

**NUCLEAR REGULATORY COMMISSION**

**[Docket No. 50-331; NRC-2020-0189]**

**NextEra Energy Duane Arnold, LLC**

**Duane Arnold Energy Center**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Exemption; issuance.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is issuing an exemption in response to a February 25, 2020, as supplemented by letter dated May 29, 2020, request from NextEra Energy Duane Arnold, LLC (NEDA, the licensee). The issuance of the exemption would permit NEDA to use funds from the Duane Arnold Energy Center (DAEC) decommissioning trust fund (DTF) for spent fuel management and site restoration activities and without prior notification of the NRC.

**DATES:** The exemption was issued on August 12, 2020.

**ADDRESSES:** Please refer to Docket ID **NRC-2020-0189** when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Web Site:** Go to <https://www.regulations.gov/> and search for Docket ID **NRC-2020-0189**. Address questions about NRC docket IDs in Regulations.gov to Jennifer Borges; telephone: 301-287-9127; e-mail:

Jennifer.Borges@nrc.gov. For technical questions, contact the individual listed in the

**FOR FURTHER INFORMATION CONTACT** section of this document.

- **NRC's Agencywide Documents Access and Management System**

**(ADAMS):** You may obtain publicly-available documents online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the

search, select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov). The ADAMS accession number for each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in this document.

**FOR FURTHER INFORMATION CONTACT:** Scott P. Wall, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-2855; e-mail: [Scott.Wall@nrc.gov](mailto:Scott.Wall@nrc.gov).

**SUPPLEMENTARY INFORMATION:** The text of the exemption is attached.

Dated August 13, 2020.

For the Nuclear Regulatory Commission.

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Scott P. Wall, Senior Project Manager,  
Plant Licensing Branch III,  
Division of Operating Reactor Licensing,  
Office of Nuclear Reactor Regulation.

**Attachment – Exemption.**

**NUCLEAR REGULATORY COMMISSION**

**Docket No. 50-331**

**NextEra Energy Duane Arnold, LLC**

**Duane Arnold Energy Center**

**Exemption**

**I. Background.**

Duane Arnold Energy Center (DAEC) is a single boiling-water reactor located in Linn County, Iowa. Under Renewed Facility Operating License No. DPR-49, DAEC is owned by NextEra Energy Duane Arnold, LLC (NEDA, the licensee) (70%), Central Iowa Power Cooperative (20%), and Corn Belt Power Cooperative (10%) and is operated by NEDA. This license is subject to the rules, regulations, and orders of the U.S. Nuclear Regulatory Commission (NRC, the Commission).

By letter dated January 18, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19023A196), NEDA submitted to the NRC a certification in accordance with Section 50.82(a)(1)(i) of Title 10 of the *Code of Federal Regulations* (10 CFR), stating its determination to permanently cease power operations at DAEC in the fourth quarter of 2020. By letter dated March 2, 2020 (ADAMS Accession No. ML20062E489), NEDA updated this certification, stating that it plans to permanently cease power operations at DAEC on October 30, 2020. By letter dated April 2, 2020 (ADAMS Accession No. ML20094F603), NEDA submitted to the NRC a Post-Shutdown Decommissioning Activities Report (PSDAR) and site-specific Decommissioning Cost Estimate (DCE) for DAEC in accordance with 10 CFR 50.82(a)(4)(i).

## **II. Request/Action.**

By letter dated February 25, 2020 (ADAMS Accession No. ML20056E054), as supplemented by letter dated May 29, 2020 (ADAMS Accession No. ML20153A371), NEDA submitted to the NRC a request for exemption from specific requirements of 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv). The exemption from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) would permit NEDA to make withdrawals from the DAEC Decommissioning Trust Fund (DTF) for spent fuel management and site restoration activities in accordance with the DAEC DCE. The exemption from 10 CFR 50.75(h)(1)(iv) would also permit NEDA to make these withdrawals without prior notification of the NRC, similar to withdrawals for decommissioning activities made in accordance with 10 CFR 50.82(a)(8).

As part of its exemption request, NEDA provided Table 1, "Annual SAFSTOR Decommissioning Cost Cash Flow for Duane Arnold Energy Center," that shows the annual DTF cash flow for DAEC while conducting SAFSTOR decommissioning (i.e., deferred dismantling). Table 1 contains the projected withdrawals from the DTF needed to cover the estimated costs of radiological decommissioning, spent fuel management, and site restoration activities as projected as of the date of the exemption request. Subsequent to its exemption request, NEDA provided the DTF balance and cost estimates for these same activities in its letter dated April 2, 2020 for the DAEC PSDAR and in Enclosure 1 to its March 26, 2020 annual report on the status of decommissioning funding for DAEC (ADAMS Accession No. ML20086L916). On May 29, 2020, NEDA supplemented its request and provided, among other things, the most recently available NEDA DAEC DTF balance. The NRC staff considered each of these submittals in its review of the exemption request.

The requirements of 10 CFR 50.82(a)(8)(i)(A) restrict the use of DTF withdrawals to expenses for legitimate decommissioning activities consistent with the definition of decommissioning that appears in 10 CFR 50.2. The definition of “decommission” in 10 CFR 50.2 is:

to remove a facility or site safely from service and reduce residual radioactivity to a level that permits—

(1) Release of the property for unrestricted use and termination of the license; or

(2) Release of the property under restricted conditions and termination of the license.

This definition does not include activities associated with spent fuel management and site restoration activities. The requirements of 10 CFR 50.75(h)(1)(iv) also restrict the use of DTF disbursements (other than for ordinary administrative costs and other incidental expenses of the fund in connection with the operation of the fund) to decommissioning expenses until final radiological decommissioning is completed. Therefore, an exemption from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) is needed to allow NEDA to use funds from the DAEC DTF for spent fuel management and site restoration activities at DAEC. The requirements of 10 CFR 50.75(h)(1)(iv) further provide that, except for withdrawals being made under 10 CFR 50.82(a)(8) or for payments of ordinary administrative costs and other incidental expenses of the fund in connection with the operation of the fund, no disbursement may be made from the DTF without written notice to the NRC at least 30 working days in advance. Therefore, an exemption from 10 CFR 50.75(h)(1)(iv) is also needed to allow NEDA to use funds from the DAEC DTF for spent fuel management and site restoration activities at DAEC without prior NRC notification.

### **III. Discussion.**

Pursuant to 10 CFR 50.12, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR Part 50 (1) when the exemptions are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security; and (2) when any of the special circumstances listed in 10 CFR 50.12(a)(2) are present. These special circumstances include, among other things:

- (a) Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule; and
- (b) Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated.

#### **A. Authorized by Law**

The requested exemption from 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) would allow NEDA to use a portion of the funds from the DAEC DTF for spent fuel management and site restoration activities at DAEC without prior notice to the NRC, in the same manner that withdrawals are made under 10 CFR 50.82(a)(8) for decommissioning activities. As stated above, 10 CFR 50.12 allows the NRC to grant exemptions from the requirements of 10 CFR part 50 when the exemptions are authorized by law. The NRC staff has determined, as explained below, that granting the licensee's proposed exemption will not result in a violation of the Atomic

Energy Act of 1954, as amended, or the Commission's regulations. Therefore, the exemption is authorized by law.

**B. No Undue Risk to Public Health and Safety**

The underlying purpose of 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) is to provide reasonable assurance that adequate funds will be available for the radiological decommissioning of power reactors. Based on the site-specific DCE and the cash flow analysis, use of a portion of the DAEC DTF for spent fuel management and site restoration activities at DAEC will not adversely impact NEDA's ability to complete radiological decommissioning within 60 years and terminate the DAEC license. Furthermore, an exemption from 10 CFR 50.75(h)(1)(iv) to allow the licensee to make withdrawals from the DTF for spent fuel management and site restoration activities without prior written notification to the NRC will not affect the sufficiency of funds in the DTF to accomplish radiological decommissioning because such withdrawals are still constrained by the provisions of 10 CFR 50.82(a)(8)(i)(B) – (C) and are reviewable under the annual reporting requirements of 10 CFR 50.82(a)(8)(v) – (vii).

Based on the above, there are no new accident precursors created by using the DTF in the proposed manner. Thus, the probability and consequences of postulated accidents are not increased. No changes are being made in the types or amounts of effluents that may be released offsite. There is no significant increase in occupational or public radiation exposure. Therefore, the requested exemption will not present an undue risk to public health and safety.

**C. Consistent with the Common Defense and Security**

The requested exemption would allow NEDA to use funds from the DAEC DTF for spent fuel management and site restoration activities at DAEC. Spent fuel management under 10 CFR 50.54(bb) is an integral part of the planned NEDA decommissioning and license termination process and will not adversely affect NEDA's ability to physically secure the site or protect special nuclear material. This change to enable the use of a portion of the funds from the DTF for spent fuel management and site restoration activities has no relation to security issues. Therefore, the common defense and security is not impacted by the requested exemption.

**D. Special Circumstances**

Special circumstances, in accordance with 10 CFR 50.12(a)(2)(ii), are present whenever application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the regulation.

The underlying purpose of 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv), which restrict withdrawals from DTFs to expenses for radiological decommissioning activities, is to provide reasonable assurance that adequate funds will be available for radiological decommissioning of power reactors and license termination. Strict application of these requirements would prohibit the withdrawal of funds from the DAEC DTF for activities other than radiological decommissioning activities at DAEC, such as for spent fuel management and site restoration activities, until final radiological decommissioning at DAEC has been completed.

The aggregate DAEC DTF balances across all licensed owners as of December 31, 2019 was \$568,294,503. The NEDA DAEC DTF balance as of December 31, 2019 was \$454,453,798. This amount represents NEDA's 70%

ownership of DAEC. In its letter dated May 29, 2020, NEDA provided an updated NEDA DAEC DTF balance of \$416,135,029 as of April 30, 2020. The NEDA analysis projects the total radiological decommissioning cost of DAEC to be approximately \$724,688,000 in 2018 dollars. As required by 10 CFR 50.54(bb), NEDA estimated the costs associated with spent fuel management at DAEC to be \$259,466,000 in 2018 dollars.

The NRC staff performed an independent cash flow analysis of the DAEC DTF over the 60-year SAFSTOR period (assuming an annual real rate of return of 2 percent, as allowed by 10 CFR 50.75(e)(1)(ii)) and determined the projected earnings of the DTF. The NRC staff confirmed that the current funds in the DTF and projected earnings provide reasonable assurance of adequate funding to complete all NRC-required radiological decommissioning activities, and also to pay for spent fuel management and site restoration activities. Therefore, the NRC staff finds that NEDA has provided reasonable assurance that adequate funds will be available for the radiological decommissioning of DAEC, even with the disbursement of funds from the DTF for spent fuel management and site restoration activities. Consequently, the NRC staff concludes that application of the requirements of 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) that funds from the DTF only be used for radiological decommissioning activities and not for spent fuel management and site restoration activities is not necessary to achieve the underlying purpose of the rule. Thus, special circumstances are present supporting approval of the exemption request.

In its submittal, NEDA also requested exemption from the requirement of 10 CFR 50.75(h)(1)(iv) concerning prior written notification to the NRC of withdrawals from the DTF to fund activities other than radiological decommissioning. The underlying purpose of notifying the NRC prior to withdrawal of funds from the DTF is to provide opportunity for NRC intervention, when deemed necessary, if the withdrawals are for expenses other than

those authorized by 10 CFR 50.75(h)(1)(iv) and 10 CFR 50.82(a)(8) that could result in there being insufficient funds in the DTF to accomplish radiological decommissioning.

By granting the exemption to 10 CFR 50.75(h)(1)(iv) and 10 CFR 50.82(a)(8)(i)(A), the NRC staff considers that withdrawals consistent with the licensee's submittal dated February 25, 2020, as supplemented by letter dated May 29, 2020, are authorized. As stated previously, the NRC staff has determined that there are sufficient funds in the DTF to complete radiological decommissioning activities as well as to conduct spent fuel management and site restoration activities consistent with the PSDAR, DCE, and the February 25, 2020, as supplemented by letter dated May 29, 2020, exemption request. Pursuant to the requirements in 10 CFR 50.82(a)(8)(v) and (vii), licensees are required to monitor and annually report to the NRC the status of the DTF and the licensee's funding for spent fuel management. These reports provide the NRC staff with awareness of, and the ability to take action on, any actual or potential funding deficiencies. Additionally, 10 CFR 50.82(a)(8)(vi) requires that the annual financial assurance status report must include additional financial assurance to cover the estimated cost of completion if the sum of the balance of any remaining decommissioning funds, plus earnings on such funds calculated at not greater than a 2-percent real rate of return, together with the amount provided by other financial assurance methods being relied upon, does not cover the estimated cost to complete the decommissioning. The requested exemption would not allow the withdrawal of funds from the DTF for any other purpose that is not currently authorized in the regulations without prior notification to the NRC. Therefore, the granting of the exemption to 10 CFR 50.75(h)(1)(iv) to allow the licensee to make withdrawals from the DTF to cover authorized expenses for spent fuel management and site restoration activities without

prior written notification to the NRC will still meet the underlying purpose of the regulation.

Special circumstances, in accordance with 10 CFR 50.12(a)(2)(iii), are present whenever compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated. The licensee states that the DTF contains funds in excess of the estimated costs of radiological decommissioning and that these excess funds are needed for spent fuel management and site restoration activities. The NRC does not preclude the use of funds from the decommissioning trust in excess of those needed for radiological decommissioning for other purposes, such as spent fuel management or site restoration activities.

The NRC has stated that funding for spent fuel management and site restoration activities may be commingled in the DTF, provided that the licensee is able to identify and account for the radiological decommissioning funds separately from the funds set aside for spent fuel management and site restoration activities (see NRC Regulatory Issue Summary 2001-07, Rev. 1, "10 CFR 50.75 Reporting and Recordkeeping for Decommissioning Planning," dated January 8, 2009 (ADAMS Accession No. ML083440158), and Regulatory Guide 1.184, Revision 1, "Decommissioning of Nuclear Power Reactors," dated October 2013 (ADAMS Accession No. ML13144A840)). Preventing access to those excess funds in the DTF because spent fuel management and site restoration activities are not associated with radiological decommissioning would create an unnecessary financial burden without any corresponding safety benefit. The adequacy of the DTF to cover the cost of activities associated with spent fuel management and site restoration, in addition to radiological decommissioning, is supported by the site-specific decommissioning cost analysis. If the licensee cannot use

its DTF for spent fuel management and site restoration activities, it would need to obtain additional funding that would not be recoverable from the DTF, or the licensee would have to modify its decommissioning approach and methods. The NRC staff concludes that either outcome would impose an unnecessary and undue burden significantly in excess of that contemplated when 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) were adopted.

The underlying purposes of 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) would be achieved by allowing NEDA to use a portion of the DAEC DTF for spent fuel management and site restoration activities without prior NRC notification, and compliance with the regulations would result in an undue hardship or other costs that are significantly in excess of those contemplated when the regulations were adopted. Thus, the special circumstances required by 10 CFR 50.12(a)(2)(ii) and 10 CFR 50.12(a)(2)(iii) exist and support the approval of the requested exemption.

#### **E. Environmental Considerations**

In accordance with 10 CFR 51.31(a), the Commission has determined that the granting of the exemption will not have a significant effect on the quality of the human environment (see Environmental Assessment and Finding of No Significant Impact published in the *Federal Register* on August 4, 2020 (85 FR 47255)).

#### **IV. Conclusions.**

In consideration of the above, the NRC staff finds that the proposed exemption confirms the adequacy of funding in the DAEC DTF, considering growth, to complete radiological decommissioning of the site and to terminate the license and also to cover estimated spent fuel management and site restoration activities.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12(a), the exemption is authorized by law, will not present an undue risk to public health and safety, and is consistent with the common defense and security. Also, special circumstances are present. Therefore, the Commission hereby grants NEDA an exemption from the requirements of 10 CFR 50.82(a)(8)(i)(A) and 10 CFR 50.75(h)(1)(iv) to allow use of a portion of the funds from the DAEC DTF for spent fuel management and site restoration activities in accordance with the DAEC PSDAR and DCE, dated April 2, 2020. Additionally, the Commission hereby grants NEDA an exemption from the requirement of 10 CFR 50.75(h)(1)(iv) to allow such withdrawals without prior NRC notification.

This exemption is effective upon issuance.

Dated: 12th day of August 2020.

For the Nuclear Regulatory Commission.

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Craig G. Erlanger, Director,  
Division of Operating Reactor Licensing,  
Office of Nuclear Reactor Regulation.