

**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 spent nuclear fuel**I. a. Problem Statement** (Provide a clear, concise description of the issue.)

Spent nuclear fuel storage cask Certificates of Compliance and ISFSI licenses contain an inordinately high level of detail that is not commensurate with the relatively low risk of dry cask storage operations. This results in industry and NRC resources being unnecessarily expended on review and approval of non-safety significant changes – and 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 that 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. Yet despite this mutual recognition, this process continues to consume an inordinate amount of both NRC and industry resources. The lack of a risk appropriate licensing process has caused dry storage licenses and CoCs to be considerably more detailed than reactor licenses, even though the risks associated with dry cask storage are considerably lower. A collaborative effort between NRC and industry is needed to provide a path forward to more risk appropriate dry storage licenses and CoCs. This need has long been recognized, yet progress towards a more efficient regulatory framework has proved elusive.

In February of 2010 the Commission directed staff (Reference 1) to “undertake a thorough review of the regulatory programs for spent fuel storage and transportation” and to, among other things, “identify risk-informed, performance-based enhancements that will bring increased predictability and efficiency to the regulatory process”. Staff responded to this later that year (Reference 2) with a 7 year plan to “implement risk informed enhancements”. However, little progress has been made on this plan.

Meanwhile, in 2012 Industry submitted a Petition for Rulemaking (PRM 72-7) proposing improvements to 10 CFR Part 72 “based on experience and risk insights” (Reference 3). Although NRC approved the PRM for consideration in rulemaking (Reference 4), no action has been taken to date.

Despite these efforts, today the licensing of dry storage systems under 10 CFR Part 72 remains a highly inefficient process that consumes significant NRC and industry resources.

The efficiency improvements being addressed in this RIRP are vital to enabling NRC to fulfill its mission, as the use of dry cask storage continues to grow, and are consistent with agency policy. NRC’s Project Aim 2020 (Reference 5) outlines a planning strategy and makes several recommendations in the spirit of “helping the agency to accomplish the agency’s safety and security mission more effectively and efficiently while operating with fewer resources as the agency contracts during the next several years.” The economic realities that have inspired Project AIM are significant – making it imperative that NRC and industry identify and achieve efficiencies wherever possible.

## References:

1. Staff Requirements – COMDEK-09-0001 “Revisiting the Paradigm for Spent Fuel Storage and Transportation Regulatory Programs”, February 18, 2010
2. COMSECY-10-0007 “Project Plan for the Regulatory Program Review to Support Extended Storage and Transportation of Spent Nuclear Fuel” June 15, 2010
3. Letter, Anthony R. Pietrangelo (NEI) to Annette L. Vietti-Cook, October 3, 2012
4. 79 Federal Register 41,935, July 18, 2014
5. Project AIM 2020 Report and Recommendations” SECY-15-0015, January 30, 2015

**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 71 and/or 10 CFR 72 regulated entities (provide basis)?**

Yes. The licenses and Certificates of Compliance (CoC) for all dry storage systems approved under 10 CFR Part 72 are 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 considerably more detailed than reactor licenses, even though the risks associated with dry cask storage are considerably lower. They are also highly customized, reflecting individual reviewer expectations. This results in a situation in which storage licenses and CoCs must be frequently amended as licensees/CoC holders continue to innovate and their customers continue to address growing storage challenges (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 casks at the same site have different licensing bases). As the use of dry storage continues to expand, this situation has the potential to become unworkable, given available resources, 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 that risk informing dry cask storage licenses and CoCs could reduce the number of license amendments by over 50%. This would result in significant resource savings for both NRC and industry consistent with the goals of NRC's Project AIM 2020 and industry's delivering the nuclear promise initiative.

**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 more risk informed dry cask storage licensing process.
2. An agreed to plan between NRC and industry, with firm schedule commitments, to implement this process.

**IV. Date:**   02/7/2016