



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

March 24, 2016

**LICENSEE:** STP Nuclear Operating Company

**FACILITY:** South Texas Project, Unit 1

**SUBJECT:** SUMMARY OF MARCH 2, 2016, PUBLIC MEETING WITH STP NUCLEAR OPERATING COMPANY TO DISCUSS A PROPOSED LICENSE AMENDMENT TO OPERATE SOUTH TEXAS PROJECT, UNIT 1, PERMANENTLY WITH 56 CONTROL RODS (CAC NO. MF7361)

On March 2, 2016, a Category 1 pre-application public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of STP Nuclear Operating Company (STPNOC, the licensee), at NRC Headquarters, in Rockville, Maryland. The purpose of the meeting was for STPNOC staff to provide information on a proposed license amendment request (LAR) to modify technical specifications (TS) for Unit 1 of the South Texas Project (STP) to allow permanent operation following removal of a single unreliable control rod. The meeting notice and agenda, dated February 18, 2016, are located in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML16050A010. The licensee's handouts from the meeting are available in ADAMS at Accession No. ML16062A304. A list of meeting attendees is provided in the Enclosure to this meeting summary.

In its presentation, STPNOC staff provided information on the control rod configuration and the background of the issue; the physical configuration changes to support long-term operation, the impact on design basis accident safety analyses, and the proposed schedule. STPNOC staff provided an overview of the license amendment and the proposed change to the Unit 1 TS 5.3.2, "Control Rod Assemblies," to recognize 56 control rods.

The licensee stated that the consequences and uncertainty associated with replacing the control rod are significant since the process would require special tooling and processes not currently in existence, and penetration of the primary reactor coolant system pressure boundary.

The NRC staff asked if the cause of the rod control sequencing failure that was blamed for the damage to control rod D-6 was identified. The NRC staff requested that this be addressed in the submittal as well as how any future failure of this nature will be prevented including mitigative measures. Specifically, the NRC staff asked the licensee to address if and how the rapid refueling procedures would be modified.

During the presentation on physical configuration changes to support future operation (page 13 of the handout), the NRC staff requested STPNOC to address the long-term operational effects on and around the existing guide tube flow restrictor. These effects may include material degradation, loosening, and clogging. Also, the licensee should address how these effects will be monitored, tracked, and mitigated by inspection, maintenance, and analysis. STPNOC stated that the flow restrictor will remain in place, but the thimble plug will be removed to reduce radiological impacts during refueling operations.

STPNOC proposed to use the Reload Safety Analysis Checklist (RSAC) in accordance with the Westinghouse Electric Company LLC procedure WCAP-9272-PA, "Westinghouse Reload Safety Evaluation Methodology," as the basis for long-term operation with 56 control rods. The RSAC was the basis for the Unit 1 Amendment No. 208 issued on December 11, 2015 (ADAMS Accession No. ML15343A128), allowing one-cycle of operation with 56 control rods.

The NRC staff questioned the licensee's use of the RSAC for longer-term operation for several reasons including that the amendment is not asking for a single fuel reload as the RSAC was intended and that the removal of a control rod permanently is a design change. Therefore, STPNOC's use of the RSAC baseline analyses using a 57-rod reference core appears inaccurate. Further, the NRC staff stated that the NRC safety evaluation for WCAP-9272 stipulates that significant plant system changes are outside the scope of applicability for approval of WCAP-9272. The staff considers the permanent changes proposed in the LAR to be significant and first-of-a-kind design modifications. The NRC staff specified that these concerns need to be addressed in detail in the submittal if STPNOC chooses to use the RSAC as a basis for the amendment. STPNOC instead should consider the Updated Final Safety Analysis Report (UFSAR) Chapter 15 design basis accident analyses that could be challenged by the configuration change and conducting a new bounding analysis.

STPNOC responded that the key safety parameters assumed in the UFSAR design basis accident safety analyses would not be challenged (i.e., shutdown margin, boron worth, rod worth, trip reactivity and most positive moderator density coefficient) for the core with 56 control rods. The licensee went on to state that the bounding accident analyses in the UFSAR do not assume a number or configuration of control rods in the core. STPNOC staff indicated that these assumptions would be discussed in detail in the submittal.

STPNOC stated it would again provide in the submittal, a table with impacts to design basis accident analysis. The licensee's proposed schedule included submitting the LAR on March 17, 2016 (this was subsequently moved to March 31), with an NRC decision by March 2, 2017. The licensee cannot restart Unit 1 without NRC action.

The NRC staff stated that the schedule is extremely challenging and that an audit could improve efficiency. The STPNOC staff stated that they would support audits as needed. The NRC requested that the licensee consider contingencies if the staff cannot approve the amendment in the requested timeframe or if it is denied.

In summary, the NRC staff stated that the licensee must address the staff's concerns concerning the validity of the RSAC as the basis for the LAR, degradation mechanisms and inspections of the flow restrictor, and regulatory controls associated with the failure mechanism causing damage to control rod D-6.

No public comments were received and no Public Meeting Feedback Forms were received.

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Please direct any inquiries to me at 301-415-1906, or [lisa.regner@nrc.gov](mailto:lisa.regner@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'Lisa M. Regner', with a long, sweeping horizontal stroke extending 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:  
List of Attendees

cc w/encl: Distribution via Listserv

LIST OF ATTENDEES

MARCH 2, 2016, MEETING WITH STP NUCLEAR OPERATING COMPANY

REGARDING PROPOSED EMERGENCY AMENDMENT

SOUTH TEXAS PROJECT, UNIT 1

DOCKET NO. 50-498

<b>NAME</b>	<b>ORGANIZATION</b>
Lisa Regner	U.S. Nuclear Regulatory Commission (NRC)
Robert Taylor	NRC
Robert Pascarelli	NRC
Will MacFee	NRC
George Thomas	NRC
Ian Tseng	NRC
Matt Hamm	NRC
Mike King	NRC
John Klos	NRC
Tim Lupold	NRC
Matthew Hardgrove	NRC
Josh Borromeo	NRC
Jim Hickey	NRC
Mike Murray	STP Nuclear Operating Company (STPNOC)
Wendy Brost	STPNOC
Roland Dunn	STPNOC
Michael Berg	STPNOC
Joe Rocha	STPNOC
Duane Gore	STPNOC
Charles Albury	STPNOC
Ron Holloway	Wolf Creek Nuclear Operating Company
Brian Krystek	Engineering Planning and Management, Inc.
Tim Sande	ENERCON

Enclosure

Please direct any inquiries to me at 301-415-1906, or [lisa.regner@nrc.gov](mailto:lisa.regner@nrc.gov).

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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List of Attendees

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**ADAMS Accession No.: ML16081A205**

**\*via email**

OFFICE	NRR/DORL/LPL4-1/PM	NRR/DORL/LPL4-1/LA	NRR/DE/EMCB/BC*	NRR/DSS/SRXB/BC*
NAME	LRegner	JBurkhardt	YLi	EOesterle
DATE	3/21/16	3/21/16	3/23/16	3/22/16
OFFICE	NRR/DSS/SNPB/BC*	NRR/DSS/STSB/BC*	NRR/DORL/LPL4-1/BC	NRR/DORL/LPL4-1/PM
NAME	JDean	RElliott	RPascarelli	LRegner
DATE	3/23/16	3/21/16	3/24/16	3/24/16

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