

NUCLEAR REGULATORY COMMISSION

Docket No. 50-331

NextEra Energy Duane Arnold, LLC

Duane Arnold Energy Center

Exemption

I. Background.

The Duane Arnold Energy Center (DAEC) is a single boiling-water reactor located in Linn County, Iowa. NextEra Energy Duane Arnold, LLC (NEDA, the licensee) holds renewed Facility Operating License No. DPR-49 for DAEC. The license provides that the facility is subject to all rules, regulations, and orders of the U.S. Nuclear Regulatory Commission (NRC, the Commission) now or hereafter in effect.

By letter dated January 18, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19023A196), NEDA submitted a notification to the NRC indicating that it would permanently shut down the DAEC in the fourth quarter of 2020. NEDA's letter also stated that NEDA would submit a supplement with the date on which DAEC would cease operations following a grid reliability review by the Midcontinent Independent System Operator, Inc. Once NEDA certifies that it has permanently defueled the DAEC reactor vessel and placed the fuel in the spent fuel pool (SFP), pursuant to Section 50.82(a)(2) of Title 10 of the *Code of Federal Regulations* (10 CFR), the DAEC renewed facility operating license will no longer authorize operation of the reactor or emplacement or retention of fuel in the reactor vessel. However, the licensee will still be authorized to possess, and store irradiated nuclear fuel. Irradiated fuel is currently being stored onsite in an SFP and in independent spent fuel storage installation (ISFSI) dry casks. The irradiated fuel will be stored in the ISFSI until it is shipped off site. When the reactor is defueled, the reactor, the reactor coolant system, and the

secondary system will no longer be in operation, and will have no function related to the safe storage and management of irradiated fuel.

II. Request/Action.

By letter dated January 16, 2020 (ADAMS Accession No. ML20016A380), NEDA submitted a partial exemption request for NRC approval from the record retention requirements of: (1) 10 CFR Part 50, Appendix B, Criterion XVII, "Quality Assurance Records," which requires certain records (e.g., results of inspections, tests, and materials analyses) be maintained consistent with applicable regulatory requirements; (2) 10 CFR 50.59(d)(3), which requires that records of changes in the facility must be maintained until termination of a license issued pursuant to 10 CFR Part 50; and (3) 10 CFR 50.71(c), which requires certain records to be retained for the period specified by the appropriate regulation, license condition, or technical specification (TS), or until termination of the license if not otherwise specified.

The licensee requested the partial exemptions because it wants to eliminate: (1) records associated with structures, systems, and components (SSCs) and activities that were applicable to the nuclear unit, which are no longer required by the 10 CFR Part 50 licensing basis (i.e., removed from the Updated Final Safety Analysis Report (UFSAR) and/or TSs by appropriate change mechanisms); and (2) records associated with the storage of spent nuclear fuel in the SFP once all fuel has been removed from the SFP and the DAEC license no longer allows storage of fuel in the SFP. The licensee cites record retention partial exemptions granted to Zion Nuclear Power Station, Units 1 and 2 (ADAMS Accession No. ML111260277), Millstone Power Station, Unit 1 (ADAMS Accession No. ML070110567), Vermont Yankee Nuclear Power Station (ADAMS Accession No. ML15344A243), San Onofre Nuclear Generating Station, Units 1, 2, and 3 (ADAMS Accession No. ML15355A055), and Kewaunee Power Station (ADAMS Accession No. ML17069A394) as examples of the NRC granting similar requests.

Records associated with residual radiological activity and with programmatic controls necessary to support decommissioning, such as security and quality assurance, are not affected by the partial exemption request because they will be retained as decommissioning records, as required by 10 CFR Part 50, until the termination of the DAEC license. In addition, the licensee did not request an exemption associated with any other recordkeeping requirements for the storage of spent fuel at its ISFSI under 10 CFR Part 50 or the general license requirements of 10 CFR Part 72. No exemption was requested from the decommissioning records retention requirements of 10 CFR 50.75, or any other requirements of 10 CFR Part 50 applicable to decommissioning and dismantlement.

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 when the exemptions are authorized by law, will not present an undue risk to public health or safety, and are consistent with the common defense and security. However, the Commission will not consider granting an exemption unless special circumstances are present. Special circumstances are described in 10 CFR 50.12(a)(2).

Many of the DAEC reactor facility SSCs are planned to be abandoned in place pending dismantlement. Abandoned SSCs are no longer operable or maintained. Following permanent removal of fuel from the SFP, those SSCs required to support safe storage of spent fuel in the SFP will also be abandoned. In its January 16, 2020, partial exemption request, the licensee stated that the basis for eliminating records associated with reactor facility SSCs and activities is that these SSCs will be removed from service per regulatory change processes, dismantled or demolished, and no longer have any function regulated by the NRC.

The licensee recognizes that some records related to the nuclear unit will continue to be under NRC regulation primarily due to residual radioactivity. The radiological and other

necessary programmatic controls (such as security, quality assurance, etc.) for the facility and the implementation of controls for the defueled condition and the decommissioning activities are and will continue to be appropriately addressed through the license and current plant documents such as the UFSAR and TSs. Except for future changes made through the applicable change process defined in the regulations (e.g., 10 CFR 50.48(f), 10 CFR 50.59, 10 CFR 50.90, 10 CFR 50.54(a), 10 CFR 50.54(p), 10 CFR 50.54(q), etc.), these programmatic elements and their associated records are unaffected by the requested partial exemption.

Records necessary for SFP SSCs and activities will continue to be retained through the period that the SFP is needed for safe storage of irradiated fuel. Analogous to other plant records, once the SFP is permanently emptied of fuel, there will be no need for retaining SFP related records.

NEDA's general justification for eliminating records associated with DAEC SSCs that have been or will be removed from service under the NRC license, dismantled, or demolished, is that these SSCs will not serve any future DAEC functions regulated by the NRC. NEDA will describe its decommissioning plans for DAEC in the Post Shutdown Decommissioning Activities Report which it will submit under a separate letter.

NEDA intends to retain the records required by its license as the facility's decommissioning transitions. However, equipment abandonment will obviate the regulatory and business needs for maintenance of most records. As the SSCs are removed from the licensing basis, NEDA asserts that the need for their records is, on a practical basis, eliminated. Therefore, NEDA is requesting partial exemptions from the associated records retention requirements for SSCs and historical activities that are no longer relevant. Approval of the partial exemption request would eliminate the associated burden of retaining records for SSCs that are no longer part of the DAEC licensing basis. NEDA is not requesting to be exempt from any recordkeeping requirements for storage of spent fuel at an ISFSI under 10 CFR Part 50 or the general license requirements of 10 CFR Part 72. Additionally, no exemption was requested

from the decommissioning records retention requirements of 10 CFR 50.75, or any other requirements of 10 CFR Part 50 applicable to decommissioning and dismantlement.

A. Authorized by Law.

As stated above, 10 CFR 50.12 allows the NRC to grant exemptions from 10 CFR Part 50 requirements if it makes certain findings. As described here and in the sections below, the NRC has determined that special circumstances exist to grant the partial exemptions. In addition, granting the licensee's proposed partial exemptions will not result in a violation of the Atomic Energy Act of 1954, as amended, other laws, or the Commission's regulations. Therefore, the granting of the partial exemption request from the recordkeeping requirements of 10 CFR 50.71(c); 10 CFR Part 50, Appendix B, Criterion XVII; and 10 CFR 50.59(d)(3) is authorized by law.

B. No Undue Risk to Public Health and Safety.

As SSCs are prepared for SAFSTOR, which NEDA currently plans to use, and eventual decommissioning and dismantlement, they will be removed from NRC licensing basis documents through appropriate change mechanisms, such as through the 10 CFR 50.59 process or through a license amendment request approved by the NRC. These change processes involve either a determination by the licensee or an approval from the NRC that the affected SSCs no longer serve any safety purpose regulated by the NRC. Therefore, the removal of the SSC would not present an undue risk to the public health and safety. In turn, elimination of records associated with these removed SSCs would not cause any additional impact to public health and safety.

The granting of the partial exemption request from the recordkeeping requirements of 10 CFR 50.71(c); 10 CFR Part 50, Appendix B, Criterion XVII; and 10 CFR 50.59(d)(3) for the records described is administrative in nature and will have no impact on any remaining

decommissioning activities or on radiological effluents. The granting of the partial exemption request will only advance the schedule for disposition of the specified records. Because these records contain information about SSCs associated with reactor operation and contain no information needed to maintain the facility in a safe condition when the facility is permanently defueled and the SSCs are dismantled, the elimination of these records on an advanced timetable will have no reasonable possibility of presenting any undue risk to the public health and safety.

C. Consistent with the Common Defense and Security.

The elimination of the recordkeeping requirements does not involve information or activities that could potentially impact the common defense and security of the United States. Upon dismantlement of the affected SSCs, the records have no functional purpose relative to maintaining the safe operation of the SSCs, maintaining conditions that would affect the ongoing health and safety of workers or the public, or informing decisions related to nuclear security.

Rather, the partial exemptions requested are administrative in nature in that they would only advance the current schedule for disposition of the specified records. Therefore, the partial exemption request from the recordkeeping requirements of 10 CFR 50.71(c); 10 CFR Part 50, Appendix B, Criterion XVII; and 10 CFR 50.59(d)(3) for the types of records described is consistent with the common defense and security.

D. Special Circumstances.

Paragraph 50.12(a)(2) states, in part: “The Commission will not consider granting an exemption unless special circumstances are present. Special circumstances are present whenever— . . . (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; or (iii) Compliance would result in undue hardship or other costs that are significantly in

excess of those contemplated when the regulation was adopted”

Criterion XVII of 10 CFR Part 50, Appendix B, states, in part: “Sufficient records shall be maintained to furnish evidence of activities affecting quality.”

Paragraph 50.59(d)(3) states, in part: “The records of changes in the facility must be maintained until the termination of an operating license issued under this part”

Paragraph 50.71(c), states, in part: “Records that are required by the regulations in this part or Part 52 of this chapter, by license condition, or by [TSs] must be retained for the period specified by the appropriate regulation, license condition, or [TS]. If a retention period is not otherwise specified, these records must be retained until the Commission terminates the facility license”

In the Statement of Considerations for the final rulemaking, “Retention Periods for Records” (53 FR 19240; May 27, 1988), in response to public comments received during the rulemaking process, the NRC stated that records must be retained “for NRC to ensure compliance with the safety and health aspects of the nuclear environment and for the NRC to accomplish its mission to protect the public health and safety.” In the Statement of Considerations, the Commission also explained that requiring licensees to maintain adequate records assists the NRC “in judging compliance and noncompliance, to act on possible noncompliance, and to examine facts as necessary following any incident.”

These regulations apply to licensees in decommissioning. During the decommissioning process, safety-related SSCs are retired or disabled and subsequently removed from NRC licensing basis documents by appropriate means. Appropriate removal of an SSC from the licensing basis requires either a determination by the licensee or an approval from the NRC that the SSC no longer has the potential to cause an accident, event, or other problem which would adversely impact public health and safety.

The records that would be subject to removal, if the partial exemption request is granted, are associated with SSCs that had been important to safety during power operation or operation

of the SFP, but are no longer capable of causing an event, incident, or condition that would adversely impact public health and safety, as evidenced by their appropriate removal from the licensing basis documents. If the SSCs no longer have the potential to cause these scenarios, then it is reasonable to conclude that the records associated with these SSCs would not reasonably be necessary to assist the NRC in determining compliance and noncompliance, taking action on possible noncompliance, or examining facts following an incident. Therefore, their retention would not serve the underlying purpose of the rule.

In addition, once removed from the licensing basis documents (e.g., UFSAR or TS), SSCs are no longer governed by the NRC's regulations and, therefore, are not subject to compliance with the safety and health aspects of the nuclear environment. As such, retention of records associated with SSCs that are or will no longer be part of the facility serves no safety or regulatory purpose, nor does it serve the underlying purpose of the rule of maintaining compliance with the safety and health aspects of the nuclear environment in order to accomplish the NRC's mission. Accordingly, special circumstances are present which the NRC may consider, pursuant to 10 CFR 50.12(a)(2)(ii), to grant the requested partial exemption request.

Records which continue to serve the underlying purpose of the rule, that is, to maintain compliance and to protect public health and safety in support of the NRC's mission, will continue to be retained pursuant to the regulations in 10 CFR Part 50 and 10 CFR Part 72. Retained records that are not subject to the proposed partial exemption include those associated with programmatic controls, such as those pertaining to residual radioactivity, security, and quality assurance, as well as records associated with the ISFSI and spent fuel assemblies.

The retention of records required by 10 CFR 50.71(c); 10 CFR Part 50, Appendix B, Criterion XVII; and 10 CFR 50.59(d)(3) provides assurance that records associated with SSCs will be captured, indexed, and stored in an environmentally suitable and retrievable condition. Given the volume of records associated with the SSCs, compliance with the records retention

rule results in a considerable cost to the licensee. Retention of the volume of records associated with the SSCs during the operational phase is appropriate to serve the underlying purpose of determining compliance and noncompliance, taking action on possible noncompliance, and examining facts following an incident, as discussed.

However, the cost effect of retaining operational phase records beyond the operations phase until the termination of the license was not fully considered or understood when the records retention rule was put in place. For example, existing records storage facilities are eliminated as decommissioning progresses. Retaining records associated with SSCs and activities that no longer serve a safety or regulatory purpose could therefore result in an unnecessary financial and administrative burden. As such, compliance with the rule would result in an undue cost in excess of that contemplated when the rule was adopted. Accordingly, special circumstances are present which the NRC may consider, pursuant to 10 CFR 50.12(a)(2)(iii), to grant the partial exemption request.

E. Environmental Considerations.

Pursuant to 10 CFR 51.22(b) and (c)(25), the granting of an exemption from the requirements of any regulation in Chapter I of 10 CFR meets the eligibility criteria for categorical exclusion provided that: (1) there is no significant hazards consideration; (2) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite; (3) there is no significant increase in individual or cumulative public or occupational radiation exposure; (4) there is no significant construction impact; (5) there is no significant increase in the potential for or consequences from radiological accidents; and (6) the requirements from which an exemption is sought are among those identified in 10 CFR 51.22(c)(25)(vi).

The partial exemption request is administrative in nature. The partial exemption request has no effect on SSCs and no effect on the capability of any plant SSC to perform its design

function. The partial exemption request would not increase the likelihood of the malfunction of any plant SSC. The probability of occurrence of previously evaluated accidents is not increased, since most previously analyzed accidents will no longer be able to occur and the probability and consequences of the remaining fuel handling accident are unaffected by the partial exemption request. Therefore, the partial exemption request does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The partial exemption request does not involve a physical alteration of the plant. No new or different type of equipment will be installed and there are no physical modifications to existing equipment associated with the partial exemption request. Similarly, the partial exemption request will not physically change 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 partial exemption request 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 parameters within which the plant is normally operated, or in the setpoints which initiate protective or mitigative actions, and no new failure modes are being introduced. Therefore, the partial exemption request does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The partial exemption request does not alter the design basis or any safety limits for the plant. The partial exemption request does not impact station operation or any plant SSC that is relied upon for accident mitigation. Therefore, the partial exemption request does not involve a significant reduction in a margin of safety.

For these reasons, the NRC has determined that approval of the partial exemption request involves no significant hazards consideration because granting the licensee's partial exemption request from the recordkeeping requirements of 10 CFR 50.71(c); 10 CFR Part 50, Appendix B, Criterion XVII; and 10 CFR 50.59(d)(3) at the decommissioning DAEC does not: (1) involve a significant increase in the probability or consequences of an accident previously

evaluated; (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety (10 CFR 50.92(c)). Likewise, there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite, and no significant increase in individual or cumulative public or occupational radiation exposure.

The exempted regulations are not associated with construction, so there is no significant construction impact. The exempted regulations do not concern the source term (i.e., potential amount of radiation involved in an accident) or accident mitigation; therefore, there is no significant increase in the potential for, or consequences from, radiological accidents. Allowing the licensee partial exemption from the record retention requirements for which the exemption is sought involves recordkeeping requirements, as well as reporting requirements of an administrative, managerial, or organizational nature.

Therefore, pursuant to 10 CFR 51.22(b) and 10 CFR 51.22(c)(25), no environmental impact statement or environmental assessment need be prepared in connection with the approval of this partial exemption request.

IV. Conclusions.

The NRC has determined that the granting of the partial exemption request from the recordkeeping requirements of 10 CFR 50.71(c); 10 CFR Part 50, Appendix B, Criterion XVII; and 10 CFR 50.59(d)(3) will not present an undue risk to the public health and safety. The destruction of the identified records will not impact remaining decommissioning activities; plant operations, configuration, and/or radiological effluents; operational and/or installed SSCs that are quality-related or important to safety; or nuclear security. The NRC staff determined that the destruction of the identified records is administrative in nature and does not involve information or activities that could potentially impact the common defense and security of the United States.

The purpose for the recordkeeping regulations is to assist the NRC in carrying out its mission to protect the public health and safety by ensuring that the licensing and design basis of the facility is understood, documented, preserved and retrievable in such a way that will aid the NRC in determining compliance and noncompliance, taking action on possible noncompliance, and examining facts following an incident. Since the DAEC SSCs that were safety-related or important to safety have been or will be removed from the licensing basis and removed from the plant, the staff agrees that the records identified in the partial exemption request will no longer be required to achieve the underlying purpose of the records retention rule.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12, the partial 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. Also, special circumstances are present. Therefore, the Commission hereby grants NEDA a partial exemption from the recordkeeping requirements of 10 CFR 50.71(c); 10 CFR Part 50, Appendix B, Criterion XVII; and 10 CFR 50.59(d)(3) for DAEC only to the extent necessary to allow the licensee to advance the schedule to remove records associated with SSCs that have been or will be removed from NRC licensing basis documents by appropriate change mechanisms (e.g., 10 CFR 50.59 or via NRC-approved license amendment request, as applicable).

This partial exemption is effective upon submittal of the licensee's certification of permanent fuel removal, under 10 CFR 50.82(a)(1).

Dated at Rockville, Maryland, this 12th day of May, 2020.

For the Nuclear Regulatory Commission.

Craig G. Erlanger, Director
Division of Operating Reactor Licensing