CLARIFICATION OF NRC REQUEST FOR SUPPLEMENTAL INFORMATION
NEI 22-02, "GUIDELINES FOR WEATHER-RELATED ADMINISTRATIVE CONTROLS
FOR SHORT DURATION DRY CASK STORAGE OPERATIONS"

The following information includes additional clarifications to the request for supplemental information (RSI) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22111A272) issued on April 29, 2022. These clarifications address comments Nuclear Energy Institute (NEI) made in their response to the RSI (ML22168A135) in a letter dated June 17, 2022, and at a July 18, 2022, public meeting (ML22215A261) between NEI and the Nuclear Regulatory Commission (NRC) to discuss the responses. The RSIs describe information necessary for the NRC to complete its technical review of NEI 22-02, "Guidelines for Weather-Related Administrative Controls for Short Duration Dry Cask Storage Operations."

The NRC issued the RSI because the initial submittal of NEI 22-02 lacked sufficient detail for the NRC to start a review for endorsement of NEI 22-02 as a method the NRC would consider acceptable for complying with the NRC's regulations for both licensees and certificate of compliance (CoC) holders. Revision 1 to NEI 22-02 addresses some of the items requested in the RSIs, however, it does not provide generic guidance with sufficient information for licensees and CoC holders to establish weather-related administrative controls that would meet the regulations.

Additional Clarification to RSIs

NEI 22-02 needs to provide generic guidance with sufficient information to licensees and CoC holders on how to establish and implement administrative controls that would meet regulatory requirements.

RSI 1.a and RSI 1.b

Section 3.3 of NEI 22-02 revision 1 considers weather alerts but does not take into consideration the design basis parameters of SSCs used during handling operations. The purpose of the administrative controls is to prevent SSCs from exceeding design basis parameters (i.e., operating or design limits) prior to adverse weather conditions or to mitigate potential consequences if complications were to occur during handling operations. NEI 22-02 needs to provide guidance to licensees and CoC holders on how to identify design basis parameters (e.g., operating wind speeds and temperatures) and how to prevent or mitigate exceeding design basis parameters in the weather-related administrative controls. As discussed in the public meeting, NEI 22-02 could provide a list of different design parameters in a table for licensees and CoC holders to consider when using different systems, structures, and components (SSCs) and configurations during outdoor handling operations.

The NRC maintains that a review of the design basis parameters is within the scope and necessary for establishing weather-related administrative controls, which need to include operating or design limits for SSCs used during outdoor handling operations. To satisfy RSI 1.a and RSI 1.b, NEI needs to provide guidance on how CoC holders and licensees can identify these parameters and develop procedures to establish administrative controls that will prevent exceeding any design bases limits that could be exceeded by adverse weather conditions.

RSI 1.c

Revision 1 of NEI 22-02 does not provide sufficient guidance on how licensees and CoC holders should determine the timing, frequency, and forecast area of forecast checks. In the response to RSI 1, NEI stated that NEI 22-02 was revised to "recommend a frequency for subsequent checks of the weather forecast during the outdoor activities (if necessary, based on the activity duration)" based on site-specific considerations. NEI 22-02 was revised with the addition of one sentence addressing the frequency of forecast checks: "Licensees should decide if, and how frequently, additional weather forecast checks should be performed and include that frequency in procedures or instructions." This does not provide guidance on how licensees should determine if additional weather forecast checks are needed or how licensees should determine the frequency of additional forecast checks.

NEI 22-02 needs to provide additional guidance on how licensees and CoC holders would consider the timing, frequency, and area of the forecast checks within the established procedures. This guidance is necessary in order to address changes in the weather forecast and provide the licensee the ability to place the system in an analyzed configuration at any given time. For example, the licensee and CoC holder could determine the frequency based on operating experience, the amount of time needed to complete the operation, potential delays and malfunctions, and the time it would take to place the system in an analyzed configuration.

RSI 1.d

In section 3.2 of NEI 22-02 revision 1, NEI states that "actions should reflect the specific circumstances and timing of the potential change to the weather forecast as well as the current status of the short duration outdoor cask operation. Response actions may involve any of the following, depending on the severity and timing of the pending weather situation [...]" NEI 22-02 needs to provide guidance for associating specific actions (e.g., increasing the frequency of weather monitoring, taking compensatory measures, continuing handling operations, stopping handling operations and placing in an analyzed configuration that does not exceed any design bases parameter) with any weather conditions that could exceed design basis parameters during handling operations. NEI 22-02 needs to provide guidance on determining the appropriate actions for any change in the weather forecast that considers durations of the weather-related administrative controls, characteristics of the site, operating experience, characteristics of the handling operations, potential delays and malfunctions, and level of staffing. NEI 22-02 needs to provide guidance for identifying specific actions taken for changes in weather conditions if they were to occur.

RSI 3

In section 3.5 of NEI 22-02 revision 1, NEI states that malfunctions and unexpected delays do occur, but they are "infrequent and the likelihood of a malfunction or delay occurring at the same time as an unexpected occurrence of severe weather is so low, it should be considered non-credible." NEI does not support these conclusions about risk and credibility in revision 1 to NEI 22-02.

NEI 22-02 needs to provide guidance to licensees on how to consider a conservatively bounding estimate of the time required to place the cask in an analyzed configuration when developing administrative controls that would meet the regulatory requirements of 10 CFR 72.122(b). Specifically, the regulations contained in 72.122(b)(2)(i)(B) require that licensees consider

appropriate combinations of the effects of normal and accident conditions and the effects natural phenomena. The NRC staff maintains that NEI 22-02 needs to provide guidance on how its users should estimate a bounding duration of handling operations which includes consideration for potential malfunctions and delays. NEI 22-02 needs to provide guidance on estimating durations that considers potential malfunctions and delays or provide a risk discussion with supported conclusions.

In addressing RSI 3, NEI 22-02 could recommend licensees estimate the duration of each stage of the handling operations and the compensatory measures based on previous operating experience while accounting for subparts a through e of RSI 3.

RSI 4

In section 3.5 of revision 1 to NEI 22-02, NEI directs licensees to develop compensatory measures based on their site-specific engineering evaluation. To satisfy RSI 4, the discussion of compensatory measures in section 3.5 of NEI 22-02 needs to define what compensatory measures are and provide guidance on how licensees would determine compensatory measures for putting the cask in an analyzed configuration at any stage of their handling operations considering the time and resources needed.

RSI 5

In response to RSI 5, NEI stated that, if the NRC endorsed NEI 22-02, CoC holders could use the 10 CFR 72.48 change process to add procedures for weather-related administrative controls to their safety analysis reports (SARs) and that no licensing actions would be necessary on the part of either the CoC holders or licensees. As discussed in RG 3.72, “Guidance for Implementation of 10 CFR 72.48, ‘Changes, Tests, and Experiments,’” 10 CFR 72.48 allows for changes without prior NRC review and approval if the change is a generic NRC approved acceptable approach for meeting an NRC requirement. With the recommendation that licensees develop their own technical basis document to support the administrative controls and the lack of guidance on how to create the administrative controls, revision 1 to NEI 22-02 does not describe a generic approach for meeting an NRC requirement that the NRC could approve and licensees and CoC holders could incorporate into their SARs using the 10 CFR 72.48 change process. NEI 22-02 needs to provide guidance on a generic approach for creating the weather-related administrative control procedures in order for CoC holders to use the 10 CFR 72.48 change process as described in the response to RSI 5.

In section 3.5 of NEI 22-02 revision 1, NEI directs CoC holders to define the analyzed configurations in the engineering evaluations. NEI 22-02 needs to define “analyzed configuration” and provide guidance for CoC holders and licensees on where to find the analyzed configurations and associated design basis parameters for their casks and handling equipment.

In addressing RSI 5, NEI 22-02 could provide example language for the incorporation into the SAR and/or 10 CFR 72.212 reports. A standard language could be followed generically by licensees and would make it easier to incorporate the administrative controls into the SARs as opposed to each licensee having a different version with an engineering evaluation.

DISTRIBUTION:

ADAMS Accession No.: ML22216A116; ML22216A118

OFFICE	NMSS/DFM/STLB	NMSS/DFM/STLB		
NAME	CNguyen *CN*	CNguyen *CN*		
DATE	Aug 29, 2022	Sep 12, 2022		

OFFICIAL RECORD COPY