November 17, 2009

Dr. Todd S. Mintz
Geosciences and Engineering Division
Southwest Research Institute
6220 Culebra Road
San Antonio, TX 78238-5166

SUBJECT: NASA PROPOSAL

Dear Dr. Mintz:

Thank you for contacting the U.S. Nuclear Regulatory Commission (NRC) to determine if the Division of Spent Fuel Storage and Transportation (SFST) would have any interest in your research proposal to NASA regarding the impact of chloride aerosols on austenitic stainless steel structures. We understand that you plan to submit a proposal for a program entitled: "NASA Earth Science for Decision Making: Gulf of Mexico Region Program," and there is a question whether additional parties may benefit from the planned research activities. We also understand that any third party who expresses an interest is under no financial commitment or obligation, but may be a participant in suggesting the research parameters.

For information, the NRC has been investigating the susceptibility of austenitic stainless steels to chloride-induced stress corrosion cracking (SCC) when exposed to a coastal marine atmosphere (chloride aerosols). SFST would be interested in the data and technical insights regarding the deposition and deposition rates of chlorides from aerosols, and the consequences of that deposition on austenitic stainless steel components. Our goal would be to better assess the susceptibility of nuclear fuel storage systems to degradation from atmospheric chloride-bearing aerosols.

The ideal study would include various parameters, such as wind velocity and atmospheric humidity, to permit calculation of the salt deposition rate on a heated, sheltered structure, comparable to our spent fuel storage system confinement boundaries. These measured parameters, when correlated with the deliquescence of deposited salts, would help to better predict the susceptibility of the spent fuel confinement boundaries to SCC.

SFST would support a research effort, as outlined above, because it would provide insights to improve our decision-making at the NRC.

Sincerely,

/RA/

Raymond K. Lorson, Deputy Director
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

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