



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

November 25, 2020

Mr. Don Moul  
Executive Vice President, Nuclear  
Division and Chief Nuclear Officer  
NextEra Energy Duane Arnold, LLC  
Mail Stop: EX/JB  
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SUBJECT: DUANE ARNOLD ENERGY CENTER – TEMPORARY EXEMPTION FROM  
REQUIREMENTS OF 10 CFR PART 50, APPENDIX E, SECTIONS IV.F.2.B  
AND IV.F.2.C (EPID L-2020-LLE-0150 [COVID-19])

Dear Mr. Moul:

The U.S. Nuclear Regulatory Commission (NRC, the Commission) has approved the enclosed exemption from specific requirements of Appendix E to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Sections IV.F.2.b and IV F.2.c for the Duane Arnold Energy Center (DAEC). This action is in response to your application dated September 22, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20266G292), that requested:

- a one-time exemption from the requirements in 10 CFR Part 50, Appendix E, Section IV.F.2.b to postpone conducting the calendar year (CY) 2020 biennial onsite emergency preparedness (EP) exercise until CY 2021, and
- a one-time exemption from the requirements in 10 CFR Part 50, Appendix E, Section IV.F.2.c for conducting the CY 2020 biennial offsite EP exercise.

NextEra Energy Duane Arnold, LLC (NEDA, the licensee) holds Renewed Facility Operating License No. DPR-49, which authorizes operation of the DAEC. This license is subject to the rules, regulations, and orders of the Commission.

The facility consists of a boiling-water reactor located near Palo in Linn County, Iowa, that has permanently ceased power operation.

By letter dated September 22, 2020, NEDA submitted a request for temporary exemption from Appendix E to 10 CFR Part 50, Sections IV.F.2.b and IV.F.2.c regarding the performance of its CY 2020 biennial EP exercise.

The requirements in 10 CFR Part 50, Appendix E, Section IV.F.2.b state, in part:

Each licensee at each site shall conduct a subsequent exercise of its onsite emergency plan every 2 years. ... The exercise may be included in the full participation biennial exercise required by paragraph 2.c of this section.

The requirements in 10 CFR Part 50, Appendix E, Section IV.F.2.c state, in part:

Offsite plans for each site shall be exercised biennially with full participation by each offsite authority having a role under the radiological response plan.

In Appendix E to 10 CFR Part 50, the NRC defines the term "full participation," when used in conjunction with EP exercises for a particular site, to mean appropriate offsite State and local authorities and licensee personnel physically and actively take part in testing their integrated capability to adequately assess and respond to an accident at a commercial nuclear power plant. Full participation includes testing major observable portions of the onsite and offsite emergency plans and mobilization of State, local, and licensee personnel and other resources in sufficient numbers to verify the capability to respond to the accident scenario. While desirable, full participation exercises (i.e., exercises required by 10 CFR Part 50, Appendix E, Sections IV.F.2.b and 2.c) are not required to be performed simultaneously.

On January 31, 2020, the U.S. Department of Health and Human Services declared a public health emergency (PHE) for the United States to aid the nation's healthcare community in responding to the Coronavirus Disease 2019 (COVID-19). Subsequently, the Centers for Disease Control and Prevention (CDC) issued recommendations (e.g., social distancing, limiting assemblies) in an attempt to limit the spread of COVID-19.<sup>1</sup>

In the Enclosure to your application, "Request for Exemption from 10 CFR [Part] 50, Appendix E, Biennial Emergency Preparedness Exercise Requirements," you provided the following information:

- Due to the continuing uncertainty of the course of the COVID-19 PHE, NEDA requests to postpone the CY 2020 biennial onsite EP exercise until CY 2021 and to not conduct the CY 2020 biennial offsite EP exercise to allow the DAEC to continue to implement COVID-19 isolation activities (e.g., social distancing, group size limitations, self-quarantining, etc.). These isolation activities are intended to protect both onsite emergency response organization (ERO) and offsite response organization (ORO) personnel to ensure that they are available for an actual radiological emergency at the DAEC.
- The threat of COVID-19 spread has resulted in the inability to safely conduct the biennial offsite EP exercise that was scheduled for September 2, 2020, due to implementation of isolation activities (e.g., social distancing, group size limitations, self-quarantining, etc.). Further, the Iowa Department of Homeland Security and Emergency Management, the Iowa Department of Public Health, Bureau of Radiological Health, and the Benton and Linn County Emergency Management Agencies concur with NEDA's request for an exemption because they are not able to support the CY 2020 biennial offsite EP exercise in the interest of protecting State and local staff during the COVID-19 PHE.

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<sup>1</sup> CDC, "How to Protect Yourself and Others," April 18, 2020 (ADAMS Accession No. ML20125A069).

- This one-time schedular exemption to allow for the postponement of the CY 2020 biennial onsite EP exercise until CY 2021 and to not conduct the CY 2020 biennial offsite EP exercise supports the continued implementation of the isolation activities (e.g., social distancing, group size limitations, self-quarantining, etc.) to protect required ERO and ORO personnel in response to the COVID-19 PHE.
- The last biennial EP exercise was conducted on May 15, 2018. Since that time, the licensee has conducted numerous drills, exercises, and other training activities that have exercised its emergency response strategies, in coordination with offsite authorities. In Attachment 2 to the Enclosure to the September 22, 2020, application, "Onsite ERO Activities to Maintain Preparedness," NEDA provided a list of onsite training and drill activities that it has undertaken since the last evaluated biennial EP exercise to maintain the proficiency of the onsite ERO, as well as activities currently scheduled in CYs 2020 and 2021. In Attachment 3 to the Enclosure to the September 22, 2020, application, "Offsite ORO Concurrence with Exemption and List of Training Activities," NEDA provided the list "DAEC Offsite Partners Demonstration of Emergency Preparedness to Respond to an Event at DAEC." This list provided EP training delivered, and EP plans and procedures reviewed and updated, over the previous 16 months.
- The licensee will continue to conduct drills, exercises, and other training activities that exercise its emergency response strategies. The State and local authorities are expected to participate to the extent practical while also complying with the CDC recommendations to limit the spread of COVID-19.
- The licensee made a reasonable effort to reschedule the CY 2020 biennial EP exercise during CY 2020 but was unsuccessful. The DAEC full-participation drill originally scheduled for April 15, 2020, was postponed to September 2, 2020, due to the COVID-19 PHE. However, the September 2, 2020, drill was also postponed as a result of the derecho that impacted the State of Iowa and the DAEC on August 10, 2020. Moreover, the DAEC permanently ceased power operations on August 10, 2020, requiring NEDA to submit a new drill scenario, reflecting the permanently shut down status of the DAEC, for use in the postponed CY 2021 biennial onsite EP exercise. In addition, considering the current COVID-19 PHE and derecho challenges that the OROs are facing, and the permanently shut down status of the DAEC, NEDA requests an exemption from the CY 2020 biennial offsite EP exercise. Therefore, this exemption would postpone the CY 2020 biennial onsite EP exercise to CY 2021 and would cancel the CY 2020 biennial offsite EP exercise, with the next performance of that exercise to be no later than the end of CY 2022. Future biennial EP exercises would continue to be held in even-numbered years.
- The date of the rescheduled biennial onsite EP exercise is greater than 35 months from the month of the previously evaluated biennial EP exercise conducted on May 15, 2018. The NRC staff will confirm during the week of April 16, 2021, that the licensee's EP Program is adequately prepared by inspecting the EP Program using various selected elements of the Reactor Oversight Program EP Inspection Procedures.
- A statement from responsible OROs stating that they concur with the licensee's exemption request and that they are committed to maintaining their radiological emergency plans, as provided in Attachment 3 to the Enclosure to the September 22, 2020, application.

- A statement from responsible OROs that they are not impacted in a manner that would adversely affect their ability to maintain response capability to support emergency response activities to actual nuclear power plant radiological emergencies, as provided in Attachment 1 to the Enclosure to the September 22, 2020, application, "Letter to FEMA [Federal Emergency Management Agency] from State of Iowa," and Attachment 3 to the Enclosure to the September 22, 2020, application.

Pursuant to 10 CFR 50.12, "Specific exemptions," the NRC may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR Part 50 when (1) 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) special circumstances are present.

The NRC staff determined that the requested exemption is permissible under the Atomic Energy Act of 1954, as amended, and that no other prohibition of law exists to preclude the activities that would be authorized by the exemption. Therefore, the NRC staff finds that the requested exemption is authorized by law.

The regulations in 10 CFR Part 50, Appendix E, Section IV.F.2.b and Section IV.F.2.c concern requirements for licensees to conduct biennial EP exercises at their facilities. No new accident precursors are created by allowing the licensee to postpone the CY 2020 biennial onsite EP exercise to CY 2021 and to not conduct the CY 2020 biennial offsite EP exercise. Thus, the probability and consequences of postulated accidents are not increased. In addition, the requested exemption has no relation to security issues. Therefore, the NRC staff finds that the requested exemption will not present an undue risk to the public health and safety and is consistent with the common defense and security.

Special circumstances, per 10 CFR 50.12, that apply to the requested exemption to allow the licensee to postpone the CY 2020 biennial onsite EP exercise to CY 2021 and to not conduct the CY 2020 biennial offsite EP exercise include:

- a. 10 CFR 50.12(a)(2)(ii): "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."

The regulation in 10 CFR Part 50, Appendix E, Section, IV.F.2.b requires licensees to conduct an exercise of their site emergency plan biennially. Further, the regulation in 10 CFR Part 50, Appendix E, Section IV.F.2.c requires offsite plans for each site to be exercised biennially with full participation by each offsite authority having a role under the plan. The underlying purpose of these requirements is to ensure that the emergency organization personnel are familiar with their duties and to identify and correct any weaknesses that may exist in the licensee's EP Program. The underlying purpose of Section IV.F.2.c is also to test and maintain interfaces among affected State and local authorities and the licensee. The licensee has provided a list of training activities that have occurred since the last evaluated biennial EP exercise in 2018 in Attachment 2 to the application, as well as activities currently scheduled in CYs 2020 and 2021, and stated that this training will ensure that the onsite ERO is fully prepared to respond to an event at the DAEC. Further, the licensee discussed the State and local ORO participation in this training. In addition, NEDA stated that it understands that approval

of the exemption request will not impact the future biennial EP exercise schedule at the DAEC and that the exercises will continue to be held in even years.

Based on the above, the NRC staff finds that the underlying purposes of these regulations are met, in part, by the licensee having conducted these training activities and establishing an acceptable tentative date for the rescheduled biennial onsite EP exercise of the third quarter of CY 2021.

Additionally, with respect to the exemption request to not conduct the CY 2020 biennial offsite EP exercise, the NRC recognizes that in the event of an actual radiological emergency, offsite authorities would respond. Offsite authorities in all states are currently demonstrating response capabilities, including making decisions on protective actions for the public, in response to the COVID-19 PHE.<sup>2</sup> Moreover, the NRC continues to monitor U.S. nuclear power plants to ensure that they operate safely during the COVID-19 PHE and that defense-in-depth is maintained to prevent accidents from happening and to mitigate their consequences.

The NRC has consulted with the FEMA on the readiness of OROs and the use of this information to inform the NRC decision to grant exemptions, per the NRC/FEMA Memorandum of Understanding.<sup>3</sup> FEMA has recently performed assessments of all offsite emergency response plan capabilities and has concluded that offsite radiological EP remains adequate to provide reasonable assurance that appropriate measures can and will be taken to protect the health and safety of the public in a radiological emergency during the COVID-19 PHE.<sup>4</sup> FEMA monitors response and preparedness capabilities of the OROs to ensure that the response to the current PHE does not adversely impact their ability to protect the public health and safety in the event of a radiological emergency at a commercial nuclear power plant. Exercises are just one of the many methods by which FEMA assesses and validates the adequacy of OROs' plans and ability to implement those plans. In accordance with current FEMA program guidance,<sup>5</sup> FEMA has alternative means of conducting these assessments.

Based on the above, granting the request for exemption from the 10 CFR Part 50, Appendix E, Section IV.F.2.c requirement for biennial offsite EP exercises in CY 2020, with the next performance of the exercise to be no later than the end of CY 2022, would allow State, counties, and local governments to continue to focus their essential response efforts on the COVID-19 PHE. This exemption would apply only to the requirements of 10 CFR Part 50, Appendix E, Section IV.F.2.c, and would not address 44 CFR Part 350. An exemption from Section IV.F.2.c would not prevent a State or local authority, at its discretion, from demonstrating key skills in drills and exercises for the

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<sup>2</sup> COVID-19 Resources for State Leaders, *Executive Orders – By State*, accessed August 12, 2020, <https://web.csg.org/covid19/executive-orders/>

<sup>3</sup> "Memorandum of Understanding (MOU) Between the Department of Homeland Security / Federal Emergency Management Agency and Nuclear Regulatory Commission Regarding Radiological Response, Planning and Preparedness," December 7, 2015, ADAMS Accession No. ML15344A371.

<sup>4</sup> FEMA Preparedness Assessments, ADAMS Accession Nos. ML20164A275, ML20174A603, ML20141L795, ML20170B043, ML20170B171, ML20167A175, ML20164A038, ML20154K696, ML20154K617, ML20150A110, and ML20162A056.

<sup>5</sup> Program Manual, Radiological Emergency Preparedness, FEMA P-1028, December 2019, accessed August 12, 2020, [https://www.fema.gov/media-library-data/1577108409695-4e49a0a56c8c62695dcc301272a1eda7/FEMA\\_REP\\_Program\\_Manual\\_Dec\\_2019.pdf](https://www.fema.gov/media-library-data/1577108409695-4e49a0a56c8c62695dcc301272a1eda7/FEMA_REP_Program_Manual_Dec_2019.pdf).

8-year exercise cycle or prevent a State or local authority from conducting the exercise in CY 2020 or CY 2021.

- b. 10 CFR 50.12(a)(2)(v): “The exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation.”

NEDA has determined that the originally scheduled exercise date does not support continued implementation of the isolation activities (e.g., social distancing, group size limitations, self-quarantining, etc.) to protect required ERO personnel in response to the ongoing COVID-19 PHE. These activities are needed to ensure that ERO personnel are isolated from COVID-19 and remain capable of executing the functions of the ERO, as described in the DAEC Emergency Plan. A tentative date of third quarter CY 2021 has been established for the conduct of the CY 2020 biennial onsite EP exercise.

The State of Iowa informed the licensee that it was no longer able to support the originally scheduled biennial EP exercise in the interest of protecting State and local ORO staff, and EP exercise participants. The State of Iowa concluded that rescheduling the biennial EP exercise in CY 2020 would not be feasible due to significant hardship and public safety concerns caused by the response efforts to the COVID-19 PHE and the impacts of the August 10, 2020 derecho event. Affected counties of Benton, Linn, Johnson, and Marshall were severely impacted by the derecho event with catastrophic damaging winds ranging from 100 to 140 miles per hour resulting in significant damages to houses, businesses, and public facilities and widespread electrical distribution system damages. The State of Iowa has also seen civil unrest across the state to include violent protests, vandalism, and violence towards law enforcement. These incidents have provided additional operational impacts to the ORO emergency responders.

In addition, the Iowa Department of Homeland Security and Emergency Management submitted an exemption request to the Region VII U.S. Department of Homeland Security-FEMA Administrator requesting relief from the biennial exercise frequency requirements for the DAEC due to hardship caused by the ongoing response efforts to the COVID-19 PHE. In an October 8, 2020, memorandum, “Approval of the Requested Relief from Biennial Radiological Emergency Preparedness Program Exercise” (ADAMS Accession No. ML20283A670), FEMA approved this request for relief.

Therefore, the NRC staff finds that the requested exemption to allow the licensee to postpone the CY 2020 biennial onsite EP exercise to CY 2021 and to not conduct the CY 2020 biennial offsite EP exercise, with the next performance of the exercise to be no later than the end of CY 2022, would provide only temporary relief from the applicable regulations and that the licensee has made good faith efforts to comply with the regulations.

Based on the above evaluations, the NRC staff finds that the special circumstances of 10 CFR 50.12(a)(2)(ii) and 10 CFR 50.12(a)(2)(v) are present.

NRC approval of the requested exemption is categorically excluded under 10 CFR 51.22(c)(25) and there are no extraordinary circumstances present that would preclude reliance on this exclusion. The NRC staff determined, per 10 CFR 51.22(c)(25)(vi)(E), that the requirements from which the exemption is sought involve education, training, experience, qualification, requalification, or other employment suitability requirements. The NRC staff also determined

that approval of this exemption involves no significant hazards consideration because it does not authorize any physical changes to the facility or any of its safety systems, change any of the assumptions or limits used in the licensee's safety analyses, or introduce any new failure modes. There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite because this exemption does not affect any effluent release limits as provided in the licensee's technical specifications or by the regulations in 10 CFR Part 20, "Standards for Protection Against Radiation." There is no significant increase in individual or cumulative public or occupational radiation exposure because this exemption does not affect limits on the release of any radioactive material, or the limits provided in 10 CFR Part 20 for radiation exposure to workers or members of the public. There is no significant construction impact because this exemption does not involve any changes to a construction permit. There is no significant increase in the potential for or consequences from radiological accidents because the exemption does not alter any of the assumptions or limits in the licensee's safety analysis. In addition, the NRC staff determined that there would be no significant impacts to biota, water resources, historic properties, cultural resources, or socioeconomic conditions in the region. Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the approval of the requested exemption.

Granting the requested exemption does not impact NRC findings of reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the DAEC. In the statement of considerations for the standards to be applied when considering whether to grant exemptions ("Specific Exemptions; Clarification of Standards, Final Rule," 50 *Federal Register* 50764, dated December 12, 1985), the Commission stated:

While compliance with all NRC regulations provides reasonable assurance of adequate protection of the public health and safety, the converse is not correct, that failure to comply with one regulation or another is an indication of the absence of adequate protection, at least in a situation where the Commission has reviewed the noncompliance and found that it does not pose an "undue risk" to the public health and safety. Furthermore, the Commission has never defined the concept of "defense-in-depth" to preclude the granting of an exemption from a regulation as long as the applicable exemption criteria are met. In fact, the Commission has recognized that its regulations may provide for the possibility of exemptions when an appropriately high level of safety is in fact achieved and the public interest is served.

The NRC staff has determined that in accordance with 10 CFR 50.12, the requested exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security; and that special circumstances are present. Therefore, the NRC hereby grants the licensee's request for a one-time schedular exemption from the requirements for the biennial onsite EP exercise in 10 CFR Part 50, Appendix E, Section IV.F.2.b, and from the requirements for the biennial offsite EP exercise in 10 CFR Part 50, Appendix E, Section IV.F.2.c to postpone conducting the CY 2020 biennial onsite EP exercise until CY 2021 and to not conduct the CY 2020 biennial offsite EP exercise.

The exemption with respect to the biennial onsite EP exercise requirement expires on December 31, 2021; the exemption with respect to the biennial offsite EP exercise requirement expires on December 31, 2022, or when the biennial offsite EP exercise is performed in CY 2022, whichever occurs first.

D. Moul

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If you have any questions, please contact the DAEC project manager, Scott P. Wall, at 301-415-2855 or via e-mail at [Scott.Wall@nrc.gov](mailto:Scott.Wall@nrc.gov).

Sincerely

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

Docket No. 50-331

cc: Listserv

SUBJECT: DUANE ARNOLD ENERGY CENTER – TEMPORARY EXEMPTION FROM REQUIREMENTS OF 10 CFR PART 50, APPENDIX E, SECTIONS IV.F.2.B AND IV.F.2.C (EPID L-2020-LLE-0150 [COVID-19]) DATED NOVEMBER 25, 2020

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**ADAMS Accession No.: ML20301A846**

**\*by e-mail**

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