



February 28, 2019

NG-19-0008
L-2019-047
10 CFR 73.5
10 CFR 50.82

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

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

Request for Exemption from 10 CFR 73.55(p)(1)(i) and (ii) Related to the
Suspension of Security Measures in an Emergency or During Severe Weather

By letter dated January 18, 2019 (Accession No. ML19023A196), NextEra Energy Duane Arnold, LLC (NEDA) provided formal notification to the U.S. Nuclear Regulatory Commission (NRC) pursuant to 10 CFR 50.82(a)(1)(i) and 10 CFR 50.4(b)(8) of the intention to permanently cease power operations at the Duane Arnold Energy Center (DAEC) in the fourth quarter of 2020.

After the certifications of permanent cessation of power operation and of permanent removal of fuel from the reactor vessel are docketed for DAEC, in accordance with 10 CFR 50.82(a)(1)(i) and (ii), and pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. As a result, licensed reactor operators will no longer be required to support plant operating activities. Instead, certified fuel handlers (CFHs) will perform activities associated with decommissioning and irradiated fuel handling and management. Approval of a CFH training and retraining program is needed to facilitate these activities. By letter dated January 29, 2019 (ML19037A016), NEDA submitted a request for NRC approval of the CFH training and retraining program for DAEC.

NG-19-0008

L-2019-047

Page 2 of 2

In accordance with 10 CFR 73.5, "Specific Exemptions," NEDA requests an exemption for DAEC from 10 CFR 73.55(p)(1)(i) and 10 CFR 73.55(p)(1)(ii), related to the suspension of security measures in an emergency or during severe weather. 10 CFR 73.55(p)(1)(i) and 10 CFR 73.55(p)(1)(ii) require that the suspension of security measures be approved by a licensed senior operator before taking action. NEDA is requesting an exemption from these rules to allow either a licensed senior operator or a CFH to approve the suspension of security measures. Approval of this exemption request will align 10 CFR 73.55(p)(1)(i) and 10 CFR 73.55(p)(1)(ii) with 10 CFR 50.54(y). The details of the 10 CFR 73.5 exemption request are enclosed.

NEDA requests review and approval of this exemption request by June 1, 2020 to support the current schedule to permanently defuel the DAEC. NEDA requests that the approved exemption request become effective for DAEC following the docketing of the certification required by 10 CFR 50.82(a)(1) that the DAEC has been permanently shut down and defueled.

There are no regulatory commitments made in this letter. If you should have further questions, please contact J. Michael Davis, Licensing Manager at 319-851-7032.



Dean Curtland
Site Director, Duane Arnold Energy Center
NextEra Energy Duane Arnold, LLC

Attachment: Exemption Request

cc: NRC Region III Administrator
NRC Resident Inspector
NRC Project Manager

1. SPECIFIC EXEMPTION REQUEST

In accordance with Title 10 CFR 73.5, "Specific Exemptions," NextEra Energy Duane Arnold, LLC, hereafter NextEra Energy Duane Arnold, requests an exemption from 10 CFR 73.55(p)(1)(i) and 10 CFR 73.55(p)(1)(ii), related to the suspension of security measures in an emergency or during severe weather for the Duane Arnold Energy Center (DAEC). These rules require that the suspension of security measures be approved by a licensed senior operator before taking action. Consistent with 10 CFR 50.54(y), the proposed exemption would allow either a licensed senior operator or a certified fuel handler (CFH) to approve the suspension of security measures in an emergency or during severe weather at DAEC after the certifications required under 10 CFR 50.82(a)(1) have been docketed and the NRC has approved the NextEra Energy Duane Arnold CFH training and retraining program that was submitted by letter dated January 29, 2019 (Reference 1).

By letter dated January 18, 2019 (Reference 2), NextEra Energy Duane Arnold provided formal notification to the U.S. Nuclear Regulatory Commission (NRC) pursuant to 10 CFR 50.82(a)(1)(i) and 10 CFR 50.4(b)(8) of the intention to permanently cease power operations at the DAEC in the fourth quarter of 2020. After the certifications of permanent cessation of power operation and of permanent removal of fuel from the reactor vessel are docketed for DAEC, in accordance with 10 CFR 50.82(a)(1)(i) and (ii), and pursuant to 10 CFR 50.82(a)(2), the 10 CFR 50 license for DAEC will no longer authorize reactor operation or emplacement or retention of fuel in the reactor vessel. As a result, licensed senior operators will no longer be required to support facility operating activities. Instead, CFHs will facilitate the activities associated with decommissioning and irradiated fuel handling and management.

2. BASIS FOR EXEMPTION REQUEST

Approval of this exemption request will align 10 CFR 73.55(p)(1)(i) and 10 CFR 73.55(p)(1)(ii) with 10 CFR 50.54(y) and 10 CFR 50.2 for DAEC as a nuclear power reactor facility whose certifications required under 10 CFR 50.82(a)(1) have been docketed.

10 CFR 50.54(x) states:

A licensee may take reasonable action that departs from a license condition or a technical specification (contained in a license issued under this part) in an emergency when this action is immediately needed to protect the public health and safety and no action consistent with license conditions and technical specifications that can provide adequate or equivalent protection is immediately apparent.

10 CFR 50.54(y) states:

Licensee action permitted by paragraph (x) of this section shall be approved, as a minimum, by a licensed senior operator, or, at a nuclear power reactor facility for which the certifications required under 10 CFR 50.82(a)(1) have been submitted, by either a licensed senior operator or a certified fuel handler, prior to taking the action.

10 CFR 73.55(p) states:

- (1) *The licensee may suspend implementation of affected requirements of this section under the following conditions:*
 - (i) *In accordance with 10 CFR 50.54(x) and 10 CFR 50.54(y) of this chapter, the licensee may suspend any security measures under this section in an emergency when this action is immediately needed to protect the public health and safety and no action consistent with license conditions and technical specifications that can provide adequate or equivalent protection is immediately apparent. This suspension of security measures must be approved as a minimum by a licensed senior operator before taking this action.*
 - (ii) *During severe weather when the suspension of affected security measures is immediately needed to protect the personal health and safety of security force personnel and no other immediately apparent action consistent with the license conditions and technical specifications can provide adequate or equivalent protection. This suspension of security measures must be approved, as a minimum, by a licensed senior operator, with input from the security supervisor or manager, before taking this action.*

10 CFR 50.2 provides the following definition:

Certified fuel handler means, for a nuclear power reactor facility, a non-licensed operator who has qualified in accordance with a fuel handler training program approved by the Commission.

The permissibility and equivalency of decision-making by a CFH is reflected in 10 CFR 50.54(y), which was promulgated as part of a rulemaking to clarify and codify practices that have been accepted for licensees of a unit being decommissioned. In proposing this provision (Reference 3), the NRC explained:

A nuclear power reactor that has permanently ceased operations and no longer has fuel in the reactor vessel does not require a licensed individual to monitor core conditions. A certified fuel handler at a permanently shutdown and defueled nuclear power reactor undergoing decommissioning is an individual who has the requisite knowledge and experience to evaluate plant conditions and make these judgments.

Therefore, compliance with 10 CFR 73.55(p)(1)(i) and 10 CFR 73.55(p)(1)(ii) requiring licensed senior operator approval for a facility that is permanently shutdown and defueled is not necessary to achieve the underlying purpose of the regulations.

The specific conditions for granting an exemption from regulations in 10 CFR Part 73 are set forth in 10 CFR 73.5. In accordance with 10 CFR 73.5, the NRC is authorized to grant exemptions from the requirements of 10 CFR Part 73 that it determines: (i) are authorized by law, (ii) will not endanger life or property or the common defense and security, and (iii) are otherwise in the public interest. The following addresses each of these conditions and demonstrates that the NRC may grant the exemption request pursuant to its regulations.

(i) Authorized by Law

The exemption request from 10 CFR 73.55(p)(1)(i) and 10 CFR 73.55(p)(1)(ii) will remove the requirement that a licensed senior operator approve the suspension of security measures, under certain emergency conditions or severe weather, and aligns these regulations with 10 CFR 50.54(y) by using the authority of a CFH, as defined in 10 CFR 50.2, in place of a licensed senior operator. In accordance with 10 CFR 73.5, the NRC's regulations allow for exemptions from the regulations in 10 CFR Part 73 that the NRC determines are authorized by law. Therefore, granting an exemption is explicitly authorized by the NRC's regulations.

(ii) Will Not Endanger Life or Property or the Common Defense and Security

The suspended security measures will be reinstated as soon as conditions permit in accordance with 10 CFR 73.55(p)(2). The suspension of security measures for non-weather emergency conditions under 10 CFR 73.55(p)(1)(i) will continue to be invoked only "when this action is immediately needed to protect the public health and safety and no action consistent with the license conditions and technical specifications that can provide adequate or equivalent protection is immediately apparent." The suspension of security measures for severe weather under 10 CFR 73.55(p)(1)(ii) will continue to be used only when "the suspension of affected security measures is immediately needed to protect the personal health and safety of security force personnel and no other immediately apparent action consistent with the license conditions and technical

specifications can provide adequate or equivalent protection." The requirement to receive input from the security supervisor or manager will remain as well.

Approval of an exemption to allow as a minimum either a CFH or a licensed senior operator to suspend security measures in an emergency or during severe weather at these units once the certifications required by 10 CFR 50.82(a)(1) have been submitted, will not endanger life or property. The CFH at each unit will be sufficiently trained and qualified to approve the suspension of security measures in accordance with the NextEra Energy Duane Arnold CFH training and retraining program submitted for NRC review and approval (Reference 1). The exemption would not reduce the measures currently in place to protect against radiological sabotage. In addition, the common defense and security would not be adversely affected as a result of this exemption because the exemption does not reduce the overall effectiveness of the respective physical security plans, training and qualification plans, or safeguards contingency plans.

Therefore, allowing a CFH or a licensed senior operator as a minimum to approve the suspension of security measures in an emergency or during severe weather does not adversely affect public health and safety or the assurance of the common defense and security.

(iii) Is Otherwise in the Public Interest

An exemption to allow either a CFH or a licensed senior operator to suspend security measures for an emergency or during severe weather at these units does not present a risk to the public health and safety. The exemption will allow a trained, qualified individual (that is, a CFH) to approve the suspension of security measures in an emergency or during severe weather. The exemption permits NextEra Energy Duane Arnold to implement changes to its security plans to authorize a CFH to approve temporary suspension of security regulations during an emergency or severe weather, which would align the authority given to the CFH by the NRC when it promulgated 10 CFR 50.54(y). Once the certifications of permanent cessation of power operations and of permanent removal of fuel from the DAEC reactor vessel are submitted in accordance with 10 CFR 50.82(a)(1)(i) and (ii), licensed reactor operators will no longer be required to support facility operating activities. The exemption will maintain the current level of safety, be consistent with 10 CFR 50.54(y), and avoid an unnecessary impact on the costs associated with maintaining a redundant training program (that is, reactor operator training). Therefore, exempting requirements to obtain approval from a licensed senior operator, who is not otherwise required for a permanently shutdown and defueled reactor, before taking steps to protect the public health and safety, or to protect the safety of the security force, is in the public interest.

3. ENVIRONMENTAL ASSESSMENT

NextEra Energy Duane Arnold, LLC (NEDA) has determined that the requested exemption meets the categorical exclusion provision in 10 CFR 51.22(c)(25), as the requested licensing action is an exemption from the requirements of the NRC's regulations and: (i) there is no significant hazards consideration; (ii) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite; (iii) there is no significant increase in individual or cumulative public or occupational radiation exposure; (iv) there is no significant construction impact; (v) there is no significant increase in the potential for or consequences from radiological accidents; and (vi) the requirements from which an exemption is sought involve: safeguard plans, and materials control and accounting inventory scheduling requirements; or involve other requirements of an administrative, managerial, or organizational nature. The information provided below supports the basis for this determination.

(i) There is no significant hazards consideration

NEDA has evaluated the proposed exemption to determine whether or not a significant hazards consideration is involved by focusing on the three standards set forth in 10 CFR 50.92, "*Issuance of amendment*," as discussed below:

1. Does the proposed exemption involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The proposed exemption would allow either a licensed senior operator or a CFH to suspend security measures in an emergency or during severe weather at Duane Arnold Energy Center (DAEC) following permanent cessation of operations and permanent removal of fuel from the reactor vessel. The proposed exemption has no effect on facility structures, systems, and components (SSCs) and no effect on the capability of any facility SSC to perform its design function and, therefore, would not increase the likelihood of a malfunction of any facility SSC. The proposed exemption does not alter any assumptions or methodology associated with the previously evaluated accidents in the DAEC Updated Final Safety Analysis Report. The exemption will not affect the probability of occurrence of any previously analyzed accident.

The proposed exemption would allow either a licensed senior operator or a Certified Fuel Handler (CFH) to suspend security measures in an emergency or during severe weather at DAEC and, therefore, does not affect the ability to successfully respond to previously evaluated accidents. The exemption will not affect the consequences of any accidents previously evaluated.

Therefore, the proposed exemption does not involve a significant increase in the probability or consequences of any accidents previously evaluated.

2. Does the proposed exemption create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed exemption does not involve a physical alteration of the facility. No new or different type of equipment will be installed, and there are no physical modifications to existing equipment associated with the proposed exemption.

Similarly, the proposed exemption would not physically alter the facility or any SSCs involved in the mitigation of any accidents. Thus, no new initiators or precursors of a new or different kind of accident are created. Furthermore, the proposed exemption does not create the possibility of a new accident as a result of new failure modes associated with any equipment or personnel failures. No changes are being made to the parameters within which the facility is normally maintained, or in protective or mitigative action setpoints, and no new failure modes are being introduced.

Therefore, the proposed exemption does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed exemption involve a significant reduction in a margin of safety?

Response: No

The proposed exemption would allow either a licensed senior operator or a CFH to suspend security measures in an emergency or during severe weather at DAEC following permanent cessation of operations and permanent removal of fuel from the reactor vessel. The proposed exemption does not alter the design basis or any safety limits. The proposed exemption does not impact station operation or any facility SSC that is relied upon for accident mitigation.

Therefore, the proposed exemption does not involve a significant reduction in a margin of safety.

Based on the above, NEDA concludes that the proposed exemption does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of "no significant hazards consideration" is justified.

- (ii) There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

The proposed exemption to the security regulation is unrelated to any operational restriction. There are no changes in the types, characteristics, or quantities of effluents discharged to the environment associated with the proposed exemption. There are no materials or chemicals introduced into these facilities that could affect the characteristics or types of effluents released offsite. In addition, the method of operation of waste processing systems will not be affected by the exemption. The proposed exemption will not result in changes to the design basis requirements of SSCs that function to limit or monitor the release of effluents. All the SSCs associated with limiting the release of effluents will continue to be able to perform their functions.

Therefore, the proposed exemption will result in no significant change to the types or significant increase in the amounts of any effluents that may be released offsite.

- (iii) There is no significant increase in individual or cumulative public or occupational radiation exposure.

The proposed exemption would allow either a licensed senior operator or a CFH to suspend security measures in an emergency or during severe weather at DAEC following permanent cessation of operations and permanent removal of fuel from the reactor vessel. The proposed exemption to the security regulation is unrelated to any operational restriction. There are no changes in normal occupational doses. Likewise, design basis accident dose is not impacted by the proposed exemption.

Therefore, the exemption would result in no expected increases in individual or cumulative occupational radiation exposure on either the workforce or the public.

- (iv) There is no significant construction impact.

No construction activities are associated with the proposed exemption, and therefore, there is no significant construction impact.

- (v) There is no significant increase in the potential for or consequences from radiological accidents.

The proposed exemption would allow either a licensed senior operator or a CFH to suspend security measures in an emergency or during severe weather at DAEC following permanent cessation of operations and permanent removal of fuel from the reactor vessel. The proposed exemption to the security regulation does not affect the analyzed source terms, does not affect the ability to successfully respond to or mitigate any previously evaluated accidents, or the radiological assumptions used in any evaluations. The exemption will not affect the consequences of any previously evaluated accidents.

Therefore, the proposed exemption does not result in a significant increase in the potential for, or consequences of, a radiological accident.

- (vi) The requirements from which an exemption is sought involve safeguards, materials control, and managerial matters.

The purpose of the exemption is to allow alternative action to the stated requirements in 10 CFR 73.55(p)(1)(i) and 10 CFR 73.55(p)(1)(ii) by permitting either a licensed senior operator or a CFH to approve the suspension of security measures in an emergency or during severe weather. The requirement to have a licensed senior operator or a CFH approve departure from security actions is viewed as involving safeguards, materials control, and managerial matters.

Therefore, pursuant to 10 CFR 51.22(b), an environmental impact statement or environmental assessment is not required for the proposed exemption.

4. CONCLUSION

As demonstrated above, NEDA considers that this exemption request is in accordance with the criteria of 10 CFR 73.5. Specifically, the requested exemption is authorized by law, will not endanger life or property or the common defense and security, and is otherwise in the public interest. There is no adverse environmental impact associated with this exemption request as discussed above.

5. PRECEDENT

The proposed request is consistent with exemption requests recently approved by the NRC in the following correspondence:

- Letter dated May 16, 2017, NRC to Dent, "Pilgrim Nuclear Power Station – Approval Request for Exemption from Specific Provisions in 10 CFR 73.55" (ML17059D763);
- Letter dated July 7, 2017, NRC to Fisher, "Fort Calhoun Station, Unit No. 1 – Approval of Request for Exemption from Specific Provisions in 10 CFR 73.55" (ML17067A346);
- Letter dated October 11, 2017, NRC to Entergy, "Palisades Nuclear Plant – Approval of Request for Exemption from Specific Provisions in 10 CFR 73.55" (ML17216A802);
- Letter dated June 7, 2018, NRC to Hanson, "Three Mile Island Nuclear Station, Unites 1 and 2 – Exemption from the Requirements of 10 CFR 73.55(p)(1)(i) and (ii) Related to the Suspension of Security Measures in and Emergency or During Severe Weather" (ML18019A019).

6. REFERENCES

- (1) Letter from NextEra Energy Duane Arnold, LLC to NRC, "Request for Approval of Certified Fuel Handler Training Program," dated January 29, 2019 (ML19037A016).
- (2) Letter from NextEra Energy Duane Arnold, LLC to NRC, "Certification of Permanent Cessation of Power Operations," dated January 18, 2019 (ML19023A196).
- (3) Federal Register Notice, Vol. 60, No. 139 (60 FR 37374), "Decommissioning of Nuclear Power Reactors," dated July 20, 1995.