

# **NRC INSPECTION MANUAL**

IOEB

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## **INSPECTION MANUAL CHAPTER 2523**

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**NRC APPLICATION OF OPERATING EXPERIENCE  
IN THE REACTOR OVERSIGHT PROCESS**

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ATTACHMENT 1: Revision History

## 2523-01 PURPOSE

Inspection Manual Chapter (IMC) 2523 describes the interface between the reactor operating experience (OpE) program and the Reactor Oversight Process (ROP).

## 2523-02 OBJECTIVES

02.01 To implement the applicable policies of Management Directive (MD) 8.7, "Reactor Operating Experience Program," dated September 28, 2006.

02.02 To emphasize the availability and applicability of OpE for use within the NRC's inspection and assessment activities.

02.03 To provide guidance on the integration of OpE into the ROP.

## 2523-03 APPLICABILITY

This IMC applies to those organizations within the NRC responsible for the development, maintenance, and application of the ROP and those organizations responsible for the collection, evaluation, and communication of OpE information.

## 2523-04 DEFINITIONS

04.01 Application of (or Applying) OpE. Taking actions based on insights or recommendations resulting from OpE evaluations. These actions could involve communicating with stakeholders, taking regulatory actions, and influencing agency programs.

04.02 Clearinghouse. The centralized team that performs the key functions and activities of the reactor OpE program. Its core duties include (1) collecting, storing, screening, prioritizing, and distributing OpE information to interested users, (2) conducting and facilitating OpE evaluation and application activities, (3) facilitating the communication of OpE lessons learned, and (4) coordinating NRC OpE activities among other organizations that perform OpE functions.

04.03 Evaluation of (or Evaluating) OpE. A review of OpE information (generally coordinated by an issue manager in the Office of Nuclear Reactor Regulation (NRR), Division of Inspection and Regional Support (DIRS), Operating Experience Branch (IOEB), and performed by IOEB staff or technical staff, or both) to determine the significance of the information and to gain insights and lessons learned that the NRC could use for agency communication or application.

04.04 Issue Manager. An individual within the clearinghouse who is responsible for tracking and project managing an issue for resolution (IFR) through the evaluation and application phases of the OpE process.

04.05 Issue for Resolution (IFR). A matter involving OpE information that becomes captured by the screening and trending phase of the clearinghouse OpE process and will be further processed for subsequent evaluation or application, or both.

04.06 OpE Information. Various sources of OpE information include the following:

- Daily Event Notifications (Title 10 of the *Code of Federal Regulations* (10 CFR) 50.72, "Immediate Notification Requirements for Operating Nuclear Power Reactors")
- Licensee Event Reports (10 CFR 50.73, "Licensee Event Report System")
- Regional daily event briefings
- NRC inspection findings
- Reports from the International Atomic Energy Agency (IAEA) and Nuclear Energy Agency (NEA) Incident Reporting System (IRS)
- Documents from the Institute of Nuclear Plant Operators (INPO)
- Reports under 10 CFR Part 21, "Reporting of Defects and Nonconformance" and 10 CFR 50.55(e), "Conditions of Construction Permits"
- Other internal and external studies

Consideration is also given to relevant events of a non-nuclear nature.

## 2523-05        RESPONSIBILITIES AND AUTHORITIES

05.01 Director, Division of Inspection and Regional Support, Office of Nuclear Reactor Regulation (NRR/DIRS).

- a. Coordinates overall reactor OpE program activities and assesses its effectiveness in accordance with MD 8.7.
- b. Coordinates the overall application of OpE in the ROP through inspection policies, programs, and guidance.

05.02 Chief, Operating Experience Branch (IOEB), NRR/DIRS.

- a. Manages the OpE clearinghouse and analysis functions within a single organization to (1) collect, screen, prioritize, and distribute OpE to the NRC staff, (2) facilitate and track OpE evaluations, decisions, and applications, (3) help communicate OpE lessons learned, (4) assess and trend OpE, and (5) coordinate overall NRC OpE functions.
- b. Refers OpE to the Chief, Reactor Inspection Branch (IRIB), when it appears to influence one or more ROP components.
- c. Approves OpE smart samples (OpESSs), in coordination with the Chief, IRIB.

05.03 Chief, Reactor Inspection Branch (IRIB), NRR/DIRS.

- a. Decides when, in response to referred OpE, changes to one or more inspection program elements are appropriate, including the development of, or revision to inspection guidance, or the approval of OpESSs.
- b. Supports the distribution, tracking, and communication of OpE to the inspection program staff and the inspection staff.

05.04 Chief, Performance Assessment Branch (IPAB), NRR/DIRS. Decides when, in response to referred OpE, it is appropriate to consider changes to one or more ROP components under IPAB cognizance.

05.05 Directors, Division of Reactor Projects (DRP), Division of Reactor Safety (DRS), Regional Offices. Advise regional inspection staff on how OpE information may impact current and planned inspection activities.

05.06 Regional Operating Experience Coordinators. Provide support to inspection staff and Regional management by communicating OpE information to allow for staff consideration in the planned inspection activities.

05.07 Regional Inspection Staff. Consider OpE information during the planning and performance of inspection activities. Consider forwarding information concerning potentially generic issues to IOEB and/or the Regional OpE Coordinators.

2523-06 OPERATING EXPERIENCE PROGRAM OVERVIEW

06.01 Background. The NRC's systematic collection and evaluation of OpE plays an important role in its mission to ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment.

In 2002, the Davis-Besse Lessons Learned Task Force identified substantial shortcomings in agency OpE activities. As a result, the NRC chartered an interoffice Reactor Operating Experience Task Force (ROETF) to formally assess the agency's OpE activities, establish objectives and attributes for the agency's OpE efforts, and recommended improvements.

The NRC developed MD 8.7, "Reactor Operating Experience Program" and NRR Office Instruction (OI) LIC-401, "NRR Reactor Operating Experience Program" based on the recommendations of the ROETF to provide agency-level guidance for implementation of the OpE program.

This IMC summarizes the OpE program and provides guidance for the application of OpE in the ROP.

06.02 Elements of the Operating Experience Process. The reactor OpE program consists of a process for handling OpE information from the time that it first becomes available to the final action of applying significant OpE information to the agency's regulatory activities. The facilitation of this process involves five phases:

- (1) collecting, storing, and making available new OpE information
- (2) screening OpE information and communicating
- (3) evaluating OpE information and communication
- (4) applying OpE lessons learned from the evaluations
- (5) trending

06.03 Screening Process. Members of the clearinghouse team meet daily to review OpE information that has been collected by attending morning calls, reviewing daily event notifications, and researching other OpE sources. The purpose of screening is to determine whether OpE information has actual or potential safety significance and the issue's generic applicability.

06.04 Communication of Operating Experience. The focus of internal stakeholder communications is to promptly inform appropriate staff members or management or both about significant operational events and to share details, insights, and lessons learned from events in a timely manner. The internal communication tools (such as the [Reactor OpE Information Gateway](#) and [OpE Community Forum](#)) contain preliminary, predecisional information. Once the agency has formally evaluated an OpE issue and has determined that it meets the safety significance criteria for agency action, the NRC communicates the issue to the public and the industry through one or more methods (e.g. generic communication, rulemaking public comment periods, etc.).

- a. Reactor OpE Information Gateway. The [Reactor OpE Information Gateway](#) is the NRC's internal Web site dedicated to the centralized collection and communication of OpE information. It includes various search tools to facilitate the gathering of pertinent OpE information.
- b. OpE COMMs. The [OpE Community Forum](#) is used to quickly disseminate OpE. Within this forum, forum posts (COMMs) are categorized by topic, and users are alerted to emergent and processed information relevant to that topic category.

During its daily meetings, the clearinghouse team decides whether to issue a COMM and chooses the OpE forum group(s) that should receive the COMM. No formal criteria govern when to issue a COMM.

Any NRC staff member can subscribe to the OpE Community Forum from the [OpE subscription site](#), which is linked from the [Reactor OpE Information Gateway](#). Subscribing to a COMM group will ensure that staff members receive

notification by e-mail of the posting of a new COMM to the group to which they have subscribed. Staff members may modify their subscriptions at any time.

- c. Generic Communications. Writing a generic communication is one of the most common recommendations resulting from an IFR evaluation. The staff develops generic communications in accordance with NRR OI LIC-503, "Generic Communications Affecting Nuclear Reactor Licensees."
- d. OpE Wrap-Up. During the monthly ROP Branch Chief counterpart calls, the IOEB staff will typically provide a written and verbal summary of OpE identified since the previous counterpart call.
- e. Notable OpE Report. Before the mid-cycle and end-of-cycle assessments, the IOEB staff prepares a Notable OpE report that addresses the OpE events of concern and any trends over the previous 6 to 12 months.

## 2523-07 APPLICATION OF OPERATING EXPERIENCE

07.01 Inspection Activities. NRC inspection observations and findings provide vital input to the OpE program. OpE information can also inform NRC inspection activities at other sites. NRC inspectors should consider relevant OpE information in preparing for, conducting, and documenting inspection activities. Regional OpE coordinators and IOEB staff can assist with filtering OpE information to those items relevant to the planned inspection activities. The [Reactor OpE Information Gateway](#) lists contacts.

- a. Reactor OpE Information Gateway. Searching the [Reactor OpE Information Gateway](#) can be an effective method of gathering pertinent OpE information for an inspection.
- b. OpE COMMs. NRC inspectors should consider subscribing to (or performing a historical review of) the COMM group(s) associated with their current inspection activities. Inspectors may also propose to IOEB staff that a COMM be developed for new or updated OpE.
- c. Generic Communications. The reference section of each NRC Inspection Procedure (IP) lists significant relevant generic communications. The internal OpE [Generic Communications](#) website contains additional information and a link to a more detailed [cross reference](#) of potentially relevant generic communications for each IP.
- d. Feedback. Information on potentially generic safety questions may derive from NRC inspection activities. Inspection reports are reviewed as part of the OpE process. However, resident inspectors and regional staff are encouraged to forward information on potentially generic safety questions (such as questions or concerns related to the design or licensing bases) to the Regional OpE Coordinator, or IOEB, or both for further consideration.

07.02 Operating Experience Smart Sample. The OpESS program is designed to provide NRC inspection staff with a detailed synopsis of selected OpE that the agency considers as having generic safety significance and that can be applied to baseline inspection activities. The OpESS program supports the ROP inspection program by informing the ROP inspection scope and sample selection. The information and trends identified from OpESS inspections may provide further indication that a specific issue warrants additional agency action (such as a Temporary Instruction (TI) or generic communication).

a. Development.

1. An OpESS is proposed to the OpE clearinghouse as a result of analysis trending or after an IFR evaluation. Items that are good candidates are issues that appear to have potential safety significance and that may result in the documentation of inspection findings or violations.
2. An OpESS is similar in format to a TI and should be a self contained information source for the inspection staff. IMC 0040, "Preparing, Revising, and Issuing Documents for the Inspection Manual" provides guidance on formating OpESSs.
3. IOEB will develop the OpESS in coordination with IRIB.
4. The OpESS should clearly state the purpose, applicability, and any expectations for the inspection staff (including use, documentation requirements, and time charges).
5. Proposed OpESSs will follow the review and comment process described in IMC 0040.
6. NRR OI LIC-401 and the IOEB staff handbook provide additional guidance on OpESS development. Both are accessible through the [Reactor OpE Information Gateway](#).

b. Approval.

1. An OpESS is forwarded to the IRIB Branch Chief after initial approval by the IOEB Branch Chief.
2. The IRIB Branch Chief will process the OpESS for review and comment in accordance with IMC 0040.
3. After resolution of any comments, the IOEB and IRIB Branch Chiefs will approve the OpESS.

4. Approved OpESSs are posted on the [NRC public Web site](#).

NOTE: OpESSs that contain security related or proprietary information are posted on the [NRC internal Web site](#) and a redacted version is posted on the [NRC public Web site](#).

c. Application.

1. Once approved, the IRIB Branch Chief will coordinate communication of the OpESSs to the NRC inspection staff.
  2. Resident inspection staff, in consultation with the Regional OpE coordinator and Regional management, will review newly issued OpESSs to determine their impact on site specific inspection activities.
  3. OpESSs conducted by the inspection staff should be credited toward ROP baseline inspection samples and documented in the appropriate inspection report.
  4. When an OpESS is performed as part of the baseline inspection program, the applicable section of the pertinent NRC inspection report will reference the OpESS by number. IMC 0612, "Power Reactor Inspection Reports," includes additional guidance on documentation.
- d. Periodic Review. IOEB will perform a periodic review of active OpESSs every 4 years to determine their effectiveness and current applicability. If IOEB determines that the OpESS is no longer necessary (i.e., the OpESS has been performed a sufficient number of times or agency actions have addressed the underlying issue), then the OpESS will be removed from active status. IOEB will coordinate with IRIB to notify the Regions when an OpESS is removed from active status.

07.03 Inspection Program Guidance Revisions. OpE can provide valuable insight for potential changes to inspection program guidance.

- a. Items that may warrant changes to existing inspection program guidance documents include the following:
  1. Additional guidance on sample selection or existing inspection activities. The additional guidance would allow inspectors to better inform the current inspection scope or sample selection process (e.g., directing the consideration of specific structures, systems, or components based on OpE).

2. New inspection samples or activities not currently covered by the inspection program.
    - (a) In keeping with the bases of the ROP, newly proposed inspection samples or activities should be risk informed and should generally review the licensee's current performance.
    - (b) New inspection samples or activities generally require additional resources. Proposals for new samples or activities should also include recommended areas to reduce inspection to offset the associated resource change.
  - b. Consideration should be given to whether an OpESS or TI would be appropriate before revisions are made to existing inspection program guidance to determine whether, or what type of, changes should be made.
  - c. The formal review process discussed in IMC 0307, Appendix B, "ROP Realignment Process" directly addresses the need to consider OpE in the periodic evaluation of baseline IPs. The following activities support the IP review process:
    1. IOEB will assign OpE subject matter experts (SMEs) to serve as resources to individual IRIB IP owners.
    2. IOEB will provide a consolidated list of notable OpE that covers the period of consideration for the realignment.
    3. IOEB SMEs will provide OpE that is targeted to individual IPs based on standardized reviews conducted by the OpE SMEs.
    4. IRIB IP owners will consider adjustments to inspection requirements or guidance for risk-significant events and adverse trends identified through the OpE process.

NOTE: Take caution to avoid deleting past significant OpE that may still be currently applicable.

  - d. An IFR evaluation could result in a recommendation to revise one or more inspection program guidance documents. Issue Managers should present IFRs to IRIB and IPAB to help determine whether revisions may be appropriate.
    1. The IRIB Branch Chief will determine whether an IFR warrants further consideration for potential changes to inspection program guidance documents.

2. If the IRIB Branch Chief determines that the IFR warrants further consideration, the issue manager should work with a point of contact designated by the IRIB Branch Chief to evaluate what changes may be appropriate.
3. Once a determination is made to propose a revision to one or more inspection program guidance documents, the issue manager will develop and submit a feedback form using the process in IMC 0801, "Reactor Oversight Program Feedback Program."

07.04 Operating Experience in the Assessment Process. Regional offices are directed to consider OpE as part of the mid-cycle and end-of-cycle assessments discussed in IMC 0305, "Operating Reactor Assessment Program."

- a. During these reviews, regionwide OpE and emerging trends should be evaluated to determine whether any general areas of concern might be identified. Before the mid-cycle and end-of-cycle assessments, Regional offices are provided a Notable OpE report (prepared by IOEB) that addresses the OpE events of concern and any trend over the previous 6 to 12 months. If more specific information is necessary, Regional offices should consider requesting assistance from IOEB. Reactor OpE points of contact are listed on the [Reactor OpE Information Gateway](#).
- b. The Region should use relevant OpE, current OpESSs, and emerging trends to inform inspection planning and the selection of focused inspection samples.
- c. Any areas of concern identified during the mid-cycle and end-of-cycle assessments should be communicated to NRR/DIRS as follows:
  1. Issues or concerns associated with OpE should be communicated to IOEB through the Regional OpE coordinator.
  2. Issues or concerns associated with the ROP or program documents should be communicated through the ROP feedback form process.

## 2523-08 REFERENCES

IMC 0040, "Preparing, Revising, and Issuing Documents for the NRC Inspection Manual"

IMC 0305, "Operating Reactor Assessment Program"

IMC 0307, Appendix B, "ROP Realignment Process"

IMC 0350, "Oversight of Reactor Facilities in Shutdown Condition due to Significant Performance and/or Operational Concerns"

IMC 0612, "Power Reactor Inspection Reports"

IMC 0801, "Reactor Oversight Process Feedback Program"

IMC 0970, "Potentially Generic Items Identified by Regional Offices"

IMC 2515, "Light-Water Reactor Inspection Program – Operations Phase"

MD 8.7, "Reactor Operating Experience Program"

NRR OI LIC-401, "NRR Reactor Operating Experience Program"

NRR OI LIC-503, "Generic Communications Affecting Nuclear Reactor Licensees"

[Reactor OpE Information Gateway](#) (This NRC internal website contains preliminary, predecisional information)

[OpE Community Forum](#) (This NRC internal website contains preliminary, predecisional information)

END

ATTACHMENT 1

Revision History for IMC 2523

Commitment Tracking Number	Issue Date	Description of Change	Training Needed	Training Completion Date	Comment Resolution Accession Number
N/A	ML11242A061 11/16/11 CN 11-035	Initial issuance. Researched commitments for 4 years and found none.	None	N/A	ML11298A202