



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

April 20, 2021

Mr. Don Moul  
Executive Vice President, Nuclear  
Division, and Chief Nuclear Officer  
Florida Power & Light Company  
Mail Stop: EX/JB  
700 Universe Boulevard  
Juno Beach, FL 33408

SUBJECT: DUANE ARNOLD ENERGY CENTER - WITHDRAWAL OF INTERIM COMPENSATORY MEASURE B.1.a IN EA-02-026, "ORDER FOR INTERIM SAFEGUARDS AND SECURITY COMPENSATORY MEASURES," AND WITHDRAWAL OF EA-06-137, "ORDER REQUIRING COMPLIANCE WITH KEY RADIOLOGICAL MITIGATION STRATEGIES" (EPID L-2021-LLO-0000)

Dear Mr. Moul:

By letter dated February 25, 2002 (Agencywide Documents Access and Management System [ADAMS] Package Accession No. ML020490058), the U.S. Nuclear Regulatory Commission (NRC) issued Order EA-02-026, "Order for Interim Safeguards and Security Compensatory Measures," to all operating nuclear power reactor licensees. Following the terrorist attacks on September 11, 2001, the NRC supplemented the security measures required for protection against the design-basis threat at nuclear power reactor facilities through a series of security orders. These orders, including Order EA-02-026, established new requirements for specific training; access authorization enhancements; and enhancements to defensive strategies, mitigative measures, and integrated response.

The NRC amended Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities;" 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants;" 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater Than Class C Waste;" 10 CFR Part 73, "Physical Protection of Plants and Materials;" and Appendix B, "General Criteria for Security Personnel," and Appendix C, "Licensee Safeguards Contingency Plans," to 10 CFR Part 73, through a final rule, titled "Power Reactor Security Requirements," which the agency published in Volume 74 of the *Federal Register* (FR), page 13925, on March 27, 2009 (74 FR 13925). The rulemaking codified generically applicable security requirements that the agency previously issued by orders and updated the existing power reactor security requirements. The rule became effective on May 26, 2009.

By letter dated November 28, 2011 (ADAMS Accession No. ML111220447), the NRC partially rescinded Order EA-02-026. The requirements of Order EA-02-026 addressed by Interim Compensatory Measure (ICM) B.1.a involved operator training for specific security-initiated events that were not covered by proposed or existing regulations and remained in effect.

By letter dated June 20, 2006 (ADAMS Accession No. ML061600023), the NRC issued Order EA-06-137, "Order Requiring Compliance with Key Radiological Protection Mitigation Strategies," to various operating nuclear power reactor licensees, including the Duane Arnold Energy Center (DAEC). It required those licensees to implement certain key radiological protection mitigation strategies for the purpose of allaying the effects of a loss-of-coolant accident for the reactor vessel.

By letter dated January 18, 2019 (ADAMS Accession No. ML19023A196), NextEra Energy Duane Arnold, LLC (NEDA) certified to the NRC that it planned 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 its timeline and certified to the NRC that it planned to permanently cease power operations at DAEC on October 30, 2020. By letter dated August 27, 2020 (ADAMS Accession No. ML20240A067), NEDA revised the permanent shut down date to August 10, 2020, and certified, pursuant to 10 CFR 50.82(a)(1)(i) and 50.4(b)(8), that DAEC had permanently ceased power operations on August 10, 2020.

By letter dated October 12, 2020 (ADAMS Accession No. ML20286A317), NEDA certified, pursuant to 10 CFR 50.82(a)(1)(ii) and 50.4(b)(9), that fuel was permanently removed from the DAEC reactor vessel and placed in the spent fuel pool as of October 12, 2020. Upon docketing of these certifications for permanent cessation of operations and permanent removal of fuel from the DAEC reactor vessel, NEDA acknowledged that, as specified in 10 CFR 50.82(a)(2), the renewed facility operating license (DPR-49) for DAEC no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel.

Section III of Order EA-02-026 and Section III of Order EA-06-137 give the Director of the NRC Office of Nuclear Reactor Regulation the authority to relax or rescind any or all of the conditions of the orders upon demonstration by the licensee of good cause.

In a letter dated March 1, 2021 (ADAMS Accession No. ML21067A234), NEDA requested that the NRC rescind ICM B.1.a in Order EA-02-026, and rescind Order EA-06-137 in its entirety, for DAEC based on its transition from an operating reactor to a non-operating reactor. NEDA cited the following reasons to demonstrate good cause for rescinding ICM B.1.a in Order EA-02-026 and the entirety of Order EA-06-137:

- DAEC permanently ceased power operations on August 10, 2020, and the plant will have no further refueling outages or startups. The docketed 10 CFR 50.82(a)(1)(i) and (ii) certifications mean that the 10 CFR Part 50 license no longer authorizes operation of the reactor or retention of fuel into the reactor vessel. As a result, there is no longer a need to address the specific security-initiated event in ICM B.1.a in Order EA-02-026, which is primarily associated with reactor operation.
- DAEC has been permanently defueled since October 12, 2020, and the certifications required by 10 CFR 50.82(a)(1)(i) and (ii) have been submitted, such that the 10 CFR Part 50 license no longer authorizes operation of the reactor or retention of fuel into the reactor vessel. As such, a loss-of-coolant accident will no longer be possible, and the primary containment has no design function. Therefore, Order EA-06-137 does not apply because core damage will no longer be a concern.

The NRC staff notes that since DAEC is permanently shut down and defueled, the primary security focus is protection of the spent fuel. The specific security-initiated event addressed in ICM B.1.a in Order EA-02-026 does not have any effect on the storage or cooling of spent fuel.

In addition, the NRC staff recognizes that DAEC will maintain mitigation strategies for the protection of spent fuel under License Condition 2.C.(9) of its license. License Condition 2.C.(9) requires DAEC to develop and maintain strategies and staff training to address large fires and explosions, including for protection of the spent fuel.

The NRC staff has determined that withdrawing ICM B.1.a in Order EA-02-026 will not reduce the capability of the licensee to mitigate any consequences from the specific security-initiated event described in Order EA-02-026, even in the unlikely case that the event could have some effect on the systems used for storage and cooling of spent fuel. The operations staff will continue to receive training on mitigation strategies related to the protection of spent fuel.

The NRC staff has also determined that Order EA-06-137, which requires compliance with key radiological mitigating strategies at DAEC, will no longer be necessary because core damage will not be possible once all fuel is removed from the reactor vessel. Therefore, the requirement to maintain procedures and training in accordance with Order EA-06-137 does not apply.

For the reasons discussed above, the NRC staff concludes that the licensee has demonstrated good cause to withdraw ICM B.1.a in Order EA-02-026 and to withdraw Order EA-06-137 in its entirety. Therefore, in light of the docketing of the 10 CFR 50.82(a)(1)(i) and (ii) certifications for permanent cessation of operations and removal of fuel from the reactor vessel, the NRC withdraws ICM B.1.a in Order EA-02-026 and Order EA-06-137 in its entirety for DAEC.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,



Signed by Veil, Andrea  
on 04/20/21

Andrea D. Veil, Director  
Office of Nuclear Reactor Regulation

Docket No. 50-331

cc: Duane Arnold Listserv

Duane Arnold Security Order Recission Letter DATE April 20, 2021

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**ADAMS Accession No.: ML21075A134; Ltr ML21067A270**

**\* via email**

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