

Regulatory Information Conference (RIC) 2009

Technical Specifications (TS) Workshop Overview: Reducing Regulatory Uncertainty

Moderator: Robert Elliott, Chief
Technical Specifications Branch
Office Of Nuclear Reactor Regulation (NRR)
March 11, 2009 4:PM-5:30PM

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General Session Information

- **Badges and Identification** – Please remember to visibly display name badges throughout the duration of the RIC.
- **Cell Phones and Pagers** – At this time, please turn off or silence cell phones and pagers.
- **Presentation Materials** – All provided electronic presentation materials will be posted on the U.S. NRC RIC website at www.nrc.gov, keyword: RIC.
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Workshop Objective

- Reduce Regulatory Uncertainty for Operators and Inspectors.
- Actively engage in Providing an Open Agenda to Solve emergent issues.

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Speaker Introductions:

- Robert Elliott – Moderator
- Brian Mann – TSTF / VP-Excel Services
- Kristy Bucholtz – NRR/ITSB
- Ken Schrader – TSTF/Pacific Gas & Electric
- Carl Schulten – NRR/ITSB

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Topic #1: Limiting Condition of Operation (LCO) 3.0.4a Usage

- LCO 3.0.4 When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:
- a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time;

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Topic #1: LCO 3.0.4a Usage

- Case Study 1:
 - Licensee commenced startup with the Radiation Monitor inoperable.
 - Invoked LCO 3.0.4a for a mode transition with a Radiation Monitor LCO not met.
 - Following discussions with the NRC, the licensee placed the Radiation Monitor bi-stable in Trip and proceeded with start-up transition to Mode 2.
 - NRC Task Interface Agreement (TIA) 2008-002 issued.

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Case Study #1 LCO 3.0.4a Usage

*Does the allowance of **LCO 3.0.4a** require that the required actions of the Condition must be met before entry into the LCO Applicability?*

- NRC TIA2008-02 position is “Yes,” the channel should be tripped before entering the LCO.
- Agreement position: TS require tripping the channel within the required action completion time following entry into the Applicability of the LCO.

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Case Study #1 TIA2008-02 Perspective

Understanding the TIA Process

- TS-related TIAs are NRR Staff input to the Reactor Oversight Process at the request of a Region.
- Staff input considers all matters involving the inspection finding.

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Case Study #1 TIA2008-02 Perspective

LCO 3.0.4a Bases

Compliance with Required Actions that permit continued operation of the unit for an unlimited period of time [provides] an acceptable level of safety for continued operation.

- Allowances for unlimited operation cannot begin until the statements in the TS Required Actions are met.
- Licensee chose not to take the Condition required actions.

Case Study #1 GL 87-09 Perspective

- GL 87-09 found that preventing startup with inoperable equipment (i.e., LCO 3.0.4) unduly restricts facility operation when conformance with Action Requirements provides an acceptable level of safety for continued operation.

For an LCO that has Action Requirements permitting continued operation for an unlimited period of time, entry into an operation MODE or other specified condition of operation should be permitted in accordance with the Action Requirements.

- TIA2008-02 input did not align with Generic Letter 87-09.

Case Study #1 Agreement Position

- Applying LCO 3.0.4a permits entering the Condition before completing the required actions of the Condition within their specified completion time.
- Nothing in the staff position should be interpreted as endorsing or encouraging a plant startup with inoperable equipment (GL 87-09).

Case Study #1 Best Practice Perspectives

- For Case Study #1 safe facility operation is best ensured by meeting Required Actions without delay.
- Probably should not enter LCO 3.0.4a to transition in Mode if you know you cannot perform the Required Actions within the associated Completion Time.

Case Study 1: TSTF Perspective

- Our position was discussed in detail in a letter from the TSTF to Fred Brown (NRC) dated July 17, 2008 (ADAMS ML082001198).
- The TSTF concurs with the NRC's position.

Case Study 1: TSTF Perspective

- We agree that it is prudent, but not required, to complete the Required Actions to be entered prior to entering the Applicability unless there is a reason not to do so.
 - Could avoid a reportable shutdown if the Required Action cannot be completed.
 - Operational requirements, such as required testing, may prohibit such Required Actions.

Topic #2: LCO 3.0.5 Usage.

LCO 3.0.5	Equipment removed from service or declared inoperable to comply with ACTIONS may be returned to service under administrative control solely to perform testing required to demonstrate its OPERABILITY or the OPERABILITY of other equipment. This is an exception to LCO 3.0.2 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY.
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Topic #2: LCO 3.0.5 Usage.

- Case Study 2:
 - Licensee Nuclear Instrument (NI) Channel A was found to be inoperable during startup.
 - Licensee entered TS 3.3.1
 - Allowed A Channel to be untripped and unbypassed if licensee prevented bypassing of remaining channels.
 - 2 out of 3 channels required to trip the reactor.
 - Implemented LCO 3.0.5 for Surveillance testing of B, C, and D RPS channels.
 - A Channel inoperable, but was left in service.
 - B, C, and D channels would be bypassed for testing per LCO 3.0.5.
 - 2 out of 2 channels required to trip reactor in this configuration.

Case Study 2 :Usage of LCO 3.0.5

- LCO 3.0.5 – *Equipment removed from service or declared inoperable to comply with ACTIONS may be returned to service under administrative controls solely to perform testing required to demonstrate its OPERABILITY or the OPERABILITY of other equipment. This is an exception to LCO 3.0.2 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY.*

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Case Study 2 :Usage of LCO 3.0.5

- LCO 3.0.5 was intended to be used when operability can not be demonstrated while being in compliance with Technical Specifications.
- LCO 3.0.5 Bases – *The administrative controls ensure the time the equipment is returned to service in conflict with the requirements of the ACTIONS is limited to the time absolutely necessary to perform the required testing to demonstrate OPERABILITY. This specification does not provide time to perform any other preventive or corrective maintenance.*

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Case Study 2 :Usage of LCO 3.0.5

- An example of demonstrating the OPERABILITY of other equipment
- An inoperable channel or trip system has been placed in trip to comply with TS.
- LCO 3.0.5 is used to return the channel or trip system to service to prevent a trip from occurring during the performance of required testing on another channel in the other trip system.

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Case Study 2 :Usage of LCO 3.0.5

- A similar example of demonstrating the OPERABILITY of other equipment
- An inoperable channel or trip system has been placed in trip to comply with TS.
- LCO 3.0.5 is used to return a channel or trip system to service to permit the logic to function and indicate the appropriate response during the performance of required testing on another channel in the same trip system.

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Case Study 2: TSTF Perspective

- The TSTF agrees that the NRC's position is consistent with the philosophy described in the LCO 3.0.5 Bases,
 - "The administrative controls ensure the time the equipment is returned to service in conflict with the requirements of the ACTIONS is limited to the time absolutely necessary to perform the required testing to demonstrate OPERABILITY."

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Case Study 2: TSTF Perspective

- The TSTF agreed to develop a Traveler to modify the LCO 3.0.5 Bases (and, if necessary, the Specification) to state that LCO 3.0.5 shall not be used if there are other alternatives that would allow the required testing to be performed while maintaining compliance with Actions.

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Case Study 2: TSTF Perspective

- If a licensee is in the rare situation in which performing required testing while complying with Actions would be less safe than other alternatives, they can request relief from the NRC.

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Topic #3: Required Actions Completion

ACTIONS		
CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Recirculation loop jet pump flow mismatch not within limits.	A.1 Shutdown one recirculation loop.	2 hours
B. THERMAL POWER > 77.6% RTP during single loop operation.	B.1 Reduce THERMAL POWER to ≤ 77.6% RTP.	1 hour
C. Requirements B.3, B.4, or B.5 of the LCO not met.	C.1 Satisfy the requirements of the LCO.	24 hours
D. Required actions and associated completion times of conditions A, B, or C not met. OR No recirculation loops in operation.	D.1 Be in Mode 3.	12 hours

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Topic #3: Required Actions Completion

- Case Study 3:
 - Recirculation loop Flow Control Valve power unit tripped due to a blown fuse, causing valve to drift open.
 - Resulted in a Jet Pump loop flow mismatch.
 - This condition resulted in LCO 3.4.1 not being met.

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Case Study 3: Required Actions Completion

Failure to shut down one recirculation loop upon discovery of flow mismatch greater than 5% at greater than 70% rated core flow.

- Do Tech Specs permit voluntary entry into a shutdown condition in the Specs without meeting other applicable Condition Required Actions?
 - NRC position is “No,” TS Required Actions are remedial measures that must be taken within specified Completion Times when LCOs are not satisfied.

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Case Study #3 Plant TS Requirements

- Spec 3.4.1 contains two LCOs, one for two loop operation and a second for single loop operation.
 - 3 hours into the event plant conditions are established to protect the core.
 - 24 hours are allowed to establish single loop core operating limits.
- Shutdown Condition in the Tech Spec applies with Required Actions and associated Completion Times not met or no loops in operation.

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Case Study #3 Required Actions Completion

- Staff position based on LCO 3.0.2 requirements regarding discovery of failure to meet an LCO.
- TS Completion Time Use and Application requirements further explain LCO 3.0.2.

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Case Study #3 Implementation of Tech Specs

- Tech Specs require implementation of Required Actions when LCOs are not satisfied.
- Intentional entry into ACTIONS should not be made for operational convenience (LCO 3.0.2 Bases).
 - Includes default shutdown Actions.

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Case Study 3: TSTF Perspective

- The TSTF is considering the Staff's position, but our perspective is that the TS Actions allow the licensee the flexibility to follow the Required Actions specified in the Actions table, including entering the default Condition.
- The TSTF is concerned that the Staff's position employs the criteria of whether it's physically possible to perform a Required Action, and that criteria is not explicitly stated in the ISTS.

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Case Study 3: TSTF Perspective

- The TSTF is also concerned that the NRC's position may result in unintended consequences and limit operator's ability to choose the safest course of action.
- In order to determine if these concerns are valid, the TSTF agreed to review all Required Actions that do not simply direct restoration of the inoperable equipment.

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Case Study 3: TSTF Perspective

- Based on that review, the TSTF may develop changes to individual specifications or the Chapter 1 or Section 3.0 ISTS usage rules to address any issues.

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Topic #4 SR 3.0.3 Applicability For SR's that have never been performed

- SR 3.0.3
- If it is discovered that a Surveillance was not performed within its specified Frequency, then compliance with the requirement to declare the LCO not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified Frequency, whichever is greater. This delay period is permitted to allow performance of the Surveillance. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.
- If the Surveillance is not performed within the delay period, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.
- When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.

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Topic #4 SR 3.0.3 Applicability For SR's that have never been performed

- Case Study 4:
 - Licensee Identified that 4 RPS scram contactors had never been tested.
 - Licensee implemented SR 3.0.3 for a missed Surveillance.
 - Licensee successfully tested all RPS scram contactors after 5 days.
 - NRC TIA2008-004 Issued.

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Case Study 4: SR 3.0.3

- SR 3.0.3 is applied to surveillance intervals that are inadvertently exceeded.
- Vast majority of surveillances do in fact demonstrate that systems or components are operable.
- When a surveillance is missed, it is primarily a question of operability that has not been verified by the performance of a Surveillance Requirement.

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Case Study 4: SR 3.0.3

- For missed surveillances the system or component is presumed to be operable due to the previous history of passed surveillances for the system or component.
- If a surveillance has never been performed there is no past history to provide the same level of confidence as a missed surveillance, which allows the presumption of operability.

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Case Study 4: SR 3.0.3

- Therefore, the NRC staff's position is that a missed surveillance is not the same as never performed surveillance and SR 3.0.3 can not be applied.

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Case Study 4: TSTF Perspective

- The TSTF perspective is that SR 3.0.3 applies to SRs that have never been performed.
- SR 3.0.3 already contains sufficient restrictions to allow appropriate application to SRs that have never been performed.

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Case Study 4: TSTF Perspective

- Industry guidance states that SR 3.0.3 may be applied if it has been discovered that an SR (or a portion of an SR) has never been performed provided that there is a reasonable expectation that the associated equipment is OPERABLE, and that it is expected that the SR will be performed successfully.

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Case Study 4: TSTF Perspective

- The TSTF has proposed adding this guidance to the SR 3.0.3 Bases in TSTF-512, "Revise SR 3.0.3 to Address SRs that Cannot be Performed or are Not Met," submitted in October 2008.
- The TSTF also believes that the NRC has historically taken the position that SR 3.0.3 does apply in this situation.

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Operational Convenience

- Additional Product of NRC and TSTF Technical Specifications Workshop.
 - Clarification and Definition determination will be further analyzed and resolution will be forthcoming.

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Closing Remarks

- The TSTF believes the workshop was very successful in reaching common understanding between the licensees that use the TS and the NRC that enforces the TS.
- The TSTF and NRC agreed that in the future we will strive to promptly identify and discuss differences in understanding of generic TS provisions.

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Closing Remarks

- The TSTF encourages licensees to contact the TSTF when differences of opinion arise with the NRC on the generic application of TS.

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NRC Closing Remarks

- The workshop provided a good venue for open dialogue and the staff encourages industry to offer up concerns with generic TS usage at TSTF public meetings.
- The staff will continue to dialog with the industry during public meetings to enhance a common understanding of TS provisions.

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¿QUESTIONS?

Public Question & Answer Session
Please Submit all Questions to the Session
Coordinator (Abe Marrero) or the Room
Monitor.

Backup Slides

Example 1.3-6

EXAMPLE 1.3-6

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One channel inoperable.	A.1 Perform SR 3.x.x.x.	Once per 8 hours
	<u>OR</u> A.2 Reduce THERMAL POWER to ≤ 50% RTP.	8 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours