UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 31, 2022

C. H. Georgeson, General Manager
Engineering
South Texas Project Nuclear
Operating Company
South Texas Project Electric
Generating Station
P.O. Box 289
Wadsworth, TX 77483

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR REVIEW OF THE SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION INDEPENDENT SPENT FUEL STORAGE INSTALLATION, LICENSE NO. SNM-2514 - COST ACTIVITY CODE/ENTERPRISE PROJECT IDENTIFICATION NUMBER 001028/07201041/L-2022-LLE-0009

Dear Mr. Georgeson:

By letter dated March 11, 2022 (Agencywide Documents Access and Management System {ADAMS} Accession No. ML22070B140), South Texas Project Nuclear Operating Company (STPNOC, or the applicant) requested the U.S. Nuclear Regulatory Commission (NRC) to grant an exemption for one multipurpose canister (MPC), Model MPC-37, Serial Number 248, in use at the South Texas Project Electric Generating Station (STPEGS). The application specifically requests an exemption from the requirements of Appendix B, Section 3.3, "Codes and Standards," of Certificate of Compliance (CoC) No. 1032 for the HI-STORM FW MPC Storage System. In accordance with Section 3.3 the HI-STORM FW, an MPC-37 must meet the 2007 Edition ASME Code, which requires that 100 percent of the weld seam joining the baseplate to the shell of the canister be inspected by radiography test.

In connection with our review, we need the information identified in the enclosed requests for additional information (RAIs). To assist us in scheduling the NRC staff review of your response, we request that you provide this information 30 calendar days from the date of this letter. Inform us at your earliest convenience, but no later than 30 calendar days from the date of this letter if you are not able to provide the information by that time. If you are unable to provide a response by the stated date, our review may be delayed.

Please reference Docket No. 72-1041 and Cost Activity Code/Enterprise Project Identification No. 001028/07201041/L-2022-LLE-0009 in future correspondence related to this review. The NRC staff is available to clarify these questions, and, if necessary, to meet and discuss your proposed responses.

In accordance with Title 10 of the *Code of Federal Regulations*, Section 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this communication will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of the NRC's ADAMS. ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

If you have any questions regarding this communication, please contact me at 301-415-1035 or via e-mail at Donald.Habib@nrc.gov.

Sincerely,

Signed by Habib, Donald
on 03/31/22

Donald Habib, Project Manager
Storage and Transportation Licensing Branch
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket Nos. 72-1041, 50-498, 50-499
License/Certificate No. SNM-2514

Enclosures:
1. Request for Additional Information RAI M-1
2. Request for Additional Information RAI C-1

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR REVIEW OF THE SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION INDEPENDENT SPENT FUEL STORAGE INSTALLATION, LICENSE NO. SNM-2514 - COST ACTIVITY CODE/ENTERPRISE PROJECT IDENTIFICATION NUMBER 001028/07201041/L-2022-LLE-0009 DOCUMENT DATE: March 31, 2022

ADAMS Accession No. ML22089A085

OFFICE	DFM/STLB/PM	DFM/STLB/LA	DFM/MSB/TR	DFM/CTCFB/TR
NAME	DHabib	WWheatley	OKhan	CBajwa
DATE				
OFFICE	DFM/MSB/BC	DFM/CTCFB/BC	DFM/STLB/BC	DFM/STLB/PM
NAME	TBoyce	DMarcano	YDiaz-Sarabria	DHabib
DATE				

OFFICIAL RECORD COPY

South Texas Project Electric Generating Station Units 1 and 2
Independent Spent Fuel Storage Installation
Request for Exemption from Certificate of Compliance
Inspection Requirement for One Multipurpose Canister

Request for Additional Information RAI M-1
March 31, 2022

FINAL

Provide additional information to demonstrate that the stress reduction factor used in the stress analysis for HI-STORM FW multipurpose canister (MPC) adequately bounds the possible weld flaws in the unexamined section of MPC shell to baseplate weld.

The applicant proposed to use a joint efficiency factor from the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section VIII, Division 1. However, the joint efficiency factor from ASME Section VIII, Division 1, is not applicable to the HI-STORM FW MPC, which is designed and constructed using ASME Section III, Division I, Subsection NB, with NRC approved ASME B&PV code alternatives.

Subsequently, the applicant re-evaluated calculations of bounding load cases for the MPC using a stress reduction factor described in NRC's interim staff guidance (ISG) -15, Materials Evaluation (NRC ADAMS Accession Number ML010100170). However, the stress reduction factor of 0.8 from ISG-15 is applicable for a lid to shell weld with multiple penetrant testing (PT) in lieu of a volumetric examination. Therefore, the applicant's proposed use of the stress reduction factor of 0.8 as a design criterion was not supported by a justification that demonstrates it was appropriate for the analyses of the possible weld flaws in the unexamined section of the repaired MPC shell to baseplate weld. While the stress reduction factor of 0.8 may be adequate to bound possible weld flaws as a result of the unexamined section of the repaired MPC to shell baseplate weld, the applicant did not provide an analysis or supporting information to justify the value of the stress reduction factor used in the re-evaluated calculations of the bounding load cases.

This information is needed to determine compliance with 10 CFR 72.236(b) and (l).

South Texas Project Electric Generating Station Units 1 and 2
Independent Spent Fuel Storage Installation
Request for Exemption from Certificate of Compliance
Inspection Requirement for One Multipurpose Canister

Request for Additional Information RAI C-1
March 31, 2022

FINAL

Discuss how the results of the helium leakage testing completed after the weld repair on MPC 248 demonstrate that the MPC meets the required leakage acceptance criteria.

Enclosure 1 of the letter from South Texas Project Nuclear Operating Company, dated March 11, 2022, (NOC-AE-22003877) states the following (on page 1):

> *Following completion of the weld repair, MPC 248 successfully passed a helium leakage test during factory acceptance testing as well as a hydrostatic test performed at STPEGS during loading operations.*

The statement above suggests that the containment boundary for the MPC in question was demonstrated as “leaktight” for purposes of the confinement review (assuming that fabrication leakage test was conducted in accordance with the SAR for this system); additionally, the applicant asserted that confinement has been maintained for this MPC following the weld repair. Staff review of the results of the leak testing of MPC 248 may provide reasonable assurance that confinement has been maintained for this MPC.

This information is needed to determine compliance with 10 CFR 72.236 (d) and (e).

South Texas Project ISFSI Exemption Request, Final Request for Additional Information DATE April 1, 2022

DISTRIBUTION:

ADAMS Accession No.: Ltr ML22089A085

OFFICE	NMSS/DFM/STLB	NMSS/DFM/STLB	NMSS/DFM/CTCFB	NMSS/DFM/MSB
NAME	DHabib *DH*	WWheatley *WW*	CBajwa *CB*	OKhan *OK*
DATE	Mar 30, 2022	Mar 30, 2022	Mar 31, 2022	Mar 30, 2022
OFFICE	NMSS/DFM/MSB	NMSS/DFM	NMSS/DFM/STLB	NMSS/DFM
NAME	TBoyce *TB*	DMarcano *DM*	DHabib *DH*	AParker-Haynes *AP*
DATE	Mar 31, 2022	Mar 31, 2022	Mar 31, 2022	Apr 1, 2022

OFFICIAL RECORD COPY