

Factual Description of Identified Condition: During a walkdown of the licensee's Procedure OP AP-8A, "Control Room Inaccessibility Hot Standby used for shutting down the reactor in the event of a fire in the control room requiring evacuation and remote shutdown, the team found that operators could not establish auxiliary feedwater within 30 minutes assumed in Calculation M-944.

On April 4, 2003, in response to the team's finding the licensee re-timed the operator actions in AP-8A, using their ASD simulator. During this simulated event, operators took 18 minutes to close the PORV and 42 minutes to initiate AFW. Calculation M-944 requires that the PORVs be closed in 5 minutes and AFW be established in 30 minutes. The licensee initiated AR A0580357 to place this item into the corrective action system.

System(s) and Train(s) Degraded by Identified Condition: [redacted] and both trains of AFW.

Licensing Basis Function of System(s) or Train(s): .The licensee credits Procedure OP-8A for meeting the requirements of 10 CFR Part 50, Appendix R, Section III.G.3 and III.L.

Other Safety Function of System(s) or Train(s): Not applicable

Maintenance Rule Category: Risk-significant

Time that identified condition existed or is assumed to have existed: greater than 30 days

Functions and Cornerstones degraded as a result of this identified condition: [redacted]

If the finding is assumed to degrade fire protection defense in depth (DID), detection, suppression, barriers, fire brigade. STOP. Go to IMC 0609, Appendix F

PHASE 1 (IMC 0609, Appendix F)

Step F.4 - Fire Protection Risk Significance Screening Methodology - Phase 1

Step 1: Screening of Fire Protection Findings:

Figure 4-1: Screening Process Phase 1 (Step 1)

Clearly Stated Fire Protection Findings: The licensee failed to implement a procedure that would ensure operators could complete required actions in a timely manner in order to achieve and maintain hot shutdown conditions, in the event of a control room fire requiring control room evacuation and remote shutdown.

On April 4, 2003, in response to the team's finding the licensee re-timed the operator actions in AP-8A, using their ASD simulator. During this simulated event, operators took [redacted] and 42 minutes to initiate AFW. Calculation M-944 requires that the PORVs be closed in 5 minutes and AFW be established in 30 minutes.

[redacted]

Step 2: Safety Importance Determination

Using Figure 4-3 as the protection scheme and screening criteria for Figure 4-3 to determine if the fire protection DID findings are potentially significant:

Is fixed fire suppression system affected by the finding? [redacted]

Does fire barrier forming the fire area boundaries interface with recovery areas. Are any of these fire barriers affected by the finding? [redacted]

Is detection or fire brigade effectiveness affected by the finding? [redacted]

PHASE 1 CONCLUSION [redacted]

PHASE 2 (IMC 0609, Appendix F)

Step 1: Grouping of Fire Protection and Post-fire Safe Shutdown Findings

The alternative shutdown procedure is inadequate, in that During a simulated control room fire requiring evacuation and remote shutdown, operators took [redacted] and 42 minutes to initiate AFW. Calculation M-944 requires that the PORVs be closed in 5 minutes and AFW be established in 30 minutes.

Step 2: Define the Fire Scenario

[redacted]

[redacted]

Step 3: Quantitative Evaluation of Findings

[redacted]

Steps 4 through 7

Using Table 5.1 determine the risk associated with DID elements. and the FMF formula:
FMF = log(IF) + FB + MS + AS + CC (when appropriate)

[redacted]

Step 8: Modifications Necessary To Add Impact of Spurious Actuations

As stated, multiple spurious actuations occur with a probability of 0.1; therefore a factor of -1 is added to the cutset that is impacted by spurious actuations.

[redacted]

PHASE 2 CONCLUSION: In following the SDP process as outlined in IMC 0609, Appendices A and F, this issue is [redacted] However, given the uncertainty concerning the ignition frequency and the RSO, and questions [redacted]