



JAPAN LESSONS-LEARNED PROJECT DIRECTORATE

JLD-ISG-2012-##

**Guidance for Performing the Integrated
Assessment for Flooding**

DRAFT Interim Staff Guidance

Revision 0

(Draft for use at public meeting on September 12-13, 2012)



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INTERIM STAFF GUIDANCE
JAPAN LESSONS-LEARNED PROJECT DIRECTORATE
GUIDANCE FOR PERFORMING THE INTEGRATED ASSESSMENT FOR
EXTERNAL FLOODING
JLD-ISG-12-##**

PURPOSE

This interim staff guidance (ISG) is being issued to describe to stakeholders methods acceptable to the staff of the U.S. Nuclear Regulatory Commission (NRC) for performing the Integrated Assessment for external flooding as described in NRC's March 12, 2012 request for information (Ref. (1)) issued pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.54(f) regarding Recommendation 2.1 of SECY-11-0093, *Recommendations for Enhancing Reactor Safety in the 21st Century, the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident* (Ref. (2)). Among other actions, the March 12, 2012 letter requests that respondents reevaluate flood hazards at each site and compare the reevaluated hazard to the current design basis at the site for each flood mechanism. Addressees are requested to perform an Integrated Assessment if the current design basis flood hazard does not bound the reevaluated flood hazard for all mechanisms. This ISG will assist operating power reactor respondents and holders of construction permits under 10 CFR Part 50 with performance of the Integrated Assessment. It should be noted that the guidance provided in this ISG is not intended to describe methods for use in regulatory activities beyond the scope of the March 12, 2012, 50.54(f) letter.

BACKGROUND

Following the events at the Fukushima Dai-ichi nuclear power plant, the NRC established a senior-level agency task force referred to as the Near-Term Task Force (NTTF). The NTTF conducted a systematic and methodical review of the NRC regulations and processes and determined if the agency should make additional improvements to these programs in light of the events at Fukushima Dai-ichi. As a result of this review, the NTTF developed a comprehensive set of recommendations, documented in SECY-11-0093(Ref. (2)). These recommendations were enhanced by the NRC staff following interactions with stakeholders. Documentation of the NRC staff's efforts is contained in SECY-11-0124, *Recommended Actions To Be Taken Without Delay From the Near Term Task Force Report*, dated September 9, 2011 (Ref. (3)), and SECY-11-0137, *Prioritization of Recommended Actions To Be Taken in Response to Fukushima Lessons Learned*, dated October 3, 2011(Ref. (4)).

As directed by the staff requirements memorandum for SECY-11-0093 (Ref. (2)), the NRC staff reviewed the NTTF recommendations within the context of the NRC's existing regulatory framework and considered the various regulatory vehicles available to the NRC to implement the recommendations. SECY-11-0124 and SECY-11-0137 established the staff's prioritization of the recommendations based upon the potential safety enhancements.

As part of the staff requirements memorandum for SECY-11-0124, dated October 18, 2011 (Ref. (5)), the Commission approved the staff's proposed actions, including the development of

three information requests under 10 CFR 50.54(f). The information collected would be used to support the NRC staff's evaluation of whether further regulatory action should be pursued in the areas of seismic and flooding design, and emergency preparedness.

In addition to Commission direction, the Consolidated Appropriations Act, Public Law 112-074, was signed into law on December 23, 2011. Section 402 of the law requires a reevaluation of licensees' design basis for external hazards.

In response to the aforementioned Commission and Congressional direction, the NRC issued a request for information to all power reactor licensees and holders of construction permits under 10 CFR Part 50 on March 12, 2012 (Ref. (1)). The March 12, 2012 50.54(f) letter includes a request that respondents reevaluate flooding hazards at nuclear power plant sites using updated flooding hazard information and present-day regulatory guidance and methodologies. The letter also requests the comparison of the reevaluated hazard to the current design basis at the site for each potential flood mechanism. If the reevaluated flood hazard at a site is not bounded by the current design basis, respondents are requested to perform an Integrated Assessment. The Integrated Assessment will evaluate the total plant response to the flood hazard, considering multiple and diverse capabilities such as physical barriers, temporary protective measures, and operational procedures. The NRC staff will review the responses to this request for information and determine whether regulatory actions are necessary to provide additional protection against flooding.

RATIONALE

On March 12, 2012, NRC issued a request for information to all power reactor licensees and holders of construction permits under 10 CFR Part 50. The request was issued in accordance with the provisions of Sections 161.c, 103.b, and 182.a of the Atomic Energy Act of 1954, as amended (the Act), and NRC regulation in Title 10 of the *Code of Federal Regulations*, Part 50, Section 50.54(f). Pursuant to these provisions of the Act or this regulation, respondents were required to provide information to enable the staff to determine whether a nuclear plant license should be modified, suspended, or revoked.

The information request directed respondents to submit an approach for developing an Integrated Assessment Report including criteria for identifying vulnerabilities. This ISG describes an approach for developing the Integrated Assessment Report that is acceptable to the staff.

APPLICABILITY

This ISG shall be implemented on the day following its approval. It shall remain in effect until it has been superseded or withdrawn.

PROPOSED GUIDANCE

This ISG is applicable to holders of operating power reactor licensees and construction permits under 10 CFR Part 50 from whom an Integrated Assessment is requested (i.e., sites for which the current design basis flood hazard does not bound the reevaluated hazard for all potential flood mechanisms). For combined license holders under 10 CFR Part 52, the

issues in NTTF Recommendation 2.1 and 2.3 regarding seismic and flooding reevaluations and walkdowns are resolved and thus this ISG is not applicable.

IMPLEMENTATION

Except in those cases in which a licensee or construction permit holder under 10 CFR Part 50 proposes an acceptable alternative method for performing the Integrated Assessment, the NRC staff will use the methods described in this ISG to evaluate responses to the portions of the March 12, 2012 request for information related to the Integrated Assessment.

BACKFITTING DISCUSSION

Licensees and construction permit holders under 10 CFR Part 50 may use the guidance in this document to meet the intent of the portions of the March 12, 2012 request for information related to the Integrated Assessment. Accordingly, the NRC staff issuance of this ISG is not considered backfitting, as defined in 10 CFR 50.109(a)(1), nor is it deemed to be in conflict with any of the issue finality provisions in 10 CFR Part 52.

FINAL RESOLUTION

The contents of this ISG, or a portion thereof, may subsequently be incorporated into other guidance documents, as appropriate.

ATTACHMENTS

1. Guidance for performance of Integrated Assessment

REFERENCES [#INCOMPLETE AND UNFORMATTED]

1. USNRC. *#INSERT Reference to NRC 50.54(f) letter. ML #.*
2. **U.S. Nuclear Regulatory Commission.** *Recommendations for Enhancing Reactor Safety in the 21st Century, The Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident, SECY-11-0093.* July 12, 2011. ADAMS Accession No. ML111861807.
3. **USNRC.** *#INSERT Reference to SECY-11-0124, Recommended Actions To Be Taken Without Delay From the Near Term Task Force Report.* September 9, 2011.
4. —. *#INSERT Reference to SECY-11-0137, Prioritization of Recommended Actions To Be Taken in Response to Fukushima Lessons Learned.* October 3, 2011.
5. —. *#INSERT Reference to SRM for SECY-11-0124.* ADAMS Accession No. ML 112911571.