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

June 14, 2013

LICENSEE: STP Nuclear Operating Company

FACILITY: South Texas Project, Units 1 and 2

SUBJECT: SUMMARY OF MAY 23, 2013, PUBLIC MEETING WITH STP NUCLEAR OPERATING COMPANY TO DISCUSS THE PROPOSED RISK-INFORMED APPROACH TO THE RESOLUTION OF GSI-191, "ASSESSMENT OF DEBRIS ACCUMULATION ON PWR SUMP PERFORMANCE" (TAC NOS. MF0613 AND MF0614)

On May 23, 2013, a 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, Rockville, Maryland. The meeting notice and agenda, dated April 30, 2013, is located in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML13119A080.

By letter dated January 31, 2013 (ADAMS Accession No. ML13043A013), STPNOC requested an exemption for South Texas Project, Units 1 and 2 (STP), for a risk-informed approach to resolution of Generic Safety Issue (GSI)-191, "Assessment of Debris Accumulation on PWR [Pressurized-Water Reactor] Sump Performance." By letter dated April 1, 2013 (ADAMS Accession No. ML13066A519), the NRC staff requested supplemental information in order to consider this exemption request. The purpose of this meeting was to discuss STPNOC's proposed response to the NRC staff request for supplemental information. The NRC staff also made a short presentation to provide the licensee with initial review insights related to probabilistic risk assessment and high-level requirements of Regulatory Guide (RG) 1.174, Revision 2, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant Specific Changes to the Licensing Basis, "May 2011 (ADAMS Accession No. ML100910006), and RG 1.200, Revision 2, "An Approach for Determining the Technical Adequacy of the Probabilistic Risk Assessment Results for Risk-Informed Activities," March 2009 (ADAMS Accession No. ML090410014).

A list of meeting attendees is provided in the Enclosure to this meeting summary.

Meeting Summary

The discussion was based on the following previously provided meeting materials/handouts.

1. South Texas Project, Units 1 and 2, STP Pilot Submittal for Risk-Informed Approach to Resolving GSI-191 (ADAMS Accession No. ML13150A216).

2. Risk-Informed GSI-191 Pilot Application Initial Review Insights (ADAMS Accession No. ML13140A284).

Results of Discussions

1. The NRC staff suggested that the revised submittal should contain clear pointers or mapping to important information (e.g., calculations, test data, analysis, etc.) that will be required by the NRC staff reviewers for performing the acceptance review and subsequent detailed review later. The revised submittal should also clearly define the information included in the application and the information available for audit by the NRC staff.

2. The NRC staff suggested the licensee to provide a list of input variables, including a description and basis for how each variable was modeled (point estimate, probability distribution, time-dependent variable, etc.) and an assessment of which variables have the greatest influence on the results.

3. The licensee was requested to provide a detailed description and justification for all assumptions critical to the results of the analysis.

4. The NRC staff noted that STPNOC appears to have used the results of the Electric Power Research Institute (EPRI) tests for coating failures. The NRC suggested the licensee to provide technical justification for applicability of the EPRI test data to STP analysis in support of the application.

5. The NRC staff suggested the licensee to revise the Updated Final Safety Analysis Report (UFSAR) establishing clear design basis in support of future changes as a result of plant modifications and performance of operability determinations.

6. The licensee stated that the submittal will include revised technical specification (TS) bases pages to reflect the revised design bases. However, the licensee expressed the view that the change will not result in any TS changes.

7. The NRC staff noted that the description of the containment response code (MELCOR) and reactor coolant system (RCS) code (RELAP) may not be sufficient for modeling certain phenomena. The licensee proposes to use MELCOR to set boundary conditions for chemical effects and to determine available net positive suction head for the reactor coolant pumps. RELAP is proposed to be used to show that vessel inlet blockage is acceptable for certain break sizes and locations. The NRC staff suggested the licensee provide a comprehensive discussion on the codes used for containment response and RCS analysis. The NRC staff took an action to provide the licensee with references to examples of some recent licensing actions processed by the NRC staff, as an example, showing the appropriate level of detail for the STP submittal and include the references in the meeting summary.

8. The NRC staff suggested that the licensee be explicit in addressing all of the principle elements of risk-informed, plant-specific decision-making including RG 1.174, including the principles of defense-in-depth and safety margins. The licensee stated that a detailed description addressing plant-specific procedures and training to each principle would be provided.

The NRC staff follow-up regarding Item 7 above:

During the meeting, the NRC staff stated that a certain level of detail that would be expected regarding the thermal-hydraulic (T/H) computer codes. These codes are used to model the RCS and the containment response to breaks of various sizes and locations. STPNOC indicated that the submittal would contain approximately three-page summaries that cover the code modeling, assumptions, and results. The NRC staff stated the T/H codes would be important in its evaluation of the overall risk-informed analyses.

The NRC staff expressed the view that three pages may not be sufficient to cover or outline the T/H model for RELAP5-3D. This version of RELAP5 is significantly different than the 1-D model. This is a first-of-a-kind approach to dealing with this complex issue. The NRC staff notes that examples of the objectives, model (including nodalization), methodology (including selection of specific code options for models and correlations, and rationale for these choices), sensitivities, verification and validation, and plant analyses can be found in certain amendments approved by the NRC staff and reports that are publically available.

The following can be used as examples for level of details:

1. Fort Calhoun Station, Unit No. 1, request for an amendment to modify containment spray actuation logic and dampers in containment air cooling and filtering system dated May 2, 2008 (ADAMS Accession No. ML081140390).

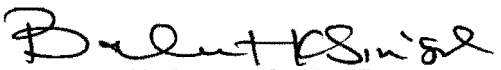
2. Surry Power Station, Unit Nos. 1 and 2, amendments for alternate use of the GOTHIC Code for recirculation spray system dated November 15, 2007 (ADAMS Accession No. ML073120506).

3. GE Hitachi Nuclear Energy Topical Report NEDO-33608, Revision 2, "Boiling Water Reactor Emergency Core Cooling Suction Strainer In-Vessel downstream Effects," January 2011 (ADAMS Accession No. ML110140481) for the T/H codes to address in-vessel effects.

No Public Meeting Feedback Forms were received for this meeting.

Please direct any inquiries to me at (301) 415-3016, or balwant.singal@nrc.gov.

Sincerely,



Balwant K. Singal, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosure:
List of Attendees

cc w/encl: Distribution via Listserv

LIST OF ATTENDEES

MAY 23, 2013, MEETING WITH STP NUCLEAR OPERATING COMPANY

REGARDING RISK-INFORMED APPROACH TO RESOLUTION OF GSI-191 ISSUE

SOUTH TEXAS PROJECT, UNITS 1 AND 2

DOCKET NOS. 50-498 AND 50-499

NAME	TITLE	ORGANIZATION
Mike Murray	Regulatory Affairs Manager	STP Nuclear Operating Company (STPNOC)
Rick Grantom	Manager Risk Project	STPNOC
Coley Chappell	Engineering Licensing Consultant	STPNOC
Steve Blossom	Project Manager	STPNOC
Wes Schultz	Design Engineer	STPNOC
Ken Taplett	Licensing Engineer	STPNOC
Ernie Kee	STP Risk Management Scientist	STPNOC
Jamie Paul*	Licensing Supervisor	STPNOC
Mark Coughlin*	STP Procedures Projects	STPNOC
Tripp Frahm*	Operations Support Manager*	STPNOC
Linda Dyer*	GSI-191 Project Admin	STPNOC
Kerry Howe**	Professor	University of New Mexico
Craig D. Sellers**	Project Manager	ENERCON
Tim Sande**	Principal Engineer	ENERCON
Gilbert Zigler*	Senior Scientist/Engineer	ENERCON
Rodolfo Vaghetto**	Graduate Research Assistant	Texas A&M University
Jeremy Tejada**	POSDOC Researcher	University of Texas at Austin
David Morton*	Professor	University of Texas at Austin
Janet Leavitt**	Director	Alion Science and Technology (Alion)
Bruce Letellier**	Chief Scientist	Alion
Zahra Mohaghy	Professor	University of Illinois at Urbana – Champaign (UIUC)
Greg Quitoriano*	Senior Engineer	Pacific Gas and Electric
Patrick Reyes*	-	Performance Contracting, Inc.
Parvez Salim*	-	AREVA
William A. Cross*	-	Florida Power and Light (FPL)
Paul Leonard*	-	FPL
William Ruhland*	-	Steelhead Consulting
Maurice Dingler	Engineer	Wolf Creek Nuclear Operating Company (WCNOC)

*Partcipated via phone
**Represented STPNOC

Enclosure

NAME	TITLE	ORGANIZATION
Ron Holloway	Project Manager	WCNOC
Don Wakefield	Senior Consultant	ABS Consulting
Owen M. Scott	Engineering Supervisor	Southern Nuclear Company (SNC)
Philip Grissom	Principal Engineer	SNC
Steve Frank	Attorney	Morgan Lewis
John Butler	Senior Director	Nuclear Energy Institute (NEI)
Mark Richter	Senior Project Manager	NEI
Matt Yoder*	Senior Chemical Engineer	U.S. Nuclear Regulatory Commission (NRC)
Steve Smith	Reactor Systems Engineer	NRC
Paul Klein	Senior Materials Engineer	NRC
Stewart Bailey	Branch Chief	NRC
Ervin Geiger	Senior Engineer	NRC
C. J. Fong	Risk Analyst	NRC
Louise Lund	Deputy Director, Division of Operating Reactor Licensing (DORL)	NRC
Jack Davis	Deputy Director, Division of Safety Systems (DSS)	NRC
Sheena Whaley	Branch Chief	NRC
Emma Wong	Engineer	NRC
Marloy Diaz Colon	Engineer	NRC
Jeffrey Rikhoff	Senior Environmental Specialist	NRC
John Stang	Project Manager	NRC
Rob Elliott	Branch Chief	NRC
Travis Tate	Branch Chief	NRC
Steve Dinsmore	Senior Reliability and Risk Analyst	NRC
Mike Markley	Branch Chief	NRC
Hossein Hamzehee	Branch Chief	NRC
Christopher Jackson	Branch Chief	NRC
Ashley Guzzetta	Reactor Systems Engineer	NRC
Balwant K. Singal	Senior Project Manager	NRC

*Partcipated via phone
**Represented STPNOC

Please direct any inquiries to me at (301) 415-3016, or balwant.singal@nrc.gov.

Sincerely,

/RA/

Balwant K. Singal, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosure:
List of Attendees

cc w/encl: Distribution via Listserv

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RidsNrrDssStsb Resource	EGeiger, NRR/DSS/SSIB	JRikhoff, NRR/DLR/RERB
RidsNrrDraAadb Resource	CFong, NRR/DRA/APLA	SWhaley, NRR/DSS/SNPB
RidsNrrDraApla Resource	LLund, NRR/DORL	
RidsNrrLAJBurkhardt Resource	EWong, NRR/DE/ESGB	

ADAMS Accession No.: ML13161A163 ***via email**

OFFICE	NRR/DORL/LPL4/PM	NRR/DORL/LPL4/LA	NRR/DSS/SRXB/BC	NRR/DSS/STSB/BC
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DATE	6/10/13	6/10/13	6/13/13	6/10/13
OFFICE	NRR/DE/ESGB/BC	NRR/DSS/SSIB/BC	NRR/DRA/AADB/BC	NRR/DRA/APLA/BC
NAME	GKulesa	SBailey	TTate*	HHamzehee
DATE	6/13/13	6/11/13	6/11/13	6/12/13
OFFICE	NRR/DLR/RERB/BC	NRR/DORL/LPL4/BC	NRR/DORL/LPL4/PM	
NAME	MWong	MMarkley	BSingal	
DATE	6/11/13	6/14/13	6/14/13	

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