



South Texas Project Electric Generating Station 4000 Avenue F – Suite A Bay City, Texas 77414

December 8, 2009
U7-C-STP-NRC-090220

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
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11555 Rockville Pike
Rockville MD 20852-2738

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

Attached are the responses to the NRC staff questions included in Request for Additional Information (RAI) letter numbers 230 and 231 related to Combined License Application (COLA) Part 2, Tier 2, Sections 1.1.5 and 1.4. This submittal completes the responses to these RAI letters.

The attachments address the responses to the RAI questions listed below:

RAI 01-15

RAI 01-16

There are no commitments in this letter.

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

STI 32587225

DO91
NRC

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

Executed on 12/8/09



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

rhs

Attachments:

1. Question 01-15
2. Question 01-16

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

(electronic copy)

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RAI 01-15**QUESTION:**

The purpose of this RAI is to 1) determine if the proposed standard license conditions for 10 CFR Part 30, 40, and 70 are appropriate for the South Texas Project Unit 3 and 4 COLA and 2) request additional information in the application to address program elements to ensure that STPNOC will have in place the necessary controls to allow receipt of byproduct and source material prior to the 10 CFR 52.103(g) finding.

In the STP 3 and 4 COLA transmittal letter STPNOC requested such other licenses as would be required for receipt, possession and use of source, byproduct and special nuclear material in connection with the operation of Unit 3. The staff notes that such licenses would be in accordance with Commission regulations in 10 CFR Parts 30, 40, and 70.

In a memorandum (ML083030065) dated December 9, 2008, the staff proposed the following standard license conditions and requirements regarding 10 CFR Parts 30, 40, and 70:

- (1) (i) Pursuant to the Act and 10 CFR Part 70, to receive and possess at any time, special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, described in the final safety analysis report (FSAR), as supplemented and amended;
- (ii) Pursuant to the Act and 10 CFR Part 70, to use special nuclear material as reactor fuel, after the finding in Section 2.D(1) of this license has been made, in accordance with the limitations for storage and amounts required for reactor operation, and described in the FSAR, as supplemented and amended;
- (2) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, at any time, any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required, any byproduct, source, or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (4) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

Please inform us as to whether or not the above proposed standard license conditions and requirements are considered appropriate to support the South Texas Project COL. In addition, please discuss, and provide additional information as needed, which parts of the application provide sufficient information to support compliance with the applicable portions of 10 CFR Part

30 and 40. For example, describe how you have addressed in the application the radiation protection program, security and fire protection program elements that will be in place prior to receipt of the byproduct or source material authorized by the proposed license above. Note that the staff believes that its current review of the STP COLA will identify the necessary controls regarding the receipt of new fuel on site in accordance with 10 CFR Part 70.

RESPONSE:

The proposed license conditions described in the RAI are considered appropriate to support the STP Units 3 and 4 COL. STPNOC requests that the fourth condition be modified as, "Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility (STP Units 3 and 4) or any of the other units at the STP site." This would enable Unit 3, for example, to take LLW or contaminated tools from Unit 1.

The STP Units 3 and 4 FSAR (which incorporates by reference the ABWR DCD) includes Chapter 9 - Auxiliary Systems, Chapter 11 - Radioactive Waste Management, Chapter 12 - Radiation Protection, and Chapter 13 - Conduct of Operations, which provide sufficient information to support compliance with the applicable portions of 10 CFR Parts 30, 40 and 70. The license application information requested in these Parts relates to byproduct, source, and special nuclear material and its purposes, radiation safety personnel, personnel training, facilities and equipment, radiation safety program, and waste management. Specifically:

- Information related to the organizational structure of the applicant, including those responsible for source, byproduct and special nuclear material radiation safety, is provided in FSAR Sections 12.5S and 13.1.
- Information related to training of personnel, including those responsible for source, byproduct and special nuclear material radiation safety, is provided in FSAR Sections 12.5S and 13.2.
- Information related to radiation protection facilities and equipment is provided in FSAR Section 12.5.
- Information related to the radiation safety program is provided in FSAR/DCD Sections 11.5, 12.1, 12.3, 12.5 and 12.5S.
- Information related to the Fire Protection Program is provided in FSAR Section 9.5.1.
- Information related to the relevant waste management processes is provided in FSAR/DCD Section 11.4.
- Information related to plant procedures, including those used to control source, byproduct and special nuclear material, is provided in FSAR Sections 12.5S and 13.5.

- Information related to security, including safeguards of special nuclear material, is provided in FSAR/DCD Section 13.6.

FSAR Table 13.4S-1 provides milestones for implementation of various operational programs. Important milestone dates for various operational programs that support issuance of the license and requirements relative to 10 CFR Parts 30, 40, and 70 include the following:

- Radiation Protection Program (including ALARA principles): The Standards for Protection Against Radiation in 10 CFR Part 20 apply to persons licensed by the Commission to receive, possess, use, transfer, or dispose of byproduct, source, or special nuclear material or to operate a production or utilization facility under Parts 30, 40, and 70. The milestones for implementation of the Radiation Protection Program provided in FSAR Table 13.4S-1 implement the provisions of 10 CFR Part 20 on a timetable adequate to ensure compliance with the 10 CFR Parts 30, 40 and 70 licenses.
- Fire Protection Program: As described in FSAR Table 13.4S-1, elements of the Fire Protection Program are conservatively implemented in a phased manner by first implementing the elements of the program necessary to support receipt and storage of fuel onsite and then implementing additional elements necessary to support fuel load and plant operation.
- Security Program including physical security, safeguards contingency programs, training and qualification program - prior to receipt of fuel onsite. Other than fuel, no sources containing SNM that would require implementation of the Physical Security Program or Safeguards Contingency Program have been identified.

In particular, the Radiation Protection Program, which incorporates NEI 07-03A with certain supplemental information (as stated in FSAR Section 12.5S), provides that:

Prior to initial receipt of byproduct, source, or special nuclear materials (excluding Exempt Quantities as described in 10 CFR 30.18), and thereafter, when such radioactive materials are possessed under this license, the following Radiation Protection Program elements will be in place:

- a. Organization - A radiation protection supervisor and at least one radiation protection technician, each selected, trained and qualified consistent with the guidance in Regulatory Guide 1.8.
- b. Facilities - A facility or facilities to support the receipt, storage and control of non-exempt radioactive sources in accordance with 10 CFR 20.1801, 20.1802, and 20.1906.
- c. Instrumentation and Equipment - Adequate types and quantities of instrumentation and equipment will be selected, maintained, and used to provide for the appropriate detection capabilities, ranges, sensitivities, and accuracies to conduct radiation surveys and monitoring (in accordance with 10 CFR 20.1501

and 20.1502) for the types and levels of radiation anticipated for the non-exempt sources possessed under this license.

- d. Procedures - Procedures will be established, implemented and maintained sufficient to maintain adequate control over the receipt, storage, and use of radioactive materials possessed under this license and as necessary to assure compliance with 10 CFR 19.11 and 19.12 and the applicable portions of 10 CFR Part 20, commensurate with the types and quantities of radioactive materials received and possessed under this license.
- e. Training - Initial and periodic training will be provided to individuals responsible for the receipt, control or use of non-exempt radioactive sources possessed under this license in accordance with 10 CFR 19.12 and consistent with the guidance in Regulatory Guides 1.8, 8.13, 8.27, and 8.29.

These provisions provide adequate controls for the receipt, possession and use of sources containing byproduct, source and special nuclear material. In particular, the program elements above addressing 10 CFR 20.1801 and 20.1802 provide adequate security, control and surveillance of such sources. These program elements also ensure that such sources are used only by properly trained, authorized users.

No fire protection requirements have been identified in 10 CFR Parts 30 or 40, except as part of the emergency planning requirements of 10 CFR 30.32(i) and 40.31(j). 10 CFR 30.32(i) applies to byproduct material "in unsealed form, on foils or plated sources, or sealed in glass" in excess of the quantities in 30.72 Schedule C. No sources have been identified that meet this description. 10 CFR 40.31(j) relates to an application to possess uranium hexafluoride and therefore is also not applicable.

No COLA change is required as a result of this response.

RAI 01-16

QUESTION:

Section 302(b) of the Nuclear Waste Policy Act of 1982, as amended, states "The Commission, as it deems necessary or appropriate, may require as a precondition to the issuance or renewal of a license under section 103 or 104 of the Atomic Energy Act of 1954 [42 U.S.C. 2133, 2134] that the applicant for such license shall have entered into an agreement with the Secretary for the disposal of high-level radioactive waste and spent nuclear fuel that may result from the use of such license."

Please identify the DOE contract number applicable to STP Units 3 and 4 for disposal of high-level radioactive waste and spent nuclear fuel or provide STPNOC's plans, including the time frame, for entering into such a contract.

RESPONSE:

The DOE contract numbers applicable to STP Units 3 and 4 for disposal of high-level radioactive waste and spent nuclear fuel are DE-CR01-09RW09007 (for STP Unit 3) and DE-CR01-09RW09008 (for STP Unit 4).

No COLA change is required as a result of this response.