FINAL SUPPORTING STATEMENT

FOR

REQUEST FOR INFORMATION PURSUANT TO 10 CFR 50.54(f)
REGARDING RECOMMENDATIONS 2.1, 2.3 AND 9.3, OF THE NEAR-TERM TASK FORCE
REVIEW OF INSIGHTS FROM THE FUKUSHIMA DAI-ICHI EVENT

(3150-0211)
EXTENSION

Description of the Information Collection

Title 10 of the *Code of Federal Regulations* (10 CFR) 50.54(f) of the U.S. Nuclear Regulatory Commission (NRC) regulations provides that a licensee shall, upon request by the Commission, submit written statements under oath or affirmation to enable the Commission to determine whether a license should be modified, suspended, or revoked. When the NRC staff has identified a potential health, safety, environmental or security deficiency at a particular plant or series of plants, the staff may require a licensee or licensees to submit information to evaluate the particular situation and to make a determination whether the situation is serious enough to require that the Commission issue an order to modify, revoke, or suspend the license to operate a nuclear reactor.

Following events at the Fukushima Dai-ichi nuclear power plant resulting from the March 11, 2011, Great Tōhoku Earthquake and subsequent tsunami, and in response to requirements contained in Section 402 of the Consolidated Appropriations Act (Public Law 112-074), the NRC issued letters to 104 power reactors licensees, 2 power reactors in the process of resuming licensing, and 4 reactors under construction with combined licenses (COLs) pursuant to 10 CFR 50.54(f) requesting the following information:

- Seismic and flooding hazard reevaluations to determine if further regulatory action is necessary
- Walkdowns to confirm compliance with the current licensing basis and provide input to the hazard reevaluations
- Analysis of the Emergency Preparedness capability with respect to staffing and communication ability during a prolonged multiunit event

The letters requested the one-time collection of information but allowed for implementation over a 7-year period. Most of the reports have been submitted but some reports are still pending; as a result, an extension is needed. The NRC is not changing the letters or other requirements set out in the previous information collection request.

A. JUSTIFICATION

1. Need For and Practical Utility of the Collection of Information

Protection from natural phenomena is critical for safe operation of nuclear power plants. Failure to protect structures, systems, and components important to safety from natural phenomena with appropriate safety margins has the potential to result in common-cause failures with significant consequences, as was demonstrated at

Fukushima. Additionally, the consequences of an accident from some natural phenomena may be aggravated by a “cliff-edge” effect, in that a small increase in the hazard (e.g., flooding level) may sharply increase the number of structures, systems, and components affected.

Current NRC regulations and associated regulatory guidance provide a robust regulatory approach for the evaluation of site hazards associated with natural phenomena. However, this framework has evolved over time as new information regarding site hazards and their potential consequence has become available. As a result, the licensing basis, design, and level of protection from natural phenomena differ among the existing operating reactors in the United States, depending on when the plant was constructed and licensed for operation. Additionally, the assumptions and factors that were considered in determining the level of protection necessary at these sites vary depending on a number of contributing factors. To date, the NRC has not undertaken a comprehensive re-establishment of the design basis for existing plants to reflect the current state of knowledge or current licensing criteria.

As the state of knowledge of these hazards has evolved significantly since the licensing of many of the plants within the U. S., and given the demonstrated consequences from Fukushima, it is necessary to confirm the appropriateness of the hazards assumed for U.S. plants and their ability to protect against them.

In response to the events the Fukushima Dai-ichi nuclear power plant resulting from the March 11, 2011, Great Tōhoku Earthquake and subsequent tsunami, Congress directed the NRC in Section 402 of the Consolidated Appropriations Act (Public Law 112-074) to collect information from reactor licensees as described below:

> The Nuclear Regulatory Commission shall require reactor licensees to re-evaluate the seismic, tsunami, flooding, and other external hazards at their sites against current applicable Commission requirements and guidance for such licensees as expeditiously as possible, and thereafter when appropriate, as determined by the Commission, and require each licensee to respond to the Commission that the design basis for each reactor meets the requirements of its license, current applicable Commission requirements and guidance for such license. Based upon the evaluations conducted pursuant to this section and other information it deems relevant, the Commission shall require licensees to update the design basis for each reactor, if necessary.

In accordance with Commission direction, the information collection request included the following:

General

- Confirmation of receipt of the 10 CFR 50.54(f) request within 30 days. The required response is a written statement, signed under oath or affirmation.
- Response indicating inability to comply with information request (60 days for emergency preparedness responses and 90 days for all other requests)

Hazard reevaluation

The reevaluation and related analysis will also serve to meet NRC’s obligation

under the Consolidated Appropriations Act for 2012 (Pub Law 112-74), Section 402, and also affords licensees the opportunity to inform the NRC regarding safety-related decisions.

- Submission of method for performing reevaluation and assessment of seismic and flooding hazards
- Submission of reevaluation of site seismic and flooding hazards
- Submission of an assessment of the impact on the plant of the reevaluated hazards

Walkdowns

The results from these walkdowns are expected to capture any degraded, non-conforming conditions, and cliff-edge effects for flooding so that they are addressed by the licensee's corrective action program.

- Submission of method for performing seismic and flooding walkdowns
- Submission report on seismic and flooding walkdowns

Emergency Preparedness (EP)

The accident at Fukushima reinforced the need for effective EP, the objective of which is to ensure the ability to implement effective measures to mitigate the consequences of a radiological emergency. In addition, the accident at Fukushima highlighted the need to determine the number and qualifications of staff to fill all necessary positions to respond to a multi-unit event. Finally, there is a need to ensure that the communication equipment relied upon to coordinate the event response during a prolonged station blackout can be powered.

- Submission of emergency preparedness communications assessment and draft and final assessments of staffing

The NRC engaged with stakeholders in developing generic guidance for licensee responses to the information collections contained in the 50.54(f) letters. The NRC staff issued guidance or endorsements of industry guidance on the following dates:

- Guidance for performing the Integrated Assessment for External Flooding, November 30, 2012 (Agencywide Documents Access and Management System ADAMS Accession No. ML12311A214)
- Guidance for Performing a Tsunami, Surge, or Seiche Hazard Assessment, January 4, 2013 (ADAMS Accession No. ML12314A412)
- Guidance on Performing a Seismic Margin Assessment, November 16, 2012 (ADAMS Accession No. ML12286A029)
- Guidance For Assessment of Flooding Hazards Due to Dam Failure, July 29, 2013 (ADAMS Accession No. ML13151A153)
- Guidance for Activities Related to Near-Term Task Force Recommendation 2.1, Flooding Hazard Reevaluation; Focused Evaluation and Integrated Assessment, July 11, 2016 (ADAMS Accession No. ML16162A301)
- NRC endorsement of guidance for screening, prioritization, and implementation details [for seismic reevaluations], February 15, 2013 (ADAMS Accession No. ML12319A074)

- NRC endorsement of industry's expedited approach for seismic reevaluations, May 7, 2013 (ADAMS Accession No. ML13106A331)
- NRC Endorsement of Industry High Frequency Program: Application Guidance, September 17, 2015 (ADAMS Accession No. ML15218A569)
- NRC endorsement of Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communication Capabilities, May 15, 2012 (ADAMS Accession No. ML12131A043)

2. Agency Use of Information

Using the information gathered by these information requests, the NRC will determine if additional regulatory action is necessary. This may include actions such as modifying the design basis hazard or ordering plant modifications for a plant if the NRC determines that the reevaluated hazard justifies such an action.

3. Reduction of Burden Through Information Technology

There are no legal obstacles to reducing the burden associated with this information collection. The NRC encourages respondents to use information technology when it would be beneficial to them. The NRC has issued *Guidance for Electronic Submissions to the NRC* which provides direction for the electronic transmission and submittal of documents to the NRC. Electronic transmission and submittal of documents can be accomplished via the following avenues: the Electronic Information Exchange (EIE) process, which is available from the NRC's "Electronic Submittals" Web page, by Optical Storage Media (OSM) (e.g. CD-ROM, DVD), by facsimile or by e-mail. It is estimated that approximately 100% of the potential responses are filed electronically.

4. Effort to Identify Duplication and Use Similar Information

No sources of similar information are available. There is no duplication of requirements.

The information request is based upon the lessons learned from the Fukushima accident. It requests licensees to perform reevaluations to modern standards and consider additional situations such as natural disasters that affect multiple units at once. This type of information or its analog is not currently available to the NRC.

5. Effort to Reduce Small Business Burden

None of the licensees responding to this collection are small businesses.

6. Consequences to Federal Program or Policy Activities if the Collection Is Not Conducted or Is Conducted Less Frequently

The NRC issued the letters to ensure compliance with requirements in Section 402 of the Consolidated Appropriations Act for 2012 and the timelines set forth in the conference report for PL 112-74:

> The conferees recognize the progress that the Nuclear Regulatory

> Commission has made on the recommendations of the Near Term Task Force. Commission staff has proposed a prioritized list of the Task Force recommendations that reflects the order regulatory actions are to be taken. The conferees direct the Commission to implement these recommendations consistent with, or more expeditiously than, the "schedules and milestones" proposed by NRC staff on October 3, 2011. The conferees direct the Commission to maintain an implementation schedule such that the remaining recommendations (not identified as Tier 1 priorities) will be evaluated and acted upon as expeditiously as practicable. The conferees request that the Commission provide a written status report to the House and Senate Committees on Appropriations on its implementation of the Task Force recommendations on the one year anniversary of the Fukushima disaster.

Additionally, the Consolidated Appropriations Act, Public Law 112-074, Section 402 requires a reevaluation of licensees' design basis for external hazards. The NRC considers that its implementation of Recommendation 2.1, which includes all of the remaining burden, is needed to satisfy this requirement. The conference report associated with the Public Law indicated that the NRC should complete this activity in accordance with, or faster, than the schedule proposed in SECY-11-0137.

7. Circumstances Which Justify Variation from OMB Guidelines

   Not Applicable

8. Consultations Outside the NRC

   Throughout the development of the letter, the NRC staff solicited stakeholder input including feedback on the burden. The NRC staff made draft versions of the letter publicly available and hosted seven public meetings to gather stakeholder feedback. Further, the Nuclear Energy Institute provided feedback to the NRC on the content of the letter, including the associated burden. The NRC staff considered all feedback in generating its burden estimate.

   Opportunity for public comment on the information collection requirements for this clearance package was published in the *Federal Register* on December 11, 2018 (83 FR 63687). Additionally, NRC staff contacted eight potential respondents via email in the areas of operating reactor owner/operator licensee's representatives from Ameren UE, Duke Energy Power Company, LLC, Energy Northwest, Entergy Nuclear Operations, Inc., Exelon Generation Co., LLC, Indiana/Michigan Power Co., and Tennessee Valley Authority. Of the eight potential respondents contacted, no respondent replied.

   One comment was received from an anonymous submitter in response to the published *Federal Register* Notice. The submitter provided general comments, as well as specific comments in response to four questions posed in the *Federal Register* Notice. In summary, the submitter commented that the NRC has already collected sufficient information in the time since the original request to make the necessary regulatory decisions and that no additional information collection is needed to inform the NRC's evaluations of reevaluated flood or seismic hazards. The submitter also commented that information should not be required from "100%

of the Nuclear Units" since no new information would be expected from the effort.

The NRC disagrees with the comments because the remaining information to be submitted in response to the NRC's request is related to plant-specific seismic probabilistic risk assessments (SPRAs) based on each plant's reevaluated seismic hazards using present-day regulatory guidance and methods. This information is being collected and evaluated on a plant-specific basis to evaluate the potential need to modify, suspend, or revoke each plant's license. The plants identified as needing to submit SPRA reports were deemed those with the highest likelihood of the potential for needed modifications based on initial evaluations of reevaluated seismic hazard information.

In a letter dated October 27, 2015 (ADAMS Accession No. ML15194A015), the NRC staff informed licensees of expected dates for the SPRA report submittals, which were consistent with those discussed during a public meeting held that same month. The NRC staggered the schedule for the SPRA submittals to align with the availability of NRC and industry resources. As a result, some plants are still completing these analyses according to the staggered schedule and have yet to submit their reports for plant-specific NRC evaluation. These remaining SPRAs are in progress with the specifically identified licensees, and the reports are expected to be submitted to the NRC within the renewed collection period.

The submitter also commented that the burden of information collection for this request has been and remains underestimated, but provided no specific information to further inform the estimate. The NRC disagrees with this comment. In developing the initial estimate, the NRC staff held several public meetings with affected stakeholders and included stakeholder input in developing the estimates. The NRC also considered recent submittals and interactions with licensees and has not received any other information indicating that the burden is underestimated. Additionally, no comments were received from the eight licensee representatives (licensees expected to submit remaining SPRA reports) to provide any new information to counter the burden estimates provided.

9. Payment or Gift to Respondents

   Not Applicable

10. Confidentiality of Information

    Confidential and proprietary information is protected in accordance with NRC regulations at 10 CFR 9.17(a) and 10 CFR 2.390(b).

11. Justification for Sensitive Questions

    Not Applicable

12. Estimated Burden and Burden Hour Cost

Respondents

The respondents for this collection are 12 power reactor licensees with remaining required submittals. All other original respondents have completed all actions required in response to the 50.54(f) letter, have permanently ceased operation, or have been granted relief or deferrals for some requirements in the previous clearance periods. The power plant licensees were asked to perform all information collections (seismic and flooding reevaluations and walkdowns and emergency preparedness evaluations). The only responses remaining in the renewed clearance period for the 12 power reactor licensees will be risk assessments regarding the seismic reevaluations.

Two reactors are in deferred status. The reactors in deferred status will not be expected to submit any further information unless they were to resume licensing, in which case a new schedule would be established for their submission of the required information.

Estimated Burden and Cost

The NRC staff estimates that the time to respond to all requirements contained in the 50.54(f) information request over the clearance period (the next 3 years) totals 33,000 hours at a cost of $9,075,000 (33,000 hours x $275/hour). This burden estimate represents the entire industry burden to respond to the 50.54(f) request over the next 3 years. If this burden is annualized over a 3-year clearance period, the burden is estimated to be 11,000 hours (33,000 hours / 3 years = 11,000 hours per year). See the Burden Estimate Table (submitted as a supplementary document and available in ADAMS under Accession No. ML18254A274) for a detailed breakdown of licensee burden.

The $275 hourly rate used in the burden estimates is based on the NRC's fee for hourly rates as noted in 10 CFR 170.20 "Average cost per professional staff-hour." For more information on the basis of this rate, see the Revision of Fee Schedules; Fee Recovery for Fiscal Year 2018 (83 FR 29622, June 25, 2018).

Burden assumptions

The following information collection activities were completed in previous clearance periods:

- Confirmation of Receipt
- Response indicating inability to comply with the information collection request
- Risk assessment approach (seismic)
- Hazard reevaluation (seismic)
- Seismic limited scope evaluations[1] (including spent fuel pool evaluations and confirmation of the performance of key plant equipment for high frequency/low frequency spectral accelerations)

[1] In the previous renewal submission, staff separated out activities related to spent fuel pool evaluations to improve transparency and ensure accurate accounting for licensee efforts. These are not new

- Integrated assessment approach or confirm use of generic approach (flooding)
- Hazard reevaluation (flooding)
- Integrated assessment for flooding hazards or focused evaluation related to local intense precipitation and available physical margin for other flood hazards. Note that three licensees were granted deferrals for their focused evaluations due to their announced plans for permanent shutdown. No burden is included for these licensees because they will not be required to submit the focused evaluations.
- Seismic walkdown procedures
- Final seismic walkdown report
- Flooding walkdown procedures. (Plants resuming licensing and COL applicants were not asked to conduct walkdowns.)
- Final flooding walkdown report
- Communications analysis
- Staffing analysis

The submission of seismic risk assessment and evaluations (Enclosure 1) is the only reporting requirement not yet completed by all licensees. Estimates include time for licensees to submit their seismic risk assessment.

For the remaining licensees performing seismic assessments and evaluations, the NRC staff made the following assumptions:

SPRA

- 12 remaining power reactor licensees are due to perform an SPRA and submit their response during the clearance period. This task was originally estimated to take 8,000 hours, which the NRC staff increased to 8,450 to account for uncertainty. The actual amount of effort is expected to be variable depending upon existing risk models that a licensee may be able to draw upon in performing the SPRA. Based on comments from the Nuclear Energy Institute when the clearance was initiated in 2012, this estimate was increased by approximately 30 percent, to 11,000 hours.
- The 12 remaining licensees are due to complete their submittals during the first 6 months of the clearance period. The NRC staff assumes that the final 25 percent of the effort, on average, will be incurred in the clearance period, or 2,750 hours (11,000 hours x 25 percent) for the 12 remaining licensees conducting an SPRA. The current estimate is based on the fact that all of the remaining SPRAs are due to be submitted no later than December 31, 2019, and some of the 12 licensee submittals

requirements. The high frequency confirmation and spent fuel pool evaluation were a part of the original March 12, 2012, 50.54(f) letter in Enclosure 1. They were considered part of the risk assessment. Step 7a contained the spent fuel pool evaluation and Step 3 contained expectations for confirming capabilities for safety equipment if high or low frequency exceedances exist.

are due at earlier dates in the clearance period. The majority (75 percent) of the work to prepare the SPRA has been performed and accounted for in the previous clearance periods. The total estimated burden (11,000 hours) to perform an SPRA has not changed from the previous clearance period (2017, 2018, 2019). Because an SPRA is a multi-year effort, the NRC staff limits the burden estimation for a clearance period to the number of licensees conducting the SPRA and the amount of work remaining.

Note that the number of plants conducting an SPRA has changed from the original estimates submitted to OMB in 2012. In 2012, the NRC assumed that 27 high priority plants would conduct an SPRA, 10 high priority plants would conduct a higher-burden Seismic Margin Assessment (SMA), and that 43 other plants would also submit a higher-burden SMA. The NRC has reassessed the need for plants to conduct SMAs and SPRAs in light of the low to moderate seismic exceedances above current plant design bases for some sites. The NRC letter dated October 27, 2015, identified 36 licensees (at 21 sites) that were expected to perform SPRAs. No SMA submissions were then anticipated. Of the 36 licensees due to submit SPRAs:

- 4 submitted supplementary information and were granted relief from the SPRA requirement after review of this information.
- 4 additional licensees have announced plans for permanent shutdown and were granted deferrals, or are expected to request a deferral, for their SPRAs beyond their announced permanent shutdown dates. No further burden is included for these licensees because it is not expected that they will be required to submit the SPRAs.
- 16 licensees completed their SPRA submittals in the 2016 - 2019 clearance period.
- 12 licensees will submit their SPRA during the upcoming clearance period. Burden has been included for these submissions.

13. Estimate of Other Additional Costs

There are no additional costs.

14. Estimated Annualized Cost to the Federal Government

The NRC staff estimates that the time needed to review the SPRAs will require 10,500 hours of NRC staff time over the clearance period. The NRC effort is estimated at 3,500 hours or $962,500 (3,500 hours x $275/hour).

15. Reasons for Change in Burden or Cost

The previously approved burden total for the 50.54(f) letters issued in March 2012 is 314,885 hours and 238 responses, annualized to 104,961.7 hours and 79.3

responses. This estimate was based on the work that would be performed by licensees during the 2016-2019 clearance period.

The current request is for 33,000 hours and 12 responses (annualized to 11,000 hours and 4 responses), a decrease of 93,961.7 annualized hours and 75.3 annualized responses, based on the work that will be performed by licensees during the 2019-2021 clearance period.

The primary reason for the decrease in burden is that the information collection is a one-time collection and most responses were submitted during the previous two clearance periods. The only remaining submissions are the SPRA submittals from 12 power reactor licensees. Information collections that have been completed include the seismic high and low frequency confirmations, seismic spent fuel pool evaluations, flooding hazard reevaluations, flooding integrated assessments, focused evaluations of local intense precipitation and available physical margin, and the remaining final staffing analyses. In addition, 16 power reactor licensees have completed their SPRA submittals. Four licensees have announced their plans to permanently cease operation of their power reactors and are not expected to be required to respond to the information collections covered by this clearance.

Finally, the NRC's fee rate decreased from $279/hour to $275/hour.

16. Publication for Statistical Use

    Not Applicable

17. Reason for Not Displaying the Expiration Date

    Not Applicable

18. Exceptions to the Certification Statement

    None

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

Not Applicable