NEI 22-02: GUIDELINES FOR WEATHER-RELATED ADMINISTRATIVE CONTROLS FOR SHORT DURATION OUTDOOR DRY CASK STORAGE OPERATIONS

NRC Public Meeting: Independent Spent Fuel Storage Installation (ISFSI) Operations

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Nuclear Energy Institute

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Background

- NRC inspectors have questioned industry practices during short duration dry cask storage operations
- In a letter of 10/29/2021 NEI…
  - …raised backfit concerns regarding these questions
  - …pointed out that this issue of very low safety significance had the potential to disrupt dry cask storage operations across the country
  - …proposed using the Very Low Safety Significance Issue Resolution Process to address the issue
- In an 11/9/2021 meeting there was a thorough discussion of the issue and the potential to resolve them using the VLSSIR process
- These discussions have not, yet, led to resolution

Overview

- Certificates of Compliance (CoCs) for dry storage systems (DSS) have been issued by NRC under Part 72 since the 1990s
- 72.122 requires DSS to withstand natural phenomena including tornado missiles
- 72.122 is broadly worded and does not specify how the analyses must be conducted
- CoCs include deterministic tornado analysis for fully loaded casks, but many short-duration operations were not required to be covered by those deterministic analyses
- For short-duration operations where deterministic analysis was not required, safety is ensured through admin controls - no loading takes place in inclement weather
- This issue is of very low safety significance
- Guidance on administrative controls may be useful to address NRC questions

VLSSIR and Principles of Good Regulation

- Very Low Safety Significance Issue Resolution (VLSSIR) Process has been used by the NRC 11 times in the reactor area
- It is designed to efficiently manage issues of very low safety significance when there is uncertainty in the licensing basis
- NRC's Principles of Good Regulation indicate:

  "Regulatory activities should be consistent with the degree of risk reduction they achieve. Where several effective alternatives are available, the option which minimizes the use of resources should be adopted."

- VLSSIR should be used to address the short-duration issue as it arises in NRC inspections
- NEI 22-02 is being proposed to align NRC and industry on appropriate use of administrative controls during short-duration operations

NEI 22-02

- Introduction
- Scope of the Guidance
- Guidance
- References

NEI 22-02 – Scope of the Guidance

- Overview of short-duration outdoor DCS activities
- Common examples of short-duration outdoor activities
- Industry experience
- Licensing bases and administrative controls

NEI 22-02 – Guidance

- Proactive administrative controls
- Reactive administrative controls
- Resources
- Use of severe weather alerts to guide decision-making
- Implementation

Closing Remarks

- Expectation that tornado analyses address all short-term ISFSI operations unreasonable and outside of the licensing basis for general ISFSI licensees
- Issue is of very low safety significance
- VLSSIR process is a good fit for determining whether NRC and industry resources are best spent to resolve the STO issue as it arises in the context of NRC inspections
- Any inspection findings should be subject to backfit analysis
- NRC endorsement of NEI 22-02 would clarify appropriate use of administrative controls during STO, if needed

Discussion