

**SOUTH TEXAS PROJECT UNITS 3 AND 4 COMBINED LICENSE APPLICATION,
2.4 HYDROLOGY - GROUNDWATER
AUDIT PLAN**

A. Background

South Texas Project (STP) submitted to the U. S. Nuclear Regulatory Commission (NRC) groundwater modeling documentation as a part of their Combine Operating License Application for Units 3 and 4. NRC staff reviewed the modeling documentation within Final Safety Analysis Report Sections 2.4.12 and 2.4.13 and found deficiencies in the modeling, mainly in the set-up of the boundary conditions and simulation scenarios. To address the deficiencies in the groundwater model, the staff issued supplemental requests for additional information on April 16, 2010. The purpose of the audit is for the staff to review STP's groundwater model, supporting modeling documentations, and calculation packages. The audit is needed for the staff to better understand the modeling result in order to make accurate safety conclusions in relation to estimate maximum groundwater level and to assess the radiological consequences of accidental releases to groundwater.

B. Regulatory Audit Bases

This regulatory audit is based on the following:

- Standard Review Plan 2.4.12 and 2.4.13
- Regulatory Guide (RG) 1.206

C. Regulatory Audit Scope or Methodology

- The area of focus for the audit is the STP Units 3 and 4 Groundwater Modeling.

D. Information and Other Material Necessary for the Regulatory Audit

- Combined License Application (COLA), Rev. 3, Section 02.04.12 and 02.04.13 for Hydrology
- Groundwater Modeling Report provided in letter number U7-C-STP-NRC-090206
- Calculation Package, Accidental Release of Liquid Effluent Groundwater (Request for Additional Information (RAI) response 02.04.12-37)
- STPNOC responses to **RAI 4551** (02.04.12-38, 02.04.12-39, 02.04.12-40, 02.04.12-41, 02.04.12-42, 02.04.12-43, 02.04.12-44, 02.04.12-45, 02.04.12-46, 02.04.12-47, 02.04.12-48, 02.04.12-49, 02.04.12-50) and **RAI 4610** (02.04.13-15)
- Set-up and Simulation Results from the Applicant's Groundwater Model

Enclosure

E. Audit Team

The following are the audit team members:

Hosung Ahn, NRC Audit Team Lead
Nebiyu Tiruneh, NRO Licensing
Joe Giacinto, NRO Licensing
Tekia Govan, Project Manager
Charles Kincaid, PNNL Hydrologist Contractor

F. Logistics

Date: Tuesday, May 25, 2010
Time: 8:30 a.m. – 5:00 p.m.
Location: Bechtel Power Corporation
5275 Westview Drive
Frederick, MD 21703-8306
Telephone: 301-228-6000

G. Deliverables

The audit team will issue a regulatory audit summary within 90 days after completing the audit.