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August 28, 2007
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U. S. Nuclear Regulatory Commission
Attention: Dale Klein, Chairman
One White Flint North
11555 Rockville Pike
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South Texas Project
Units 3 and 4
Docket No. PROJ0749
Tier 1 and Tier 2* Departures

Dear Mr. Chairman:

During the August 22, 2007 Commission briefing on new plants, several comments were made regarding the number of Tier 1 changes to the Advanced Boiling Water Reactor (ABWR) Design Control Document (DCD).

It continues to be the South Texas Project Nuclear Operating Company (STPNOC) position to limit the proposed Tier 1 and Tier 2* changes to the DCD to those items necessary to address either obsolescence or errors, necessary to address site-specific issues, appropriate to improve safety and reliability, or that represent significant advances in the design that are important to achieving a viable reference plant.

Accordingly, I am providing the following information on the current South Texas Project (STP) Units 3 and 4 Tier 1 and Tier 2* departures.

Background

The 1997 ABWR DCD contains more than 12,000 pages of technical design, drawings, and descriptive information. At the beginning of the ABWR DCD, there are approximately 300 pages of design information identified as "Tier 1"; the remainder of the document is "Tier 2". The ABWR DCD, Revision 4, was issued in 1997 and has not been revised in the ensuing ten years.

10 CFR 52 requires NRC approval of cases where an application departs in any way from Tier 1 material. Part 52 also requires NRC approval where an application departs in any way from certain specific design information in Tier 2, which the NRC has labeled "Tier 2*".

Ten years after issuance of the ABWR Design Certification, there are only twelve Tier 1 and Tier 2* departures being proposed in the STP Combined Operating License Application (COLA). We understand that General Electric – Hitachi Nuclear Energy America will be incorporating all non-site-specific departures in the ABWR DCD amendment to be submitted in the second quarter 2008.

The twelve departures represent changes where the STP site did not meet assumed generic site parameters, or changes in technology or guidance since 1997 which will improve safety.

Site Parameters Departure

The site parameters in the ABWR DCD were expected to bound most potential US sites. When site historical data was analyzed, there were three specific deviations from the generic envelope. The site flood level was increased to a higher elevation as a result of a postulated main cooling reservoir failure as a design basis event, resulting in the installation of watertight doors on the first floor elevation similar to those installed at STP Units 1 and 2. The maximum design precipitation rate for rainfall increased from 49.3 cm/hr to 50.3 cm/hr; and the humidity as represented by wet bulb temperature increased from 26.7 0 C to 27.3 0 C. Neither precipitation nor humidity increases result in any actual design, construction, or operation impact.

Technology and Guidance Changes

The ABWR DCD was certified in 1997. Since then there have been many safety and reliability improvements based on plant operating experience and/or new technology, and there have also been changes in regulatory requirements and accepted industry codes and standards. STPNOC believes that it is prudent to depart from the ABWR certified design in these cases as follows.

1. Codes and Standards - Updates civil engineering codes and standards between the 1997 DCD and current 2007 plans for STP 3 and 4, which support modularized construction and construction codes within Texas. This was the only Tier 2* change.

2. Safety Relief Valves (SRV) Setpoints - Changes to valve setpoints, reseating pressure, and drift values, based on current industry operating experience, will improve the reliability of the SRVs and make Units 3 and 4 consistent with other operating Boiling Water Reactors.

3. Control Systems Changes to Inputs, Tests, and Hardware – Changes to improve reliability and safety through improvements to the Reactor Protection System. The original ABWR Safety Evaluation Report acknowledged that the technology and capabilities of the Instrumentation and Control (I&C) systems would be evolving. These changes allow increased capabilities of new digital control systems to improve overall plant safety and reliability. For example, the changes provide a more accurate method to monitor actual reactor power using the Neutron Monitoring System and eliminate inconsistencies in the original DCD related to testing, control switches, and equipment locations.

4. Main Steam Isolation Valve (MSIV) Closure on High Radiation Signal – Improves safety and reliability by reducing the potential for unnecessary reactor shutdowns caused by spurious actuation of the Main Steam Line Radiation Monitor trips. The deletion of the automatic trip and closure of the MSIV on high radiation was generically approved by the NRC for BWR plants.

5. Residual Heat Removal (RHR) and Fuel Pool Cooling (FPC) – Improves safety and reliability by adding the capability to use a third RHR division for supplemental FPC cooling during refueling outages.

6. Feed Water Line Break (FWLB) Mitigation – Decreases risk by ensuring that the containment pressure margins are maintained during the limiting MFWLB containment pressurization accident.

7. RCIC Weir Pump/Turbine – Improves design, reliability, and safety by changing to a more robust design.

8. Electrical Low Voltage Testing and Breaker Coordination – Changes necessitated because the ABWR DCD descriptions of (1) the method of low voltage testing is not achievable, and (2) the breaker coordination is neither achievable nor required. Changes will reflect current industry practices.

9. I&C Power Divisions – Adds a fourth regulating transformer and assorted distribution panels to supply I&C Power to the various Division IV components to provide an improved level of plant protection and personal safety

10. Hydrogen Recombiner Deletion – Eliminates the hydrogen recombiners in accordance with current NRC regulations.

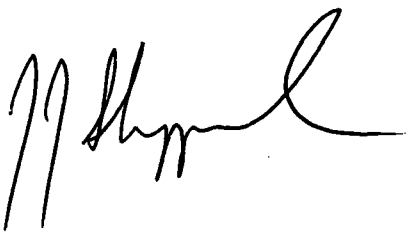
11. Safety-Related I&C Architecture – Changes necessitated because the 1997 ABWR DCD descriptions reflected outdated technology (i.e., multiplexers) and are now inconsistent with

currently available systems and equipment. Changes to the I&C architecture will also provide operators with improved plant monitoring and display.

Summary

STPNOC has carefully evaluated Industry experience and regulatory changes since the ABWR was certified in 1997. Twelve (12) changes have been identified which we believe will result in improved safety, reliability, and efficiency. All eleven generic changes will be incorporated into the next revision of the ABWR DCD, which will ensure consistency and standardization for subsequent ABWR applications. These changes will be fully described in our COLA.

If you require any additional information, please contact me at (361) 972-8575 or Greg Gibson, Manager of Regulatory Affairs for STP 3 and 4, at (361) 972-4626.



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