



January 29, 2014

NG-14-0016  
10 CFR 50.54(f)

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Duane Arnold Energy Center  
Docket No. 50-331  
Renewed Op. License No. DPR-49

Update to NextEra Energy Duane Arnold, LLC's Response To NRC Request for Additional Information Associated with Near-Term Task Force Recommendation 2.3, Flooding – Review of Available Physical Margin (APM) Assessments

- References:
- 1) NRC Letter, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 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 Accident," dated March 12, 2012 (ML12073A348)
  - 2) NRC Letter to Nuclear Energy Institute, Endorsement of Nuclear Energy Institute (NEI) 12-07, "Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features," dated May 31, 2012 (ML12144A142)
  - 3) Letter, R. Anderson (NextEra Energy Duane Arnold, LLC) to NRC, "Response to NRC 10 CFR 50.54(f) Request for Information Regarding Near-Term Task Force Recommendation 2.3, Flooding," NG-12-0461, dated November 27, 2012 (ML12342A004)
  - 4) NRC Letter, "Request for Additional Information Associated with Near-Term Task Force Recommendation 2.3 Flooding Walkdowns," dated December 23, 2013 (ML13325A891)

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued Reference 1 requesting information on several topics including information associated with Near-Term Task Force Recommendation 2.3, Flooding. Per Reference 2, the NRC endorsed Nuclear Energy Institute (NEI) 12-07, "Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features." In Reference 3,

ADDI  
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NextEra Energy Duane Arnold, LLC (hereafter NextEra Energy Duane Arnold) provided the requested information.

NEI 12-07 required licensees to identify the available physical margin (APM) associated with each applicable flood protection feature, determine if the margin provided is small, and evaluate any small margins that have potentially significant consequences through the corrective action process. Following the NRC Staff's initial review of walkdown reports, regulatory site audits were conducted at a sampling of plants. Based on the walkdown report reviews and site audits, the Staff identified additional information, as documented in Reference 4, needed to complete its assessments.

The enclosure to this letter provides the information requested in Reference 4.

This letter makes no new commitments or changes to existing commitments.

If you have any questions or require additional information, please contact Ken Putnam at 319-851-7238.

I declare under penalty of perjury that the foregoing is true and correct.  
Executed on January 29, 2014



Richard L. Anderson  
Vice President, Duane Arnold Energy Center  
NextEra Energy Duane Arnold, LLC

Enclosure

Enclosure to NG-14-0016

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Additional Information Associated with Near-Term Task Force Recommendation  
2.3, Flooding – Review of Available Physical Margin (APM) Assessments

3 pages follow

**Update to NextEra Energy Duane Arnold, LLC's Response To NRC Request for Additional Information Associated with Near-Term Task Force Recommendation 2.3, Flooding – Review of Available Physical Margin (APM) Assessments**

**NRC Request 1:**

Provide confirmation that the process for evaluating APM was reviewed.

**NextEra Energy Duane Arnold Response to Request 1:**

NextEra Energy Duane Arnold completed a review of the process used at Duane Arnold Energy Center to evaluate APMs.

**NRC Request 2:**

Provide confirmation that the APM process is now or was always consistent with the guidance in NEI 12-07 and discussed in this RAI.

**NextEra Energy Duane Arnold Response to Request 2:**

The original walkdown effort followed the guidance provided in NEI 12-07, including defining and documenting applicability of determined small margin issues. Additional actions were performed to ensure the process is consistent with the information in this RAI.

**NRC Request 3:**

Provide, if changes are necessary, a general description of any process changes to establish this consistency.

**NextEra Energy Duane Arnold Response to Request 3:**

The NEI 12-07 walk down effort followed the guidance provided in NEI 12-07, including a definition for a small margin. However, a specific APM was not assigned to the seals in below grade walls associated with flood protection features. These items have been addressed in accordance with the guidance provided in this RAI, and entered into the corrective action process for further action.

**NRC Request 4:**

As a result of the audits and subsequent interactions with industry during public meetings, NRC staff recognized that evaluation of APM for seals (e.g., flood doors,

penetrations, flood gates, etc.) was challenging for some licensees. Generally, licensees were expected to use either Approach A or Approach B (described below) to determine the APM for seals:

- a) If seal pressure ratings were known, the seal ratings were used to determine APM (similar to example 2 in Section 3.13 of NEI 12-07). A numerical value for APM was documented. No further action was performed if the APM value was greater than the pre-established small-margin threshold value. If the APM value was small, an assessment of "significant consequences" was performed and the guidance in NEI 12-07 Section 5.8 was followed.
- b) If the seal pressure rating was not known, the APM for seals in a flood barrier is assumed to be greater than the pre-established small-margin threshold value if the following conditions were met: (1) the APM for the barrier in which the seal is located is greater than the small-margin threshold value and there is evidence that the seals were designed/procured, installed, and controlled as flooding seals in accordance with the flooding licensing basis. Note that in order to determine that the seal has been controlled as a flooding seal, it was only necessary to determine that the seal configuration has been governed by the plant's design control process since installation. In this case, the APM for the seal could have been documented as "not small".

As part of the RAI response, state if either Approach A or Approach B was used as part of the initial walkdowns or as part of actions taken in response to this RAI. No additional actions are necessary if either Approach A or B was used.

If neither Approach A or B was used to determine the APM values for seals (either as part of the walkdowns or as part of actions taken in response to this RAI), then perform the following two actions:

- Enter the condition into the CAP (note: it is acceptable to utilize a single CAP entry to capture this issue for multiple seals). CAP disposition of "undetermined" APM values for seals should consider the guidance provided in NEI 12-07, Section 5.8. The CAP disposition should confirm all seals can perform their intended safety function against floods up to the current licensing basis flood height. Disposition may occur as part of the Integrated Assessment. If an Integrated Assessment is not performed, determine whether there are significant consequences associated with exceeding the capacity of the seals and take interim action(s), if necessary, via the CAP processes. These actions do not need to be complete prior to the RAI response.
- Report the APM as "undetermined" and provide the CAP reference in the RAI response.

**NextEra Energy Duane Arnold Response to Request 4:**

Neither Approach A or B, as described above, were used to determine the APM values for seals in below grade walls/floors. Seals in below grade walls/floors were inspected as part of the original walkdowns for signs of degradation, and corrective actions were initiated, if required. As part of the actions taken to address this RAI, the seals in below grade walls/floors have been assigned an APM value of “undetermined” and have been entered into the CAP process (CR1934141) for further evaluation of their available physical margin. Implementation of interim actions will be pursued, if necessary.

CARBON COPY LIST FOR NG-14-0016

January 29, 2014

Regional Administrator, USNRC, Region III

Resident Inspector, USNRC, Duane Arnold Energy Center

Project Manager, USNRC, Duane Arnold Energy Center

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