

Revision to Guidance Formerly Contained in Generic Letter 91-18 (RIS 2005-20)

Winter 2005
Regional Seminars for Inspector Training
Operability Determination Process

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Introduction

- ROP Digital City - IMC Part 9900 STSODP
 - Operability Determinations and Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety
- This presentation will provide you with an overview of the ODP guidance

NRC Team

- HQ
 - TSB: Carl Schulten, Tom Boyce, Nancy Salgado
 - DLPM: Bill Reckley, Harold Chernoff
- Region I – Jim Trapp
- Region II – Randy Musser
- Region III – Stephen Burton
- Region IV – Charles Stancil

Background

- NRC Public Workshop August 2003
 - Info gathering workshop vice problem solving workshop
 - Over 125 people; most utilities represented
 - Comments on terminology, scope, selected topics
- NRR/Region Team Updated Guidance
 - Consolidation/update of two IMC 9900 sections
 - Reconciled various issues
 - Change from GL to RIS

Background (continued)

- August 2004
 - FRN August 3, 2004 issued RIS 2004-xx
 - NRC Public Workshop August 25, 2004
 - Info dissemination and communication
 - Not problem-solving or plant-specific issues
 - Verbal discussion not final written guidance
- October 2004
 - NEI ODP Task Force
 - Categorized Comments
 - Prioritized Recommendations
- January – September 2005
 - Comment Resolution Jan – June '05
 - Regional concurrence July – Aug '05
 - RIS 2005-20 issued September 26, 2005

NEI ODP Task Force Objectives

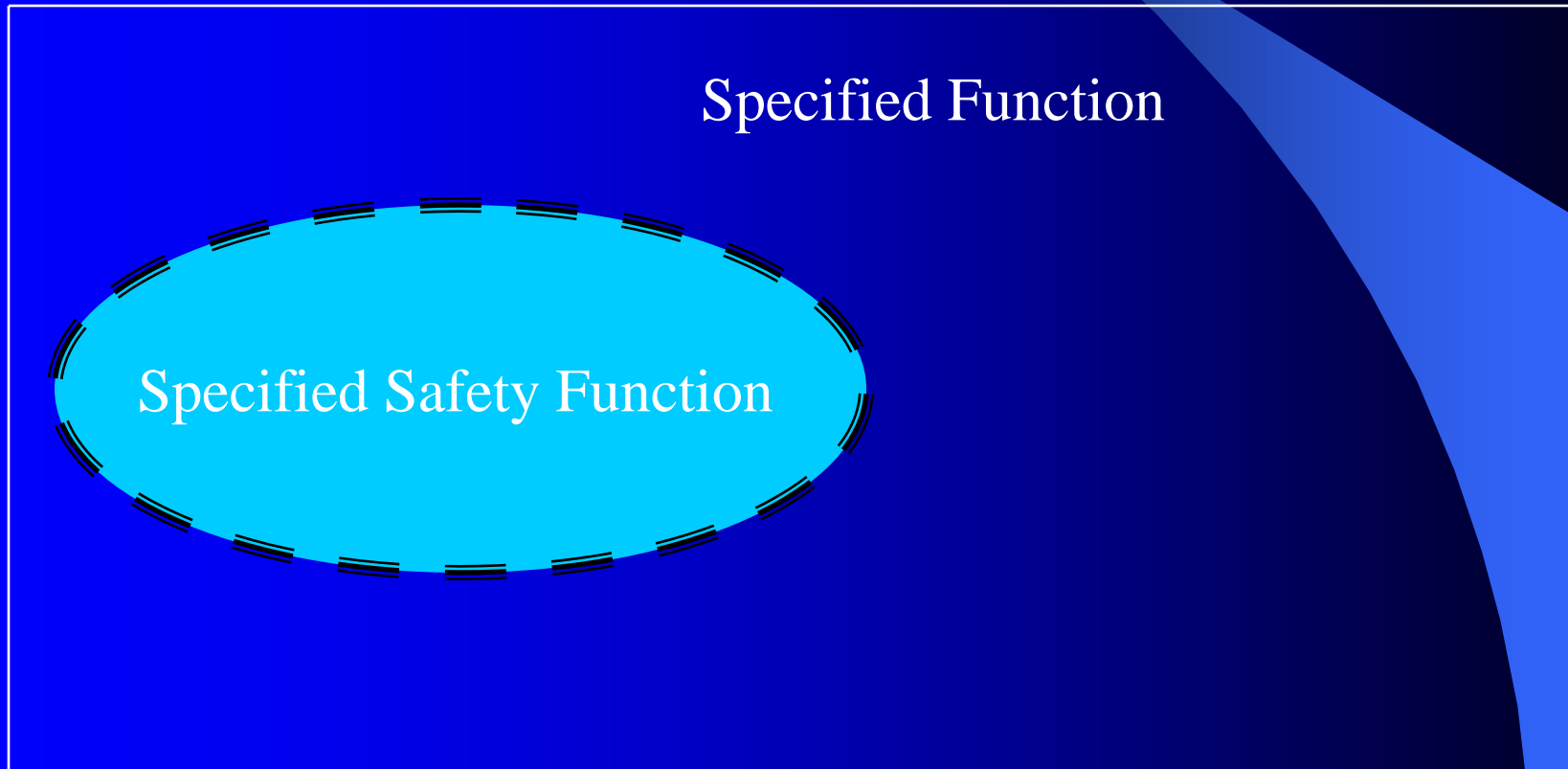
- Establish framework to differentiate Operability from Functionality
- Establish key terms & definitions, for example:
 - “Operability Determination” compared to “Functionality Assessment”
 - “Specified Safety Function” as a subset of “Specified Function”
 - “Reasonable Expectation”
 - “Operability Declaration”
- Clarify important concepts, for example:
 - Timing
 - Role of the Corrective Action Program (or equivalent)
 - Role PRA
 - Treatment of compensatory measures
 - Treatment of “methods of evaluation”
 - Documentation

RIS 2004-xx

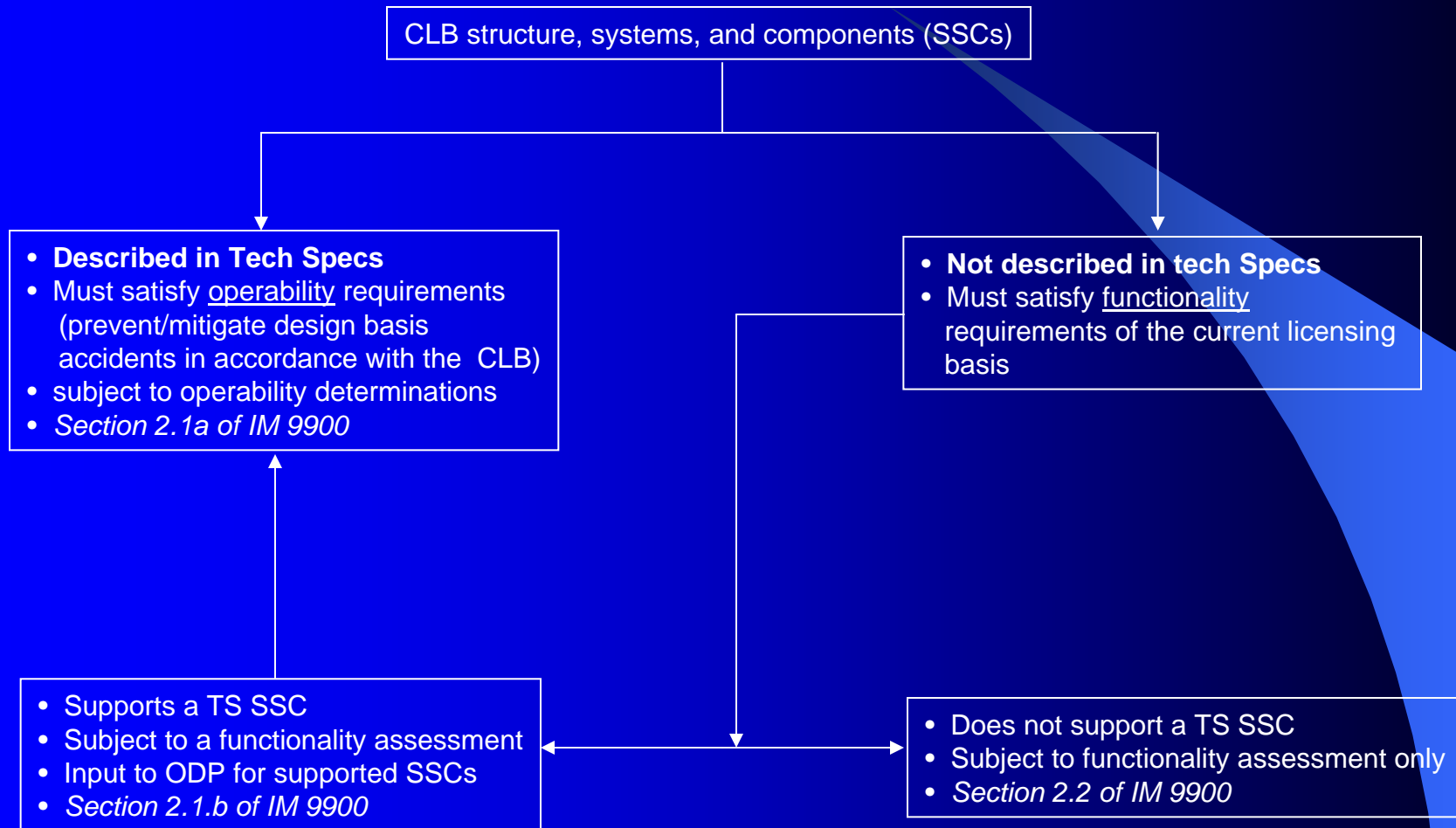
- NRC Staff Goals for Revision to Guidance
 - Ensure safety
 - Guidance usable to inspectors and plant operators
 - Clarify while recognizing that judgment involved and can't solve every problem
- Impediments to ensuring safety
 - Unclear OD process
 - Focuses on process or language not technical issue

RIS 2004-xx

Scope of Licensing Basis for SSCs



SCOPE OF AN OPERABILITY DETERMINATIONS VS. SCOPE OF FUNCTIONALITY ASSESSMENTS

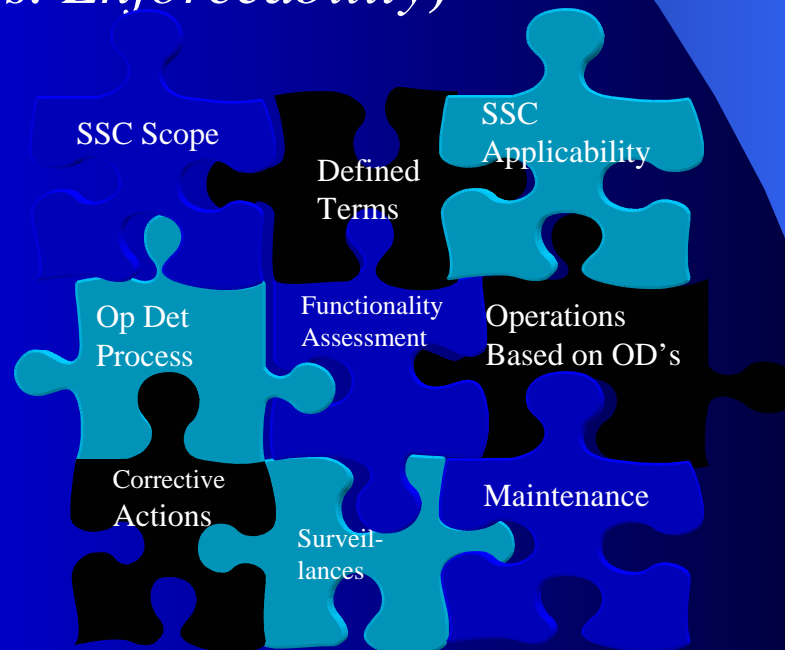


Changes and Clarifications

RIS 2005-20

- Rewritten to be Clearer and more Process Oriented
- Clarified Selected Issues Based on Industry Feedback
- Revised to Reflect Ongoing Regulatory Changes

*“Inspector guidance,” but also industry guidance
(Expectations vs. Enforceability)*

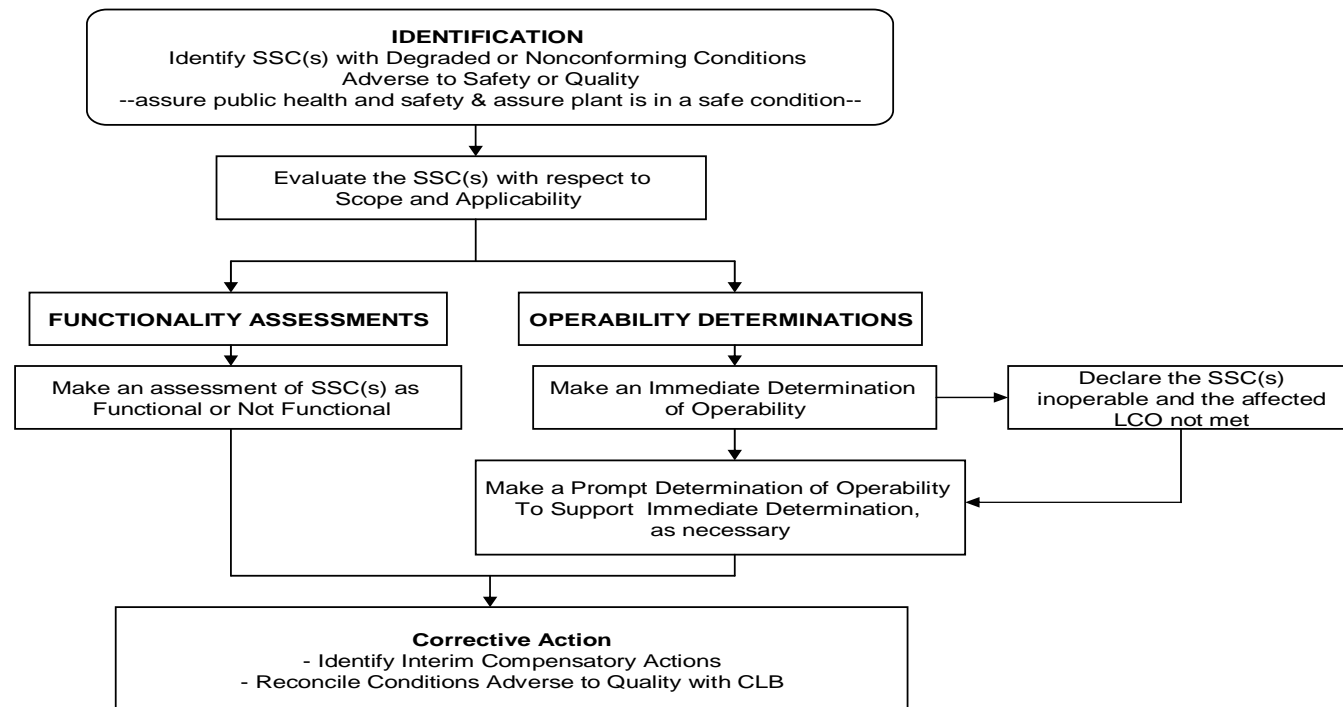


Rewritten to be more Process Oriented

- GL 91-18 endorsed two IMC 9900 documents
 - Operable/Operability Ensuring Functional Capability of a System or Component
 - Resolution of Degraded and Nonconforming Conditions
- Eliminates the overlap between documents
- Organized by sequence of events

Rewritten to be More Process Oriented

Operability Determination Process Flowchart



Rewritten to be Clearer

Standardized Terminology

- “Operability” vs. “Functionality”
- “Immediate” and “Prompt”
- “Completion Time” vs. “Allowed Outage Time”
- Added component reliability discussion
- Treatment of compensatory measures

Rewritten to be Clearer

- Operator Awareness & Responsibilities
 - Who makes the operability call?
 - Who prepares operability determinations?
- Documentation needed to support Operability Determination or a Functionality Assessment
 - Different Expectations

Clarified Selected Issues Based on Industry Feedback

- Timing interface with ODP
 - Softened strict time requirements (<24 hours) on prompt operability determination limits

Clarified Selected Issues Based on Industry Feedback

Ongoing Regulatory Changes

- Consistency with Reactor Oversight Program
 - Maintenance Rule Unavailability vs. Performance Indicator Safety System Unavailability
- Consistency with 10 CFR 50.59
 - Update language
 - Added references
- Consistency with 10 CFR 50.65
 - Added RIS Appendix B, “Maintenance”
- Consistency with revised NOED process
 - JCO vs. Enforcement Discretion

Clarified Selected Issues Based on Industry Feedback

Ongoing Regulatory Changes

- Updated guidance on Design Bases
 - **GL Guidance** – Scope of “safety-related” SSCs for design basis events defined by 50.49.
 - **OD Guidance** – Scope of SSCs for design basis events is defined by 50.2
- Updated guidance on Current Licensing Basis
 - Includes License Renewal (10CFR54)

Communications Plan

- HQ
 - NRC Exec Team/ Leadership Team Brief - Nov
 - NRR Project Managers – February 2006
- Regions
 - Fall 2005 Regional Inspector Training
 - Developing On-line Inspector Training
 - Considering a Website for Notable Operability Calls
- Industry
 - NEI Operability Workshops – July & Nov
 - Regional Utility Groups

Going Forward

- Changes to IMC 9900 Technical Guidance
 - Further changes to 9900 likely via RIS
- Input from NEI ODP Working Group
 - Industry/NRC close agreement
 - Identify Op Experience issues for benchmarking ODP guidance

Scope and Examples

Gray Area – Operability Determination (OD)
vs. Functionality Assessment (FA)

Disclaimer.... The following examples are intended to illustrate application of the operability determination process guidance made publicly available in RIS 2005-20, and should not be considered to represent official NRC positions.

Scope and Examples

Gray Area – OD vs. FA

Example 1:

A plant identifies that the SBO environment of a TS SSC will exceed the qualification temperature for the SSC.

However, engineering confirms that the SSC SBO qualification temperature exceeds the design bases qualification temperature of the SSC established initially during the original plant licensing.

Is the SSC operable or inoperable.

Scope and Examples

Gray Area – OD vs. FA

The SSC is operable because it can perform its design basis “specified safety function.”

- However, the SSC SBO function cannot be met; therefore, the SSC is non-functional since the plant does not comply with the SBO rule.
- The non-functional SSC condition must be entered into the plant Corrective Action Program (or equivalent).
- The SSC SBO function must be restored in a timely manner, commensurate with the safety importance of the non-compliance with the SBO rule.

Scope and Examples

Gray Area – OD vs. FA

Example 2:

A plant has only the LPCI injection function of the RHR system in the TS. The plant has discovered that the disc has separated from the stem on the RHR injection isolation valve and has closed the injection flow path. This disables only the RHR function. (Assume safety shutdown licensing basis for this plant is Hot Shutdown)

Is an OD or FA required?

Reportability Considerations

- The final reporting decision for this condition would benefit from a FA.
- 10 CFR 50.72(b)(3)(v) is an 8-hour reporting requirement:

Scope and Examples

Gray Area – OD vs. FA

The affected function is not a Specified Safety Function

- However, a FA is expected

Reportability Considerations

- The final reporting decision for this condition would benefit from a FA.
- 10 CFR 50.72(b)(3)(v) is an 8-hour reporting requirement:
 - ...Any event or condition that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to: ...remove residual heat

Scope and Examples

Gray Area – OD vs. FA

Example 3:

A plant identifies a potential internal flooding concern which can affect TS and non-TS equipment. The USAR is not specific on the design/licensing basis for flooding.

- Is an operability determination required for the safety related equipment?

Scope and Examples

Gray Area – OD vs. FA

The answer depends on the relationship between the flooding event and the events/accidents that the TS are intended to address:

- If the flooding impacts a TS SSC, an OD is required.
- If the flooding does not impact a TS SSC, a FA is required (the more typical scenario), the concern should be addressed by the Corrective Action Program (or equivalent).

Scope and Examples

Gray Area – OD vs. FA

Example 4:

A plant has an AFW system (or RCIC for BWR). The steam isolation valve fails the stroke time test only in the open direction. A review of the UFSAR indicates that the “safe” function is for the valve to close and isolate the system upon a steam break downstream of the valve. The valve is declared operable because it can perform its safety function as defined in the UFSAR.

However, a NUREG 0737 commitment (post TMI action item) exists for this valve because of a concern about re-opening the valve after inadvertent or accidental operator closure. The licensee had agreed to this requirement and so committed in their 0737 response. The commitment made the reopening of the valve a safety-related, design-basis function (i.e., a specified safety function).

Does the commitment, albeit not described in the UFSAR, mean that that the operability evaluation is incorrect.

Scope and Examples

Gray Area – OD vs. FA

Does the commitment, albeit not described in the UFSAR, mean that that the operability evaluation is Incorrect

- Yes

The licensee should refer to Administrative Letter 98-10 to resolve the discrepancy between the TS and the commitment.

Scope and Examples

Gray Area – OD vs. FA

Example 5:

A plant identifies a problem with a calculation, indicating that a TS may be non-conservative. For example a review of AST calculations identifies an error in the "shine" assumptions such that the location of a TS SSC could be inaccessible following an accident.

Is an operability evaluation required for the SSC?

Is an operability evaluation required if the SSC is not in Section 3 of the TS (LCO/SR), but is in the TRM (or equivalent)?

Scope and Examples

Gray Area – OD vs. FA

Is an operability evaluation required for the SSC?

- Yes

Is an operability evaluation required if the SSC is not in Section 3 of the TS (LCO/SR), but is in the Technical Requirements Manual (or equivalent)?

- No, unless the SSCs provide a required support function for another SSC which is in the TS.