



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

May 12, 2016

Mr. Dennis L. Koehl
President and CEO/CNO
STP Nuclear Operating Company
South Texas Project
P.O. Box 289
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT, UNIT 1 – SUPPLEMENTAL INFORMATION
NEEDED FOR ACCEPTANCE OF REQUESTED LICENSING ACTION RE:
REQUEST TO OPERATE PERMANENTLY WITH 56 CONTROL RODS
(CAC NO. MF7577)

Dear Mr. Koehl:

By letter dated April 7, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16110A297), STP Nuclear Operating Company (STPNOC) submitted a license amendment request for the South Texas Project, Unit 1 (STP). The proposed amendment request would allow operation of the Unit 1 reactor with 56 control rods versus the original core design of 57 control rods. The purpose of this letter is to provide the results of the U.S. Nuclear Regulatory Commission (NRC) staff's acceptance review of this amendment request. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

Consistent with Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), an amendment to the license (including the technical specifications) must fully describe the changes requested, and following as far as applicable, the form prescribed for original applications. Section 50.34 of 10 CFR addresses the content of technical information required. This section stipulates that the submittal address the design and operating characteristics, unusual or novel design features, and principal safety considerations.

The NRC staff has reviewed your application and concluded that the information delineated in the enclosure to this letter is necessary to enable the staff to make an independent assessment regarding the acceptability of the proposed amendment request in terms of regulatory requirements and the protection of public health and safety and the environment.

In order to make the application complete, the NRC staff requests that STPNOC supplement the application within 13 business days of the date of this letter, to address the information requested in the enclosure. This will enable the NRC staff to begin its detailed technical review. If information responsive to the NRC staff's request is not received by the requested date, the application will not be accepted for review pursuant to 10 CFR 2.101, and the NRC will cease its review activities associated with the application. If the application is subsequently accepted for

D. Koehl

- 2 -

review, you will be advised of any further information needed to support the staff's detailed technical review by separate correspondence.

The information requested and associated time frame in this letter were discussed with Lance Sterling of your staff during a teleconference held on May 12, 2016.

If you have any questions, please contact me at (301) 415-1906.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lisa M. Regner', with a large, sweeping flourish extending upwards and to the right.

Lisa M. Regner, Senior Project Manager
Plant Licensing Branch IV-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-498

Enclosure:
Supplemental Information Needed

cc w/encl: Distribution via Listserv

SUPPLEMENTAL INFORMATION NEEDED

LICENSE AMENDMENT REQUEST

STP NUCLEAR OPERATING COMPANY

SOUTH TEXAS PROJECT, UNIT 1

DOCKET NO. 50-498

1. Provide an explanation of how the value for a bounding key safety parameter was initially determined for input into the safety analyses. For example, the bounding shutdown margin originally input into the safety analyses was 1.3 percent delta rho. Explain how the value of 1.3 was initially determined. The key safety parameters include the following:
 - a. Moderator temperature coefficient/moderator density coefficient
 - b. Shutdown margin
 - c. Trip reactivity

Confirm that if these key safety parameters are impacted by the removal of the control rod, then the new value for the key safety parameter would be rerun through the analysis to determine the new result.
2. Provide summaries of the evaluations performed from the supporting calculations and documentation for each of these design basis accident events analyzed and provide the reference number:
 - a. Uncontrolled boron dilution accident
 - b. Dropped bank during full power operations
 - c. Steam line break accident
 - d. Control rod ejection accident
 - e. Steam generator tube rupture
3. Provide an explicit discussion for each safety analysis methodology regarding the assumptions made when developing the methodology for symmetric versus asymmetric control rod patterns (i.e., that would result from operation with one control rod removed). If no assumptions were made or if it was assumed that the control rod pattern was symmetric, provide a discussion of why that methodology is still applicable given the proposed new plant configuration.
4. Provide a discussion of any evaluations that have been performed under Title 10 of the *Code of Federal Regulations* Section 50.59 "Changes, tests, and experiments," if applicable, as a result of a removal of a control rod that may impact or may have impacted the analyses discussed above.

Enclosure

D. Koehl

- 2 -

review, you will be advised of any further information needed to support the staff's detailed technical review by separate correspondence.

The information requested and associated time frame in this letter was discussed with Lance Sterling of your staff during the teleconference held on May 12, 2016.

If you have any questions, please contact me at (301) 415-1906.

Sincerely,

/RA/

Lisa M. Regner, Senior Project Manager
Plant Licensing Branch IV-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-498

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Supplemental Information Needed

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ADAMS Accession No. ML16127A452

* per email

OFFICE	NRR/DORL/LPL4-1/PM	NRR/DORL/LPL4-1/LA	NRR/DSS/SRXB/BC (A)*
NAME	LRegner	JBurkhardt	EOesterle
DATE	5/11/16	5/9/16	5/6/16
OFFICE	NRR/DORL/LPL4-1/BC	NRR/DORL/LPL4-1/PM	
NAME	RPascarelli [JKlos for]	LRegner	
DATE	5/12/16	5/12/16	

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