



Control Room Habitability Technical Specifications

TSTF-448

May 26, 2005

CRH TF / TSTF



Presentation Outline

- Background
- Issues & Industry Analysis
Regarding the NRC's January 2005
Proposal
- Summary of Agreements and
Differences

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Background

- **March 2002** – Draft Guide 1114 issued -
starting point for TSTF-448
- **December 2002** – TSTF-448 Rev 0 submitted
- **June 2003** – GL 2003-01 issued
- **July 2003** – CRH TF / NRC Meeting –
agreement on tech spec issues
- **August 2003** – TSTF-448 Rev 1 submitted

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Background

- **December 2003** – RAIs on Rev 1 received
- **March 2004** – RAI responses and draft TS submitted
- **Summer 2004** – NRC and individual Licensee interaction on CRH TS
- **January 2005** – NRC response to March 2004 letter and draft TS received

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Background

- **April 2005** - Draft responses to NRC
 - Responses apply to pressurized control rooms only
- **May 26, 2005**
 - Develop path to reach resolution
- Revision of TSTF-448 to follow

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Introduction

- In March 2004, it appeared that Industry and NRC were in substantial agreement on TS:
 - Adopted new in-leakage testing SR
 - Defined a program for Control Room Integrity, including testing, maintenance, and assessment
 - Program was consistent with NRC Reg Guide 1.196 draft TS
- Many licensees committed to adopting TS based on TSTF-448 in their response to GL 2003-01 based on those agreements

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Introduction

- In January of 2005, the NRC introduced a number of new issues that need to be resolved
- After so much has been accomplished, it's important to not let these new issues derail the resolution of the larger control room habitability concern

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Introduction

- Industry agrees that a shutdown is required if GDC-19 cannot be met (i.e., CREFS is inoperable)
- However, the Staff's proposed TS provisions require a plant shutdown if GDC-19 can still be met (i.e., CREFS is operable but degraded)
- This is inconsistent with other regulatory guidance
- The Industry is not willing to support this position

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Issue Summary

- Industry has identified 12 issues from the January 2005 letter that require discussion and resolution
 1. 30 day shutdown requirement
 2. ΔP surveillance expansion
 3. CR in-leakage limits in TS
 4. Use of AST in evaluating in-leakage
 5. Inclusion of other ventilation TS in TSTF-448
 6. LCO to include CR boundary

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Issue Summary

- Issues from January 2005 letter (continued)
 7. TS specifies controls for opening boundary
 8. List of mitigating actions in TS
 9. CR “occupants” vs. “operators”
 10. CR versus CRE terminology
 11. Post event testing
 12. Duplicative requirements



Discussion of Issues



30 Day Shutdown Requirement

- NRC proposal
 - 30 day shutdown if in-leakage exceeds limit even though GDC-19 operator protection requirements can be met with compensatory measures
- Given
 - A plant shutdown is necessary if the Control Room Emergency Filtration System (CREFS) is inoperable (e.g., the system cannot perform its safety function)
 - CREFS operability is based on meeting the operator protection requirements in GDC-19 - radiation, toxic gas, and smoke



30 Day Shutdown Requirement

- Industry disagrees with proposal because the NRC is proposing shutdown requirements when the CREFS is operable but degraded
 - CREFS can still perform the “specified safety function” of operator protection in accordance with GDC-19 with compensatory measures
 - In all other TS, would not enter an action for a operable but degraded condition
 - Would follow guidance in GL 91-18



30 Day Shutdown Requirement

- Generic Letter 91-18 discussion of “operable but degraded”
 - Correction must be in a timely manner
 - Must be corrected at the first opportunity
 - If not corrected by the first refueling outage, internal documentation must justify the longer correction time
 - Reviewable by the NRC
 - Enforceable under Criterion XVI
- Amplifying information is provided in the draft RIS



30 Day Shutdown Requirement

- Concerned that the NRC proposed TS is based on how a safety function is performed instead of whether the safety function is performed
 - This approach is reflected in the NRC’s proposal to include the boundary in the LCO and to include the specific in-leakage limits in the TS
- Inconsistent with definition of OPERABLE
- Inconsistent with STS
- Inconsistent with performance based regulation



30 Day Shutdown Requirement

- Industry position
 - No TS Action or shutdown requirement if GDC-19 is met with compensatory measures
 - ◆ System is operable but degraded
 - GL 91-18 guidance for timely corrective action
 - Shutdown if GDC-19 is not met using existing TS actions \Rightarrow LCO 3.0.3 OR Action B 24 hours
- Willing to consider providing a report to NRC, even though beyond existing requirements



Δ P Surveillance Expansion

- NRC proposal
 - Expanded Δ P surveillance to be used as an indication of CR integrity
- Concerns
 - RG 1.197 and GL 2003-01 stated Δ P surveillance may not be reliable in confirming CRE integrity
 - SR test conclusions may be indeterminate but can result in inoperability and shutdown
 - Significant expansion in Δ P testing frequency and may require hundreds of Δ P measurements



Δ P Surveillance Expansion

- Concerns (continued)
 - SR has no acceptance criteria for determining operability or need for VBTP-required assessments
 - Licensing basis assessment required even if in-leakage is within limits



Δ P Surveillance Expansion

- Industry proposal
 - Under 10CFR50.36, should not be a surveillance
 - Change from TSTF-448, Rev. 1
 - Move current test to Admin Controls Program unless licensee justifies deleting SR
 - ◆ Program would require Δ P testing as currently performed every 18 months
 - ◆ Licensees trend and evaluate results



CR In-leakage Limits in TS

- NRC Proposal
 - Include specific in-leakage limits in the tech specs
- Concerns
 - Violates principle of performance based regulations that focus on results (GDC-19 compliance)
 - ◆ Many parameters affect meeting GDC-19, not just in-leakage



CR In-leakage Limits in TS

- Concerns (continued)
 - Specific in-leakage limits are not a “limiting condition for operation”
 - Prohibits use of the “operable but degraded” determination
- Industry proposal
 - No specific in-leakage limits listed in tech specs



Use of AST in Evaluating In-Leakage

- NRC proposal
 - Cannot use the Alternative Source Term in evaluating CR in-leakage not within limits because CREFS would be inoperable
- Concerns
 - Exceeding in-leakage does not necessarily make the CREFS Inoperable



Use of AST in Evaluating In-Leakage

- Concerns (continued)
 - Negates application of White Paper on use of AST in the context of CRH
 - ◆ Difficulty arises because of inclusion of in-leakage limits in tech specs and resultant effect on operability
 - Violates principle of performance based regulation
 - ◆ Analyze all parameters to determine if GDC-19 is met



Use of AST in Evaluating In-Leakage

- Industry proposal
 - Use TSTF-448 approach
 - ◆ Meet GDC-19
 - ◆ In-leakage limits specified in licensee controlled program
 - Use AST analytical methods in accordance with AST/CRH White Paper



Inclusion of Other Ventilation TS in TSTF-448

- NRC proposal
 - Expand TSTF-448 to other ventilation systems tech specs
- Concerns
 - Not related to CR habitability concerns expressed in GL 2003-01
 - Significant delay in completion of TSTF-448 and associated license amendment requests
 - Confusion regarding licensee commitments in GL 2003-01 responses



Inclusion of Other Ventilation TS in TSTF-448

- Industry proposal
 - Do not expand issue beyond CR (TSTF-448, Rev 1)



LCO to Include CR Boundary

- NRC proposal
 - Treat CR boundary and emergency filtration systems as separate items in LCO and Conditions
- Concerns
 - Violates Improved Technical Specifications format and usage conventions
 - ◆ CR boundary is a support system to the emergency filtration system
 - ◆ Supporting systems are required by the definition of Operable



LCO to Include CR Boundary

- Concerns (continued)
 - Results in confused application of proposed Actions (plant in two actions at the same time)
- Industry proposal
 - LCO should apply only to the emergency filtration system
 - Definition of operability covers functionality of the boundary



TS Specifies Controls for Opening Boundary

- NRC proposal
 - LCO Note to specify requirements for opening the boundary under administrative control
- Considerations
 - In the ITS, administrative controls are implemented by the licensee



TS Specifies Controls for Opening Boundary

■ Concerns

- No precedent exists for specifying requirements on administrative controls
- Not consistent with standard format and usage in Improved Technical Specifications
- Existing LCO Note approved by NRC in TSTF-287 in March 2000



TS Specifies Controls for Opening Boundary

■ Industry proposal

- Do not modify LCO Note and do not specify requirements on administrative controls in TS



List of Mitigating Actions in TS

- NRC proposal
 - Mitigating actions must be specified in the Program. Admin Tech Spec description of the Program contains a list.
- Concerns
 - Use of a list with provisions for plant specific options makes the list exclusive
 - Violates the principles of performance based regulations



List of Mitigating Actions in TS

- Concerns (continued)
 - All possible circumstances cannot be foreseen
 - May result in less effective mitigating actions or need for exigent NRC relief
- Industry proposal
 - Tech Spec Bases state that the licensee Program include pre-planned mitigating actions



CR “Occupants” vs “Operators”

- NRC proposal
 - Required Action B.2 verifies protection of the CR “occupants” instead of the CR “operators”
- Industry proposal
 - Industry agrees with the NRC proposal



CR Versus CRE Terminology

- NRC proposal
 - Use the term “Control Room” instead of “Control Room Envelope” and replace the terms “boundary” and “envelope” with one term – “boundary”
- Given
 - The terms must be well defined and used consistently



CR Versus CRE Terminology

■ Concerns

- NRC definition of “control room” is not consistent with normal plant terminology in that it includes areas that are not considered part of the CR
- Making “boundary” synonymous with “envelope” would not be consistent with usage in NEI 99-03, RG 1.196 and RG 1.197



CR Versus CRE Terminology

■ Industry proposal

- Leave the terms “Control Room”, “Control Room Boundary” and “Control Room Envelope” defined as proposed in TSTF-448



Post Event Testing

- NRC proposal
 - Admin tech spec paragraph 5.5.18.b.2(c)(3) requires testing of the affected boundary after an event if the resulting conditions lead to a change in operating mode, alignment, or response that could lead to a new limiting condition
- Concerns
 - Meaning of paragraph is unclear



Post Event Testing

- Concerns (continued)
 - Paragraph is unnecessary. Proposed paragraph duplicates existing requirements in 10CFR 50.59 or SR 3.0.1
- Industry proposal
 - Delete paragraph



Duplicative Requirements

- NRC proposal –
 - Admin tech spec 5.5.18 includes:
 1. b.1.(b) and 2.c.(2) - post maintenance testing
 2. b.2.(a), b.2.(b), b.2.(c).(1), h.1, and j – meeting surveillance requirements
 3. b.2.(c).(1), b.2.(c).(2), b.2.(c).(3), and c – configuration control and preventive maintenance
 4. b.1.(c) – configuration requirements for surveillance performance
 5. b, b.1 – testing requirements
 6. h.1 – operability considerations



Duplicative Requirements

- Concerns
 - Proposed program duplicates requirements contained in the following tech specs and regulations
 1. Duplicates SR 3.0.1
 2. Duplicates SR 3.0.1
 3. Duplicates Appendix B, 10CFR50.59, and 10CFR50.65
 4. Duplicates 10CFR50.36
 5. Imposes RG 1.197
 6. Duplicates definition of Operable



Duplicative Requirements

- Industry proposal
 - Delete referenced paragraphs and make the Program consistent with other similar programs in the technical specifications



Summary of Agreements and Differences

- NRC's proposed tech specs contain many items of concern to industry
- There is a need to reach resolution to end ambiguous situation regarding Control Room Habitability tech specs

