

Supplement to NRC Audit Report in Support of Evaluation of South Texas Project, Units 3 and 4, Combined License Application, Chapter 19 and Section 17.4

On April 7, 2011 and June 9, 2011, the NRC staff conducted an audit of the South Texas Projects (STP) Units 3 and 4, Design Reliability Assurance Program (D-RAP). Table 1 provides examples of the D-RAP system screening conducted by the D-RAP expert panel in December 2010 and March 2011 to identify site-specific risk-significant systems, structures, and components (SSCs) that supplement the initial list included in STP Units 3 and 4 FSAR Appendix 19K. These site-specific risk-significant SSCs are designated at the system level using the risk ranking methodology described in STP Units 3 and 4 FSAR Section 17.4S.1.4 (“Methods of Analysis for Risk Significant SSC Identification”). In general, the categorization of a system is determined by the highest categorized system function and the same categorization is given to all components in the system. The detailed list of risk-significant SSCs is documented for use in STP’s quality record STI No. 32962928, “D-RAP Systems Review,” dated May 25, 2011.

Table 1. D-RAP System Screening Examples

<u>System Description</u>	<u>Modeled in PRA (Yes or No)</u>	<u>Added to D-RAP (Yes or No)</u>
Post Accident Monitoring System	No	Yes
Reactor Pressure Vessel System	Yes	Yes
Nuclear Boiler System	Yes	Yes
Rod Control and Information System	No	No
Control Rod Drive System	Yes	Yes
Standby Liquid Control System	Yes	Yes
Neutron Monitoring System	No	Yes
Remote Shutdown Panel	Yes	Yes
Reactor Protection System	Yes	Yes
ESF Logic and Control System	Yes	Yes
Recirculation Flow Control System	No	Yes
Steam Bypass and Pressure Control System	No	Yes
Process Radiation Monitoring System	No	Yes
Residual Heat Removal System	Yes	Yes
High Pressure Core Flooder	Yes	Yes
Leak Detection and Isolation System	Yes	Yes
Reactor Core Isolation Cooling (RCIC) System	Yes	Yes
Reactor Water Cleanup System	Yes	Yes
Condensate and Feedwater System	Yes	Yes
Circulating Water System (flooding isolation)	Yes	Yes
Alternate Feedwater Injection System	No	Yes
Reactor Building Cooling Water	Yes	Yes
Reactor Service Water System	Yes	Yes

<u>System Description</u>	<u>Modeled in PRA (Yes or No)</u>	<u>Added to D-RAP (Yes or No)</u>
High Pressure Nitrogen Gas Supply System	Yes	Yes
13.8kV System	Yes	Yes
4.16 kV System (non-Class 1E)	Yes	Yes
4.16 kV System (Class 1E)	Yes	Yes
480 V System (non-Class 1E)	Yes	No
480 V System (Class 1E)	Yes	Yes
480 V MCC System	Yes	Yes
Vital AC System	Yes	Yes
Primary Containment System	Yes	Yes
Primary Containment Vessel	Yes	Yes
Containment Internal Structures	Yes	Yes
Reactor Pressure Vessel Pedestal	Yes	Yes
Standby Gas Treatment	Yes	Yes
Suppression Pool Temperature Monitoring System	Yes	Yes
Fire Protection System	Yes	Yes
Control Building HVAC System	Yes	Yes
Reactor Building HVAC System	Yes	Yes
Ultimate Heat Sink Pumphouse HVAC	Yes	Yes
Reactor Building	Yes	Yes
Turbine Building	Yes	No
Control Building	Yes	Yes
Ultimate Heat Sink	Yes	Yes
Fire Protection Pump House	Yes	Yes

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