April 21, 2009

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE SECRETARY

In the Matter of
South Texas Project Nuclear Operating Company
South Texas Project Units 3 and 4
Docket Nos. 52-012 and 52-013

DECLARATION BY GEORGE RICE, GROUNDWATER HYDROLOGIST POTENTIAL FOR GROUNDWATER CONTAMINATION AT THE SOUTH TEXAS PROJECT NUCLEAR POWER PLANT

I, George Rice, declare as follows:

There is insufficient time to perform a thorough review of the groundwater system and assess the potential for groundwater contamination at the South Texas Project (STP) Nuclear Power Plant. However, some of the radionuclides that are used in or produced by the plant, such as uranium, radium, and tritium, are known to be mobile in groundwater. If released from the plant or associated facilities, these radionuclides may contaminate the local groundwater system and any lakes and streams to which the groundwater discharges.

The unlined Main Cooling Reservoir (MCR) is a potential source of groundwater contamination. Any contaminants in the MCR could affect underlying bodies of groundwater, but the potential of groundwater contamination from MCR is not considered. The failure to assess the potential for groundwater contamination from MCR is an omission in the Environmental Report and requires further consideration.

My 2004 report, entitled *New Mexico's Right to Know: The Potential for Groundwater Contaminants from LANL to Reach the Rio Grande,* addressed whether it was possible for

groundwater to transport contaminants from Los Alamos National Laboratory (LANL) during the 61 years LANL has existed and if so, whether the contaminants from the LANL have reached the Rio Grande. The analysis found that contaminants from LANL have entered the groundwater and that groundwater from LANL flows toward the Rio Grande. Moreover, the analysis found that it is possible for groundwater, and at least some of the contaminants it transports, to travel from contaminated areas at LANL to the Rio Grande during the 61 years LANL has existed. Contaminants from LANL have reached springs discharging to the Rio Grande.

These results from the above-mentioned analysis demonstrate why a study of this nature would be important in the case of STP. A full analysis of the groundwater system at STP is essential to discern the potential for radionuclides contaminating the local groundwater system and any lakes and streams to which the groundwater discharges. The 60-day time period is insufficient to perform a thorough review of the groundwater system and assess the potential for groundwater contamination from MCR and the operation of the STP Nuclear Power Plant Units 3 & 4.