



South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

June 10, 2010  
U7-C-STP-NRC-100133

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852-2738

South Texas Project  
Units 3 and 4  
Docket Nos. 52-012 and 52-013  
Response to Request for Additional Information

Reference: Letter, Scott Head to Document Control Desk, "Response to Request for Additional Information", dated April 29, 2010: U7-C-STP-NRC-100100 (ML101270285).

Attached is a revised response to an NRC staff question included in Request for Additional Information (RAI) letter number 396, related to Combined License Application (COLA) Part 2, Tier 2, Section 11.2. This submittal completes the response to letter 396.

The Attachment revises the response to RAI 11.02-10, previously responded to in the referenced letter.

The indicated change to the COLA will be incorporated in the next routine revision submitted following NRC acceptance of the revised response.

There are no commitments in this letter.

If you have any questions regarding this response, please contact me at (361) 972-7136 or Bill Mookhoek at (361) 972-7274.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 6/10/10

Scott Head  
Manager, Regulatory Affairs  
South Texas Project Units 3 & 4

scs  
Attachment: 11.02-10 Revised Response

cc: w/o attachment except\*  
(paper copy)

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**QUESTION:**

DCD COL License Information Item 11.1, item 1, states that the applicant shall provide “Compliance with Appendix I to 10 CFR 50 and the guidance given in ANSIN13.1, “Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities,” Regulatory Guide (RG) 1.21 “Measuring and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants,” and RG 4.15, “Quality Assurance for Radiological Monitoring Programs (Normal Operation)—Effluent Streams and the Environment,””

The applicant states in Section 11.2.5 the commitment to Appendix I to 10 CFR 50, and refers to section 12.2.2.4 which describes how the compliance will be accomplished for liquid and gaseous effluents.

There is no commitment to Regulatory Guide 4.15, revision 1 or revision 2 in FSAR Chapter 11, or 12.2 per the COL License Information Item 11.1. Chapter 1.9 or 1.9S does not list Regulatory 4.15 as a Regulatory Guide utilized for compliance.

Reference to and use of this Regulatory Guide needs to be added to the FSAR appropriately in accordance with the COL License Information Item 11.1.

**REVISED RESPONSE:**

STPNOC letter U7-C-STP-NRC-100100, dated April 29, 2010, provided the response to NRC Request for Additional Information (RAI) 11.02-10. This revised response replaces the previous response in its entirety. The COLA changes identified below provide a description of the implementation of NRC Regulatory Guide (RG) 4.15, Rev. 1, “Quality Assurance for Radiological Monitoring Programs (Normal Operations)—Effluent Streams and the Environment” at STP 3&4.

STP 3&4 COLA Part 2, Tier 2, Subsection 11.2.5, item 1, will be revised as shown below:

STP 3 & 4 complies with Appendix I to 10 CFR 50 and the guidelines given in ANSI Std. N13.1, “Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities” (Reference 11.2-3), Regulatory Guide (RG) 1.21, “Measuring and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants,” and RG 4.15, Revision 1, “Quality Assurance for Radiological Monitoring Programs (Normal Operation)—Effluent Streams and the Environment,” as described in Subsection 12.2.2.4 with the QA aspects described in Subsection 11.5.7S as shown below.

STP 3 & 4 COLA, Part 2, Tier 2, Subsection 11.5.7S will be revised as shown below in a future revision. Gray shading shows the changes from COLA Revision 3.

### **11.5.7S Additional Information**

This subsection supplements the information provided in the reference DCD as discussed in Section C.III.1.11.5 of Regulatory Guide 1.206.

An offsite dose calculation manual (ODCM) for STP 1 & 2 has been reviewed and approved by the NRC. It contains descriptions of the methodology and parameters used for calculation of offsite doses resulting from gaseous and liquid effluents. It also describes how liquid and gaseous effluent release rates are derived and parameters used in setting instrumentation alarm setpoints to control or terminate effluent releases. The ODCM also contains the radiological environmental monitoring program which samples and analyzes radiation and radionuclides in the environs of the existing plant, using local land use census data in identifying all potential radiation exposure pathways associated with radioactive materials present in liquid and gaseous effluents and direct external radiation from the plant. The ODCM for STP 3 & 4 will be integrated into the 1 & 2 ODCM, taking into account the appropriate differences between the existing and new units.

The effluent radiation monitors provide the means to control releases of radioactive material to the environment to maintain the releases ALARA in accordance with Appendix I to 10 CFR Part 50. Compliance with the numerical guidance provided in Appendix I to 10 CFR 50 is discussed in Subsection 12.2.2.4. The cost benefit analyses for augments to the liquid and gaseous waste management systems, as required by Appendix I to 10 CFR 50, are discussed in Sections 11.2.1.2 and 11.3.11.1.

The Radiological Environmental Monitoring Program (REMP) for STP 3&4 is expected to be integrated with that of STP 1&2 as part of the ODCM and is consistent with Regulatory Guide 4.15, "Quality Assurance for Radiological Monitoring Programs (Normal Operation)—Effluent Streams and the Environment." Quality assurance is provided in the existing NRC-approved REMP through accredited training programs and personnel qualification programs, a measurement assurance program that includes Inter-laboratory Comparison Program tests, and administrative and technical procedures governing the monitoring and analyses program for all activities, including computational checks.

Control checks and tests are applied to the analytical operations by means of duplicate and/or split analyses of selected samples, and by the introduction of environmental samples with known nuclide concentrations. Calibrations are confirmed by participation in the Nuclear Energy Institute/National Institute of Standards and Technology Measurement Assurance Program.

STP 3 & 4 COLA, Part 2, Tier 2, Section 1.9S will be revised as shown below in a future revision. Gray shading shows the changes from COLA Revision 3.

## 1.9S Conformance with Regulatory Criteria

### 1.9S.1 Conformance with Regulatory Guides

Table 1.9S-1 lists the applicable Division 1 and Division 8 Regulatory Guides (RGs) effective in March 2007 with which STP 3 & 4 conform for the site-specific portions of the facility design not included in the reference ABWR DCD. The operational aspects of the facility are included. The table also includes those RGs with which the departures taken from the reference ABWR DCD conform. Table 1.9S-2 addresses STP 3 & 4 conformance with those RGs annotated as "COL Applicant" in the reference ABWR DCD Table 1.8-20.

Division 4 RGs are addressed in the Environmental Report with one exception for RG 4.15 (addressed herein); Division 5 RGs are addressed in the Security Plan.

**Table 1.9S-1 Site-Specific Conformance with Regulatory Guides (Continued)**

No.	Title	Rev.
1.194	Atmospheric Relative Concentrations for Control Room Radiological Habitability Assessments at Nuclear Power Plants	0 (6/03)
1.198	Procedures and Criteria for Assessing Seismic Soil Liquefaction at Nuclear Power Plant Sites	0 (11/03)
1.199	Anchoring Components and Structural Supports in Concrete	0 (11/03)
1.204	Guidelines for Lightning Protection of Nuclear Power Plants	0 (11/05)
1.206	Combined License Applications for Nuclear Power Plants	0 (6/07)
1.208	A Performance-Based Approach to Define the Site-Specific Earthquake Ground Motion	0 (3/07)
<b>Division 4</b>		
4.15	Quality Assurance for Radiological Monitoring Programs (Normal Operation)—Effluent Streams and the Environment	1 (2/79)
<b>Division 8</b>		
8.1	Radiation Symbol	0 (2/73)
8.4	Direct-Reading and Indirect-Reading Pocket Dosimeters	0 (2/73)
8.5	Criticality and Other Interior Evacuation Signals	1 (3/81)
8.6	Standard Test Procedure for Geiger-Muller Counters	0 (5/73)
8.7	Instructions for Recording and Reporting Occupational Radiation Exposure Data	2 (11/05)
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations Will Be as Low as Is Reasonably Achievable	3 (6/78)
8.9	Acceptable Concepts, Models, Equations, and Assumptions for a Bioassay Program	1 (7/93)
8.10	Operating Philosophy for Maintaining Occupational Radiation Exposures as Low as Is Reasonably Achievable	1-R (5/77)
8.13	Instruction Concerning Prenatal Radiation Exposure	3 (6/99)
8.15	Acceptable Programs for Respiratory Protection	1 (10/99)

STP 3 & 4 COLA, Part 2, Tier 2, Subsection 12.2.2.2 will be revised as shown below in a future revision for consistency with the DCD section numbering. Gray shading shows the change from COLA Revision 3.

~~12.2.2.2~~ ~~12.2.2.4~~ **Average Annual Doses**

The following site-specific supplement addresses COL License Information Item 12.5.

STP 3&4 COLA Part 3 (Environmental Report), Subsection 6.2.7 will be revised as shown below in a future revision. Gray shading shows the change from COLA Revision 3.

**6.2.7 References**

- 6.2-5 “Quality Assurance for Radiological Monitoring Programs (~~Inception through Normal Operations to License Termination~~) — Effluent Streams and the Environment,” Regulatory Guide 4.15, ~~Interim Rev. 2 1, March 2007~~ February 1979.