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MEMORANDUM FOR: Richard H. Vollmer, Director, Division of Engineering

FROM: Roger J. Mattson, Director, Division of Systems Integration

SUBJECT: POSITION STATEMENT ON ALLOWABLE REPAIRS FOR ALTERNATIVE SHUTDOWN AND ON THE APPENDIX R REQUIREMENT FOR TIME REQUIRED TO ACHIEVE COLD SHUTDOWN

Some licensees have experienced difficulties in interpreting two areas of Sections III.G and III.L. The purpose of this memorandum is to inform you of these two areas and interpretations which we believe are needed. These interpretations pertain to the (1) allowable repairs to achieve safe shutdown and (2) allowable time to achieve safe shutdown. The interpretations which follow are not new. We request your concurrence in this matter.

Allowable Repairs to Achieve Safe Shutdown

Section III.G.1 of Appendix R states that one train of systems needed for hot shutdown must be free of fire damage. Thus, one train of systems needed for hot shutdown must be operable during and following a fire. Operability of the hot shutdown systems, including the ability to overcome a fire or fire suppressant induced maloperation of hot shutdown equipment and the plant's power distribution system, must exist without repairs. Manual operation of valves, switches and circuit breakers is allowed to operate equipment and isolate systems and is not considered a repair. However, the removal of fuses for isolation is not permitted. All manual operations must be achievable prior to the fire or fire suppressant induced maloperations reaching an unrecoverable plant condition.

Modifications, e.g., wiring changes, are allowed to systems and/or components not used for hot shutdown, but whose fire or fire suppressant induced maloperations may indirectly affect hot shutdown. These repairs must be achievable prior to the maloperations causing an unrecoverable plant condition.

Repairs for cold shutdown systems are allowed by Section III.L.5 of Appendix R. For cold shutdown capability repairs, the removal of fuses for isolation and the replacement of cabling is permitted. Also, selected equipment replacement, e.g., such as replacing a valve, pump, control room controls and instruments, will be reviewed on a case-by-case basis to verify its practicality within the appropriate time constraints. Procedures for repairing damaged equipment should be prepared in advance with replacement equipment (i.e., cables

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*SEE PREVIOUS CONCURRENCE.

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DATE				7/1/82	7/2/82		

made-up with terminal lugs attached) stored onsite. All repairs should be of sufficient quality to assure safe operation until the plant is restored to an operating condition. Repairs not permitted include the use of clip leads in control panels (which means that hard wired terminal lugs must be used), and the use of jumper cables other than those fastened with terminal lugs.

When repairs are necessary in the fire area, the licensee will have to demonstrate that sufficient time is available to allow the area to be re-entered and that expected fire and fire suppressant damage will not prevent the repair from taking place and that repair procedure will not endanger operating systems. In addition, written procedures must exist for the orderly transfer of control from the control room and the remote shutdown stations and vice versa. The repairs to cold shutdown systems are considered to be an upper limit. The licensee may design the plant so that cold shutdown can be achieved without repair.

Allowable Time to Achieve Safe Shutdown

Section III.G of Appendix R states that fire damage to cold shutdown capability must be limited to damage that can be repaired within 72 hours. Section III.L.1 of Appendix R states that the alternative shutdown capability shall be able to achieve cold shutdown within 72 hours. Further, Section III.L.5 of Appendix R states that fire damage shall be limited so that the systems can be made operable and cold shutdown achieved within 72 hours. Sections III.L.1 and III.L.5 state that a plant must be capable of achieving cold shutdown using only onsite power prior to the elapse of 72 hours. Section III.L.5 also clearly states that offsite power is assumed restored after 72 hours in that equipment and systems not needed until 72 hours may be powered by offsite power only.

We have been using and propose to continue to use Sections III.L.1 and III.L.5 in our evaluations. Thus, a licensee should have the capability of repairing equipment and achieving cold shutdown within 72 hours using only onsite power. The 72 hours is considered an upper limit; a licensee may limit the repairs and achieve cold shutdown in a shorter time frame.

We have applied the interpretations of Sections III.L.1 and III.L.5 of Appendix R to approximately twenty plant fire protection reviews. We propose to continue to use the interpretations discussed above for future alternative shutdown reviews. If you agree, then please indicate your concurrence at the bottom of this page and return to me.

Original Signed by:
Roger J. Mattson

Roger J. Mattson, Director
Division of Systems Integration

Approved: Original Signed By
Richard H. Vollmer, Director
Division of Engineering

cc: See next page.

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