



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 2, 2017

MEMORANDUM TO: Christopher G. Miller, Director
Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation

FROM: Shaun Anderson, Branch Chief */RA/*
Reactor Inspection Branch
Division of Inspection and Regional Support
Office of Nuclear Reactor Regulation

SUBJECT: WORKING GROUP TO UPDATE THE REACTOR OVERSIGHT
PROCESS FOR REGULATORY ACTIONS TAKEN FOLLOWING THE
FUKUSHIMA DAI-ICHI ACCIDENT

The purpose of this memorandum is to establish of a working group to integrate the results of the regulatory actions taken by the U.S. Nuclear Regulatory Commission (NRC) following the Fukushima Dai-ichi accident into the Reactor Oversight Process (ROP). Many of these regulatory actions resulted in changes to the current licensing basis (CLB)¹ for currently operating reactors subject to the ROP and warrant consideration for incorporation in ROP program documents. The Japan Lessons-Learned Division, Office of Nuclear Reactor Regulation, has indicated a desire to establish a working group on the basis that there is the potential for significant stakeholder interaction associated with changes to the ROP to incorporate the treatment of these regulatory actions. This working group will follow the attached charter and Inspection Manual Chapter (IMC) 0040, "Preparing, Revising and Issuing Documents for the NRC Inspection Manual," (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16273A037) in developing changes to the ROP. Jane E. Marshall, Director, Japan Lessons-Learned Division, Office of Nuclear Reactor Regulation, is designated as the Senior Executive Service (SES) champion for the effort. Staff efforts will be accounted for under cost activity code A11023, NB-OP RX-OVERSIGHT-FUKUSHIMA-115212-N.

Enclosure:
As stated

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¹ As defined in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 54.3, "Definitions" and LIC-100, Revision 1, "Control of Licensing Bases Operating Reactors."

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FOR REGULATORY ACTIONS TAKEN FOLLOWING THE FUKUSHIMA
DAI-ICHI ACCIDENT DATED OCTOBER 2, 2017

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***via email**

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CHARTER FOR THE WORKING GROUP TO INCORPORATE POST-FUKUSHIMA REGULATORY ACTIONS IN THE REACTOR OVERSIGHT PROCESS

Objective

The purpose of this charter is to establish the structure, scope, and expectations for the working group to incorporate post-Fukushima regulatory actions in the Reactor Oversight Process (ROP). The objective of this effort is to identify regulatory actions that resulted in changes to the current licensing basis (CLB), as defined in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 54.3, "Definitions," and LIC-100, Revision 1, "Control of Licensing Bases for Operating Reactors," for currently operating reactors subject to the ROP that warrant modifications to the ROP. Following identification of those areas that warrant modifications, the working group will prepare revised or new ROP program documents using the guidance of Inspection Manual Chapter (IMC) 0040, "Preparing, Revising and Issuing Documents for the NRC Inspection Manual," (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16273A037) and this charter.

Background

In response to the events at Fukushima Dai-ichi, the NRC issued three orders. These are Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated March 12, 2012 (ADAMS Accession No. ML12054A735), Order EA-12-051, "Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," dated March 12, 2012 (ADAMS Accession No. ML12056A044), and Order EA-13-109, "Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions," dated June 6, 2013 (ADAMS Accession No. ML13143A334). The NRC also issued a 10 CFR 50.54(f) request for information, and initiated a rulemaking on the lessons learned from the accident. These orders, the licensees' actions stemming from the request for information and the outcome of the rulemaking, as described below, constitute the majority of the new requirements the working group will consider for incorporation into the ROP.

In the course of the rulemaking, the Commission further directed the staff in Staff Requirements Memorandum (SRM)-SECY-15-0065, "Proposed Rule: Mitigation of Beyond-Design-Basis Events (RIN 3150-AJ49)," dated August 27, 2015, ADAMS Accession No. ML15239A767, to "update the [ROP] to explicitly provide periodic oversight of industry's implementation of the [Severe Accident Management Guidelines] SAMGs," which are the subject of a set of regulatory commitments mandated by the Nuclear Energy Institute (NEI) Nuclear Strategic Issues Advisory Committee (NSIAC) as an Industry Initiative. (See NEI letter, dated October 26, 2015, "Industry Initiative to Maintain Severe Accident Management Guidelines," ADAMS Accession No. ML15335A442.) All currently operating power reactor licensees have made regulatory commitments adopting their associated owners groups' generic severe accident management guidelines as self-imposed standards for this effort. The NRC staff have already undertaken efforts to incorporate SAMG oversight into the ROP. Inspection Procedure (IP) 71111.18, "Plant Modifications," (ADAMS Accession No. ML16306A185) was recently revised and went into effect on January 1, 2017 to allow for oversight of SAMGs in a plant's configuration management process. An additional ROP revision will be needed to allow for oversight of the site specific incorporation of PWROG/BWROG SAMG guidance revisions.

Additionally, currently operating power reactor licensees have committed to implement, and have implemented additional measures, such as multi-source term dose assessment capabilities. While the agency has performed numerous audits, and completed inspections under temporary instructions of licensee compliance with the orders, long-term oversight should be established and incorporated into the ROP to verify continued compliance/conformance.

Scope

The working group will assess the post-Fukushima regulatory actions (requirements and licensee commitments) in order to capture them appropriately in ROP program documents. The working group will develop inspection procedures, or revise existing inspection procedures, as appropriate. The working group will also develop or revise associated ROP program documents, if needed. The post-Fukushima regulatory actions to be addressed include:

- Proposed requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.155, "Mitigation of Beyond-Design-Basis Events," provided to the Commission in SECY-16-0142, "Draft Final Rule – Mitigation of Beyond-Design-Basis Events (ADAMS Accession No. ML16301A005) as supplemented on February 22, 2017 (ADAMS Accession No. ML17045A163).¹
- Requirements imposed by Order EA-13-109, "Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions," dated June 6, 2013 (ADAMS Accession No. ML13143A334)
- Implementation of SAMGs per licensee commitments
- Implementation of multi-source dose assessment capabilities per licensee commitments
- Implementation of modifications associated with Focused Evaluations and Integrated Assessments per licensee commitments (discussed in COMSECY-15-0019: Enclosure 1, ADAMS Accession No. ML15153A110)

The key expectations in developing new or revised ROP program documents include:

- The baseline inspection program will continue to be risk-informed. Oversight should be commensurate with the beyond-design-basis nature of the strategies and equipment. The scope and level of effort should be appropriate to the nature of the post-Fukushima regulatory actions and relative to other baseline inspection procedure requirements.
- Appropriate interaction with internal and external stakeholders is important in the development of any new or revised ROP program document.

¹ The working group will take into account the current requirements of Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated March 12, 2012 (ADAMS Accession No. ML12054A735), Order EA-12-051, "Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," dated March 12, 2012 (ADAMS Accession No. ML12056A044), and 10 CFR 50.54(hh)(2), all of which would be incorporated into 10 CFR 50.155 once the rule is finalized, pending receipt of Commission direction on SECY-16-0142.

In developing new or revised ROP program documents, the following aspects will be considered.

- Possible inspection formats include a new single procedure for beyond-design-basis oversight, required samples integrated into existing procedures, flexibility in sample selection integrated into existing procedures, or a determination that no ROP baseline oversight is needed.
- Some beyond-design-basis requirements are inspected in existing procedures (i.e., SAMGs, B.5.b). If a new single procedure is developed, the group should consider relocating existing inspection requirements into the new inspection procedure if efficiency can be achieved.
- Consider if any outcomes from the Working Group on Improving the Effectiveness and Efficiency of Engineering Inspections (ML17172A620) can be leveraged. In addition, any new or revised ROP program documents should not conflict with any proposals from the Working Group on Improving the Effectiveness and Efficiency of Engineering Inspections.
- Consider if existing ROP program documents need to be revised to reflect that licensees may credit FLEX in activities beyond the requirements of the proposed rule.
- Perform oversight on a sample of full strategies (similar to TI 2515-191) or only consider oversight for changes from items previously inspected.
- Consider incorporation of a vertical slice inspection of flood protection measures (including engineering design basis reviews) and vertical slice inspection of mitigating strategies.
- Consider lessons learned from previous mitigation strategies inspections.
- Consider if a revision to IMC 612, Appendix E, “Examples of Minor Issues,” is needed or if use of a cross-regional panel to disposition issues identified during inspection implementation is needed. If a revision to IMC 612 Appendix E is determined to be warranted or if use of a cross-regional panel is determined to be warranted, such effort would be considered to be outside the scope of this working group.
- Consider if revisions to IMC 0609, “Significance Determination Process,” are needed, including associated attachments and appendixes. If revisions to IMC 0609 are determined to be warranted, such effort would be considered to be outside the scope of this working group.

Participation

The working group will consist of designated representatives as indicated in Table 1, “List of Working Group Members.” If the group determines that additional expertise and involvement is needed, additional staff will participate as necessary.

Meetings

Working group members designated as “participants” will meet weekly initially and then every two weeks as the ROP program documents are further developed. Working group members designated as “participants as needed” will attend meetings when there are planned discussions on topics related to or under their purview. Working group members designated as “participants as needed” are free to attend other meetings if they desire to do so. The meetings will typically last one hour with date and time to be determined based on member availability. Routine meetings are expected to last until all ROP program documentation revisions are finalized. The Senior Executive Service (SES) champion will be invited to all meetings, however SES champion attendance at meetings is not mandatory.

Communications

As ROP program documents are developed, it is essential that routine communications occur with the various internal and external stakeholders. The working group will brief the SES champion on a weekly basis, or as deemed necessary by the SES champion. As a minimum, communications with other internal and external stakeholders will occur upon commencement and completion of key milestones, and as further deemed necessary. Possible communication venues include, but are not limited to, internal Headquarters and Regions Fukushima-Related Bi-Weekly Call, internal Headquarters and Regions Director Bi-Weekly Call, and external ROP public meetings. For NRC Headquarters management, briefings will also be conducted with the Deputy Executive Director for Reactor and Preparedness Programs, the NRR Executive Team, the NSIR Executive Team, various NRR division directors, including JLD and Division of Inspection and Regional Support and NSIR division directors, including the Division of Preparedness and Response. All working group participants will ensure that their management is kept informed throughout the effort.

In addition, the appropriate level of Commission interaction will occur per COMSECY-16-0022, “Proposed Criteria for Reactor Oversight Process Changes Requiring Commission Approval and Notification,” (ADAMS Accession No. ML17132A359).

Key Milestones

March 2018	Develop final proposals (i.e. NRC management approval on proposal for inspection requirements, level of effort, resource estimates, etc.)
June 2018	Issue draft ROP program documents
June 2019	Issue final ROP program documents
January 2020	Begin implementation of new ROP program documents. Ensure appropriate level of Commission interaction.

Disband

The working group will disband upon implementation of the new ROP program documents. Consideration can be given to disbanding the working group after issuance of the final ROP program documents if no further substantial effort is expected at that time.

Time Reporting

All activities will be documented in HRMS using CAC No. A11023.

Table 1: Working Group Members

Working Group Members	Role
NRR/JLD (Jane E. Marshall, Director)	Senior Executive Service Champion
NRR/DIRS/IRIB (Aron Lewin)	Participant / Project Management Lead
NRR/JLD/JOMB (Eric Bowman with Joylynn Quinones-Navarro as back-up)	Participant / Project Management Alternate Lead
NRR/DRA/APHB (Matthew Humberstone-Reliability & Risk Analyst)	Participant
Region 1 (Christopher Lally)	Participant
Region 2 (Reinaldo Rodriguez)	Participant
Region 3 (Stuart Sheldon)	Participant
Region 4 (Ryan Alexander)	Participant
NRR/DIRS/IRIB (Jim Isom - Chair for Working Group on Improving the Effectiveness and Efficiency of Engineering Inspections)	Participant as Needed
NSIR (Charles Murray with Eric Schrader as back-up - Multi-source dose assessment capabilities)	Participant as Needed
NRR/DRA/ARCB (Kristy Bucholtz & Elijah Dickson - SAMG leads)	Participant as Needed