

March 26, 1999

MEMORANDUM TO: Thomas L. King, Director  
Division of System Technology  
Office of Nuclear Regulatory Research  
/original signed by T. Collins for/  
FROM: Gary M. Holahan, Director  
Division of Systems Safety and Analysis  
Office of Nuclear Reactor Regulation  
SUBJECT: TECHNICAL SUPPORT FOR SPENT FUEL POOL  
ZIRCONIUM FIRE CONSEQUENCE ANALYSIS

On March 16, 1999 staff from DSSA met with staff from DST/AEB to discuss the progression and consequences of a zirconium fire in a spent fuel pool. DSSA is specifically interested in the offsite doses that result from a zirconium fire in a spent fuel pool. The information is needed to support proposed rulemaking for relaxing emergency planning and insurance requirements for permanently shutdown reactors.

DSSA is therefore requesting that your staff perform offsite dose calculations assuming that a zirconium fire progresses to fuel melting. The base case should be for a time of one year after shutdown and use the same fission product inventory and release fractions as the calculations performed in NUREG/CR-4982 Severe Accidents in Spent Fuel Pools in Support of Generic Safety Issue 82. A small to moderate number of sensitivity calculations may also be needed. The time frame for completion of these calculations is approximately two months.

Any questions on this matter may be addressed to Diane Jackson or Joseph Staudenmeier.

CONTACT: Joseph Staudenmeier, NRR/DSSA/SRXB  
415-2869

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\*see previous concurrence page

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Q148