

U.S. NUCLEAR REGULATORY COMMISSION

DIRECTIVE TRANSMITTAL

TN: DT-06-18

To: NRC Management Directives Custodians

Subject: Transmittal of Management Directive 8.7, "Reactor Operating Experience Program"

Purpose: Directive 8.7 is being issued to provide agency-level guidance for the recently implemented Reactor Operating Experience (OpE) Program. The implementation of this new program is a result of recommendations from the Davis-Besse Lessons Learned Task Force (DBLLTF).

Office of Origin: Office of Nuclear Reactor Regulation

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Directive: 8.7 Reactor Operating Experience Program

Availability: Rulemaking, Directives and Editing Branch
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Reactor Operating Experience Program

Directive
8.7

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U. S. Nuclear Regulatory Commission

Volume: 8 Licensee Oversight Programs

NRR

Reactor Operating Experience Program Directive 8.7

Policy (8.7-01)

It is the policy of the U.S. Nuclear Regulatory Commission to have an effectively coordinated program to systematically review operating experience (OpE) gained from the nuclear power industry and research and test reactors, assess its significance, provide timely and effective communication to stakeholders, and apply the lessons learned to regulatory decisions and programs affecting nuclear reactors.

Objectives (8.7-02)

The objectives of the agency's Reactor OpE Program are as follows:

- To collect, evaluate, communicate, and apply OpE information in a systematic, timely, and coordinated manner to effectively support the agency's goal of ensuring safety. Application includes sharing significant OpE information with the nuclear industry in a timely manner so that the industry can ensure safety. (021)
- To coordinate use of OpE information to improve the effectiveness, efficiency, and appropriateness of NRC decisions. Evaluations of OpE provide fundamental information necessary to improve safety assessments and help optimize NRC decisions. Lessons learned from OpE evaluations influence regulatory decisions to improve NRC regulatory programs, including licensing and inspection. (022)

Objectives

(8.7-02) (continued)

- To facilitate providing the public, Congress, and other external stakeholders with accurate, timely, and balanced OpE information, including actual or potential hazards to health and safety, thereby enhancing understanding of the performance of both the nuclear industry and licensed plants. (023)

Organizational Responsibilities and Delegations of Authority

(8.7-03)

Commission

(031)

Acts on the most serious reactor events or conditions that are brought to its attention after an OpE review determines that the significance of the event or the condition impacting or potentially impacting public health and safety, common defense and security, and protection of the environment requires the immediate attention of the Commission.

Executive Director for Operations (EDO)

(032)

- Oversees the agency's interoffice Reactor OpE Program and directs appropriate office roles and responsibilities. (a)
- Directs actions, as necessary, to the appropriate office(s) in response to significant reactor OpE events or conditions. (b)
- Manages and updates, as necessary, portions of the Memorandum of Agreement between NRC and the Institute of Nuclear Power Operations (INPO) that are germane to OpE. (c)

Organizational Responsibilities and
Delegations of Authority
(8.7-03) (continued)

Advisory Committee on Reactor
Safeguards (ACRS)
(033)

Reviews, as necessary, significant reactor OpE information and the staff's OpE-related studies and advises the Commission with regard to their impact on public health, safety, environment, and common defense and security at proposed or existing reactor facilities.

Director, Office of International
Programs (OIP)
(034)

- Serves as the principal contact for the establishment and administration of formal arrangements between NRC and the agencies of foreign countries and international organizations for the exchange and collection of nuclear plant OpE information. (a)
- Serves as the formal contact for obtaining international OpE information and transferring it to the OpE Clearinghouse for further processing. (b)

Director, Office of Information
Services (OIS)
(035)

Supports, as necessary, the Offices of Nuclear Reactor Regulation (NRR), Nuclear Regulatory Research (RES), and Nuclear Security and Incident Response (NSIR), and the regions in providing efficient information technology solutions to the agency's Reactor OpE Program.

Organizational Responsibilities and
Delegations of Authority
(8.7-03) (continued)

Director, Office of Nuclear
Reactor Regulation (NRR)
(036)

- Leads the agency's Reactor OpE Program. (a)
- Provides resources to ensure the implementation and periodic updates of this management directive (MD) and NRR Office Instruction LIC-401, "NRR Reactor Operating Experience Program." (b)
- Assigns a senior manager as a single point of contact to coordinate overall Reactor OpE Program activities and to measure effectiveness. (c)
- Directs prompt review and analysis of significant domestic and international OpE. (d)
- Oversees the OpE Clearinghouse to facilitate the Reactor OpE Program. (e)
- Provides resources to ensure that OpE information is appropriately evaluated and applied in support of core office programs, such as licensing, oversight, rulemaking, and incident response. (f)
- Serves as sponsor for the communication of OpE through the Web and other information technology, in coordination with OIS, as necessary, and ensures review and approval of information technology applied in OpE in accordance with the agency management policy for Capital Planning and Investment Control. (g)
- Provides process to coordinate incorporation of significant lessons learned from the OpE program into regulatory programs, for example, oversight, licensing, rulemaking, and incident response. (h)

Organizational Responsibilities and
Delegations of Authority
(8.7-03) (continued)

Director, Office of Nuclear
Reactor Regulation (NRR)
(036) (continued)

- Institutes program metrics aligned with the agency's strategic plan and the OpE program attributes to measure the internal effectiveness of the OpE program. (i)
- Conducts periodic assessment of the Reactor OpE Program. (j)
- Provides a program for assessing external effectiveness of the Reactor OpE Program. (k)
- Coordinates with NSIR to identify reactor OpE information that could impact nuclear security or security events that could impact nuclear safety. (l)

Director, Office of Nuclear
Regulatory Research (RES)
(037)

- Directs the reviews and evaluations of OpE information to identify precursors to potential core damage sequences and to support the Industry Trends Program in the areas of initiating event frequencies, system and component reliability, and common-cause failures. (a)
- Supports near-term reviews, conducts analyses, and develops products on the basis of significant domestic and international OpE. (b)
- Provides summary evaluations of RES studies that could provide OpE insights. These evaluations contain distilled OpE findings and lessons learned, along with recommendations for

Organizational Responsibilities and
Delegations of Authority
(8.7-03) (continued)

Director, Office of Nuclear
Regulatory Research (RES)
(037) (continued)

application. The evaluations are input into the OpE information process. (c)

- Directs the Generic Safety Issues Program. (d)
- Coordinates with NRR to provide OpE information through the Web and other information technology. Provides a licensee event report (LER) search system. (e)
- Provides resources for coordinating and utilizing the Institute of Nuclear Power Operation (INPO) Equipment Performance Information and Exchange System (EPIX) data. (f)
- Oversees development of risk analysis tools and models and institutes a program to provide periodic feedback to agency and licensee risk models based on OpE lessons learned from the application of these tools and models. (g)

Director, Office of Nuclear Security
and Incident Response (NSIR)
(038)

- Manages the agency's incident response function, which provides the program to receive and disseminate OpE information reported to the agency's Headquarters Operations Center. (a)
- Coordinates with other NRC program offices, as necessary, to identify security-related issues that could impact reactor safety, or reactor safety events that could impact security. (b)

Organizational Responsibilities and
Delegations of Authority
(8.7-03) (continued)

Regional Administrators (RAs)
(039)

- Provide for prompt reviews of plant-specific events and conditions, including onsite followup, and provide the information to the OpE Clearinghouse. (a)
- Coordinate regional efforts with other NRC offices that share OpE responsibilities to (1) evaluate significant OpE, (2) apply lessons learned from OpE evaluations to improve regulatory programs and activities, and (3) provide feedback on the effectiveness of the application of OpE information to improve reactor operations and regulatory programs and activities. (b)
- Identify reactor safety issues that could require evaluation by the Reactor OpE Program. (c)
- Provide resources to support the Reactor OpE Program in obtaining additional information necessary to facilitate OpE screening or evaluation. (d)
- Provide feedback on the effectiveness of OpE communication tools and program integration. (e)
- Specify regional OpE program needs. (f)
- Provide designated representatives to support the Reactor OpE Program and to interact with the other Reactor OpE Program coordinators in order to integrate agencywide OpE processes. (g)

Director, Office of Administration (ADM)
(0310)

Provides translation services for foreign documents associated with operational safety data (see MD 3.12) and technical editing

Organizational Responsibilities and
Delegations of Authority
(8.7-03) (continued)

Director, Office of Administration (ADM)
(0310) (continued)

and publishing services to NRC offices as requested to support the program.

Director, Office of Human Resources (HR)
(0311)

- Supports the Reactor OpE Program and program offices for providing knowledge transfer of OpE, as appropriate, through Human Resources Training and Development. (a)
- Assists in developing knowledge transfer tools to support the Reactor OpE Program. (b)

Applicability
(8.7-04)

The policy and guidance in this directive apply to all NRC employees.

Definitions
(8.7-05)

Long-term review - Comprehensive studies in which many years of OpE information is typically aggregated and evaluated from a technical perspective. These reviews are generally provided by RES. The study results are then integrated into the regulatory process, as appropriate. There are many types of long-term reviews, such as system and component studies, risk and reliability studies, studies of engineering issues, and long-term trending and analyses.

Definitions

(8.7-05) (continued)

Near-term review - A review performed in generally 1 year or less, with timeliness commensurate with safety significance. These near-term reviews are generally provided by NRR. Some trends and evaluation activities in NRR and RES tend to balance near-term and longer term reviews. Near-term studies tend to deal with issues that are covered by regulatory requirements and their main focus is on determining safety significance and assessing generic implications for OpE applications.

OpE Clearinghouse - The centralized team that performs the key functions and activities of the Reactor OpE Program. 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 communication of OpE lessons learned; and (4) coordinating NRC OpE activities among organizations performing OpE functions.

OpE information - Various sources of OpE information include Daily Event Notifications (10 CFR 50.72), LERs (10 CFR 50.73), regional daily events briefings, NRC Inspection Findings, International Atomic Energy Agency (IAEA) and Nuclear Energy Agency (NEA) Incident Reporting System (IRS) reports, INPO documents, 10 CFR Part 21 reports, and other internal and external studies.

Power Reactors - Reactors licensed for the production of electrical power.

Reactors - All licensed reactors, that is, power and research and test reactors.

Research and Test Reactors - Reactors licensed for the purposes of research and development or medical therapy.

Handbook
(8.7-06)

In place of a handbook, office-level guidance such as LIC-401, “NRR Reactor Operating Experience Program” (NRR), and TEC-001, “Coordination of RES Operating Experience Issues and Products with the NRC Operating Experience (OpE) Program” (RES), is available for specific procedures. These guidance documents are listed in the Reference section below.

References
(8.7-07)

Code of Federal Regulations

Title 10, “Energy.”

U.S. Nuclear Regulatory Commission

Management Directives

3.12, “Handling and Disposition of Foreign Documents and Translations.”

3.14, “U.S. Nuclear Regulatory Commission External Web Site.”

5.2, “Memoranda of Understanding With States.”

5.12, “International Nuclear Event Scale Participation.”

6.3, “The Rulemaking Process.”

6.4, “Generic Issues Program.”

8.1, “Abnormal Occurrence Reporting Procedure.”

8.2, “NRC Incident Response Program.”

8.3, “NRC Incident Investigation Program.”

References

(8.7-07) (continued)

8.13, "Reactor Oversight Process."

12.6, "NRC Sensitive Unclassified Information Security Program."

NUREG-Series Publications

NUREG-0933, "A Prioritization of Generic Safety Issues."

NUREG-1022, "Event Reporting Guidelines—10 CFR 50.72 and 50.73."

Other Documents

LIC-401, "NRR Reactor Operating Experience Program" (NRR).

Memorandum of Agreement Between NRC and the Institute of Nuclear Power Operations (INPO).

OVRST-300, "NRR Audit/Self-Assessment Program" (NRR).

Reactor Operating Experience Task Force Report, November 26, 2003, ADAMS No. ML 033350063.

TEC-001, "Coordination of RES Operating Experience Issues and Products with the NRC Operating Experience (OpE) Program" (RES).

United States Code

Energy Reorganization Act of 1974, as amended, Section 208, Abnormal Occurrence Reporting (42 U.S.C. 5801 et seq.).