



POLICY ISSUE **(Notation Vote)**

December 11, 2019

SECY-19-0121

FOR: The Commissioners

FROM: Margaret M. Doane
Executive Director for Operations

SUBJECT: DENIAL OF PETITION FOR RULEMAKING ON POWER REACTORS IN
EXTENDED SHUTDOWN (PRM-50-114; NRC-2016-0204)

PURPOSE:

In this paper, the staff requests Commission approval to deny a petition for rulemaking (PRM) associated with power reactors in extended shutdown (PRM-50-114) and publish a notice of the denial in the *Federal Register*. This paper does not address any new commitments or resource implications.

BACKGROUND:

David Lochbaum, on behalf of the Union of Concerned Scientists and two co-petitioners (petitioners), filed a petition with the U.S. Nuclear Regulatory Commission (NRC) on September 1, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16258A486), requesting that the NRC amend Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," to "promulgate regulations applicable to nuclear power reactors with operating licenses issued by the NRC but in an extended outage."

The NRC assigned docket number PRM-50-114 to this petition and published a notice of docketing in the *Federal Register* (81 FR 89011; December 9, 2016). The staff received two

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public comment submissions (five comments in total) from the Nuclear Energy Institute and Entergy during the 75-day public comment period. Both comment submissions were in favor of denying the petition and provided a basis for that position.

DISCUSSION:

Summary of the Petition Evaluation

The petitioners assert that the existing regulations in 10 CFR Part 50 are not clear on the requirements for reactors in extended shutdowns because “they were promulgated for operating reactors and for reactors undergoing decommissioning—not for reactors in limbo that will at some unspecified later date return to the operating reactor world or join the decommissioning community.” The petitioners also assert that “the NRC lacks regulations to manage the risk from reactors in extended shutdowns that may someday seek to restart” and that “this petition for rulemaking seeks to fill that void.” Additionally, the petitioners assert that “the reactor in an extended shutdown scenario entails issues beyond those being addressed by the NRC’s decommissioning rulemaking.”

The petitioners requested that the NRC amend 10 CFR Part 50 to “promulgate regulations applicable to nuclear power reactors with operating licenses issued by the NRC but in an extended outage.” The petitioners’ request covers four main issues:

- 1) Define “extended shutdown” for power reactors.
- 2) Establish requirements during an “extended shutdown” period, including the petitioners’ proposed “Reactor Extended Shutdown Activities Report” (RESAR).
- 3) Establish requirements to exit and restart from an “extended shutdown.”
- 4) Conduct a decommissioning funding review(s) during an “extended shutdown” and establish requirements to prevent the retraction of any letter of permanent cessation of operations certification.

Issue No. 1: Define “extended shutdown” for power reactors.

The petitioners requested that the NRC amend 10 CFR Part 50 to define power reactor extended shutdown.

The staff evaluated this request and determined that it does not warrant rulemaking. The staff determined that development of a definition in the regulations for power reactor extended shutdown is not necessary because the holder of an operating license is required to maintain the facility and all its security and operational programs in accordance with the conditions of its operating license. This remains true whether the facility is operating or shut down for any period of time, including extended shutdowns. As discussed further under Issue Nos. 2, 3, and 4 below, as well as in the enclosed *Federal Register* notice, operating reactor licensees must maintain programs in effect to ensure the continued safety and security of the facility during any mode of operation. Therefore, defining “extended shutdown” does not represent a new safety or security issue that is not currently and adequately covered by the existing regulations.

Issue No. 2: Establish requirements during an “extended shutdown” period, including use of the petitioners’ proposed RESAR.

The petitioners requested that the NRC amend 10 CFR Part 50 to establish requirements for the time period during an extended shutdown, including the use of the petitioners’ proposed RESAR. This report would be similar to the existing Post-Shutdown Decommissioning Activities Report and would include descriptions of the following activities:

- operator licenses
- aging management
- technical specifications
- inservice inspections (and inservice testing)
- quality assurance
- irradiated fuel protection
- fitness for duty

The staff evaluated this request and determined that it does not warrant rulemaking. The staff determined that existing NRC regulations, guidance, and procedures adequately address this issue raised by the petitioner and that the petition did not present any significant new information or demonstrate a need that would support amending the regulations. Since existing regulations adequately address facilities in an extended shutdown, no additional requirements are needed beyond those that already exist. The NRC expects licensees to adhere to all applicable regulations and its operating license requirements even during an extended shutdown period. The operating license does not change, nor do the required programs or license conditions (e.g., technical specifications, inservice inspections, inservice testing, quality assurance, compliance with the Maintenance Rule). Therefore, the proposed RESAR is not necessary to describe how certain activities or operations would be carried out during a prolonged shutdown period, as these are already documented in the licensing basis for the facility.

Issue No. 3: Establish requirements to exit and restart the facility from an “extended shutdown.”

The petitioners requested that the NRC amend 10 CFR Part 50 to establish regulatory requirements applicable to the facility to exit from an extended shutdown and restart the facility.

The staff evaluated this request (with the petitioners’ cited example of Browns Ferry Nuclear Plant, Unit 1) and determined that it does not warrant rulemaking. The staff determined that the existing regulations provide adequate protection of the public health and safety to ensure that, when a licensee decides to restart a facility, the condition and qualification of the facility, its components, and its personnel are adequate and ready before the facility can produce power or prior to transitioning to a new mode of operation. The staff further determined that existing Reactor Oversight Process guidance provides for appropriate NRC oversight of a plant in an extended shutdown condition. Technical specifications and Inspection Manual Chapter 0375, “Implementation of the Reactor Oversight Process at Reactor Facilities in an Extended Shutdown Condition for Reasons Not Related to Performance,” dated November 13, 2015 (ADAMS Accession No. ML15247A274), play an important role in this regard.

Specifically, Inspection Manual Chapter 0375 governs the oversight of a power reactor facility that is in extended shutdown for reasons not related to performance. One of the purposes of Inspection Manual Chapter 0375 is to provide assurance that the facility will continue to be operated in a manner that provides adequate protection of public health and safety following reactor restart. Section 06.02 of Inspection Manual Chapter 0375 discusses the inspection plan and indicates that a focus on operational readiness of the licensee for reactor restart may be necessary. Aspects that may be considered as potential areas for additional NRC inspection include equipment upgrades and maintenance, procedure updates, facilities maintenance, and the status of the corrective action program. Additionally, Section 06.02 of Inspection Manual Chapter 0375 directs inspectors to verify that the licensee has considered the latest vendor bulletins and other important information relevant to safety-related equipment, consistent with licensee procedures. This could be an appropriate focus area for inspections during an extended shutdown because some of these systems may not be required during a shutdown.

Issue No. 4: Conduct a decommissioning funding review(s) during an "extended shutdown" period and establish requirements to prevent the retraction of any letter of permanent cessation of operations certification.

The petitioners requested that the NRC amend 10 CFR Part 50 to conduct a decommissioning funding review(s) during an extended shutdown period and establish requirements to prevent the retraction of any letter of permanent cessation of operations submitted to the NRC under 10 CFR 50.82(a)(1).

The staff evaluated these requests and determined that they do not warrant rulemaking. The staff determined that the current regulations already require licensees to perform decommissioning funding reviews that meet or exceed the petitioners' request for reassessing the decommissioning funds and preliminary decommissioning cost estimates.

With regard to preventing a licensee from retracting any letter of permanent cessation of operations submitted under 10 CFR 50.82(a)(1), the staff notes that the filing of a certification under 10 CFR 50.82(a)(1)(i) of a determination to cease operations alone is not sufficient to result in permanent cessation of operations. In accordance with 10 CFR 50.82(a)(2), after a licensee has submitted both certifications required by 10 CFR 50.82(a)(1) (permanent cessation of operations and permanent removal of fuel from the reactor vessel) and the NRC has docketed both certifications, the facility's license is no longer authorized for operation of the reactor or for emplacement or retention of fuel in the reactor vessel. No existing regulation would prevent the licensee from changing its decision to cease operations by retracting its certification under 10 CFR 50.82(a)(1)(i).

The regulations do not specify a time limit for the permanent removal of fuel or the schedule for submitting the corresponding certification under 10 CFR 50.82(a)(1)(ii) to the NRC. Additionally, after this certification is received, no existing regulations explicitly prohibit the NRC from reauthorizing operation. However, the licensee would have to demonstrate that it meets all the requirements in 10 CFR Part 50 and request approval from the NRC to authorize operation. The NRC would have to determine whether the licensee has provided reasonable assurance that it has met all the requirements.

Therefore, the staff has determined that the regulations do not need to be amended to reassess decommissioning funds or to prohibit the retraction of a licensee's letter of permanent cessation of operations submitted to the NRC under 10 CFR 50.82(a)(1) because the existing regulations are adequate.

Previous Experience with Extended Shutdown Issues

The petitioners cited Browns Ferry Nuclear Plant, Unit 1, as a relevant example of a facility that was in an extended shutdown condition for many years (from March 1985 to June 2007) after operating for 10 years and that decided to restart instead of pursuing decommissioning. The staff reviewed this example and others and found no safety gaps in the regulations. The staff notes that, as part of the Reactor Oversight Process, the NRC developed an inspection procedure to monitor the restart effort. This procedure eventually became Inspection Manual Chapter 0375, as described above.

The NRC staff found additional examples relevant to the petition, including Crystal River Nuclear Generating Plant, Unit 3, which was shut down for an extended period of time before permanently ceasing operations; Kewaunee Power Station, which had permanently shut down and defueled but later considered restarting and relicensing; James A. FitzPatrick Nuclear Power Plant, Davis-Besse Nuclear Power Station, Unit 1, and Perry Nuclear Power Plant, Unit 1, (ADAMS Accession No. ML19207A097), for which a decision to permanently cease operations was reversed.

David Kraft of the Nuclear Energy Information Service raised many of the same issues in a letter to the agency dated June 16, 2016. By letter dated August 4, 2016, John Giessner from the Division of Nuclear Materials Safety in NRC Region III responded to Mr. Kraft (ADAMS Accession No. ML16218A266). In the NRC response letter, referenced by the petitioners as "the Giessner letter," the NRC staff answered questions about the requirements for power reactor decommissioning and extended shutdown, consistent with the discussion presented above for the issues raised in PRM-50-114, including addressing license termination certifications under 10 CFR 50.82, "Termination of license."

Petition Review Board

The staff held a petition review board meeting on December 20, 2018, which resulted in the petition review board's unanimous approval of the working group's recommendation to deny the petition (ADAMS Accession No. ML18353B148; not publicly available).

RECOMMENDATION:

The staff recommends that the Commission deny PRM-50-114 because the issues raised by the petitioners are adequately addressed by existing NRC regulations, procedures, and guidance, and therefore, no amendments to the NRC's regulations are necessary. The draft *Federal Register* notice on the proposed denial (Enclosure 1) provides a detailed response to the petitioners' requests and responds to public comments on PRM-50-114.

The staff requests the Commission's approval to publish a *Federal Register* notice denying PRM-50-114. The enclosed letter for signature by the Secretary of the Commission (Enclosure 2) informs the petitioners of the Commission's decision to deny the petition. The staff also will inform the appropriate congressional committees of the Commission's decision.

COORDINATION:

The Office of the General Counsel reviewed this package and has no legal objection to the denial of the petition.

A handwritten signature in black ink, reading "Margaret M. Doane". The signature is written in a cursive style with a long horizontal flourish extending to the right.

Margaret M. Doane
Executive Director
for Operations

Enclosures:

1. *Federal Register* notice
2. Letter to the Petitioners

SUBJECT: SECY-19-0121- DENIAL OF PETITION FOR RULEMAKING ON POWER
 REACTORS IN EXTENDED SHUTDOWNS (PRM-50-114; NRC-2016-0204)
 DATED: DECEMBER 11, 2019

ADAMS Accession Numbers:**ML17331A243 (Pkg.);****ML17331A259 (SECY Paper);****ML17331A345 (FRN);****ML17331A351 (Letter to Petitioner)***** Via e-mail****SECY-012**

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