

ATTACHMENT 71111.15

INSPECTABLE AREA: Operability Evaluations

CORNERSTONES: Mitigating Systems
Barrier Integrity

EFFECTIVE DATE: January 1, 2010

INSPECTION BASES: Improperly evaluated degraded and/or non-conforming conditions may result in continued operation with a structure, system, or component (SSC) that is not capable of performing its design function.

This inspectable area verifies aspects of the Mitigating Systems and Barrier Integrity cornerstones for which there are no performance indicators.

LEVEL OF EFFORT: Review the following sample sizes of operability evaluations of degraded and non-conforming conditions which impact mitigating systems and barrier integrity: 15 to 21 per year at one reactor unit sites; 19 to 25 per year at two reactor unit sites; and 22 to 30 per year at three reactor unit sites. Although the number of required samples is an annual goal, available operability evaluation samples should be inspected each quarter to ensure a reasonable distribution throughout the year.

71111.15-01 INSPECTION OBJECTIVE

01.01 To review operability evaluations affecting mitigating systems and barrier integrity to ensure that operability is properly justified and the component or system remains available, such that no unrecognized increase in risk has occurred.

71111.15-02 INSPECTION REQUIREMENTS

02.01 Operability Evaluation Review

- a. Select operability evaluations involving risk significant SSCs. Selection of operability evaluations can emerge from the inspector's review of plant status documents such operator shift logs, emergent work documentation, deferred modifications, and standing orders to determine if an operability evaluation is warranted for a degraded component.
- b. Review the technical adequacy of the licensee's operability evaluation, and verify if operability is justified. Verify that the licensee considered other degraded conditions and their impact on compensatory measures for the

condition being evaluated. Refer to the final safety analysis report (FSAR) and other design basis documents during the review. If operability is justified, no further review is required.

- c. If the operability evaluation involves compensatory measures, determine if the measures are in place, will work as intended, and are appropriately controlled
- d. Verify that degraded SSC or compensatory measures taken to address degraded SSC does not result in changes to tests or experiments described in UFSAR (for example a SSC utilized in a way either outside the design basis or inconsistent with the safety analyses). If the changes to tests or experiments are different than what is described in UFSAR, verify that these changes or experiments do meet the various criteria specified in 10 CFR 50.59 for not requiring a license amendment.
- e. If operability is not justified:
 - 1. Determine impact on any Technical Specification (TS) limiting condition for operation (LCO).
 - 2. Use the Significance Determination Process to evaluate the risk significance of the equipment inoperability.

02.02 Identification and Resolution of Problems. Verify that the licensee is identifying problems with operability evaluations at an appropriate threshold and entering them in the corrective action program. For a sample of significant operability evaluations issues documented in the corrective action program, verify that the licensee has identified and implemented appropriate corrective actions. See Inspection Procedure 71152, "Identification and Resolution of Problems," for additional guidance.

71111.15-03 INSPECTION GUIDANCE

The licensee's process of ensuring operability is continuous and consists of the verification of operability by surveillances and continuous monitoring of plant systems. Formal determinations of operability are performed whenever a verification or other indication calls into question the SSC's ability to perform its specified function. Licensees are obligated to ensure the continued operability of SSCs as specified by TS, or to take the remedial actions addressed in the TS. The intent of this inspection is to sample licensee's operability evaluations for risk significant SSCs to verify if operability is justified, such that availability is assured, and no unrecognized increase in risk has occurred. Also, the inspections should verify that operability concerns associated with plant issues and events are being identified.

Where there is a reason to suspect that the licensee's operability determination is not, or was not correct based on the information reviewed, the inspector should discuss the issue with regional management for resolution. Depending on the complexity and risk significance of the issue, in some cases, the inspector may need to consult with regional specialists to complete verification of licensee's operability evaluation. The regional specialist's time spent on reviewing the issue should be charged to this procedure. The inspectors are not required to spend additional time in reviewing an issue if the discrepancies identified do not change the outcome of the operability evaluation.

NRC Regulatory Issue Summary 2005-20, Revision 1, Revision to NRC Inspection Manual Part 9900 Technical Guidance, "Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety" provides guidance to NRC inspectors for reviewing the actions of licensees pertaining to the operability of SSCs following the discovery of degraded and nonconforming conditions in SSCs.

See table below for inspection guidance to assist the inspector in selecting inspection activities to achieve each cornerstone objective and to achieve those activities that have a risk priority.

Cornerstone	Inspection Objective	Risk Priority	Example
Mitigating Systems Barrier Integrity	Identify any improperly evaluated degraded and/or nonconforming conditions which could potentially impact SSC's availability and result in an unrecognized increase in risk.	Operating - mitigating system as determined by plant-specific information or Risk Importance Measure 2 (RIM2). Shutdown - Mitigating systems that perform key safety functions during shutdown (decay heat removal, inventory control, electrical power availability, reactivity control, and containment)	Improper conclusion on operability of the high-pressure coolant injection (HPCI) system such that the system could not perform its function during a station blackout event concurrent with planned unavailability of the reactor core isolation cooling (RCIC) system.

71111.15-04 RESOURCE ESTIMATES

The annual resource expenditure for this inspection procedure is estimated to be 90 to 108 hours for sites with one reactor unit; 102 to 124 hours for sites with two reactor units; and 114 to 142 hours for sites with three reactor units.

71111.15-05 COMPLETION STATUS

Inspection of the minimum sample size will constitute completion of this procedure in the Reactor Programs System (RPS) inspection tracking system. That minimum sample size will consist of 15, 19, and 22 operability evaluations of degraded and nonconforming conditions in a year at 1-unit, 2-unit, and 3-unit sites, respectively.

71111.15-06 REFERENCES

NRC Regulatory Issue Summary 2005-20, Revision 1, Revision to NRC Inspection Manual Part 9900 Technical Guidance, "Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety"

NRC Inspection Manual, Part 9900, 10 CFR Guidance, “10 CFR 50.59 Changes, Tests and Experiments”

Title 10 CFR 50.59, “Changes, tests, and experiments.”

NRC Regulatory Guidance 1.187, “Guidance for Implementation of 10 CFR 50.59, Changes, Test, and Experiments,” Rev. Nov 2000.

NEI 96-07, Revision 1 (Nov 2000), Guidance for 10 CFR 50.59 Implementation.

Information Notice 97-78, “Crediting of Operator Actions in Place of Automatic Actions and Modification of Operator Actions, including Response Times”

Inspection Procedure 71152, “Identification and Resolution of Problems”

See the following Web link for reference documents:

<http://nrr10.nrc.gov/rorp/ip71111-15.html>

END

Attachment 1 - Revision History for IP 71111.15

Commitment Tracking Number	Issue Date	Description of Change	Training Needed	Training Completion Date	Comment Resolution Accession Number
N/A	07/26/06	Revision history reviewed for the last four years.		N/A	N/A
N/A	01/17/2002 CN 02-002	Revised to provide minor clarifications to inspection requirements and additional inspection guidance concerning operability evaluations. In addition, inspection resource estimates and inspection level of effort are revised to provide a band for more inspection	NO	N/A	N/A
N/A	02/02/2004 CN 04-003	Revised to include deferred modifications to the inspection sampling list.	NO	N/A	N/A
N/A	01/05/2006 CN 06-001	Increased the estimated resources required to complete this inspection activity based on increased inspection hours charged to this IP during last several ROP cycles. Completed historical CN search.	NO	N/A	N/A
N/A	07/26/06 CN 06-018	Revised to reflect changes of reference documents: GL91-18 was superseded by RIS 2005-20	NO	N/A	N/A
N/A	01/31/08 CN 08-005	Add inspection guidance to verify that licensee has correctly implemented 10 CFR 50.59 regulatory requirements if operability evaluations warrant such 50.59 evaluations be performed.	NO	N/A	N/A
N/A	11/16/09 CN 09-027	Added 6 hours of inspection resources. See 2009 ROP Realignment Results (ML092090312)	NO	N/A	N/A