

USED FUEL STORAGE AND TRANSPORTATION ISSUE SCREENING FORM

Issue Number: I-16-01

Title: Improving the efficiency of the regulatory framework for dry storage of used nuclear fuel

I. a. Problem Statement (Provide a clear, concise description of the issue.)

The level of detail in spent nuclear fuel storage cask certificates of compliance (CoC) and Independent Spent Fuel Storage Installation (ISFSI) licenses may not be commensurate with the relative risk of dry cask storage operations. This can result in industry and NRC resources being diverted from more safety-significant matters.

b. Background Information (Summarize industry events, licensing actions, inspection information, correspondence, and other documents germane to the issue. Attach documents as appropriate)

Both NRC and industry recognize there is a need to improve the efficiency of the licensing process for dry storage of spent nuclear fuel (SNF) under 10 CFR Part 72. A collaborative effort between NRC and industry is needed to provide a path forward so the level of detail for dry storage licenses and CoCs commensurate with the relative risk.

On October 3, 2012, Nuclear Energy Institute (NEI) submitted a Petition for Rulemaking (PRM 72-7) proposing improvements to 10 CFR Part 72 "based on experience and risk insights" (Reference 3). NRC approved the PRM for consideration in rulemaking (Reference 4). The rulemaking process for PRM-72-7 has not been initiated as such action depends on a PRM's assigned priority and the funding availability in the NRC budget.

NRC and NEI have been moving forward with efforts to improve the efficiency of the licensing process for SNF storage. The NRC developed an implementation plan for improving efficiency for spent fuel storage regulatory activities in 2014 (ML15223A414). Based on insights gain from tasks completed to date, and input from stakeholders, including the Advisory Committee on Reactor Safeguards (ACRS), the implementation plan was revised to provide focus on a graded licensing approach to continue the goal of achieving a level of detail that is commensurate with the relative risk.

The efficiency improvements being addressed in this RIRP will better match the regulatory process with the relative level of risk for dry storage operations.

References:

1. Letter, Anthony R. Pietrangelo (NEI) to Annette L. Vietti-Cook, October 3, 2012
2. 79 *Federal Register* 41,935, July 18, 2014

II. Screening Criteria (Provide an explanation as to how the issue meets each of the screening criteria to be considered for generic issue resolution.)

1. Does the proposed issue involve spent fuel storage or transportation and affect multiple 10 CFR Part 71 and/or 10 CFR Part 72 regulated entities (provide basis)?

Yes. Licensees and certificates of compliance (CoC) holder for all dry storage systems approved under 10 CFR Part 72 can be affected by the prevailing inefficiency.

2. Does the proposed issue warrant generic resolution (provide basis)?

Yes. There are currently 15 active site specific licenses and 14 active CoCs under 10 CFR Part 72. These licenses and CoCs are detailed and customized. This results in a situation in which storage licenses and CoCs are frequently amended as licensees/CoC holders continue to innovate and their customers continue to address growing storage challenges (e.g., different fuel types, higher fuel burnups, etc.). The corresponding proliferation of amendments consumes significant NRC and industry resources and has resulted in over 70 different dry storage system licensing bases being simultaneously in effect (often identical loaded casks at the same site have different licensing bases). As the use of dry storage continues to expand, this situation has the potential to degrade if a generic resolution is not achieved.

3. Does the issue warrant engagement between the industry and NRC (provide basis)?

Yes. Both industry preparers of dry storage license and CoC applications and NRC reviewers of these applications need to have a common understanding of the level of complexity and detail that is appropriate for a dry storage license or CoC. It is important that this understanding be consistent across NRC and throughout industry. This can only be achieved through broad and focused engagement.

4. Will generic resolution of the issue produce tangible benefits (provide basis)?

Yes. Industry estimates applying a graded approach informed by previously conducted risk studies of dry cask storage systems could reduce the number of license amendments by over 50%. This effort could result in significant resource savings for both NRC and industry.

5. Is the issue already adequately covered by another process (provide basis)?

No. Although both NRC and industry have proposed processes to address this issue, none of these efforts has made any measurable progress. Most importantly, industry and NRC efforts have not been linked into an effective collaboration. Since the need to address this issue stems from both NRC and industry resource constraints that require efficiency improvements to be made, and not from any immediate safety concern, use of this protocol permits a deliberate yet timely approach to understanding the issue and creating the necessary tools for implementing durable improvements.

POC: Are all screening criteria satisfied (“Yes” responses to questions 1-4 and “No” to question 5)?

Yes X No

III. Success Criteria (Describe the criteria to be used to define success for resolving this issue.)

Acquire and document data to determine:

1. A graded approach for the dry cask storage licensing process.
2. An approved plan between NRC and industry, with firm schedule commitments, to implement this process.

IV. Date: / /2016