

RULEMAKING ISSUE
(Notation Vote)

June 7, 2013

SECY-13-0061

FOR: The Commissioners

FROM: R. W. Borchardt
Executive Director for Operations

SUBJECT: PROPOSED RULE: WASTE CONFIDENCE – CONTINUED
STORAGE OF SPENT NUCLEAR FUEL (RIN 3150-AJ20)

PURPOSE:

To request Commission approval to publish a proposed rule in the *Federal Register* that would amend Part 51 of Title 10 of the *Code of Federal Regulations* (10 CFR), “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions.” The proposed amendments would revise 10 CFR 51.23, “Temporary storage of spent nuclear fuel after cessation of reactor operation-generic determination of no significant environmental impact,” which contains the generic determination on the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operation of a reactor (continued storage). The proposed rule would clarify that the generic determination applies to license renewals for Independent Spent Fuel Storage Installations (ISFSI). Conforming changes would also be made to other sections in 10 CFR Part 51.

SUMMARY:

The U.S. Nuclear Regulatory Commission (NRC) staff recommends that the Commission approve publication of this proposed rule, which would revise the generic determination on the environmental impacts of continued storage of spent nuclear fuel. The proposed rule would conclude that the analysis provided in the Waste Confidence Generic Environmental Impact Statement generically addresses the environmental impacts of continued storage of spent nuclear fuel; and supports determinations that it is feasible to safely store spent nuclear fuel

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beyond the licensed life for operation of a reactor and to have a mined geologic repository within 60 years following the licensed life for operation of a reactor. The NRC staff is proposing a 75-day public comment period.

BACKGROUND:

In 1984, the NRC promulgated 10 CFR 51.23, which generically satisfied the NRC's National Environmental Policy Act obligations to evaluate continued storage in license proceedings involving initial licensing and relicensing of nuclear power reactors and ISFSIs. Since that time the NRC has updated the Waste Confidence rule on several occasions, most recently in 2010. In 2012, in response to a lawsuit that challenged the 2010 update, the U.S. Court of Appeals for the District of Columbia Circuit vacated the update to the rule. In response, the Commission directed the staff to develop a generic environmental impact statement (EIS) to support an updated Waste Confidence Decision and temporary storage rule (see staff requirements memorandum (SRM) COMSECY-12-0016, "Approach for Addressing Policy Issues Resulting from Court Decision to Vacate Waste Confidence Decision and Rule," dated September 6, 2012 (NRC's Agencywide Documents Access and Management System (ADAMS) Accession No. ML12250A032)). In response to SRM-COMSECY-12-0016, the NRC staff formed the Waste Confidence Directorate in the Office of Nuclear Material Safety and Safeguards (NMSS) to carry out the Commission's directions.

The NRC began the environmental review process by publishing a Notice of Intent to prepare an EIS and conduct scoping (77 FR 65137; October 25, 2012). The NRC held one public meeting with a live Webcast and one Webcast-only meeting in November 2012, and two Webinars in December 2012 to obtain public input on the scope of the environmental review. The scoping period ended on January 2, 2013. The NRC staff issued the "Waste Confidence Generic Environmental Impact Statement Scoping Process Summary Report," on March 4, 2013, which is available in ADAMS under Accession No. ML13060A128.

To allow for ample opportunity for public involvement, the NRC has held monthly teleconferences to provide updates on the status of Waste Confidence activities. Transcripts for each of the scoping meetings and status meetings are available in ADAMS. The NRC staff also is maintaining a [Waste Confidence Website](#) on the NRC's activities regarding Waste Confidence. The NRC staff periodically posts updates to that Website, which contains information about current activities, relevant documents, and opportunities for public involvement. The NRC staff has also established an e-mail list of over 3,000 individuals interested in Waste Confidence and periodically sends out e-mail announcements of new material available through ADAMS and upcoming events for public participation.

DISCUSSION:

The NRC staff has prepared a draft *Federal Register* notice (Enclosure 1) that contains the proposed rule. The proposed rule is supported by the draft generic EIS, NUREG-2157, "Waste Confidence Generic Environmental Impact Statement" (DGEIS) (Enclosure 2). The NRC staff will be requesting public comment on both documents in the *Federal Register* notice.

Overview:

Details on the *Federal Register* notice and the DGEIS are provided below. Certain aspects of those documents are substantially different from past Waste Confidence documents, including:

- A separate standalone Waste Confidence Decision, as was present in previous Waste Confidence proceedings, is not provided. Development of a generic EIS that analyzes foreseeable environmental impacts and the experience that the NRC has gained over the past 30 years regarding spent nuclear fuel storage and disposal obviates the need for separate, independent findings.
- What had been “Findings” in past Decisions are now conclusions based on the information provided in the DGEIS on environmental impacts from continued storage and the associated assessment of spent nuclear fuel storage and national and international disposal practices.
- The proposed rule does not provide a specific year when a repository will be available for disposal of spent nuclear fuel. Instead, the staff has chosen to indicate that it is feasible to have a repository within 60 years of the end of the licensed life for operation of any reactor. This timeframe is consistent with the DGEIS short-term period and the U. S. Department of Energy (DOE) goal of having a repository sited, licensed, constructed, and opened by 2048.
- The environmental impacts for the indefinite continued storage scenario are scalable in the sense that they are based on the replacement of the ISFSI and the dry transfer system every 100 years.
- The environmental impacts of constructing an away-from-reactor ISFSI are addressed in the DGEIS due to the potential for that construction to occur during the timeframes analyzed in the DGEIS. An away-from-reactor ISFSI would also be subject to a site-specific licensing review that would include an environmental impact statement.
- The staff proposes no specific timeframe for revisiting this Waste Confidence rule, once completed. Rather, the proposed rule notes that the Commission will revisit the rule when circumstances arise that warrant reconsideration.

Detailed Discussion:

In the DGEIS, the NRC staff has analyzed the impacts of three timeframes that represent various scenarios for the length of continued storage that may be needed. The first timeframe is the short-term timeframe, which analyzes 60 years of continued storage after the licensed life for operation of a reactor. The second timeframe, the long-term timeframe, assumes an additional 100 years of storage beyond the short-term timeframe before a repository becomes available. Finally, the indefinite timeframe assumes that a repository never becomes available and the spent nuclear fuel must be stored indefinitely in either an at-reactor or away-from-reactor storage facility. The DGEIS generically addresses the environmental impacts of continued storage and its analysis supports the feasibility of safe storage of spent nuclear fuel for the three timeframes.

The NRC staff is proposing to revise the title of 10 CFR 51.23 to “Environmental impacts of storage of spent nuclear fuel beyond the licensed life for operation of a reactor.” Section 51.23(a) would be updated to include a new generic determination that would note that NUREG-2157 addresses the environmental impacts of spent fuel beyond the licensed life for operation of a reactor. The proposed rule would state that the Commission has concluded that: (1) the analysis generically addresses the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operation of a reactor and (2) the analysis supports the determination that it is feasible to safely store spent nuclear fuel beyond the licensed life for operation of a reactor. The proposed rule does not limit these two conclusions to a particular timeframe as has been done in past Waste Confidence proceedings (*i.e.*, 30 or 60 years). Although this approach takes full advantage of the analysis in the DGEIS, it is not intended to endorse prolonged or indefinite storage. The proposed rule would also state that the Commission has concluded that the analysis in the DGEIS supports the determination that it is feasible to have a mined geologic repository within 60 years following the end of the licensed life for operation of a reactor. Paragraph (b) of 10 CFR 51.23 would be revised to clarify that license renewals for ISFSIs are included in the generic determination. The proposed rule would also contain conforming changes to other sections in 10 CFR Part 51.

As indicated above, the proposed rule would contain a statement regarding the Commission’s belief that it is feasible to have sufficient mined geologic repository capacity to dispose of spent nuclear fuel by 60 years after the end of a reactor’s licensed life for operation. The 2010 Waste Confidence Decision and rule did not designate a time when a repository would be available, instead stating that repository capacity would be available “when necessary.” The NRC staff is recommending that the Commission adopt a specific timeframe that is tied to a reactor’s licensed life for operation. Adopting a specific 60-year timeframe is consistent with the short-term storage period analyzed in the DGEIS. Further, for reactors that operate for their entire licensed life for operation, the 60-year timeframe is consistent with the decommissioning timeframe in 10 CFR 50.82, “Termination of license” and 10 CFR 52.110, “Termination of license.” Finally, this timeframe is consistent with the DOE’s current estimated repository availability date of 2048. Additional information on this topic can be found in Section III.C, *Decision*, of the draft *Federal Register* notice.

When the Commission approved the final rule on the environmental effects of license renewal (SECY-12-0063, “Final Rule: Revisions to Environmental Review for Renewal of Nuclear Power Plant Operating Licenses”), the SRM directed the NRC staff to make any necessary conforming changes to the license renewal rule upon issuance of the GEIS and revised Waste Confidence rule. The proposed rule would revise two finding column entries in Table B-1 of 10 CFR Part 51, Appendix B, “Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants,” to address the proposed changes to 10 CFR 51.23. The “Offsite radiological impacts of spent nuclear fuel and high-level waste disposal” issue would be reclassified as a Category 1 impact and the finding column entry would be revised to address continued storage. For the “Onsite storage of spent nuclear fuel” issue, the finding column entry would be revised to include continued storage. It should be noted that the NRC cannot propose a change to a rule provision that is being revised in a separate rulemaking until that separate rule has been published and is effective. This is because two different proposed versions of the same rule provision can not be available at the same time as it could cause confusion as to which is the intended rule provision. A rule is considered proposed until the final rule is published and effective. Consequently, if the license renewal final rule is not effective by the time the Waste Confidence proposed rule is approved for publication, the NRC staff will need to remove the

changes related to license renewal from the Waste Confidence proposed rule. In addition, the DGEIS references the license renewal generic environmental impact statement. The NRC staff would need to change the references to an earlier publicly available version of the license renewal generic environmental impact statement if the final document is not publicly available.

A discussion of the issues formerly in the five “Findings” contained in the Waste Confidence Decision is provided in Section III.C., *Decision*, of the *Federal Register* notice. This section frames the issues covered by the five former “Findings” in terms of the technical feasibility and availability of a repository and the technical feasibility of safe continued storage of spent nuclear fuel. This section builds on the information and conclusions found in Appendix B of the DGEIS. Both this section and the DGEIS conclude that: (1) a geologic repository is technically feasible; (2) a mined geologic repository can be available within 60 years beyond the licensed life for operation of any reactor; (3) the regulatory framework exists to support the safe management of spent nuclear fuel until sufficient repository capacity is available; and (4) it is feasible to safely store spent nuclear fuel in spent fuel pools in the short-term timeframe and in dry casks during the short-term, long-term, and indefinite timeframes evaluated in the DGEIS.

The DGEIS does not specifically reference the draft “Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark I Boiling Water Reactor” (hereafter referred to as the Spent Fuel Pool Study or Study). If the NRC publishes a final Study before the final GEIS is published, then a reference to the Spent Fuel Pool Study will be added to the final GEIS. Although it did not specifically reference the draft Study in the DGEIS, the NMSS staff is aware of the conclusions in the draft Study and worked closely with the NRC staff that developed the draft Study to prepare the relevant sections of the DGEIS. The NRC staff expects the draft Spent Fuel Pool Study will be made public for review and comment on June 17 in advance of a July public Advisory Committee on Reactor Safeguards meeting on the draft Study.

The proposed rule would not impose any requirements on industry nor is guidance necessary; therefore, the cumulative effects of regulation does not need to be considered for this rulemaking.

AGREEMENT STATE ISSUES:

The amendments to 10 CFR Part 51 are not a matter of compatibility between the NRC and the Agreement States. The proposed rule provisions are classified as Compatibility Category NRC. A copy of the draft proposed rule *Federal Register* notice was not provided to the Agreement States. A copy of the published proposed rule *Federal Register* notice and the DGEIS will be provided to the States.

COMMITMENTS:

After the Commission completes review of the proposed rule and DGEIS, the NRC staff will file the DGEIS with the U.S. Environmental Protection Agency (EPA). The NRC staff will coordinate the publication of the proposed rule so that publication occurs on the same day that EPA notices the DGEIS. The staff is planning a 75-day public comment period for the proposed rule and DGEIS.

During the 75-day public comment period, the staff plans to hold eight regional public meetings and two nationally Webcast meetings at NRC headquarters. The regional meetings will be held in or near: Charlotte, North Carolina; Denver, Colorado; Toledo, Ohio; Boston, Massachusetts; New York City, New York; Minneapolis, Minnesota; San Clemente, California; and San Louis Obispo, California.

RECOMMENDATIONS:

That the Commission:

1. Approve for publication, in the *Federal Register*, the proposed amendments to 10 CFR Part 51 (Enclosure 1).
2. In order to satisfy requirements of the Regulatory Flexibility Act of 1980, as amended (5 U.S.C. 605(b)), certify that this rule, if promulgated, will not have a negative economic impact on a substantial number of small entities.

Note:

- a. That the proposed amendments will be published in the *Federal Register*, allowing 75 days for public comment.
- b. That the Chief Counsel for Advocacy of the Small Business Administration will be informed of the certification and the reasons for it, as required by the Regulatory Flexibility Act, 5 U.S.C. 605(b).
- c. That a regulatory analysis has not been prepared for this rulemaking.
- d. That a draft Generic Environmental Impact Statement has been prepared for this rulemaking (Enclosure 2).
- e. That appropriate Congressional committees will be informed of this action.
- f. That a press release will be issued by the Office of Public Affairs when the proposed rulemaking is filed with the Office of the Federal Register.

RESOURCES:

This waste confidence effort will require approximately \$3 million in contract support and 23 full-time equivalent (FTE) positions in both fiscal years (FY) 2013 and FY 2014. The FY 2013 budget includes \$625K and 7.5 FTE. The shortfall of \$2,375K and 15.5 FTE is being addressed through a reprogramming request to utilize available carryover funds (COMSECY-12-0030, Proposed Congressional Reprogramming Request for Fiscal Year 2013 Emergent Work), which has been reviewed and approved by the Commission. In FY 2014, \$1.5M and 7.5 FTE has been requested in the budget and the shortfall of \$1,500K and 15.5 FTE will be requested through the Planning, Budget, and Performance Management process.

COORDINATION:

The Office of the General Counsel has no legal objection to the proposed rulemaking or the DGEIS. The Office of the Chief Financial Officer has reviewed this Commission Paper for resource implications and has no objections. The rule does not contain any information collection requirements.

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Enclosures:

1. *Federal Register* Notice
2. Draft Generic Environmental
Impact Statement