

**SOUTH TEXAS PROJECT FINAL SAFETY ANALYSIS REPORT  
CHAPTER 12 APPENDIX 12B, SHIELDING AND DOSE CALCULATIONS AUDIT PLAN**

**February 10 - 11, 2015**

**NUCLEAR INNOVATION NORTH AMERICA, LLC.  
Docket Nos. 52-012 and 52-013**

Location: Westinghouse Office  
12300 Twinbrook Parkway, Suite 150  
Rockville, MD 20852

Applicant Contact: Scott Head  
James Tomkins

Purpose:

The purpose of the audit is to discuss several outstanding issues concerning Appendix 12B. The Advanced Boiling Water Reactor (ABWR) design is supported by the analysis and other supporting document developed by Toshiba America Nuclear Corporation and Nuclear Innovation North America, LLC. (NINA).

This audit follows the guidelines in Office of New Reactors (NRO) Office Instruction NRO-REG-108 (Revision 0), "Regulatory Audits."

Background and Audit Basis:

On September 20, 2007, South Texas Project Nuclear Operating Company submitted to the U.S. Nuclear Regulatory Commission (NRC), a Combined License Application (COLA) Final Safety Analysis Report (FSAR) to construct and operate two additional units (Units 3 and 4) based on the United States ABWR Certified Design Control Documents at the South Texas Project (STP) Nuclear Power Plant site located in the county of Matagorda near Bay City, Texas. On January 24, 2011, NINA became the primary applicant for the license for these two units.

During the Phase 6 Safety Evaluation Report review of Chapter 12, the NRC staff found that the contents of the FSAR, Revision 11, for Chapter 9 and Appendix 12B were not consistent. The spent fuel pool (SFP) geometry and dose rate calculation in Appendix 12B does not reflect the new spent fuel storage racks (SFR) design. Therefore, the staff requested NINA to update the SFP radiation sources and dose rate assessments in Appendix 12B with the new SFR design.

The NRC staff has identified a need to audit the analyses developed by NINA in support of the Appendix 12B shielding and dose calculations for STP, Units 3 and 4. The audit will take place at the Westinghouse Twinbrook office in Rockville, Maryland between February 10, 2015, and February 11, 2015.

Enclosure

Scope:

The primary scope of this audit is to review the Appendix 12B shielding and dose calculations developed by NINA and other supporting documents for STP, Units 3 and 4.

Audit Team:

The staff from the Radiation Protection and Accident Consequences Branch (RPAC) will comprise the audit team.

- Michelle Hart, Technical Reviewer, NRO/DSEA/RPAC
- Ronald LaVera, Technical Reviewer, NRO/DSEA/RPAC
- Edward Stutzcage, Technical Reviewer, NRO/DSEA/RPAC
- Tarun Roy, Project Manager, NRO/DNRL/LB2

The staff from NINA will include:

- Scott Head
- James Tomkins

Information and Other Materials Necessary for the Audit:

Documentation including a detailed report and supporting documentation regarding STP's shielding and dose calculations:

1. CN-REA-10-53, Revision 1, "STP Units 3&4 ABWR Spent Fuel Radiation Source."
2. CN-REA-10-64, Revision 0, "STP Units 3&4 ABWR Spent Fuel Radiation Source."
3. CN-REA-10-67, Revision 1, "Dose Rate Evaluation from a Single ABWR Fuel Bundle in STP Units 3&4 Spent Fuel Pool," and the accompanying Westinghouse Letter LTR-ABWR-LIC-11-001, dated March 31, 2011.

Logistics:

The NRC staff and the applicant have agreed that the audit will be conducted in the Westinghouse office in Rockville, Maryland. In support of this approach, the applicant has agreed to make knowledgeable staff available to discuss preliminary audit findings in the audit. The staff requests that the applicant confirm the primary and supporting documents prior to the audit.

The audit is scheduled between February 10, 2015, and February 11, 2015. The audit will be held February 10, 2015, between 1:00 p.m. and 5:00 p.m., and will conclude with an exit teleconference at 11:30 a.m. on February 11, 2015, to provide the applicant with the summary of the preliminary audit findings. The NRC staff will have an internal meeting between 11:00 a.m. and 11:30 a.m.

Schedule and Deliverables:

A summary report of the audit will be prepared and issued in accordance with NRO-REG-108 within 45 days following completion of the audit.

References:

1. NRO Office Instruction NRO-REG-108 (Revision 0), "Regulatory Audits."
2. STP, Units 3 and 4 COLA, Revision 11.
3. Standard Review Plan Section 12

Docket Nos. 52-012 and 52-013