



POLICY ISSUE (Notation Vote)

November 18, 2022

SECY-22-0102

FOR: The Commissioners

FROM: Daniel H. Dorman
Executive Director for Operations

SUBJECT: REQUEST BY HOLTEC DECOMMISSIONING INTERNATIONAL, LLC
FOR EXEMPTIONS FROM CERTAIN EMERGENCY PLANNING
REQUIREMENTS FOR INDIAN POINT NUCLEAR GENERATING UNIT
NOS. 1, 2, AND 3

PURPOSE:

In Staff Requirements Memorandum-SECY-08-0024, "Delegation of Commission Authority to Staff to Approve or Deny Emergency Plan Changes that Represent a Decrease in Effectiveness," dated May 19, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML081400510), the U.S. Nuclear Regulatory Commission (NRC) directed the staff to request Commission approval for any reduction in effectiveness of a licensee's emergency plan that requires an exemption from the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR), "Energy," paragraph 50.47(b), and Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to 10 CFR Part 50.

Accordingly, the purpose of this paper is to request Commission approval of the request by Holtec Decommissioning International, LLC (HDI, the licensee), on behalf of Holtec Indian Point 2, LLC and Holtec Indian Point 3, LLC, for exemptions from certain emergency preparedness and planning (EP) requirements of 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities." HDI's proposed exemptions would scale the EP requirements placed by the NRC on the licensee commensurate with the permanent cessation of operations and permanent removal of fuel from the reactor vessels of Indian Point Nuclear Generating Unit Nos. 1, 2, and 3 (IP1, IP2, and IP3) collectively, Indian Point Energy Center (IPEC).

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The proposed exemptions, if approved, would eliminate the requirement for HDI to maintain formal offsite radiological EP plans, but would still require the licensee to maintain certain onsite capabilities to communicate and coordinate with offsite response authorities. Although the exemptions, if approved, would reduce the current IPEC emergency plan's effectiveness, the IPEC emergency plan's effectiveness would result in the same level of effectiveness as similar decommissioning reactor sites.

This paper does not address any new commitments or resource implications.

BACKGROUND:

The EP requirements of 10 CFR 50.47, "Emergency plans," and Appendix E to 10 CFR Part 50, continue to apply to a nuclear power reactor licensee after certification of permanent cessation of operations and removal of fuel from the reactor vessel or permanent modification of the license to allow possession but not operation of the facility under 10 CFR 50.82(a)(1), "Termination of license."

The regulations at 10 CFR 50.12(a)(2)(ii), "Specific exemptions," provide that the NRC may, upon request by a licensee or on its own initiative, grant exemptions from the requirements of the regulations in 10 CFR Part 50 when, among other things, application of the regulation in the particular circumstance would not serve, or is not necessary to achieve the underlying purpose of the rule.

To establish a level of EP commensurate with the risk of a radiological emergency at a decommissioning power reactor site, power reactor licensees typically request exemptions from certain 10 CFR Part 50 EP requirements early in the decommissioning process. The NRC staff reviews each request on a case-by-case basis and grants exemptions only after conducting a thorough analysis of each request. Historically, given the significant reduction in radiological risk as a site transitions from an operating power reactor site to a decommissioning site, the NRC staff has approved exemptions from certain EP requirements based on site-specific evaluations and the objectives of the regulations.

DISCUSSION:

IP1 permanently ceased operations on October 31, 1974, and all fuel was removed from the IP1 reactor vessel by January 1976. In 1996, the NRC issued an order approving the safe-storage condition of IP1. In 2003, the NRC issued Amendment No. 52 to IP1's provisional operating license that changed the license's expiration date to be consistent with that of the IP2 license at that time. Pursuant to 10 CFR 50.82(a)(2), the IP1 license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel. HDI states that there is no IP1 spent fuel in wet storage at the IPEC site; IP1 spent fuel is stored onsite in dry cask storage in an independent spent fuel storage installation (ISFSI).

Addressing 10 CFR 50.82(a)(1)(i), the letter dated February 8, 2017 (ADAMS Accession No. ML17044A004), Entergy Nuclear Operations, Inc., Entergy Nuclear Indian Point 2, LLC, and Entergy Nuclear Indian Point 3, LLC (the IPEC licensees at that time, collectively, Entergy) certified to the NRC that they had decided to permanently cease power operations at IP2 by April 30, 2020, and at IP3 by April 30, 2021. Pursuant to 10 CFR 50.82(a)(1)(ii), by letters dated May 12, 2020, and May 11, 2021 (ADAMS Accession Nos: ML20133J902 and ML21131A157, respectively), Entergy certified to the NRC that the fuel had been permanently

removed from the IP2 and IP3 reactor vessels and placed in the spent fuel pool (SFP). Upon the docketing of these certifications, under 10 CFR 50.82(a)(2), the IP2 and IP3 licenses no longer authorize operation of the reactors or emplacement or retention of fuel into the reactor vessels. The spent fuel will be stored in the SFP and in dry cask storage at the onsite ISFSI until it is shipped offsite.

By letter dated December 22, 2021 (ADAMS Accession No: ML21356B693), as supplemented by letters dated February 1, 2022, February 2, 2022, and May 12, 2022 (ADAMS Accession Nos: ML22032A017, ML22033A348, and ML22132A169, respectively), HDI requested exemptions from specific portions of 10 CFR 50.47 and Appendix E to 10 CFR Part 50 for the IPEC licenses.

Evaluation of Emergency Planning Exemptions

In evaluating HDI's requested exemptions, the NRC staff reviewed recent similar EP exemptions granted for decommissioning nuclear power reactors, recent SFP studies, SFP mitigation strategies, and hostile action-based event considerations, which are discussed in Enclosure 1, "Historical Perspective and NRC Staff Evaluation Considerations." The staff also performed a technical evaluation of HDI's requested exemptions using the evaluation criteria specified in Section 5.0, "Evaluation of Exemptions to EP Regulations," of an Office of Nuclear Security and Incident Response (NSIR), Division of Preparedness and Response (DPR) Interim Staff Guidance (ISG) document, NSIR/DPR-ISG-02, "Emergency Planning Exemption Requests for Decommissioning Nuclear Power Plants," dated May 11, 2015 (ADAMS Accession No: ML14106A057). The outcome of this evaluation, as well as the staff's evaluation of HDI's requested exemptions against the requirements in 10 CFR 50.47, Appendix E to 10 CFR Part 50, and 10 CFR 72.32, "Emergency Plan," are detailed in Enclosure 2, "Evaluation of Request by Holtec Decommissioning International, LLC for Exemptions from Certain Emergency Planning Requirements for Indian Point Nuclear Generating Unit Nos. 1, 2, and 3."

The analysis regarding the IPEC concluded, and the NRC staff confirmed, that after the spent fuel has decayed for approximately 15 months, for beyond-design-basis events where the SFP is drained and air cooling is not possible, at least 10 hours would be available from the time spent fuel cooling is lost until the hottest fuel assembly reaches a temperature of 900°C. This 10-hour minimum threshold provides sufficient time for the licensee to take mitigative actions, or if governmental officials deem warranted, for offsite protective actions to be initiated using a comprehensive approach to EP. Based on IP3's permanent shutdown date on April 30, 2021, the calculated decay time elapsed on August 1, 2022.

Based on its evaluation, the NRC staff concluded that granting the requested exemptions to HDI would provide reasonable assurance that: (1) an offsite radiological release will not exceed the limits of the U.S. Environmental Protection Agency's early phase protective action guides of one roentgen equivalent man at the site's exclusion area boundary for the remaining applicable design basis accidents (DBAs); and (2) in the highly unlikely event of a beyond-DBA resulting in a loss of all SFP cooling, there would be sufficient time to initiate appropriate SFP mitigating actions. Although not the basis for the staff's proposal to approve the exemptions, if State or local governmental officials determine that offsite protective actions are warranted, then sufficient time and capability would also be available for offsite response organizations (OROs)

to implement these measures using a comprehensive emergency management plan or “all-hazards” approach.¹

Federal Emergency Management Agency Consultation

Consistent with the December 7, 2015, “Memorandum of Understanding Between the Department of Homeland Security/Federal Emergency Management Agency and Nuclear Regulatory Commission Regarding Radiological Response, Planning, and Preparedness” (ADAMS Accession No: ML15344A371), the NRC staff transmitted to FEMA, by email, a draft of this SECY paper to provide FEMA the opportunity to ask questions, obtain clarification, and comment on the paper before the Commission receives it for review. The staff also sent FEMA a letter dated June 7, 2022 (ADAMS Accession No: ML22143A954), documenting the transmittal of the draft SECY paper to FEMA via email.

In a letter dated August 12, 2022 (ADAMS Accession No: ML22228A227), FEMA provided comments on offsite radiological EP considerations, which are provided in Enclosure 1. The NRC staff considered FEMA’s comments in its review of the exemption request. FEMA did not object to granting the exemption request and stated that it will continue to support OROs as they adjust their plans, sustain capabilities, and manage resources to the changing radiological hazard.

CONCLUSION:

The NRC staff concludes that granting the exemption request, as justified in Enclosure 2, would provide: (1) an adequate basis for an acceptable state of EP; and (2) reasonable assurance that adequate protective measures can and will be taken in the highly unlikely event of a radiological emergency at the IPEC site.

The NRC staff has determined that pursuant to 10 CFR 50.12, “Specific exemptions,” the exemptions described in Enclosure 2 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 that special circumstances are present.

RECOMMENDATION:

The NRC staff recommends that the Commission approve HDI’s requested exemptions from certain EP requirements of 10 CFR 50.47 and Appendix E to 10 CFR Part 50.

¹ A comprehensive emergency management plan or “all-hazards” approach in this context, also referred to as an emergency operations plan, is addressed in the Federal Emergency Management Agency’s (FEMA) Comprehensive Preparedness Guide 101, “Developing and Maintaining Emergency Operations Plans,” Version 2.0, dated November 2010, <https://www.fema.gov/sites/default/files/2020-07/developing-maintaining-emergency-operations-plans.pdf>.

COORDINATION:

The Office of the General Counsel reviewed this paper and has no legal objection.

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Enclosures:

1. Historical Perspective and NRC Staff Evaluation Considerations
2. Evaluation of Request by HDI for Exemptions from Certain Emergency Planning Requirements for IPEC

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ADAMS Accession Nos: ML22231A155 (Package); ML22231A160 (SECY Paper); ML22231A166 (Enclosure 1); ML22231A187 (Enclosure 2) *via e-mail

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