

SUMMARY OF FINDINGS

IR 05000324/2003-006, 05000366/2003-006; E. I. Hatch Nuclear Plant, Units 1 and 2; 7/7-11/2003 and 7/21-25/2003 Triennial Fire Protection

The report covered a two-week period of inspection by three regional inspectors and a contractor from Brookhaven National Laboratory. Three Green non-cited violations (NCVs) and three unresolved items with potential safety significance greater than Green were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

Inspection Manual Chapter

Cornerstone: Mitigating Systems

URI. The team identified an unresolved item in that a local manual operator action, to prevent spurious opening of all eleven safety relief valves (SRVs) during a fire event, would not be performed in sufficient time to be effective. Also, licensee reliance on this manual action for hot shutdown during a fire, instead of physically protecting cables from fire damage, had not been approved by the NRC.

This finding is unresolved pending completion of a significance determination. The finding is greater than minor because it affects the mitigating system cornerstone. Also, the finding has potential safety significance greater than very low safety significance because failure to prevent spurious operation of the SRVs could result in the opening is during certain fire scenarios, thereby complicating the post-fire recovery actions. (Section 1R05.04/05.b.1)

URI. The team identified an unresolved item in that a fire in Fire Area 2104 could cause all eleven SRVs to open. The inspection team was concerned that the licensee's action to preclude this scenario were not consistent with the current licensing basis of the plant. In addition, no objective evidence existed to demonstrate that the post-fire safe shutdown equipment was adequate to mitigate eleven SRVs opening. Finally, the team noted that if the Group A SRVs were to spuriously actuate as a result of fire damage, they could not be manually controlled by the operator as part of the licensee's fire mitigation strategy

This finding is identified as unresolved pending NRC review of the concerns associated with the potential opening of SRVs. This finding was determined to have potential safety significance greater than very low significance because of the concerns associated with potential opening of the SRVs and the limited set of equipment that could be available for safe shutdown under these conditions. (Section 1R.05.03.b)

URI. The team identified an unresolved item in connection with the implementation of design change request (DCR) 91-134, SRV Backup Actuation via Pressure Transmitter Signals. The installed plant modification failed to implement the one-out-of-two taken twice logic that was specified as design input requirements in the design change

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package. Additionally, implementation of a "two-out-of-two coincident taken twice" logic has introduced a potential common cause failure of all eleven SRVs because of fire-induced damage to two instrumentation circuit cables in close proximity to each other.

This finding is unresolved pending completion of a significance determination. This finding is greater than minor because it impacts the mitigating system cornerstone. This finding has the potential for defeating manual control of Group "A" SRVs that are required for ensuring that the suppression pool temperature will not exceed the heat capacity temperature limit (HCTL) for the suppression pool. (Section 1R21.01.b)

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Green. The team identified a finding with very low safety significance in that a local manual operator action to operate safe shutdown equipment was too difficult and was also unsafe. The licensee had relied on this action instead of providing physical protection of cables from fire damage or preplanning cold shutdown repairs. However, the team judged that some operators would not be able to perform the action.

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This finding involved a violation of 10 CFR 50, Appendix R, Section III.G.1 and Technical Specification 5.4.1. The finding is greater than minor because it affected the availability and reliability objectives and the equipment performance attribute of the mitigating systems cornerstone. Since the licensee could have time to develop and implement cold shutdown repairs to facilitate accomplishment of the action, this finding did not have potential safety significance greater than very low safety significance. (Section 1R05.04/.05.b.2)

This finding is of very low safety significance because the licensee would have time to...

Green. The team identified a finding with very low safety significance in that the licensee relied on some manual operator actions to operate safe shutdown equipment instead of providing the required physical protection of cables from fire damage, and without NRC approval.

This finding involved a violation of 10 CFR 50, Appendix R, Section III.G.2. The finding is greater than minor because it affected the availability and reliability objectives and the equipment performance attribute of the mitigating systems cornerstone. Since the actions could reasonably be accomplished by operators in a timely manner, this finding did not have potential safety significance greater than very low safety significance. (Section 1R05.04/.05.b.3)

Green. The team identified a finding with very low safety significance in that emergency lighting was not adequate for some manual operator actions that were needed to support post-fire operation of safe shutdown equipment.

This finding involved a violation of 10 CFR 50, Appendix R, Section III.J. The finding is greater than minor because it affected the reliability objective and the equipment performance attribute of the mitigating systems cornerstone. Since operators would be able to accomplish the actions with the use of flashlights, this finding did not have potential safety significance greater than very low safety significance. (Section 1R05.07.b)

Violation 1st para. Safety Sign. 2nd para.



B. Licensee-Identified Violations

None