

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 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 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.

The current request is for a three year extension of the information collected in the 50.54(f) letters, issued in March 2012. This extension is necessary because, although the letters were sent to licensees in March 2012, the requirements described in the letter will be implemented over the course of approximately seven years.

## 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 (ML12311A214)

- Guidance for Performing a Tsunami, Surge, or Seiche Hazard Assessment, January 4, 2012 (ML12314A412)
- Guidance on Performing a Seismic Margin Assessment, November 16, 2012 (ML12286A028)
- Guidance For Assessment of Flooding Hazards Due to Dam Failure, July 29, 2013 (ML13151A153)
- NRC endorsement of guidance for screening, prioritization, and implementation details [for seismic reevaluations], February 15, 2013 (ML12319A074)
- NRC endorsement of industry's expedited approach for seismic reevaluations, May 7, 2013 (ML13106A331)
- NRC Endorsement of Industry High Frequency Program: Application Guidance, September 17, 2015 (ML15218A569)

## 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. NRC issued a regulation on October 10, 2003 (68 FR 58791), consistent with the Government Paperwork Elimination Act, which allows its licensees, vendors, applicants, and members of the public the option to make submissions electronically via CD-ROM, e-mail, special Web-based interface, or other means. The NRC has an Electronic Information Exchange system that provides an electronic submission capability for NRC licensees to voluntarily submit documents electronically. This system provides certificates of authority for electronic signatures with licensees, contractors, and other Government organizations. It is estimated that approximately 65% 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. NRC has in place an ongoing program to examine all information collections with the goal of eliminating all duplication and/or unnecessary information collections.

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

As described in the justification for this action, the NRC considers this information to be critical to its mission. The NRC finds that the current schedule is necessary to avoid unnecessary delay.

Additionally, as described in the justification for this action, 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 and 2.3, which represent the vast majority of the burden, 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 letters, the NRC staff solicited stakeholder input including feedback on the burden. The NRC staff made draft versions of the letters publically 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 letters, including the associated burden. The NRC staff considered all feedback in generating its burden estimate.

For the renewal of this information collection, opportunity for public comment on the information collection was published in the Federal Register on July 28, 2015 (80 FR 45005). In addition, as part of the public consultation process, in August 2015 NRC staff contacted, by phone and email, three licensees expected to complete seismic assessments (Duke Energy regarding Catawba Nuclear Station, Exelon Corporation regarding Peach Bottom Nuclear Generating Station, and Energy Northwest regarding Columbia Generating Station) and three licensees expected to complete flooding assessments (Duke Energy, FirstEnergy Nuclear Operating Company, and the Tennessee Valley Authority). No comments were received.

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 expected from the 100 power reactor licensees (5 power reactors have ceased operation in the previous clearance period and 1 has received its operating license) and 4 reactors under construction with Combined Licenses (COLs). The power plant licensees were asked to perform all information collections (seismic and flooding reevaluations and walkdowns and emergency preparedness evaluations). Reactors resuming licensing were asked to perform seismic and flooding reevaluations and emergency preparedness evaluations, but not walkdowns, as they have not yet completed construction. COL holders were asked to submit emergency preparedness evaluations only.

Two reactors are in deferred status. Reactors in deferred status will not be expected to submit any further information unless they were to resume licensing, at that time 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 three years) totals 314,885 hours at a cost of \$87,852,915 (314,885 hours x \$279/hr). This burden estimate represents the entire industry burden to respond to the 50.54(f) request over the next three years. If this burden is annualized over a three-year clearance period, the burden is estimated to be 104,961.7 hours (314,885 hours / 3 years = 104,961.7 hours per year). See Table 1 for a detailed breakdown of licensee burden.

### Burden assumptions

#### Enclosures 1-5

##### Confirmation of Receipt (completed during the previous clearance period)

- All 110 recipients of the 50.54(f) letters were required to confirm receipt of the 50.54(f) letters within 30 days. This requirement was completed during the previous clearance period.

##### Response indicating inability to comply with the information collection request (completed during the previous clearance period)

- Recipients were requested to respond within 90 days of the issuance of the 50.54(f) letters if they are unable to comply with the information collection request. This was completed in the last clearance cycle; therefore, no burden is included in the current submission for this response.

#### Enclosure 1

Estimates for Enclosure 1 include time for licensees to submit their risk assessment approach or confirm their use of a generic approach, submit the seismic hazard reevaluation and submit the seismic risk assessment.

##### Submit risk assessment approach (seismic) (completed during the previous clearance period)

- The NRC staff estimates that it will take an average of 1,700 hours for the seismic hazard reevaluation and, given that the NRC staff is developing guidance with stakeholders, only 10% of this effort (170 hours) will be required for confirming and submitting their approach. Note that NEI estimates submitted in 2012 also suggested that 10% of effort will be required for confirming and submitting the approach.

**Submit hazard reevaluation (seismic) (completed during the previous clearance period)**

100 power reactor licensees conducted hazard reevaluations.

- Central and Eastern US (CEUS): Ninety-four operating reactors in the CEUS (defined as those east of the Rocky mountains) were able to utilize a recently released seismic source characterization developed jointly by the Electric Power Research Institute, the Department of Energy, and the NRC. Based on staff experience, including input from NRC seismologists, this effort was estimated to require 1,420 hours.
- Western US (WUS): The NRC staff anticipated that it would require additional effort for six plants in the Western US to respond, because they did not have the benefit of a recent source characterization as the CEUS licensees. The NRC staff estimated that the effort required for WUS licensees would be approximately twice that of those in the CEUS, or 2,850 hours.

**Submit seismic risk assessment and evaluations**

For the 100 licensees performing seismic assessments and evaluations, the NRC staff made the following assumptions:

**SPRA (Seismic Probabilistic Risk Assessment)**

- 36% of licensees (or 36 licensees) would perform an SPRA (Seismic Probabilistic Risk Assessment) estimated to take 8,000 hours, which the NRC staff rounded up 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 NEI when the clearance was initiated in 2012, this estimate was increased by approximately 30%, to 11,000 hours. The NRC staff originally determined that higher priority plants would complete seismic risk assessments by June 2017 and December 2019. The time period when the burden will be accrued was taken into account. For the risk assessments that will be submitted in years 5 and 6 some of the work to perform the risk assessments has been conducted in years 1 through 3 (the previous clearance period). NRC staff assumes that 50% of the effort will be incurred in the current clearance period, or 5,500 hours (11,000 hours x 50%) for licensees conducting an SPRA.

Note that this differs 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 that 36 SPRAs are now expected. No SMA submissions are anticipated.

Limited scope evaluations<sup>1</sup>

- The 36 licensees performing an SPRA will also be expected to perform a spent fuel pool evaluation.
- In addition, another 43% of licensees (or 43 licensees) will perform a limited evaluation of spent fuel pools, and/or confirm performance of key plant equipment for high frequency/low frequency spectral accelerations. The staff estimates that approximately 30 licensees will complete a spent fuel pool evaluation, for total of 66 licensees performing spent fuel pool evaluations (36 licensees performing an SPRA and a spent fuel pool evaluation + 30 licensees performing a spent fuel pool evaluation = 66). 43 licensees will complete a high frequency confirmation, and 2 licensees will complete a low frequency confirmation. The staff estimates that each evaluation will require approximately 200 hours to complete.
- The remaining 21% (21 licensees) will not perform any additional analyses.

Enclosure 2

Estimates for Enclosure 2 include time for licensees to submit their integrated assessment approach upfront or, submit flooding hazard reevaluation and submit an integrated assessment or focused evaluation for flooding hazards. 101 operating units will conduct flooding reevaluations (originally 106, but some units have decided to decommission during the clearance period), while approximately 20 will submit integrated assessments and approximately 58 will submit focused evaluations.

Submit integrated assessment approach or confirm use of generic approach  
(Completed during the previous clearance period)

- The NRC staff estimates that it will take 1,300 hours for the flooding hazard reevaluation and, given that the NRC staff is developing guidance with stakeholders, only 10% will be required for confirming and submitting their approach. No further action is expected of licensees on this particular aspect of the request given the recent changes in NRC strategy to addressing the reevaluated flood hazards.

Submit hazard reevaluation (flooding)

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<sup>1</sup> In this 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 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 exceedance exist.

- In determining the estimated burden for reevaluating the flooding hazard, the NRC staff estimated the burden for various types of sites and then scaled the individual burden by the number of sites in each category. Sites that had not recently performed a flooding evaluation or because of location may be exposed to additional flooding hazards were assumed to take a larger effort than those that had recently performed a flooding evaluation (e.g., a recent evaluation in support of a new unit on the same site) or by location could justify elimination of certain hazards (e.g., sites that are sufficiently inland to preclude a tsunami occurring). Approximately one-fifth of sites were estimated to have a recent flooding study in support of a new unit on the site, with a burden of 400 hours for these sites. One-fifth of the sites were estimated to have a surge or tsunami hazard, requiring 2,900 hours for the flooding hazard reevaluation. All other sites were estimated to require 800 hours to perform the reevaluation. The average time to perform the flooding reevaluation was therefore estimated to be 1,143 hours, which was rounded up to 1,300 hours to account for uncertainty. Of these 1,300 hours, 10% is allocated to submitting the assessment approach and 1,170 is allocated toward performance of the reevaluation.

Following NEI's 2012 comments on the burden estimates for flooding hazard reevaluations, NRC increased the estimates by approximately 30%, resulting in a revised estimate of 170 hours for submitting the assessment approach and 1,520 hours for performance of the reevaluation. Only 5 sites need to submit a flood hazard reevaluation during the current clearance period, which equates to 8 plant responses. All others have been submitted and are either currently under review or have had the NRC confirm the suitability of the hazards for use in the integrated assessment (as well as mitigation strategies assessments).

*Submit integrated assessment for flooding hazards or focused evaluation related to local intense precipitation and available physical margin for other flood hazards*

- The original estimate for the preparation of integrated assessments assumed that one quarter of sites would incur significant evaluation effort (5,000 hours), one half would be required to perform a lesser analysis (now clarified to be a focused evaluation related to local intense precipitation and available physical margin to mitigate other flood hazards<sup>2</sup>) (2,500 hours), and the remaining one quarter of plants would have a reevaluated hazard below their current design basis and not need to perform any additional evaluation. The average burden was estimated to be 2,500 hours and rounded up to 2,700 hours to account for uncertainty. In response to NEI's comments during the initial (2012) comment period for these letters, NRC increased the estimates

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<sup>2</sup> The focused evaluation is a refinement of the initial 50.54(f) letter requirements, based on direction from the Commission to use a graded approach and remove unwarranted conservatism to focus resources on the most safety significant hazards and sites. A focused evaluation enables licensees to leverage existing physical margin, warning time, and feasible plant modifications to address local intense precipitation as well as other flood-causing mechanisms. For many plants, site characteristics provide protection against flooding through site grading and topography. The focused evaluations provide a streamlined way to fulfill the information request and require less licensee effort.

by approximately 30%, resulting in a revised estimate of 3,525 hours, on average, to perform the entire integrated assessment.

The time period when the burden will be accrued was taken into account. The integrated assessments and focused evaluations will be submitted in years 4 through 6; however, some of the work to perform the integrated assessments was conducted in years 1 through 3 (the previous clearance period). In the last submission, NRC staff assumed that two-thirds of the effort (2,350 hours) would occur in years 1-3 and one-third of the effort would occur in years 4-6. However, respondents did not perform as much work during the initial clearance period as anticipated on this task; therefore, NRC staff modified the estimated distribution of work. NRC staff now estimates that one quarter of the effort for this task was expended in years 1-3 and three-quarters of the effort will occur in years 4-6 (the current clearance period). NRC staff estimates that 2,645 hours of effort (3,525 hours x 75%) will be incurred in the current clearance period, for those sites who need to perform an Integrated Assessment.

Based on a revised review process utilizing a graded approach to focus on safety-significant hazards and sites, the NRC staff now estimates that only 20 units at 10 sites will need to submit an integrated assessment for flooding hazards (compared to the 2012 estimate that all 106 plants would submit an integrated assessment for flooding hazards.) Of the remaining units, 58 will perform a focused evaluation requiring a less intense effort than the integrated assessment (500 hours). A focused evaluation leverages existing design margin, site features, and weather prediction capabilities to address the changes to the flooding hazard. The remaining 15 sites and 23 units have a reevaluated hazard that is bounded by their current design basis, no additional flooding reevaluation submissions under enclosure 2, recommendation 2.1 are necessary.

### Enclosure 3

Estimates for Enclosure 3 include time for licensees to submit seismic walkdown procedures or confirm use of NRC-endorsed procedures and submit a final seismic walkdown report. 104 power reactor licensees were asked to conduct walkdowns. (Plants resuming licensing and COL applicants were not asked to conduct walkdowns).

#### **Submit seismic walkdown procedures (completed during the previous clearance period)**

- The NRC staff estimated that it will take 2,000 hours for the seismic walkdowns and, given that the NRC staff is working with stakeholders to develop generically applicable guidance, only 10% (200 hours) will be required for confirming and submitting their approach.

#### **Submit final seismic walkdown report (completed during the previous clearance period)**

- The NRC staff assumed that all licensees would incur similar burden in performing the walkdowns and accounted for site preparation, training, actual

performance of the walkdown, and review of the results. The estimate of 1,800 hours is based on staff experience.

#### Enclosure 4

Estimates for Enclosure 4 include time for licensees to submit flooding walkdown procedures or confirm use of NRC-endorsed procedures and submit a final flooding walkdown final report. 104 power reactor licensees were asked to conduct walkdowns. (Plants resuming licensing and COL applicants were not asked to conduct walkdowns).

#### **Submit flooding walkdown procedures (completed during the previous clearance period)**

The NRC staff estimated that it will take 2,000 hours for the seismic walkdowns and, given that the NRC staff is working with stakeholders to develop generically applicable guidance, only 10% will be required for confirming and submitting their approach.

#### **Submit final flooding walkdown report (completed during the previous clearance period)**

- The NRC staff assumed that all licensees would incur similar burden in performing the walkdowns and accounted for site preparation, training, actual performance of the walkdown, and review of the results. The estimate of 1,800 hours is based on staff experience. Following NEI's 2012 comments on the burden estimates for flooding walkdowns, NRC increased the estimates by approximately 30%, increasing the estimate from 2,000 hours (200 hours for walkdown procedures and 1,800 hours for flooding walkdown report) to 2,600 hours (resulting in a revised estimate of 260 hours for walkdown procedures and 2,340 hours for the flooding walkdown report).

#### Enclosure 5

Estimates for Enclosure 5 include time for licensees to submit communications analysis and submit initial and final staffing analysis related to emergency preparedness. All 110 recipients of the 50.54(f) letters were required to submit information on emergency preparedness.

#### **Submit communications analysis (completed during the previous clearance period)**

- The NRC staff originally estimated that the communications analysis would require 50 hours, based on experience of NRC staff in the Office of Nuclear Security and Incident Response. However, based on the comment received from NEI when the clearance was initiated in 2012, the NRC staff has increased the estimate to 250 hours for this response.

#### **Submit staffing analysis**

- The NRC staff originally estimated that the draft and final staffing analysis would require 25 hours each, based on experience of NRC staff in the Office of Nuclear Security and Incident Response. However, based on the comment received from NEI when the clearance was initiated in 2012, the NRC staff has increased the estimate to 125 hours for each of these responses.

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 hours required reviewing hazard reassessment reports and risk and integrated assessments, review and endorsing seismic and flooding risk assessment procedures, and review emergency preparedness analyses will require 100 full-time equivalent (FTE) employees over the course of the next four years. This averages to 25 FTE annually. At an estimated 1,400 hours per FTE, NRC effort is estimated at 35,000 hours or \$9,765,000 (35,000 hours x \$279/hr).

15. Reasons for Change in Burden or Cost

The previously approved total for the 50.54(f) letters issued in March 2012 was 1,372,506 hours and 1,576 responses (annualized to 457,502 hours and 525 responses).

The current request is for 314,885 hours and 238 responses, (annualized to 104,961.7 hours and 79.3 responses), a decrease of 352,540.3 annualized hours and 446 annualized responses.

The primary reason for the decrease in burden is that many of the responses were submitted to the NRC during the prior clearance period. These included the confirmation of receipt; seismic hazard reevaluation, seismic walkdown procedures and report, flooding walkdown procedures and report, and the emergency planning communication analysis were submitted by all of the required recipients of the 50.54(f) letters. Also, most of the recipients have submitted their flooding hazard reevaluations and emergency preparedness staffing analysis with only a few of each still outstanding. One other factor that contributed slightly to the decrease is that 5 licensees have ceased operation of their power reactors and are no longer required to respond as well as one power reactor that was in the process of resuming licensing during the prior clearance period is now in a deferred status.

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

**Table 1  
Total Licensee Reporting Burden to Respond to the 50.54(f) Request**

| <b>Enclosure</b>   | <b>Requirement</b>   | <b>Respondents</b> | <b>Responses per Respondent</b> | <b>Total Responses</b> | <b>Burden Per Response</b> | <b>Burden</b> | <b>Cost at \$279/hr</b> |
|--|--|--------------------|---------------------------------|------------------------|----------------------------|---------------|-------------------------|
| <b>Enclosures 1 – 5</b>                                      | Confirmation of Receipt  | 0.0                | 0.0                             | 0.0                    | 0.0                        | 0.0           | \$0                     |
| <b>Enclosures 1 – 5</b>                                      | Response indicating inability to comply with information request     | 0.0                | 0.0                             | 0.0                    | 0.0                        | 0.0           | \$0                     |
| <b>Enclosure 1: Recommendation 2.1: Seismic Reevaluation</b> | Submit risk assessment approach or confirm use of generic approach   | 0.0                | 0.0                             | 0.0                    | 0.0                        | 0.0           | \$0                     |
| <b>Enclosure 1: Recommendation 2.1: Seismic Reevaluation</b> | Submit hazard reevaluation (seismic), Central and Eastern US (CEUS)  | 0.0                | 0.0                             | 0.0                    | 0.0                        | 0.0           | \$0                     |
| <b>Enclosure 1: Recommendation 2.1: Seismic Reevaluation</b> | Submit hazard reevaluation (seismic), Western US (WUS)               | 0.0                | 0.0                             | 0.0                    | 0.0                        | 0.0           | \$0                     |
| <b>Enclosure 1: Recommendation 2.1: Seismic Reevaluation</b> | Submit seismic risk assessment, high priority plants conducting SPRA | 36.0               | 1.0                             | 36.0                   | 5,500.0                    | 198,000.0     | \$55,242,000            |

| Enclosure  | Requirement  | Respondents | Responses per Respondent | Total Responses | Burden Per Response | Burden   | Cost at \$279/hr |
|--|--|-------------|--------------------------|-----------------|---------------------|----------|------------------|
|  | Submit seismic risk assessment, high priority plants conducting SMA                              | 0.0         | 0.0                      | 0.0             | 0.0                 | 0.0      | \$0              |
| <b>Enclosure 1: Recommendation 2.1: Seismic Reevaluation</b> | Submit seismic risk assessment conducting SMA  | 0.0         | 0.0                      | 0.0             | 0.0                 | 0.0      | \$0              |
| <b>Enclosure 1: Recommendation 2.1: Seismic Reevaluation</b> | Submit seismic high and low frequency confirmations.   | 43.0        | 1.0                      | 43.0            | 200.0               | 8,600.0  | \$2,399,400      |
| <b>Enclosure 1: Recommendation 2.1: Seismic Reevaluation</b> | Submit seismic low frequency confirmations.  | 2.0         | 1.0                      | 2.0             | 200.0               | 400.0    | \$111,600        |
| <b>Enclosure 1: Recommendation 2.1: Seismic Reevaluation</b> | Submit seismic spent fuel pool evaluation  | 66.0        | 1.0                      | 66.0            | 200.0               | 13,200.0 | \$3,682,800      |
| <b>Enclosure 2: Recommendation 2.1 Flooding Reevaluation</b> | Submit integrated assessment approach or focused evaluation of LIP and available physical margin | 0.0         | 0.0                      | 0.0             | 0.0                 | 0.0      | \$0              |
| <b>Enclosure 2: Recommendation 2.1 Flooding Reevaluation</b> | Submit hazard reevaluation (flooding)  | 8.0         | 1.0                      | 8.0             | 1,520.0             | 12,160.0 | \$3,392,640      |

| Enclosure  | Requirement   | Respondents | Responses per Respondent | Total Responses | Burden Per Response | Burden   | Cost at \$279/hr |
|--|---|-------------|--------------------------|-----------------|---------------------|----------|------------------|
| <b>Enclosure 2: Recommendation 2.1 Flooding Reevaluation</b>   | Submit integrated assessment of flooding hazards                              | 20          | 1.0                      | 20              | 2,645.0             | 52,900.0 | \$14,759,100     |
| <b>Enclosure 2: Recommendation 2.1 Flooding Reevaluation</b>   | Submit focused evaluation of LIP and available physical margin                | 58          | 1.0                      | 58              | 500.0               | 29,000.0 | \$8,091,000      |
| <b>Enclosure 3: Recommendation 2.3: Seismic Walkdowns</b>      | Submit seismic walkdown procedures or confirm use of NRC-endorsed procedures  | 0.0         | 0.0                      | 0.0             | 0.0                 | 0.0      | \$0              |
| <b>Enclosure 3: Recommendation 2.3: Seismic Walkdowns</b>      | Submit seismic walkdown final report  | 0.0         | 0.0                      | 0.0             | 0.0                 | 0.0      | \$0              |
| <b>Enclosure 4: Recommendation 2.3: Flooding Walkdowns</b>     | Submit flooding walkdown procedures or confirm use of NRC-endorsed procedures | 0.0         | 0.0                      | 0.0             | 0.0                 | 0.0      | \$0              |
| <b>Enclosure 4: Recommendation 2.3: Flooding Walkdowns</b>     | Submit flooding walkdown final report   | 0.0         | 0.0                      | 0.0             | 0.0                 | 0.0      | \$0              |
| <b>Enclosure 5: Recommendation 9.3: Emergency Preparedness</b> | Submit communications analysis  | 0.0         | 0.0                      | 0.0             | 0.0                 | 0.0      | \$0              |
| <b>Enclosure 5: Recommendation 9.3: Emergency Preparedness</b> | Submit initial staffing analysis  | 0.0         | 0.0                      | 0.0             | 0.0                 | 0.0      | \$0              |

| Enclosure  | Requirement                    | Respondents  | Responses per Respondent | Total Responses | Burden Per Response | Burden           | Cost at \$279/hr |
|--|--------------------------------|--------------|--------------------------|-----------------|---------------------|------------------|------------------|
| <b>Enclosure 5: Recommendation 9.3: Emergency Preparedness</b> | Submit final staffing analysis | 5.0          | 1.0                      | 5.0             | 125.0               | 625.0            | \$174,375        |
| <b>TOTAL</b>   |                                | <b>104.0</b> |                          | <b>238.0</b>    |                     | <b>314,885.0</b> | \$87,852,915     |
| <b>ANNUALIZED TOTAL</b>  |                                | <b>104.0</b> |                          | <b>79.3</b>     |                     | <b>104,961.7</b> | \$29,284,305     |

TOTAL Reporting Burden: 314,885 hours  
TOTAL Responses: 238 responses

ANNUALIZED Reporting Burden: 104,961.7 hours  
ANNUALIZED Responses: 79.3 responses

Respondents: 104