



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

December 15, 2014

To the Power Reactor Licensees  
on the Enclosed List

SUBJECT: NRC RESPONSE TO LICENSEES REGARDING NOTIFICATION OF  
REGULATORY COMMITMENTS CHANGE ASSOCIATED WITH REQUEST  
FOR INFORMATION PURSUANT TO TITLE 10 OF THE *CODE OF FEDERAL  
REGULATIONS* 50.54(f) REGARDING RECOMMENDATION 2.1 OF THE  
NEAR-TERM TASK FORCE REVIEW OF INSIGHTS FROM THE FUKUSHIMA  
DAI-ICHI ACCIDENT

The purpose of this letter is to inform licensees, included in Enclosure 2, of the U.S. Nuclear Regulatory Commission's (NRC's) review of the Expedited Seismic Evaluation Process (ESEP) regulatory commitment change. These licensees have informed the NRC of their intentions to not perform the ESEP as previously committed, stating that the ESEP would not provide a significant increase in safety insight or provide indication of seismic margin for the units beyond what was already gained through the Individual Plant Examination for External Events (IPEEE) programs.

BACKGROUND

On March 12, 2012, the NRC issued a request for information pursuant to Title 10 of the *Code of Federal Regulations*, Part 50 (10 CFR), Section 50.54(f). The purpose of that request was to gather information concerning, in part, the seismic hazard at operating reactor sites to enable the NRC staff to determine whether licenses should be modified, suspended, or revoked. The "Required Response" section of Enclosure 1 of the request indicated that licensees should provide a seismic hazard evaluation and screening report within 1.5 years from the date of the letter for central and eastern United States (CEUS) nuclear power plants. For CEUS plants, the date to submit the report was extended to March 31, 2014<sup>1</sup>.

By letters dated March 2014<sup>2</sup>, to the NRC, licensees submitted for NRC review the Seismic Hazard and Screening Report, Pursuant to 10 CFR 50.54(f), Response for Information Regarding Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident. Licensees, included in Enclosure 2, in their reports included a review of IPEEE adequacy to support the plants "screening-out" of performing seismic risk evaluations in accordance with the guidance in the "Seismic Evaluation Guidance: Screening, Prioritization and Implementation Details (SPID)"<sup>3</sup>. Following an NRC staff screening and prioritization review, the staff agreed with these licensees that their facilities "screened-out" for seismic risk evaluation by demonstrating that the plant met the SPID screening criteria

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<sup>1</sup> The May 7, 2013, endorsement letter is available in the Agencywide Documents Access and Management System (ADAMS) under Accession No. ML13106A331.

<sup>2</sup> Enclosure 1 provides reference to licensee March 2014 Seismic Hazard and Screening Reports, NRC letters on the IPEEE adequacy review, licensee commitment change letters, and licensee corrective actions associated with the reevaluated hazard.

<sup>3</sup> The SPID guidance document is found in ADAMS under Accession No. ML12333A170. The staff endorsement letter for the SPID guidance is found in ADAMS under Accession No. ML12319A074.

associated with the capacity spectra from the IPEEE program and that the demonstrated plant capacity exceeds the new ground motion response spectrum (GMRS).

#### REVIEW OF REGULATORY COMMITMENT CHANGE AND RELIEF FROM INTERIM MEASURES

Licensees with a GMRS exceeding the design-basis safe shutdown earthquake, in their March 2014 seismic hazard reevaluation reports had committed to perform the ESEP in accordance with the methodology in the Electric Power Research Institute (EPRI) [Document No.] 3002000704, "Augmented Approach, Seismic Evaluation Guidance: Augmented Approach for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic"<sup>4</sup>. The ESEP was developed to address the higher seismic hazard and demonstrate seismic margin while more detailed and comprehensive plant seismic risk evaluations are being performed. Subsequently, the staff has reviewed the seismic hazards reports and has determined that the licensees listed in the enclosure have demonstrated that their plant meets the SPID screening criteria associated with of their IPEEE program review and no seismic risk evaluation would be required.

By letters dated August 29, 2014 through November 4, 2014<sup>2</sup>, these licensees notified NRC that they were revising their ESEP commitments. These licensees stated that their previous IPEEE evaluations demonstrate capacities above the GMRS and therefore, there is no significant safety benefit from performing the ESEP. Because of the reasons stated above, the licensees listed in Enclosure 2, do not intend to perform the ESEP for their specified plants. The NRC staff has reviewed the information received and concludes that the information provided to justify the reasons for not performing the ESEP is sufficient.

#### ALIGNMENT WITH MITIGATION STRATEGIES ORDER EA-12-049<sup>5</sup>

Licensees, included in Enclosure 2, have concluded the IPEEE insights and margins for installed plant equipment including previously existing equipment now used for Phase 1 of the licensee's Mitigation Strategies are seismically robust to the higher hazard. Licensees are encouraged to implement corrective actions consistent with their Mitigation Strategies Overall Integrated Plans to harden newly installed equipment (if applicable and necessary), maintain the robustness of equipment to the higher seismic hazard, and evaluate newly installed equipment mitigation strategies equipment not part of the IPEEE reviews to demonstrate their ability to cope with the higher seismic hazard. Further requirements on the seismic qualification of equipment are being considered in the on-going rulemaking on mitigation of beyond-design-basis events.

Based on the discussion above, the NRC concludes that the revised regulatory commitments are acceptable.

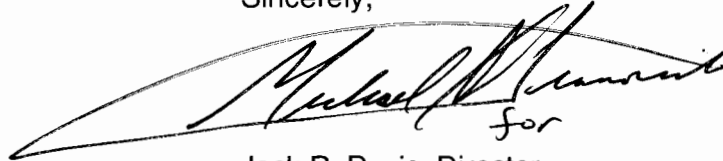
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<sup>4</sup> EPRI 3002000704 can be found under ADAMS Accession No. ML14204A619.

<sup>5</sup> Order EA-12-049, Issuance of Order to Modify Licenses with regard to requirements for Mitigation Strategies for Beyond-Design-Basis External Events, can be found under ADAMS Accession No. ML12054A735

If you have any questions regarding this letter, please contact Nicholas DiFrancesco at 301-415-1115 or via e-mail at [Nicholas.Difrancesco@nrc.gov](mailto:Nicholas.Difrancesco@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Michael J. Hancock" with "for" written below it.

Jack R. Davis, Director  
Japan Lessons-Learned Division  
Office of Nuclear Reactor Regulation

Enclosures:

1. Correspondence Associated with  
Commitment Change Requests
2. List of Addressees

cc w/encls: Distribution via Listserv

Correspondence Associated with Seismic Screening, IPEEE Seismic Adequacy,  
Expedited Seismic Evaluation Process Commitments Change Letters, and  
Overall Integrated Plan Corrective Action for Central and Eastern United States Reactor Sites

|                                        | <b>March 2014 – Licensee<br/>Re-evaluated Seismic<br/>Hazard and Screening<br/>Report</b> | <b>NRC final screening<br/>determination and IPEEE<br/>Seismic Adequacy<br/>Acceptance Letter</b> | <b>ESEP<br/>Commitment<br/>Change Letter</b> | <b>Licensee<br/>EA-12-049<br/>Overall Integrated Plan<br/>Reference to Corrective<br/>Action</b>                                                |
|----------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Plant Name</b>                      | <b>Date of letter<br/>(ADAMS Nos.)</b>                                                    | <b>Date of letter<br/>(ADAMS Nos.)</b>                                                            | <b>Date of letter<br/>(ADAMS Nos.)</b>       | <b>Date of letter<br/>(ADAMS Nos.)</b>                                                                                                          |
| Arkansas Nuclear One,<br>Units 1 and 2 | March 28, 2014<br>(ML14092A021)                                                           | November 21, 2014<br>(ML14246A428)                                                                | November 4, 2014<br>(ML14308A212)            | February 28, 2013<br>Enclosure<br>Page 4 of 51<br>(ML13063A151)                                                                                 |
| Byron Station,<br>Units 1 and 2        | March 31, 2014<br>(ML14091A010)                                                           | May 9, 2014<br>(ML14111A147)                                                                      | August 29, 2014<br>(ML14241A563)             | August 28, 2014<br>Enclosure 1<br>Page 3 of 67<br>(ML14248A229)                                                                                 |
| Fort Calhoun Station,<br>Unit 1        | March 31, 2014<br>(ML14097A087)                                                           | September 22, 2014<br>(ML14224A526)                                                               | October 22, 2014<br>(ML14297A332)            | February 28, 2013<br>Enclosure<br>Page 4 of 47<br><br><u>Cover letter</u><br>(ML13064A298)<br><u>Enclosure</u><br>(ML13092A270, non-<br>public) |

|                                                         | <b>March 2014 – Licensee<br/>Re-evaluated Seismic<br/>Hazard and Screening<br/>Report</b> | <b>NRC final screening<br/>determination and IPEEE<br/>Seismic Adequacy<br/>Acceptance Letter</b>          | <b>ESEP<br/>Commitment<br/>Change Letter</b> | <b>Licensee<br/>EA-12-049<br/>Overall Integrated Plan<br/>Reference to Corrective<br/>Action</b>                                                       |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Plant Name</b>                                       | <b>Date of letter<br/>(ADAMS Nos.)</b>                                                    | <b>Date of letter<br/>(ADAMS Nos.)</b>                                                                     | <b>Date of letter<br/>(ADAMS Nos.)</b>       | <b>Date of letter<br/>(ADAMS Nos.)</b>                                                                                                                 |
| Millstone Power Station,<br>Units 2 and 3               | March 31, 2014<br>(ML14092A417)                                                           | <u>Unit 2:</u><br>November 21, 2014<br>(ML14246A428)<br><br><u>Unit 3:</u><br>May 9, 2014<br>(ML14111A147) | July 21, 2014<br>(ML14204A619)               | February 28, 2013<br>Enclosure 1<br>Page 5 of 109<br>(ML13064A265)                                                                                     |
| Salem Nuclear<br>Generating Station,<br>Units 1 and 2   | March 31, 2014<br>(ML14090A043)                                                           | October 3, 2014<br>(ML14258A043)                                                                           | October 20, 2014<br>(ML14303A027)            | February 28, 2013<br>Enclosure 1<br>Page 4 of 56<br>(ML130590378)                                                                                      |
| Susquehanna Steam<br>Electric Station,<br>Units 1 and 2 | March 26, 2014<br>(ML14086A163)                                                           | May 9, 2014<br>(ML14111A147)                                                                               | August 28, 2014<br>(ML14241A307)             | February 28, 2013<br>Enclosure 1<br>Page 6 of 63<br><br><u>Cover letter</u><br>(ML13060A357)<br><br><u>Enclosure 1</u><br>(ML16060A358 non-<br>public) |

### List of Addressees

#### Arkansas Nuclear One

Entergy Operations, Inc.  
Docket Nos. 50-313 and 50-368  
License No. DPR-51 and NPF-6

Vice President, Operations  
Arkansas Nuclear One  
Entergy Operations, Inc.  
1448 S.R. 333  
Russellville, AR 72802

#### Byron Station

Exelon Generation Company, LLC  
Docket Nos. 50-454 and 50-455  
License Nos. NPF-37 and NPF-66

Mr. Michael J. Pacilio  
President and Chief Nuclear Officer  
Exelon Generation Company, LLC  
4300 Winfield Road  
Warrenville, IL 60555

#### Fort Calhoun Station

Omaha Public Power District  
Docket No. 50-285  
License No. DPR-40

Mr. Louis Cortopassi  
Site Vice President and Chief Nuclear  
Officer  
Omaha Public Power District  
Fort Calhoun Station  
Mail Stop FC-2-4  
9610 Power Lane  
Blair, NE 68008

#### Millstone Power Station

Dominion Nuclear Connecticut, Inc.  
Docket No. 50-336 and 50-423  
License No. DPR-65 and NPF-49

Mr. David A. Heacock  
President and Chief Nuclear Officer  
Dominion Nuclear Connecticut, Inc.  
Innsbrook Technical Center  
5000 Dominion Boulevard  
Glen Allen, VA 23060

#### Salem Nuclear Generating Station

PSEG Nuclear LLC  
Docket Nos. 50-272 and 50-311  
License No. DPR-70 and DPR-75

Mr. Thomas Joyce  
President and Chief Nuclear Officer  
PSEG Nuclear LLC-N09  
P. O. Box 236  
Hancocks Bridge, NJ 08038

#### Susquehanna Steam Electric Station

PPL Susquehanna, LLC  
Docket Nos. 50-387 and 50-388  
License No. NPF-14 and NPF22

Mr. Timothy S. Rausch  
Senior Vice President and Chief Nuclear  
Officer  
PPL Susquehanna, LLC  
769 Salem Boulevard  
NUCSB3  
Berwick, PA 18603-0467

If you have any questions regarding this letter, please contact Nicholas DiFrancesco at 301-415-1115 or via e-mail at Nicholas.Difrancesco@nrc.gov.

Sincerely,

**/RA by Michael Franovich for/**

Jack R. Davis, Director  
Japan Lessons-Learned Division  
Office of Nuclear Reactor Regulation

Enclosures:

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Commitment Change Requests
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**ADAMS Accession No:** ML14310A033

\*via e-mail

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