



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

August 19, 2011

LICENSEE: STP Nuclear Operating Company

FACILITY: South Texas Project, Units 1 and 2

SUBJECT: SUMMARY OF JULY 26, 2011, PRE-LICENSING PUBLIC MEETING VIA CONFERENCE CALL 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. ME5358 AND ME5359)

On July 26, 2011, a public meeting via conference call was held between the U.S. Nuclear Regulatory Commission (NRC), and representatives of STP Nuclear Operating Company (STPNOC, the licensee), at NRC Headquarters, Rockville, MD. The meeting notice and agenda, dated July 12, 2011, is located at Agencywide Documents Access and Management System (ADAMS) Accession No. ML111861529. The purpose of the meeting was to discuss the proposed risk-informed approach to the resolution of GSI-191, "Assessment of Debris Accumulation on PWR [pressurized-water reactor] Sump Performance." South Texas Project (STP) is the lead plant and STPNOC plans to submit a License Amendment Request (LAR) in mid-2012. The licensee previously provided an overall view of the proposed approach to the NRC staff during the public meetings held on June 2 and July 6, 2011. The purpose of this conference call was to provide an overview of the Containment Accident Sequence Stochastic Analysis (CASA) Grande method for calculating the effects of debris generated from a spectrum of postulated accidents on emergency core cooling system pump performance. The licensee also discussed the topic of Computational Fluid Dynamics (CFD) verification plans during this conference call.

The licensee's presentation slides and additional materials provided for the meeting are located at ADAMS Accession No. ML112070702. A list of meeting attendees is provided in the Enclosure to this meeting summary.

**Meeting Summary**

The licensee provided a copies of the following presentations prior to the meeting:

1. Models and Methods Used for CASA Grande
  - a. Role of CASA Grande in Risk-Informed Resolution of GSI-191
  - b. Complexities of Debris Generation, Transport, and Sump Blockage (DGTSB) – Reactor Accident Phenomena
  - c. Strategies for Stochastic Modeling of DGTSB in CASA
  - d. Required Inputs to CASA Grande

- e. Topical Approach and Implementation Plan for Debris Generation, Debris Transport, Head Loss, Air Intrusion, and Debris Bypass
  - f. Interface to PRA
2. CFD Validation Plan

Due to lack of time, however, the discussion on subtopics 1.d, 1.e, and 1.f could not be completed and it was decided to complete the discussions of the rest of the sub-topics during the meeting proposed for August 22, 2011 (meeting notice and agenda dated August 2, 2011, which is available at ADAMS Accession No. ML112130182).

The licensee presented an overview of the models and methods used for CASA Grande for subtopics 1.a, 1.b, and 1.c. The presentation covered the following in more detail:

#### **Role of CASA Grande in Risk-Informed Resolution of GSI-191**

- Deterministic Resolution Path
- Risk-Informed Resolution Path
- Purpose, Role, and Functionality of CASA Grande

#### **Complexities of DGTSB – Reactor Accident Phenomena**

- Accident Progression Overview
- Complex Phenomenology and Phenomena

#### **Strategies for Stochastic Modeling of DGTSB in CASA**

- South Texas Project Key Attributes
- Time Dependent Performance Metrics
- Time Dependent Containment Programs (Cold-Leg DEGB [Double-Ended Guillotine Break] in Large Dry Containment)
- Basic Probability Descriptions
- Time Dependent Failure Probability and Tracking time Dependence
- Propagation of Variability
- CASA Grande Random Factors
- Performance metrics

The NRC staff had only some clarification questions during the presentation. The NRC staff suggested that for future conference call public meetings, the scope of the presentations should be kept at a higher over-view level and the details should be discussed during the face-to-face meetings.

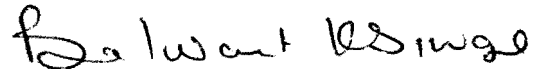
**Action Items**

There were no action items as a result of this meeting. It was agreed to arrange the next face-to-face public meeting at NRC headquarters on August 22, 2011.

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](mailto:Balwant.Singal@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Balwant K. Singal".

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  
JULY 26, 2011, PRE-LICENSING MEETING  
RISK-INFORMED APPROACH TO RESOLUTION OF GSI-191 ISSUE  
STP NUCLEAR OPERATING COMPANY  
SOUTH TEXAS PROJECT, UNITS 1 AND 2  
DOCKET NOS. 50-498 AND 50-499

NAME	TITLE	ORGANIZATION
Balwant K. Singal	Senior Project Manager	NRC/NRR/DORL
Donnie Harrison	Branch Chief	NRC/NRR/DRA/APLA
Stephen Dinsmore	Senior Reliability Risk Analyst	NRC/NRR/DRA/APLA
Steven Laur	Senior Reliability Risk Analyst	NRC/NRR/DRA/APLA
John Lehning	Reactor System Engineer	NRC/NRR/DSS/SNPB
Steve Smith	Reactor System Engineer	NRC/NRR/DSS/SSIB
Ralph Architzel	Senior Reactor Engineer	NRC/NRR/DSS/SSIB
Stewart Bailey	Branch Chief	NRC/NRR/DSS/SSIB
Ervin Geiger	Reactor System Engineer	NRC/NRR/DSS/SSIB
Wes Schultz	--	STPNOC
Sarah Wright	Administrative Assistant	STPNOC
Steve Blossom	Project Manager, Special Projects	STPNOC
Jamie Paul	Licensing	STPNOC
Ernie Kee	Risk Management	STPNOC
Rick Grantom	Manager Risk Project	STPNOC
Tim Sande*	Principal Mechanical Engineer	Alion Science and Technology
Matthew Brandes**	--	Ameren
John Swailes**	--	Calvert Cliffs
Bruce Lettellier*	--	Los Alamos National Laboratory
Jana Bergman**	--	Sciencetech
Rodolfo Vaghetto*	PhD Student	Texas A&M University
Yassin Hassan*	Professor	Texas A&M University
Elmira Popova*	-	University of Texas at Austin

\* Represented STPNOC

\*\*Public

Abbreviations:

NRC – U.S. Nuclear Regulatory Commission  
NRR – Office of Nuclear Reactor Regulation  
DORL – Division of Operating Reactor Licensing  
STPNOC – STP Nuclear Operating Company  
DRA – Division of Risk Assessment  
DSS – Division of Safety Systems  
SSIB – Safety Issues Resolution Branch  
SNPB – Nuclear Performance and Code Review Branch  
APLA – PRA Licensing Branch

Enclosure

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Please direct any inquiries to me at (301) 415-3016, or [Balwant.Singal@nrc.gov](mailto: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

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JLehning, NRR/DSS/SNPB

**ADAMS Accession No. ML112130165**

OFFICE	NRR/LPL4/PM	NRR/LPL4/LA	NRR/DSS/SSIB/BC	NRR/DRA/APLA/BC	NRR/LPL4/BC	NRR/LPL4/PM
NAME	BSingal	JBurkhardt	SBailey (SSmith for)	DHarrison	MMarkley (RHall for)	BSingal
DATE	8/2/11	8/2/11	8/3/11	8/4/11	8/19/11	8/19/11

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