



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

October 29, 2009

LICENSEE STP Nuclear Operating Company

FACILITY South Texas Project, Units 1 and 2

SUBJECT: SUMMARY OF SEPTEMBER 29, 2009 MEETING WITH REPRESENTATIVES OF STP NUCLEAR OPERATING COMPANY, LICENSEE FOR SOUTH TEXAS PROJECT, UNITS 1 AND 2, REGARDING LICENSEE'S RISK-INFORMED PERFORMANCE-BASED PROGRAMS

On September 29, 2009, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of STP Nuclear Operating Company (STPNOC), the licensee for South Texas Project (STP), Units 1 and 2, at NRC Headquarters, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. The purpose of the meeting was to discuss the status, lessons learned, and get feedback for the following programs.

- Risk Managed Technical Specifications
- Exemption from special treatment requirements
- Risk-informed safety sulture
- Surveillance Frequency Control Program
- Graded Quality Assurance
- Potential Future STPNOC Risk-informed initiatives
 - RMTS Phase 2
 - Risk-informed fire protection
 - Considerations as a pilot for risk-informing acceptance criteria for emergency core cooling systems
- Proposed exemption from the work-hour requirements in 10 CFR Part 26

The licensee described the lessons learned from Risk Managed Technical Specifications (RMTS) program, Surveillance Frequency Control Program (SFCP), and Exemption from Special Treatment Requirements. The licensee also discussed the Risk-Informed Safety Culture at STP, Units 1 and 2, and how the alignment of the programs focuses attention to safety, and improves decision-making.

The NRC staff expressed appreciation for the licensee's presentation, and the staff from the NRC Technical Specifications Branch, Probabilistic Risk Assessment Licensing Branch, and Fire Protection Branch shared insights from the NRC's experience in risk-informed activities. A list of attendees is provided in Enclosure 1. The licensee's presentation viewgraphs are provided in Enclosure 2.

The meeting notice and agenda for this meeting are available in the Agencywide Documents Access and Management System (ADAMS) Accession No. ML092570390. There was one member of the public in attendance. No Public Meeting Feedback forms were submitted related to the meeting.

If there are any questions or comments, please contact me by telephone at 301-415-1476 or by electronic mail at Mohan.Thadani@nrc.gov.



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Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosures:

1. List of Attendees
2. Licensee presentation

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LIST OF ATTENDEES

MEETING WITH STP NUCLEAR OPERATING COMPANY

Tuesday, September 29, 2009

2:00 p.m. – 5:30 p.m.

NAME	AFFILIATION
Mohan Thadani	NRC/NRR/DORL/LPL4
Michael Markley	NRC/NRR/DORL/LPL4
Gerald Waig	NRC/NRR/DIRS/ITSB
Robert Elliott	NRC/NRR/DIRS/ITSB
Steven A. Laur	NRC/NRR/DRA
A. Wayne Harrison	STPNOC
Rick Granton	STPNOC
Jin Chung	MNES
Donnie Harrison	NRC/NRR/DRA/APLA
Andrew Howe	NRC/NRR/DRA/APLA
Michael Boggi	NRC/NRR/DIRS/IHPB
Daniel M. Frumkin	NRC/NRR/DRA/AFP

**STPNOC Risk Informed,
Performance Based Programs**
Where we've been.
Where might we go?

Rick Grantom – Manager, Risk Management
Wayne Harrison – Manager, Licensing
September 29, 2009

Desired Outcomes

- Discuss with NRC the status, feedback, and lessons learned for the following risk informed programs
 - Risk Managed Technical Specifications
 - Configuration Risk Management (4B)
 - Surveillance Frequency Control Program (5B)
 - Exemption from Special Treatment Requirements
- Discuss with NRC potential future STP risk informed, performance based efforts
 - Risk Informed, Performance Based Fire Protection
 - Redefinition of Large Break LOCA

Risk-Informed Safety Culture

- Management and Operations are aligned on use of risk management in station programs to focus on safety and improve decision-making processes
- Programmatic risk management improves focus on safety
 - Risk Index is a Tier 1 Performance Indicator (i.e., tracks and monitors long term configuration risk trends)
 - Real-time risk calculations are used for managing work (i.e., tracks and monitors short term risk trends)

Overview of STP RIPB Applications

- Graded Quality Assurance and Exemption that piloted 10CFR50.69
 - Improved safety focus
- Risk-Managed Technical Specifications
 - Significant safety improvement in industry & regulatory Tech Spec approaches by establishing Configuration Risk Management methods for maintaining focus on risk-significant activities and test interval methodology
 - Operational flexibility
 - Fewer challenges to LCO ACTION times

Current RIPB Programs

- Status
- Feedback
- Lessons Learned

Surveillance Frequency Control Program (SFCP)

- RITS Initiative 5B -
STP Units 1 & 2
-

SFCP Outline

- Background
- Independent Decisionmaking Panel
- Identification of candidate STI changes
- Approved STI changes
- Resources
- Lessons
- SFCP evaluations after PRA updates

SFCP Background

- Submitted License Amendment Request (LAR) to implement TSTF-425 on 10/23/07
- NEI 04-10 Rev.1 process followed - only exception is Independent Decisionmaking Panel (IDP) – STP uses Graded Quality Assurance program IDP instead of Maintenance Rule Expert Panel
- NRC issued STP SER on 10/31/08

Completed STI Changes

Parameter	Curr Freq	Prop'd Freq	Phased Impl. Likely?	KICK-OFF	INPUTS DUE	IWG	EP	Impl.	STRIDE Status
SG Water Level Lo-Lo ACOT, TT/FI Hi-Hi ACOT	Q	R	Yes		01/20	03/04	03/19	07/01	Complete
Loss of Voltage, Degraded Voltage TADOTS	Q	SA	No		01/28	03/04	03/19	04/02	Complete
WR Containment Water Level Calibration	R	R2	No	01/19	02/05	02/18	02/26	04/02	Complete
AFW Monthly Op. Test and Channel checks – motor-driven pumps only	M	Q	No	01/19	02/25	04/01	04/16	05/15	Complete
PZR Level ACOT	Q	R	Yes	02/09	04/16	04/29	05/14	06/14	Working
PZR Press ACOT	Q	R	Yes	02/09	06/11	06/24	07/23	08/23	Working
Containment Press ACOT	Q	R	Yes	02/09	06/11	06/24	07/23	08/23	Working
SBDG Fuel Oil Tank Cleaning	10 yr	20 yr	No	04/21	06/30	07/08	08/20	09/20	
Main Steam Press ACOTs	Q	R	Yes	05/12	07/15	08/05	08/20	09/20	
RCS Flow ACOT	Q	R	Yes	05/12	07/31	08/19	09/17	11/17*	
RWST Level ACOT	Q	R	Yes	06/16	08/15	09/02	09/17	11/17*	

STP SFCP Lessons Learned

- Two IWG meetings are required to review each STRIDE
 - First meeting identifies comments that require resolution
 - Second meeting resolves comments and finalizes recommendations
- Reactor and ESF instrumentation STI changes - Engineering resources needed to evaluate drift impact on Tech Spec allowable value and Setpoint Methodology
- PRA maintains an aggregate “analysis” model to evaluate previous and current STI changes. Will need to be re-created after each PRA model update.

STP SFCP Lessons Learned

- SFCP and PRA Model Updates
 - Previous STI changes require re-evaluation after PRA model update if PRA quantitative analysis performed
 - Will be significant work load, i.e., re-perform previous STI change PRA analyses with updated PRA model – part of RI-application update process after model revision
 - Assessing aggregate effects can/should be accommodated with Risk Index approach

**Risk Managed Technical
Specifications
- RITS Initiative 4B –
STP Units 1 & 2**

RMTS Outline

- Background
- RICTCal – RMTS tool
- RMTS Use at STP
- RMTS Lessons-Learned at STP

RMTS at STP

- Approved by NRC on 7/13/07
- RMTS Tech Spec 6.8.3.k:

k. Configuration Risk Management Program (CRMP)

A program to calculate risk-informed completion time in accordance with NEI 06-09, "Risk-Managed Technical Specifications (RMTS) Guidelines, Rev. 0". The CRMP may be used for calculating a risk-informed completion time only in Mode 1 and Mode 2. In accordance with NEI 06-09, the completion time determined using the CRMP shall not be more than 30 days.

Example RMTS LCO Action

3.7.14 At least three independent Essential Chilled Water System loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

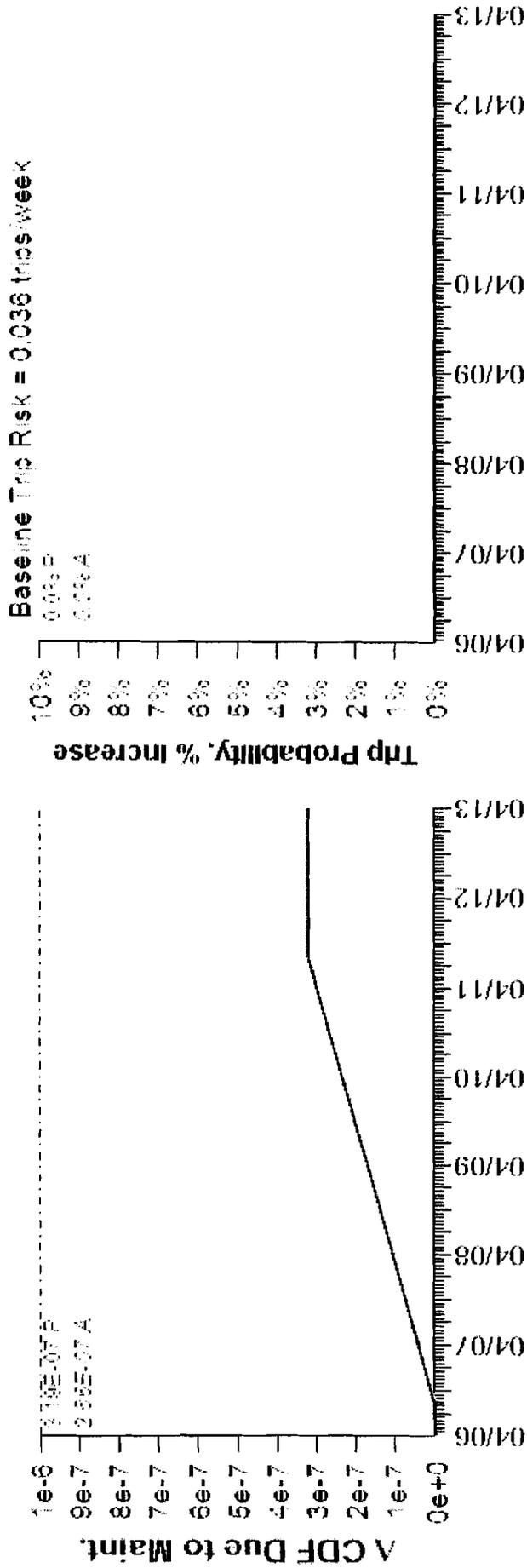
ACTION:

- a. With only two Essential Chilled Water System loops OPERABLE, within 7 days restore at least three loops to OPERABLE status or apply the requirements of the CRMP, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With two or more Essential Chilled Water System loops inoperable, within 1 hour restore at least two loops to OPERABLE status or apply the requirements of the CRMP, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

STP RMTS Experience

- Used for planned 1E 120VAC instrument inverter maintenance, 24 hour TS front stop. NRC performed inspection activity and QA performed RMTS audit.
- “Almost” used for instrument inverter failure and emergent ECW pump maintenance.
- Used to replace Train A and Train C class 1E batteries in Units 1 & 2 - 5 day work window planned. 2 hour TS front stop. No risk threshold issues

Actual Risk Profiles for Unit 1 Week of 04/06/2009



PRA Component	Planned Time	Planned Time (hh:mm)	Actual Time	Actual Time (hh:mm)	Duration
BATTA	Non-Functional	N/A	Non-Functional	04-12-2009 15:41	019:59
BATTA	Non-Functional	04-11-2009 08:00	Functional	04-09-2009 22:25	065:25
FORVA	Non-Functional	N/A	Non-Functional	04-12-2009 23:59	014:52
BOP Component	Planned Time	Planned Time (hh:mm) <td>Actual Time <td>Actual Time (hh:mm) <td>Duration</td> </td></td>	Actual Time <td>Actual Time (hh:mm) <td>Duration</td> </td>	Actual Time (hh:mm) <td>Duration</td>	Duration
NONE	Non-Functional	N/A	Non-Functional	N/A	N/A

Lessons Learned

- Early involvement from Operations and Work Control
- Draft requirements document with multiple review cycles BEFORE beginning software development
- Present RMTS concepts in multiple Licensed Operator Requal cycles
 - “multiple clocks” (e.g., front stop, RMAT, RICT – ICDP or ILERP, back stop)
 - scenario development
 - software demos

STP RMTS Pre-Implementation Lessons

- Important to train on new concepts like "PRA Functional", RMAT, and RICT. Operations, Work Control, Management, Engineering.
- Formed RMTS working group and met weekly to develop program, procedures, and policies.

STP RMTS Implementation Lessons

- Dose mitigation functions of Control Room HVAC need to be addressed as separate action statements for CRMP purposes.
- Thorough pre-job review involving all stakeholders is important to error-free application
 - STP prepared a procedure specifically for battery replacement

STP RMTS Conclusion

RMTS has improved the quality of the station's working environment by providing an approved process for addressing Tech Spec equipment issues while also reducing administrative and regulatory burden for both STP and NRC

- Questions ?

Exemption from Special Treatment Requirements Lessons Learned

- Change management and cultural change issue
- Categorization supports risk informing station processes (corrective action, PREP, Self-Assessments, Audits, etc.) and associated performance indicators (Risk Index, Equipment Reliability clock resets) .
- Significantly supports and reinforces safety culture issues
 - heightens awareness and improves communication of concerns and issues related to risk significant SSCs
- Approximately 2 Working Group meetings and 1 Expert Panel meeting to categorize system functions and components for each system on average (~200 man-hrs/system)
- Can be used in Fatigue Rule to establish scope of equipment for which the rule will apply

WHAT MIGHT WE DO?

In RIPB Programs

RMTS Phase 2 ??

- Based on the good results for the current RMTS program, STP can foresee another phase of systems being incorporated into the CRMP scope for RMTS
 - Systems like FW Iso Vlvs, ESFAS
- Based on the good results of the RITS 5B, STP can foresee another phase of surveillances being incorporated into the SFCP
 - Additional I&C systems

RISK-INFORMED FIRE PROTECTION

- NFPA-805 has not been demonstrated to be an efficient, straight-forward approach for resolving Fire Protection Program issues for all plants.
- A significant amount of regulatory uncertainty remains with the transition process and industry resources are limited.
- Many facilities (including STP) can effectively resolve non-compliances with their Fire Protection Program Licensing Basis in a more efficient manner using alternative methods.
- STP's approach on previous RIPB applications has been to meet RG 1.200 for PRA technical adequacy
 - Need to be able to reference use of RG.1200 for Fire PRA technical adequacy

10CFR50.46 ??

- Willing to discuss being a pilot for the process

Other Regulatory Issues

FIRE LARs

- STP identified 3 fire areas where the Fire Safe Shutdown Analysis does not fully meet Appendix R, III.G.2 requirements
- STP submitted LARS under their Fire Protection Program License Condition to request the use of Operator Manual Actions.
 - One amendment approved
 - Two remaining amendments under staff review and a request for additional information has been received.

Nuclear Safety Culture

- STP participating in Industry Pilot Initiative to develop a process for assessing a facility's nuclear safety culture on a real-time basis.
- STP is doing this because this is the right-thing-to-do.
- An Industry desired-outcome is to demonstrate that this process is an effective method to assess nuclear safety culture and that the NRC will revise the ROP to not include a need to identify Substantive Cross-cutting Issues.

Nuclear Safety Culture

- Concept is that the Facility has numerous data points to access nuclear safety culture compared to the limited number of data points provided by NRC identified cross-cutting aspects.
- Nuclear Safety Culture will be assessed against the *INPO Principles for a Strong Nuclear Safety Culture*.
- Pilots will start in November and conclude in the April – May 2010 time frame. The NRC has been requested to observe.

Hurricane Exemption

- Exemption request for not meeting certain work hour requirements during tropical storm or hurricane conditions submitted to the staff on September 21, 2009.
- The STP exemption is a lead-plant request for affected facilities in the industry.
- STP participated in NRC meetings to resolve this issue.
- Ultimate resolution is expected to be Part 26 rulemaking so that the exemption will not be required.

The NRC staff expressed appreciation for the licensee's presentation. and the staff from the NRC Technical Specifications Branch, Probabilistic Risk Assessment Licensing Branch, and Fire Protection Branch shared insights from the NRC's experience in risk-informed activities. A list of attendees is provided in Enclosure 1. The licensee's presentation viewgraphs are provided in Enclosure 2.

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/RA/

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Docket Nos. 50-498 and 50-499

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ADAMS Accession Nos. Meeting Notice : ML092570390 , Meeting Summary: ML093020098

OFFICE	DORL/LPL4/PM	DORL/LPL4/LA	DORL/LPL4/BC	DORL/LPL4/PM
NAME	MThadani	JBurkhardt	MMarkley	MThadani
DATE	10/29/09	10/29/09	10/29/09	10/29/09

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