

Potential Risk Contribution from Large Early Release Frequency (LERF):

In accordance with Manual Chapter 0609, Appendix A, Attachment 1, Step 2.6, "Screening for the Potential Risk Contribution Due to LERF," the analyst assessed the impact of large early release frequency because the Phase 2 SDP result provided a risk significance estimation of 7.

As documented in a letter from Arthur T. Howell III, Director, Division of Reactor Projects to Randall K. Edington, Vice President-Nuclear and CNO of the Nebraska Public Power District, dated March 31, 2005, the NRC previously evaluated the dominant sequences associated with a loss of service water initiator at Cooper. The conclusion was that, at the Cooper Nuclear Station, no significant LERF sequences are derived from a loss of service water. The postulated core damage sequences take more time than the average to progress to core damage. This would provide additional time to vessel breach and the postulated release. Additionally, the licensee and the states of Nebraska and Missouri have documented that there is a relatively short time estimated to evacuate the close-in population surrounding Cooper Nuclear Station.

LERF is defined in NRC Inspection Manual Chapter 0609, Appendix H, "Containment Integrity Significance Determination Process" as: "the frequency of those accidents leading to significant, unmitigated release from containment in a time frame prior to the effective evacuation of the close-in population such that there is a potential for early health effect." The NRC has noted that the dominant core damage sequences following a loss of service water at Cooper are long sequences that take greater than 12 hours to proceed to reactor pressure vessel breach. The shortest calculated interval from the time reactor conditions would have met the requirements for entry into a general emergency (requiring the evacuation) until the time of postulated containment rupture was 3.5 hours. The licensee stated that the average evacuation time for Cooper from the declaration of a General Emergency was 62 minutes.

The NRC determined that, based on a 62-minute average evacuation time, effective evacuation of the close-in population could be achieved within 3.5 hours. Therefore, the dominant core damage sequences affected by the subject performance deficiency were not LERF contributors. As such, the NRC's best estimate determination of the change in LERF resulting from the performance deficiency was zero.