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NLS2026049
November 11, 2026

Attention: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Subject: Supplement to License Amendment Request, Application to Adopt 10 CFR 50.69, "Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors"
Cooper Nuclear Station, Docket 50-298, Renewed License No. DPR-46

References: 1) NPPD letter to U.S. Nuclear Regulatory Commission, "Application to Adopt 10 CFR 50.69, "Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors"," dated March 19, 2026 (ML26082A204)

2) U.S. Nuclear Regulatory Commission Letter to NPPD, "COOPER NUCLEAR STATION - REGULATORY AUDIT PLAN IN SUPPORT OF REVIEW OF LICENSE AMENDMENT REQUEST REGARDING 10 CFR 50.69, "RISK-INFORMED CATEGORIZATION AND TREATMENT OF STRUCTURES, SYSTEMS AND COMPONENTS FOR NUCLEAR POWER REACTORS"," dated June 1, 2026 (ML26141A159)

By letter dated March 19, 2026 (Reference 1), Nebraska Public Power District (NPPD), submitted a license amendment request (LAR) for Cooper Nuclear Station (CNS) to adopt Title 10 of the Code of Federal Regulations (10 CFR) Section 50.69, "Risk-Informed Categorization and Treatment of Structures, Systems, and Components for Nuclear Power Reactors."

By letter dated June 1, 2026 (Reference 2), the Nuclear Regulatory Commission (NRC) notified NPPD of their intent to conduct a regulatory virtual audit with NPPD staff in support of the LAR. Following the audit, the NRC requested that NPPD respond in the form of a supplement to selected audit questions, either for clarification, to add or remove detail, or to formally document NPPD's response to the questions.

This letter is a supplement to Reference 1. Attachment 1 to this letter provides a response to several of the audit questions posed by the NRC during the regulatory virtual audit. Attachment 2 is the revised proposed facility operating license mark-up which replaces the one in Reference 1. The proposed facility operating license mark-up was changed based on communications with the NRC during the audit.

NPPD has reviewed the information supporting the No Significant Hazards Consideration Determination and the Environmental Consideration that was previously provided to the NRC in Reference 1. The additional information provided in this LAR supplement does not impact the conclusion that the proposed license amendment in Reference 1 does not involve a significant

hazards consideration. Additionally, the information does not impact the conclusion that there is no environmental assessment to be prepared in support of the proposed amendment.

This correspondence contains no regulatory commitments.

If you should have any questions regarding this submittal, please contact Steve Nelson, Regulatory Affairs and Compliance Manager, at (402) 825-5058.

I declare under penalty of perjury that the foregoing is true and correct.

Executed On: 11/11/26
Date

Sincerely,

Khalil Dia
Site Vice President

/sn

Attachments: 1. Responses to NRC Questions Related to the 10 CFR 50.69 LAR
2. Proposed Facility Operating License Mark-up

cc: Regional Administrator w/ attachments
USNRC - Region IV

Cooper Project Manager w/ attachments
USNRC - NRR Plant Licensing Branch IV

Senior Resident Inspector w/ attachments
USNRC - CNS

Nebraska Health and Human Services w/ attachments
Department of Regulation and Licensure

NPG Distribution w/ attachments

CNS Records w/ attachments

ATTACHMENT 1

Responses to NRC Questions Related to the 10 CFR 50.69 LAR

Cooper Nuclear Station, Docket No. 50-298, Renewed Operating License No. DPR-46

NOTE: The U.S. Nuclear Regulatory Commission (NRC) staff's audit questions are in italics throughout this attachment to distinguish from the Nebraska Public Power District (NPPD) responses.

Audit Question APLA-01: Interfacing System Categorization

Section 7.1 of Nuclear Energy Institute (NEI) 00-04 states, "[d]ue to the overlap of functions and components, a significant number of components support multiple functions. In this case, the system, structure, and component (SSC), or part thereof, should be assigned the highest risk significance for any function that the SSC or part thereof supports." Section 4 of NEI 00-04 states that a candidate low safety-significant (LSS) SSC that supports an interfacing system should remain uncategorized until all interfacing systems are categorized. The license amendment request (LAR) does not discuss consideration or implementation of the guidance in Section 7.1 of NEI 00-04.

Explain how the categorization process will be implemented to ensure that the cited guidance in NEI 00-04 will be followed and that any functions/SSCs that serve as an interface between two or more systems will not be categorized until the categorization for all of the systems that they support is completed and that SSCs that support multiple functions will be assigned the highest risk significance for any of the functions they support.

NPPD Response:

Cooper Nuclear Station (CNS) will be obligated to utilize the categorization methodology specified in NEI 00-04 as described in our license amendment request and proposed operating license revision. The 50.69 program processes will be implemented using a series of station procedures. These procedures are in development and are in the process of being validated for useability and conformance to NEI 00-04 requirements. By process, obligations are captured in procedures through use of protected step designations. The CNS procedure change process requires that any revisions to protected steps must be validated to not conflict with the applicable obligation. The procedures governing the 50.69 categorization process will have this type of designation on the purpose step which means the entire procedure is protected and requires any change to the procedure to be validated not to conflict with the applicable reference. The 50.69 categorization process procedures will contain steps that specifically address ensuring that any functions/SSCs that serve as an interface between two or more systems will not be categorized until the categorization for all of the systems that they support is completed and that SSCs that support multiple functions will be assigned the highest risk significance for any of the functions they support.

Audit Question APLA-02: Credit for Diverse and Flexible Coping Strategies (FLEX)

The NRC memorandum dated May 30, 2017, "Assessment of the Nuclear Energy Institute 16 06, 'Crediting Mitigating Strategies in Risk-Informed Decision Making,' Guidance for Risk-Informed Changes to Plants Licensing Basis" (Reference 21), provides the NRC staff's assessment of challenges to incorporating FLEX equipment and strategies into a PRA model in support of risk-informed decision making in accordance with the guidance of RG 1.200, Revision 2. Subsequently, the NRC issued a second memorandum dated May 6, 2022, that updates the conclusions from the NRC's 2017 memorandum to reflect the additional industry guidance for crediting mitigating strategies in PRAs.

Section 3.28 of the LAR describes the process for which CNS intends to credit FLEX equipment during the 10 CFR 50.69 categorization process. This section also states that the FLEX strategies were modeled in the CNS PRA prior to issuance of the NRC Memorandum dated May 6, 2022, and that the modeling of FLEX in the CNS PRA has not been validated for compliance.

Explain how the FLEX modeling in the CNS PRA will be validated and updated as necessary to comply with the May 6, 2022, NRC memorandum prior to 50.69 program implementation.

NPPD Response:

The version of the CNS probabilistic risk assessment (PRA) that will be used to support the 50.69 program is in the process of being updated and the modeling of the FLEX strategies is consistent with the guidance in the May 6, 2022, NRC memorandum. The modeling and internal review efforts have been performed by qualified individuals. Future periodic and emergent PRA updates will be performed in accordance with program procedures. The table below outlines CNS compliance with the guidance of the NRC memorandum. The first two columns are reproduced from the memorandum, and the third column outlines CNS compliance.

NPPD will finalize approval of updates and modeling of the FLEX strategies to be consistent with the guidance in the May 6, 2022, NRC memorandum prior to implementation of 10 CFR 50.69. Self-assessment has concluded that no changes constituted PRA upgrades as defined in the PRA Standard (ASME/ANS RA-Sa-2009, as endorsed by RG 1.200, Revision 3).

Conclusions from 2017 Memo	2021 Updates	CNS Compliance
SCOPE - CONCLUSION 1: NEI 16-06 has not provided accepted HRA methods for inclusion of offsite portable equipment to take quantitative risk credits in risk-informed applications that should meet the guidance of RG 1.200; therefore, claiming quantitative credits for offsite equipment is not appropriate until evaluations consistent with the guidance of RG 1.200 or improvements in the NEI guidance or state-of-art methods address the technical gaps	No updated industry guidance has been issued on inclusion of offsite portable equipment (e.g., equipment stored at SAFER response centers) in PRAs that meet the guidance in RG 1.200. The NRC does not anticipate the need to credit the use of offsite portable equipment in PRAs that support risk-informed applications. This conclusion remains unchanged regarding not claiming quantitative credit for the use of offsite portable equipment. Until additional industry guidance is provided that is consistent with the guidance in RG 1.200, a justification for quantitative credit for the use of offsite portable equipment in PRAs used for risk-informed applications must be submitted to the NRC for review and approval.	There are no offsite sources of portable equipment that are credited in the PRA model.
UPGRADE - CONCLUSION 2: For any new risk-informed application that has incorporated mitigating strategies and should meet the guidance of RG 1.200, the licensee should either perform a focused-scope peer review of the PRA model or demonstrate that none of the following criteria is satisfied: (1) use of new methodology, (2) change in scope that impacts the significant accident sequences or the significant accident progression sequences, (3) change in capability that impacts the significant	Revision 3 of RG 1.200 was issued in December 2020. Revision 2 of RG 1.200 has not been rescinded and may continue to be used for risk-informed applications. Therefore, Conclusion 2 remains unchanged for any new risk-informed application that incorporates mitigating strategies and intends to meet the guidance in Revision 2 of RG 1.200. For any new risk-informed application that has incorporated mitigating strategies and intends to meet the guidance in Revision 3 of RG 1.200, the licensee should either perform a focused-scope peer review of the PRA model or demonstrate that none of the criteria for a PRA upgrade are satisfied, as defined in Revision 3 of RG 1.200. The definition of PRA Upgrade in Revision 3 of RG 1.200 is as follows: A change in the PRA that results in the applicability of one or more supporting requirements that were not previously included	All model changes related to portable equipment have been model maintenance and are not considered a PRA Upgrade. During the model update process, a self-assessment is performed to ensure the Standard is still being met and to determine if there is a need for a focused-scope peer review.

Conclusions from 2017 Memo	2021 Updates	CNS Compliance
accident sequences or the significant accident progression sequences.	within the PRA (e.g., performing qualitative screening for Part 4 of ASME/ANS Level 1/LERF PRA standard when the related high-level requirement was previously not applicable, or adding a new hazard model), an implementation of a PRA method in a different context, or the incorporation of a PRA method not previously used. The Pressurized Water Reactor Owners Group (PWROG) issued PWROG-20037-NP, "PRA Upgrade and Maintenance Examples," that includes examples of when the addition of portable equipment to a plant PRA should be considered a PRA upgrade or PRA maintenance. This PWROG report may be helpful in determining whether incorporation of mitigating strategies into the PRA should be considered a PRA upgrade.	
UPGRADE - CONCLUSION 3: Licensees may incorporate mitigating strategies in PRA models after the issuance of amendments for applications that use PRA models to exercise self-approval for a plant change. For such applications, the licensee should, in addition to conforming with specific license condition(s) associated with those applications, either perform a focused-scope peer review and resolve the focused-scope peer review findings before using the new models to support any risk-informed decision-making or document an evaluation demonstrating that none of the upgrade criteria is satisfied. NRC will monitor those evaluations and their documentation, along with evaluations and documents related to other items identified in this assessment, through appropriate regulatory processes (e.g., inspections).	Conclusion 3 remains unchanged.	All model changes related to portable equipment have been model maintenance and are not considered a PRA Upgrade. During the model update process, a self-assessment is performed to ensure the Standard is still being met and to determine if there is a need for a focused-scope peer review.
DATA ANALYSIS - CONCLUSION 4: The use of expert judgment consistent with the ASME/ANS PRA Standard as endorsed by RG 1.200 is acceptable for	PWROG-18042 provides generic failure probabilities that are acceptable to the NRC for use in developing plant-specific failure probabilities for portable FLEX equipment modeled in PRAs used for risk-informed applications. PWROG-18042 is expected to be updated periodically to	PWROG-18042-P, Revision 2 failure data was used for portable equipment.

Conclusions from 2017 Memo	2021 Updates	CNS Compliance
estimating parameter values under certain conditions and the rationale for estimated values should be documented. In reviewing future risk-informed applications, the staff may request additional information to understand the rationale for parameter values. Using the appropriate regulatory processes, the NRC will review the rationale for parameter values added to PRA models after issuance of applications that use PRA models to exercise self-approval for a plant change.	incorporate new operating experience. Subsequent revisions of PWROG-18042 are acceptable to the NRC for use in developing plant-specific failure probabilities for portable FLEX equipment modeled in PRAs used for risk-informed applications, as long as the methods for analyzing the data remain unchanged. Using these generic failure probabilities eliminates the need to use expert judgment for estimating parameter values associated with common FLEX equipment. The high-level requirements (HLRs) for the Data Analysis (DA) for Internal Events hazard group in the ASME/ANS PRA Standard RA-Sa-2009 state that appropriate generic parameter estimations should be chosen and be integrated with plant-specific data to obtain plant-specific parameter estimates. Licensees should document the process used to ensure that the DA HLRs are met. Licensees that choose not to use the generic failure probabilities in PWROG-18042 to develop plant-specific failure probabilities for portable FLEX equipment modeled in PRAs used for risk-informed applications should submit a justification for the methods and probabilities used to the NRC for review and approval.	
DATA ANALYSIS - CONCLUSION 5: The NRC staff does not agree with crediting spare portable equipment not modeled in the PRA in lieu of using appropriate failure rates because this approach is not consistent with the ASME/ANS PRA Standard and RG 1.200. Furthermore, the potential impact of underestimating failure rates could be larger than the unquantified risk benefits of spare equipment not modeled in PRAs.	PWROG-18042 provides generic failure probabilities for portable FLEX equipment that are acceptable to the NRC for use in developing plant-specific failure probabilities for portable FLEX equipment modeled in PRAs used in risk-informed applications. As a result, the need to credit spare portable equipment not modeled in the PRA in lieu of using appropriate failure rates has been eliminated. Conclusion 5 regarding not crediting spare portable equipment not modeled in the PRA in lieu of using appropriate failure rates remains unchanged.	PWROG-18042-P, Revision 2 failure data was used for portable equipment.
DATA ANALYSIS - CONCLUSION 6: The failure rates of permanently installed equipment cannot be used for portable equipment even if sensitivity analyses are performed. Licensees should use plant-specific of generic data collected and analyzed using acceptable	PWROG-18043, Revision 1, presents a method for collecting and analyzing operating experience data associated with portable FLEX equipment and provides generic failure probabilities for portable FLEX equipment. PWROG-18042 provides generic failure probabilities for portable FLEX equipment. The methods for collecting and analyzing operating experience in PWROG-18043, Revision 1, and the generic portable FLEX equipment failure probabilities in PWROG-18043,	PWROG-18042-P, Revision 2 failure data was used for portable equipment.

Conclusions from 2017 Memo	2021 Updates	CNS Compliance
approaches to estimate the failure rates for portable equipment.	Revision 1, and PWROG-18042 are acceptable to the NRC for use in developing plant-specific failure probabilities for portable FLEX equipment modeled in PRAs used in risk-informed applications. PWROG-18042 is expected to be updated periodically to incorporate new operating experience. Subsequent revisions of PWROG-18042 are acceptable to the NRC for use in developing plant-specific failure probabilities for portable FLEX equipment modeled in PRAs used for risk-informed applications as long as the methods for analyzing the data remain unchanged. Using these generic failure probabilities eliminates the need to use the failure rates for permanently installed equipment to represent portable equipment. Licensees who choose not to use the generic failure probabilities in PWROG-18042 to develop plant-specific failure probabilities for portable FLEX equipment should submit a justification for the approach used to the NRC for review and approval. Conclusion 6 that licensees should not use failure rates of permanently installed equipment to represent portable equipment, even if sensitivity analyses are performed, remains unchanged.	
DATA ANALYSIS - CONCLUSION 7: NEI 16-06 and risk-informed applications should address whether and how the analysis described in SR DA-D8 is performed.	ASME/ANS PRA Standard RA-Sa-2009 supporting requirement (SR) DA-D8 states to limit the use of old data when reflecting modifications where past performance data is no longer representative. PWROG-18043, Revision 1, presents a method for collecting and analyzing operating experience data associated with portable FLEX equipment and provides generic failure probabilities for portable FLEX equipment that are based on recent operating experience. PWROG-18042 also provides generic failure probabilities for portable FLEX equipment that are based on recent operating experience. Issuance of PWROG-18043, Revision 1, and PWROG-18042 eliminates the need to use old or non-representative data for portable FLEX equipment failure probabilities, as long as the operating experience data and equipment failure probabilities continue to be updated periodically. PWROG-18042 is expected to be updated periodically to incorporate new operating experience. Licensees that use PWROG-18042 to support modeling mitigating strategies in PRAs used for risk-informed applications should verify that the information used represents current performance at the time of the application. If the information becomes outdated, or the licensee decides not to use the generic data in PWROG-18042, the licensee should submit a justification for how ASME/ANS PRA Standard	PWROG-18042-P, Revision 2 failure data was used for portable equipment.

Conclusions from 2017 Memo	2021 Updates	CNS Compliance
	RA-Sa-2009 SR DA-D8 is met to the NRC for review and approval.	
DATA ANALYSIS - CONCLUSION 8: The uncertainty associated with failure rates of portable equipment should be considered in the PRA models consistent with the ASME/ANS PRA Standard, as endorsed by RG 1.200. Risk-informed applications should address whether and how these uncertainties are evaluated.	PWROG-18043, Revision 1, incorporates three statistical approaches to generate equipment failure rates including Empirical Bayes for data with statistically significant differences in mean values, Jeffreys Noninformative Prior for cases with no statistically significant difference, and Constrained Noninformative Prior for cases with limited data. PWROG-18043, Revision 1, and PWROG-18042 provide mean values and statistical uncertainty parameters that are acceptable to the NRC for use in developing plant-specific failure probabilities for portable FLEX equipment modeled in PRAs used in risk-informed applications. However, the staff notes that the uncertainty related to the resolution of the industry operating experience data is not addressed by the report. PWROG-18043, Revision 1, does not describe the specific operating experience used to develop the equipment failure rates nor does it describe the preventive maintenance and testing activities performed. SR DA-C4 of the ASME/ANS PRA Standard RA-Sa-2009 states that records used to determine plant-specific failure data should include all failures that would have resulted in the failure of the component to perform its mission as defined in the PRA. The NRC staff was unable to determine whether the data reported by licensees to the PWROG was based on FLEX equipment preventive maintenance and testing activities that test the PRA functions or the mission as defined in the PRA. For example, PWROG-18043, Revision 1, notes that there was insufficient data to quantify the failure to load probabilities for portable diesel generators due to lack of detailed data. To account for the uncertainty in the testing activities used to generate the generic failure probabilities in PWROG-18043, Revision 1, and PWROG-18042, licensees should ensure their preventive maintenance strategies include such testing and that the data reported provides this information. When generating the plant-specific equipment failure probabilities from the generic probabilities in PWROG-18043, Revision 1, or PWROG-18042, licensees should continue to assess the uncertainty in equipment failure rates and address or disposition it as part of the process for reviewing PRA key assumptions and sources of uncertainty, as applicable, to the risk-informed application submitted to the NRC for review and approval.	PWROG-18042-P, Revision 2 failure data was used for portable equipment. Uncertainty parameters have been updated accordingly.

Conclusions from 2017 Memo	2021 Updates	CNS Compliance
DATA ANALYSIS - CONCLUSION 9: The NRC staff does not have access to and has not reviewed PWROG-14003. At this time, the NRC staff treats approaches proposed by that PWROG document as unreviewed methods.	PWROG-18042 provides generic failure probabilities for portable FLEX equipment that are acceptable to the NRC for use in developing plant-specific failure probabilities for portable FLEX equipment modeled in PRAs used in risk-informed applications. Therefore, the need to use PWROG-14003 has been eliminated. Licensees that choose to use PWROG-14003 should submit a justification for the approach used to the NRC for review and approval. Conclusion 9 that PWROG-14003 has not been reviewed by the NRC remains unchanged.	PWROG-18042-P, Revision 2 failure data was used for portable equipment.
DATA ANALYSIS - CONCLUSION 10: Without any additional data or evaluations, the currently available common-cause failure (CCF) parameter values should be used, which should appropriately reflect the higher CCF failure rates of the portable equipment when applied to the higher independent failure rates.	PWROG-18043, Revision 1, did not collect CCF data or generate generic CCF values for portable FLEX equipment. Updates to NUREG/CR-5497, "Common Cause Failure Parameter Estimations," include generic CCF terms for equipment with no prior CCF data. Conclusion 10 that currently available CCF values should be used until additional data becomes available remains unchanged.	PWROG-18042-P, Revision 2 failure data was used for portable equipment, which includes common cause data.
HRA - CONCLUSION 11: The staff finds that using surrogates for specific actions or engineering judgement to estimate the failure probability do not adequately address the elements needed for a technically acceptable HRA as described in the ASME/ANS PRA Standard (e.g., the impact of the environment under which the operators work). Until gaps in the human reliability analysis methodologies are addressed by improved industry guidance, HEPs associated with actions for which the existing approaches are not explicitly applicable, such as actions described in Sections 7.5.4 and 7.5.5 of NEI 16-06, along with assumptions and assessments, should be submitted to NRC for review.	EPRI 3002013018 provides updated detailed industry guidance for estimating the human error probabilities (HEPs) of the actions needed to implement mitigating strategies using portable equipment. The actions are classified into three stages: deploy, implement, and sustain. Each stage has human reliability elements of cognition (i.e., decision to initiate the tasks of the stage) and execution (i.e., perform the tasks). For example, declaring an extended loss of alternating current power (ELAP) is a cognition element in the deploy stage, and refueling the diesel pump is an action element of the sustain stage. EPRI 3002013018 provides guidance and examples to estimate the HEPs of typical mitigating strategies in a base case ELAP scenario (i.e., without an external event), including declaring an ELAP, deploying portable equipment, performing deep direct current (DC) load shed, implementing portable equipment, and refueling portable equipment. The report then explores variations that may occur from the base case scenario. The examples presented in EPRI 3002013018 are not applicable to every plant as-is. Therefore, plant-specific practices must be considered when determining which variations are most applicable and in applying those examples to a specific plant. EPRI 3002013018 provides guidance that is acceptable	The CNS PRA credits FLEX for internal events and Fire scenarios, but not for any "extreme external events." No additional review is required. The three surrogates used in the EPRI 3002013018 are applicable to the CNS FLEX strategies and have been used in the PRA HRA. Additional surrogates have been developed in a manner similar to that documented in EPRI 3002013018 for the following subtasks: - Making connections on threaded fluid lines (e.g., in FLX-XHE-FO-RIVER-INJ-ELAP)

Conclusions from 2017 Memo	2021 Updates	CNS Compliance
	to the NRC, with the clarifications below, for performing HRA for mitigating strategies using portable equipment. EPRI 3002013018 provides limited qualitative guidance on performing HRA for human actions impacted by extreme external events. EPRI 3002013018 does not provide quantitative guidance for performing HRA for actions impacted by extreme external events but identifies the need to develop guidance to address external hazards, which involve environmental exposure (e.g., external flood, high winds, etc.) as future work. Until additional industry guidance is provided that is consistent with the guidance in RG 1.200, a justification for quantitative credit for the use of portable equipment in an extreme external event in PRAs used for risk-informed applications should be submitted to the NRC for review and approval. EPRI 3002013018 developed three surrogates – A, B, and C – to assess the reliabilities of three types of human tasks that are not included in the Technique for Human Error Rate Prediction (THERP) HRA method (NUREG/CR1278, "Handbook of Human Reliability Analysis with Emphasis on Nuclear Power Plant Applications - Final Report," ADAMS Accession No. ML071210299). Surrogate A is for transporting portable equipment. Surrogate B is for connecting temporary hoses. Surrogate C is for validation of portable pump operability. These three surrogates are specific to the plant used in the examples and may not be applicable for other plants. The NRC notes that while Surrogates A and B may be applicable to many plants, Surrogate C is not expected to be widely applicable because it is only applicable for a very specific set of procedural cues that were verified through operator interviews to be appropriate for the specific plant used in the examples. These three surrogates have been adequately documented and are acceptable for use in a licensee's PRA used for risk-informed applications, if applicable, without additional NRC review. Any other proposed surrogates necessary to credit mitigating strategies in a licensee's PRA used for a risk-informed application should be submitted to the NRC for review and approval. EPRI 3002013018 does not include guidance for calculating the HEPs for actions such as connecting/disconnecting trailers or loading/unloading equipment. EPRI 3002013018 states that the feasibility study or task analysis decided these items would not drive the HRA results because there were no	- Loading/Unloading Error - Equipment drop (small generator) (e.g., FLX-XHE-FO-HPCOOL) These surrogates are available for review. Loading/Unloading of equipment was assessed in the validation studies for CNS and determined to be feasible. The current procedures that direct the implementation of the FLEX strategies are consistent with the activities in the validation studies. Refueling tasks were reviewed and screened according to the EPRI 3002013018 guidance. DC load shed is not required for success when implementing FLEX strategies. No credit is taken for DC load shed in the FLEX timeline.

Conclusions from 2017 Memo	2021 Updates	CNS Compliance
	credible failure mechanisms, or the impact of the failure mechanisms were negligible. EPRI's conclusion that there are no credible failure mechanisms for loading/unloading equipment is specific to the plant used in the examples and may not be applicable to all plants. As such, each licensee should confirm that there have not been any changes to their mitigating strategies since the feasibility study was completed that may impact the ability to complete these tasks and, if applicable, licensees are to document the basis for excluding such tasks from HRA. EPRI 3002013018 does not include detailed guidance for modeling refueling actions where no personnel are available to monitor the fuel level or there are no clear pre-defined procedures or plans directing refueling. If there are no personnel available to monitor the fuel level or there are no clear pre-defined procedures or plans directing refueling, the licensee should submit a justification for the modeling approach used to the NRC for review and approval. EPRI 3002013018 provides guidance for modeling refueling of portable equipment where personnel are available to monitor the fuel level and there are clear pre-defined procedures or plans directing refueling. EPRI 3002013018 includes screening criteria that may be used to determine whether refueling can be excluded from the PRA model based on the allowance in SR SY-A15 of the ASME/ANS PRA Standard RA-Sa-2009 that failure modes can be excluded from the PRA model if the relative contribution of the failure mode is less than 1 percent of the total failure rate for the component. EPRI KBA 2021-007 provides additional guidance for modeling refueling of portable equipment, including clarification of when use of the refueling screening criteria is appropriate. EPRI 3002013018, with the clarifications provided in EPRI KBA 2021-007, provides guidance that is acceptable to the NRC for modeling refueling of portable equipment where personnel are available to monitor the fuel level and there are clear pre-defined procedures or plans directing refueling. EPRI 3002013018 uses THERP to calculate the HEPs associated with DC load shedding. The EPRI report states that a self-check value of 0.5 is applied as a recovery factor for failure to open a breaker and is appropriate because of general improvements in operator training since	

Conclusions from 2017 Memo	2021 Updates	CNS Compliance
	THERP was published in 1983. The NRC does not agree with this statement because the execution values in THERP already account for self-checking. The value of 0.5 appears to be based on analyst judgement applied as part of the reasonableness check. If this approach is taken, it should be submitted to the NRC for review and approval.	
HRA - CONCLUSION 12: If procedures for initiating mitigating strategies are not explicit and the associated failure probabilities are not directly analyzed by accepted approaches, technical bases for probability of failure to initiate mitigating strategies should be submitted to NRC for review.	EPRI 3002013018 provides detailed guidance for modeling the decision to declare an ELAP, including variations where various amounts of judgement are required to make the decision. For the decision to deploy FLEX equipment where judgement is required, the EPRI report suggests using the delay implementation decision tree from NUREG-2199, "An Integrated Human Event Analysis System (IDHEAS) for Nuclear Power Plant Internal Events At-Power Application," (ADAMS Accession No. ML17073A041) to augment the decision trees in the Cause-Based Decision Tree (CBDT) HRA method, which is documented in EPRI Technical Report (TR) TR-100259, "An Approach to the Analysis of Operator Action in Probabilistic Risk Assessment." EPRI included the delay implementation decision tree from the IDHEAS At-Power HRA method (Figure 5-9 of NUREG-2199) as part of the CBDT HRA method in the EPRI HRA Calculator, Version 6.0. The NRC notes that the addition of the delay implementation decision tree enhances the ability of the EPRI CBDT method to assess the reliability of declaring an ELAP event. The NRC staff considers this an enhancement to the existing CBDT HRA method, by providing a systematic and reproducible way of assessing delayed decisions and, therefore, use of this additional decision tree is not considered a PRA upgrade. EPRI 3002013018 provides guidance that is acceptable to the NRC, with the clarifications below, for modeling the decision to initiate mitigating strategies using portable equipment. In EPRI 3002013018, the decision to declare an ELAP is modeled as the cognitive element for the operator actions to deploy portable FLEX equipment. The example plant depicted in the EPRI report has an ELAP emergency operating procedure (EOP) sheet that directs implementation of the FLEX strategies. Once entered, the ELAP EOP sheet sets off the scripted execution of a series of FLEX tasks with a pre-determined timeline. This strategy is specific to the plant used in the examples and may not be applicable for other plants. The EPRI report includes a discussion of how to identify where there is cognition and how cognition	Declaration of ELAP at CNS uses a "judgment-based" cue structure and the evaluation is performed according to the EPRI 3002013018 guidance for this type of cue structure. The ELAP procedure is consistent with the example plant in EPRI 3002013018 and most actions are performed based on the declaration of ELAP without any additional, significant cognitive work. Some actions, such as the deployment of the FLEX pump and early containment venting, do include additional cognitive work and the HFEs for those events include evaluations of the cognitive error probabilities for the associated tasks (see HFEs FLX-XHE-FO-RIVER-INJ-ELAP and FLX-XHE-FO-EARLYHCVS). For non-ELAP scenarios, the EOPs provide explicit guidance for deployment and use of the FLEX injection pump. A separate HFE was developed to represent the use of this equipment in non-ELAP scenarios involving loss of long term containment heat removal (FLX-XHE-FO-RIVER-INJ-NOELAP).

Conclusions from 2017 Memo	2021 Updates	CNS Compliance
	should be handled in HEP identification and definition. For ELAP events, a plant-specific evaluation should be performed to determine whether the cognitive element should be included in the human reliability evaluation of the operator actions to deploy portable FLEX equipment. If the decision to initiate mitigating strategies (declare ELAP) is not modeled in the PRA, the technical basis for the rationale used to exclude the decision should be submitted to the NRC for review and approval. If FLEX is credited in the PRA for events other than ELAP (such as for maintenance or other equipment failures), procedures must explicitly indicate when and how to implement mitigating strategies for the additional events. If procedures to initiate mitigating strategies for events other than ELAP are not explicit, this conclusion remains unchanged and the technical bases for the probability of failure to initiate mitigating strategies should be submitted to NRC for review and approval.	
HRA - CONCLUSION 13: Until acceptable guidance is provided for identifying and assessing unique aspects of pre-initiator human failure events for mitigating strategies, the staff may request additional information regarding assessment of those human failure events.	EPRI KBA 2021-001 provides additional guidance for identifying and assessing pre-initiating events for mitigating strategies. EPRI KBA 2021-001 provides guidance that is acceptable to the NRC, with the clarifications below, for identifying and assessing pre-initiating events for mitigating strategies. During the original implementation FLEX, thorough assessments, walkdowns, and inspections were performed with multi-disciplinary teams of subject matter experts. These assessments were vital in determining the feasibility of the human actions that need to be performed to implement FLEX, completing the task analysis for the actions that need to be modeled in the PRA, and identifying pre-initiators. The licensee should ensure that any changes made to the FLEX implementation plans, since original implementation, are thoroughly reviewed for their impacts on HRA, including pre-initiators. A best practice would be to use a multi-disciplinary team of subject matter experts that includes an expert in FLEX implementation. The assessment of pre-initiator human failure events (HFEs) is intended to capture the contribution of latent failures that are not captured in equipment failure rates. The NRC notes that battery failures may not	The CNS pre-initiator HRA was updated to address the FLEX strategies based on the same methodology used for the other plant systems supplemented by the guidance in EPRI KBA 2021-001 and in the May 6, 2022, NRC memorandum (i.e., the guidance in the "2021 Updates" column to the left of this one).

Conclusions from 2017 Memo	2021 Updates	CNS Compliance
	always be included in equipment failure rates, depending on the nature of the battery failure. The licensee should ensure battery failures are appropriately considered in the pre-initiator assessment if not included in equipment failure rates. It is noted in EPRI 3002013018 that identifying and assessing pre-initiator aspects of mitigating strategies should be performed in the same way as for other credited HFEs. The NRC notes that if the pre-initiator assessment is performed in the same way as for the peer reviewed PRA, the assessment for mitigating strategies would not be considered a PRA upgrade.	

Audit Question APLA-03: PRA Review Process Results

Regulatory Guide 1.200, Revision 2 (ADAMS Accession No. ML090410014) and Revision 3 (ADAMS Accession No. ML19308B636) provide guidance for addressing PRA acceptability. RG 1.200, Revision 2, describes a peer review process using the ASME/ANS PRA standard ASME/ANS-RA-Sa-2009, "Addenda to ASME/ANS RA-S-2008, Standard for Level 1/Large Early Release Frequency Probabilistic Risk Assessment for Nuclear Power Plant Applications," as one acceptable approach for determining the technical acceptability of the PRA.
LAR Section 3.3 of the LAR describes the timelines and results of self-assessments and peer reviews performed on the CNS FPIE and Fire PRA models. It states that the full scope peer review of the CNS FPIE PRA model, including internal flooding, was conducted in 2008 in accordance with RG 1.200, Revision 1 and the full scope peer review of the CNS Fire PRA was conducted in 2011 in accordance with RG 1.200, Revision 2. Additionally, this section states that the CNS PRA models have been assessed against RG 1.200, Revision 3. It is unclear when this assessment was performed.

Section 3.3 of the LAR also states that the licensee performed self-assessments of both the CNS FPIE and Fire PRAs that were performed to determine whether the findings constituted PRA maintenance or an upgrade of the PRA. It is unclear when these self-assessments were performed and what procedural guidance was followed. Considering these observations, please explain and provide documentation (copies of original assessments) for the following:

1. *When was the assessment against RG 1.200, Revision 3 performed?*
2. *When were the CNS self-assessments performed for the CNS FPIE and Fire PRA models and what regulatory guidance was followed?*

NPPD Response:

Question 1: Both the Full Power Internal Events/Internal Flooding (FPIE) PRA Model and Fire PRA Model have been self-assessed against RG 1.200, Revision 3. The assessments were documented and approved on December 7, 2022, and June 26, 2024, respectively.

Question 2: Self assessments to determine whether the PRA peer review findings constituted PRA maintenance or an upgrade were performed in preparation and support of each of the peer finding closure reviews for CNS. Assessments for the FPIE findings were completed in October 2022. Assessments for the Fire PRA were completed in August 2024 and July 2025. Guidance from ASME/ANS PRA Standard RA-Sa-2009, RG 1.200 Revision 3, and NEI 05-04/NEI 07-12/NEI 17-07 including Appendix X were applied.

The tables below summarize the timeline of associated activities.

FPIE Timeline	
October 2022	Cooper Maintenance/Upgrade Self-Assessment of Peer Review Finding resolutions in support of the October 2022 FPIE Independent Peer Finding Closure Review
October 2022	FPIE Independent Peer Finding Closure Review
December 2022	FPIE PRA Revision - Routine Maintenance Update

December 2022	RG 1.200, Revision 3, Self-Assessment of the FPIE Model including the December 2022 FPIE PRA Revisions

Fire PRA Timeline	
June 2024	Fire PRA Revision - Routine Maintenance Update
June 2024	RG 1.200, Revision 3, Self-Assessment of the Fire PRA Model including the June 2024 Fire PRA Revisions
August 2024	Cooper Maintenance/Upgrade Self-Assessment of Peer Review Finding resolutions in support of the September 2024 Fire PRA Independent Peer Finding Closure Review
September 2024	First Fire PRA Independent Peer Finding Closure Review
July 2025	Cooper Maintenance/Upgrade Self-Assessment of Peer Review Finding resolutions in support of the July 2025 Fire PRA Independent Peer Finding Closure Review
July 2025	Final Fire PRA Independent Peer Finding Closure Review

The following uses the framework of Section 3.3 of the LAR to clarify dates for the RG 1.200, Revision 3, assessments as well as the self-assessments for determination on whether peer review findings constituted designations of PRA maintenance or upgrades. Underlined text details the additions.

Section 3.3:

The PRA models described in Section 3.2 have been assessed against RG 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," Revision 3, consistent with NRC Regulatory Issue Summary 2007-06, "Regulatory Guide 1.200 Implementation" [62]. The RG 1.200, Revision 3, FPIE assessment was completed on December 7, 2022. The RG 1.200, Revision 3, Fire PRA assessment was completed on June 26, 2024.

Facts and Observation (F&O) closure reviews were conducted on the PRA models discussed in this section. Findings were reviewed and closed using the process documented in Appendix X to NEI 05-04, NEI 07-12 and NEI 12-13, "Close-out of Facts and Observations" [63] as accepted by NRC in the letter dated May 3, 2017 [64]. The results of this review have been documented and are available for NRC audit.

Full Power Internal Events Internal Flooding PRA Model

The full scope peer review of the CNS FPIE PRA model, including internal flooding, was conducted in 2008 in accordance with NEI 05-04 [74], RG 1.200, Revision 1 [75], and ASME/ANS PRA Standard RA-Sc-2007 [76].

An independent closure review of F&Os using NEI methodology ([13] and [15]) was conducted in October 2022. All Finding-Level F&Os were verified closed with all applicable Supporting Requirements (SRs) from ASME/ANS PRA Standard RA-Sa-2009 [7] meeting Capability Category II or greater. In support of this October 2022 F&O closure review, CNS performed a self-assessment also in October of 2022 to determine whether the resolution of each Finding

constituted maintenance or upgrade of the PRA, as defined in the ASME/ANS PRA Standard. The F&O independent Assessment Team concurred with CNS's conclusion that there were no PRA upgrades associated with the resolution of Findings.

The CNS FPIE, internal flooding, and Fire PRA models were used as part of adopting Technical Specification Task Force (TSTF) Traveler TSTF-425, Revision 3, "Relocate Surveillance Frequencies to Licensee Control- RITSTF [Risk-informed TSTF] Initiative 5b" [77]. The NRC concluded the technical reviews of the PRA were adequate and the models could be used to support the evaluation of changes to surveillance frequencies within the Surveillance Frequency Control Program.

Fire PRA Model

The full scope peer review of the CNS Fire PRA was documented in March 2011 . The review was conducted in accordance with NEI 07-12 [78], the ASME/ANS PRA Standard RA-Sa-2009, and RG 1.200, Revision [79].

A focused scope peer review was conducted in August 2024 to review application of the high energy arc fault fire modeling methodology contained in NUREG-2262[80].

Independent F&O closure reviews were conducted in September 2024 and July 2025 using NEI methodology [13] and [15]. All Finding-Level F&Os were verified closed with all applicable SRs from the ASME/ANS Standard meeting Capability Category II or greater. Closure reviews were conducted in accordance with NEI 17-07 [81], the ASME/ANS PRA Standard, and RG 1.200, Revision 3 [61].

CNS performed a self-assessment to determine whether the resolution of each Finding constituted maintenance or upgrade of the PRA, as defined in the ASME/ANS PRA Standard. These self-assessments were completed in August of 2024 and July of 2025 as part of the preparation for the two independent F&O closure reviews. The F&O independent Assessment Team concurred with CNS' conclusion that there were no PRA upgrades associated with the resolution of Findings.

The CNS Fire PRA model was previously used in support of revising the Fire Protection Licensing Basis to adopt National Fire Protection Association (NFPA) Standard 805. The NRC staff concluded that the PRA approach, methods, and data were acceptable and that the fire PRA model adequately supported the transition to NFPA 805 [82].

Audit Question RAB-01: Screening the External Flooding Hazard

In the enclosure of the LAR, the licensee states external hazards were screened for applicability to CNS per a plant-specific evaluation in accordance with GL 88-20 Supplement 4, "Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities – 10 CFR 50.54(f)," dated June 28, 1991 (ML031150485), and updated to use the criteria in ASME PRA Standard RA-Sa 2009. Attachment 4 provides a summary of the external hazards screening results. Attachment 5 provides a summary of the progressive screening approach for external hazards. All other external hazards, except for seismic, were screened from applicability.

As part of the categorization assessment of other external hazards, an evaluation is performed to determine if there are SSCs or equipment being categorized that participate in screened

scenarios and whose failure would result in an unscreened scenario. Consistent with the flow chart in Figure 5-6 in Section 5.4 of NEI 00-04, these components would be considered HSS and cannot be overridden by the Integrated Decision Panel. Cooper Nuclear Station External Hazards Assessment Table 2 contains a list of SSCs and other equipment credited in the external hazards screening.

Attachment 4, "External Hazards Screening," of the LAR enclosure identifies that screening Criterion C1, C3, and PS4 were used to screen external flooding. Attachment 5, "Progressive Screening Approach for Addressing External Hazards," of the LAR enclosure describes Criterion C1 as "event damage potential is less than events for which plant is designed," which is essentially the same criterion as supporting requirement EXT-B1, Criterion 1, from the ASME PRA standard. Attachment 5 describes Criterion C3 as, "event cannot occur close enough to the plant to affect it". Finally, Attachment 5 describes PS4 as, "Bounding mean SDF is less than 1E-6/y". The staff assumes that SDF is a typographical error for "CDF".

In the comments for the external flooding hazard (Attachment 4), references Nebraska Public Power District letter to NRC, "Revision to Integrated Assessment for External Flooding - Cooper Nuclear Station," dated July 18, 2019 (ADAMS Accession No. ML19255G789). Attachment 4 states that the NRC staff concluded that a specific upstream dam failure scenario represents the unbounded mechanism requiring mitigation consistent with NEI 16.05, Revision 1, Path 4 mitigation, while other evaluated flooding scenarios do not represent the bounding mitigation case for the site.

Attachment 4 states that these beyond design-basis flooding scenarios are manageable through permanent plant features, temporary flood-control barriers, and pre-staged FLEX equipment (C1, C3). Attachment 4 also states that the CNS IPEEE and NRC staff evaluation further determined that the conditional core damage frequency associated with upstream dam-failure scenarios is very small, on the order of 1E-08/yr (PS4), demonstrating a negligible to overall risk.

Attached 4 further states that SSCs and equipment credited for external hazard screening are treated as High Safety Significant (HSS) for categorization purposes in accordance with Figure 5 6 of NEI 00-04. Based on this review, the External Flood hazard is considered to be negligible.

The staff audited the Cooper Nuclear Station "Risk Informed Completion Time and 10CFR50.69 External Hazards Assessment Report" and reviewed Table 2 that contains a list of SSCs and other equipment credited in the external hazards screening. This table includes:

- *Portable diesel generators, fuel tanks, and transfer pumps*
- *Dam Accident Mitigation System (DAMS) portable diesel-driven pumps*
- *Pre-staged hose routes and quick-connect fittings*
- *Engineered flood barriers and door dams*
- *Temporary flood barriers, seals, and curbing*
- *Elevated staging for portable generators and pumps.*
- *River-level monitoring and alarm instrumentation*
- *Communications and portable lighting equipment*

Only components associated with External Flooding are listed. The staff then reviewed the "Cooper Nuclear Station - Staff Assessment of Flood Hazard Integrated Assessment" dated November 8, 2019 (ADAMS Accession Number ML19262G904). The staff found that the DAMS will utilize the existing water in the Torus and later the flood water inside the Reactor Building to

maintain the core cooling and SFP cooling functions throughout the upstream dam failure event. The DAMS consists of two redundant trains, each consisting of a submersible pump, booster pump, filter, necessary hosing and valves, diesel generator, and electrical distribution.

The staff noted that in EC 18-002, CNS included an assessment of the structural capacity of the building roof structures where the DAMS will be staged and the loading effects of the crane that will be used for staging and concluded that the roofs will not fail under those loads.

The staff then reviewed "Cooper Nuclear Station – Flood Hazard Mitigating Strategies Assessment (CAC No. MF7915; EPID L-2016-JLD-0007)" dated June 27, 2018 (ADAMS Accession No. ML18040A654 non-publicly available)). Based on the review of the timelines necessary to install and test the DAMS systems before arrival of floodwaters onsite combined with the estimate given for dam failure, the staff could not conclude that bounding mean CDF is less than 1E-6/yr.

In this context, the staff has the following questions regarding the screening of external hazards from the CNS 50.69 application.

1. *In the portal, in response to RAB-01, Cooper states, "because the dam-failure hazard is screened only when these SSCs perform as credited, each SSC involved in executing the DAMS coping strategy must be assigned HSS during 10 CFR 50.69 categorization. This treatment includes all principal DAMS components as well as the necessary support and installation equipment referenced by NRC staff. As such, the 50.69 categorization process will designate all THMS/DAMS-credited SSCs as HSS, and their categorization cannot be overridden by the IDP under NEI 00-04."*
    a. *Is the crane and its installation equipment included in the support and installation equipment referenced by NRC staff?*
    b. *What is the specific reference that Cooper is referring to (e.g. "Cooper Nuclear Station - Staff Assessment of Flood Hazard Integrated Assessment" dated November 8, 2019 (ADAMS Accession Number ML19262G904))?*

2. *In the portal, in response to RAB-01, the staff understands the crane is obtained from NPPD through the Interface Operating Agreement (IOA), or, if unavailable, an equivalent crane may be utilized.*
    a. *How plentiful are these cranes and what assurance is there that another crane may be quickly received if the NPPD one is unavailable given the crane and supporting equipment is expected to be categorized as HSS as stipulated in audit portal.*
    b. *Is the crane maintained and tested under the FLEX process?*

3. *The staff also requests a justification on why the bounding mean CDF is less than 1E-6/yr given the timelines necessary to install and test the DAMS systems before arrival of floodwaters onsite combined with the estimate given for dam failure. This justification should include the human error probabilities for installation of the DAMS system and transport and setup of crane. Regarding dam failure frequency, the staff provided the following Information Notice on dam failures as a potential reference (ADAMS Accession no. ML0905102690) if information from the IPEEE is used.*

NPPD Response:

Question 1.a: Yes. The crane and its associated installation equipment are included in the support and installation equipment credited for implementation of the Targeted Hazard Mitigation Strategy (THMS)/Dam Accident Mitigation System (DAMS). Crane mobilization, crane-pad preparation, crane setup, and lifting of the DAMS equipment to the Control Building roof are required elements of the validated DAMS deployment strategy. These activities are included in the implementation timeline documented in CNS Engineering Report ER 2016-039, Revision 2, and were considered in the NRC staff's review of the flood hazard mitigation strategy.

For implementation of 10 CFR 50.69, CNS will develop an External Flood Safe Shutdown Equipment List (XFSSEL) identifying the SSCs and supporting equipment necessary to achieve and maintain safe shutdown for the limiting upstream dam failure external flooding scenario. The crane and associated installation equipment necessary to support deployment of the DAMS equipment will be included in the XFSSEL evaluation. SSCs and supporting equipment determined to be necessary to perform an XFSSEL function will be treated as candidate High Safety Significant (HSS) and will not be subject to downgrade by the Integrated Decision-making Panel.

Question 1.b: The specific reference is the NRC letter, "Cooper Nuclear Station – Staff Assessment of Flood Hazard Integrated Assessment," dated November 8, 2019 (ML19262G904). This staff assessment documents the NRC's review of the CNS upstream dam failure mitigation strategy and the THMS/DAMS capability. The associated crane mobilization, setup, and equipment-lifting activities are documented in the validated implementation timeline in CNS Engineering Report ER 2016-039, Revision 2.

Question 2.a: CNS maintains multiple pathways for obtaining the crane needed to support DAMS deployment. The primary resource is the NPPD-owned 275-ton crane available through the Interface Operating Agreement (IOA). If that crane is unavailable, an equivalent crane may be utilized. CNS has identified that multiple cranes are available that can perform the required lifting actions within the validated response timeframe.

The validated DAMS timeline provides ample margin to what is reflected in ER 2016-039, Revision 2, for the crane to arrive onsite. Accordingly, successful implementation of the DAMS strategy does not depend on the availability of a single specific crane, but rather on the required heavy-lift capability being available within the validated response window.

As discussed in the response to Question 3, CNS will use an XFSSEL to identify SSCs and supporting equipment necessary to achieve and maintain safe shutdown by maintaining reactor cavity level in response to the limiting upstream dam failure external flooding scenario. The crane heavy-lift function and associated support and installation equipment are addressed through that XFSSEL evaluation. Equipment determined to be necessary to perform or support an XFSSEL safe-shutdown function will be treated as candidate HSS under the external flood safety-significance process.

Question 2.b: No. The crane is owned and maintained by NPPD and is not part of the FLEX-maintained equipment set. Accordingly, its availability, transport, and operating readiness are controlled through the IOA, rather than through the FLEX maintenance and testing program.

The THMS/DAMS deployment strategy, including crane mobilization, crane-pad preparation, crane setup, and equipment lifting, was incorporated into the validated implementation timeline documented in ER 2016-039, Revision 2. The IOA provides the administrative mechanism for maintaining crane availability and coordinating transportation, permitting, and operator support as needed. NPPD Operations is responsible for notifying CNS Design Engineering of changes to crane status or location that could affect readiness for deployment.

Because crane readiness is controlled through the IOA rather than the FLEX equipment program, separate FLEX maintenance or testing of the crane is not required. The treatment of the crane heavy-lift function and associated support and installation equipment for 10 CFR 50.69 categorization is addressed through the XFSSEL process described in the response to Question 3.

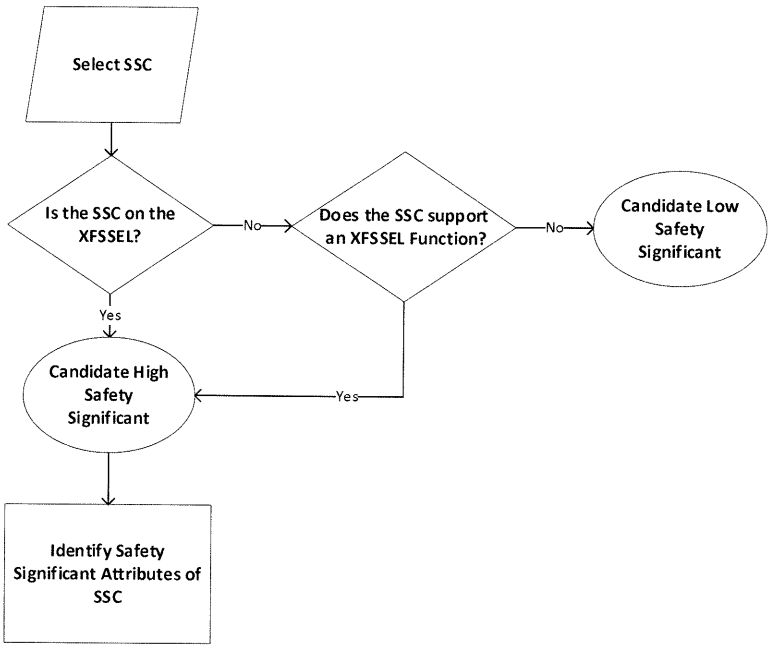
Question 3: In response to the staff's question, CNS is revising the treatment of external flooding for purposes of the 10 CFR 50.69 application. CNS will no longer rely on Progressive Screening Criterion PS4 as the screening basis for external flooding. Accordingly, the quantitative CDF evaluation previously developed to support the PS4 screening criterion is not relied upon as the basis for screening external flooding for the 10 CFR 50.69 application. Instead, CNS will use Screening Criterion C5, as applicable, together with the XFSSEL to address the limiting upstream dam failure external flooding scenario.

Under this revised approach, CNS will develop the XFSSEL prior to categorization of systems under 10 CFR 50.69. The XFSSEL will identify the SSCs and other equipment relied upon to achieve and maintain safe shutdown by maintaining reactor cavity level in response to the limiting upstream dam failure external flooding scenario. The 10 CFR 50.69 categorization process will use the XFSSEL to ensure that SSCs and other equipment necessary to preserve the external flooding screening basis receive HSS treatment. Screening Criterion C5 is applicable to this scenario because the hazard develops with sufficient advance warning to allow CNS to shut down the plant and implement the credited external flood mitigation strategy before floodwaters challenge the plant.

This approach is generally consistent with the approach proposed for Dresden Nuclear Power Station for 10 CFR 50.69 categorization of the external flood hazard (ML24149A261). For Dresden, an XFSSEL was established to identify SSCs needed to achieve and maintain safe shutdown during the applicable external flooding scenario. SSCs on the XFSSEL, as well as SSCs that support an XFSSEL function, are treated as candidate HSS during the 10 CFR 50.69 categorization process.

During categorization of systems, the NEI 00-04 component to function mapping process will be applied to the safe shutdown function of (1) Decay Heat Removal; (2) Reactivity Control; (3) Inventory Control; (4) Power Availability, and (5) Reactor Pressure Control. The SSCs that fulfill the XFSSEL functions will be identified as candidate HSS. The Cooper-specific XFSSEL process is shown in the following figure. The detailed technical basis for the Cooper external flooding response and credited THMS/DAMS strategy is provided in Cooper Nuclear Station Report No. 071021-RPT-02, Revision 0.

Figure 1 – Cooper External Flood Safety Significance Process for 10 CFR 50.69



Plant SSCs and other equipment considered for inclusion on the CNS XFSSEL will be evaluated using screening criteria. These criteria are adapted from the Dresden XFSSEL approach to reflect the Cooper external flooding safe-shutdown strategy and credited THMS/DAMS response.

For each system evaluated under 10 CFR 50.69, CNS will determine whether an SSC is included on the XFSSEL or supports an XFSSEL function. SSCs meeting either condition and subsequent criteria will be treated as candidate HSS for the external flood hazard. SSCs that are not on the XFSSEL and do not support an XFSSEL function may be considered candidate LSS, subject to the Cooper-specific screening criteria and station categorization procedures. This treatment ensures that SSCs and supporting equipment relied upon to achieve and maintain safe shutdown for the limiting upstream dam failure external flooding scenario are retained as safety significant during the categorization process.

The initial Cooper XFSSEL population is based on the SSCs and other equipment identified in Table 2 of the Cooper Nuclear Station External Hazards Assessment report (071021-RPT-01 Cooper XH Notebook Rev 1) together with additional supporting equipment required to implement the THMS/DAMS strategy. Table 2 identifies, among other items, portable diesel generators and fuel-transfer equipment, DAMS portable pumps, pre-staged hose routes and quick-connect fittings, engineered and temporary flood barriers, elevated staging locations, river-level monitoring and alarm instrumentation, and communications and portable lighting equipment. The XFSSEL evaluation will also consider supporting equipment necessary to perform credited deployment functions, including the heavy-lift/crane function discussed in the responses to questions 1.a and 2.a.

Prior to categorization of systems under 10 CFR 50.69, CNS will develop the XFSSEL to identify the SSCs and other equipment necessary to implement the credited external flood mitigation strategy for the limiting upstream dam failure external flooding scenario. The criteria below will be used to determine whether SSCs and other equipment are included on the XFSSEL or support an XFSSEL function for purposes of the external flood safety-significance evaluation. Operator actions will not be credited to exclude SSCs from the XFSSEL or to satisfy any of the six criteria.

1. **SSCs that do not perform a function required to achieve and maintain safe shutdown for the limiting upstream dam failure external flooding scenario are not included on the XFSSEL.**

   SSCs that are not required to achieve and maintain safe shutdown, or to support credited THMS/DAMS equipment and actions, may be screened from the XFSSEL.

2. **SSCs that do not support an XFSSEL function are not considered supporting SSCs for purposes of the limiting upstream dam failure external flood safety-significance evaluation.**

   SSCs whose failure would not prevent or adversely affect the performance of an XFSSEL function, including required support for credited THMS/DAMS equipment and actions, may be screened as not supporting an XFSSEL function.

3. **SSCs in systems that are assumed unavailable during or following the limiting upstream dam failure external flooding scenario are not included on the XFSSEL.**

   Where the external flooding strategy assumes that an SSC is unavailable during or following the limiting upstream dam failure external flooding scenario, that SSC is not credited to achieve and maintain safe shutdown and may be screened from the XFSSEL.

4. **SSCs located outside flood-protected structures or areas and not credited for mitigation of the limiting upstream dam failure external flooding scenario are not included on the XFSSEL.**

   SSCs that are not protected from the applicable external flooding conditions and are not credited as part of the external flood mitigation strategy are assumed unavailable for purposes of the XFSSEL evaluation and may be screened from the XFSSEL. For example, the CNS credited strategy relies on protected or elevated locations for temporary flood barriers and portable equipment; equipment located outside those protected or elevated areas and not credited in the mitigation strategy would not be included on the XFSSEL.

5. **SSCs that perform only a passive function during the limiting upstream dam failure external flooding scenario and are protected from the applicable flood conditions are not included on the XFSSEL.**

   Where an SSC is not required to actuate, reposition, or otherwise actively perform during the limiting upstream dam failure external flooding response, and its passive function is preserved by the credited flood-protection features, the SSC is not relied upon as an active element of the external flood safe-shutdown strategy and may be screened from the XFSSEL. For example, a normally closed isolation valve located within a flood-protected

structure whose external flood function is simply to remain closed would generally not require inclusion on the XFSSEL, provided its passive function is preserved under the applicable flood conditions.

6. **SSCs determined through review of the limiting upstream dam failure external flooding operating strategy to have no role in implementation of the applicable external flood mitigation or safe-shutdown strategy are not included on the XFSSEL.**

   Plant operating procedures, response strategies, and Operations input may be used to confirm whether an SSC performs or supports a function required for the limiting upstream dam failure external flooding response. SSCs confirmed to have no role in implementation of the credited mitigation or safe-shutdown strategy may be screened from the XFSSEL.

Conclusion Regarding XFSSEL Treatment

The above criteria will be used to determine whether an SSC is included on the XFSSEL or supports an XFSSEL function. An SSC that is determined not to be included in the XFSSEL and not to support an XFSSEL function will be considered candidate LSS for the limiting upstream dam failure external flood hazard, subject to final categorization through the 10 CFR 50.69 IDP process. Conversely, an SSC that is included on the XFSSEL or supports an XFSSEL function will be considered candidate HSS for the limiting upstream dam failure external flood hazard and may not be re-categorized as LSS by the IDP.

The initial population of SSCs and other equipment considered for the Cooper XFSSEL is based on the equipment identified in Table 2 of the Cooper Nuclear Station External Hazards Assessment, Report No. 071021-RPT-01, Revision 1. Table 2 identifies equipment and features credited to support the limiting upstream dam failure external flooding response, including portable diesel generators and associated fuel-transfer equipment, DAMS portable pumps, pre-staged hose routes and quick-connect fittings, engineered and temporary flood barriers, elevated staging locations, river-level monitoring and alarm instrumentation, and communications and portable lighting equipment. This approach ensures the XFSSEL is comprised of the DAMS equipment needed to maintain reactor cavity level in response to the limiting upstream dam failure external flooding scenario that represents the bounding external flooding scenario for CNS. This ensures the key SSCs will be classified as HSS if categorized in the 10 CFR 50.69 program, regardless of their flood damage susceptibility or frequency of challenge. The XFSSEL evaluation will also consider additional supporting equipment necessary to perform credited deployment and safe-shutdown functions, including the heavy-lift/crane function discussed in the responses to questions 1.a and 2.a.

IDP members will be trained on the DAMS implementation procedure with respect to the use of the XFSSEL for the 10 CFR 50.69 program, which will ensure understanding of the limiting upstream dam failure external flooding scenario, the mitigation strategy, and the methodology used to develop the XFSSEL.

Accordingly, the 10 CFR 50.69 external flooding evaluation will not rely on the previously proposed PS4 quantitative CDF screening criterion. The bounding mean CDF calculation, including the associated dam failure external flooding scenario frequency and human error probabilities for DAMS installation and crane transport/setup, is therefore not relied upon to establish the external flooding screening basis for the 10 CFR 50.69 application.

Audit Question RAB-02: Screening the Snow Load Hazard

NEI 00-04, Revision 0, Section 5, "Component Safety Significance Assessment" states, "If the plant does not have an external hazards PRA, then it is likely to have an external hazards screening evaluation that was performed to support the requirements of the IPEEE." NEI 00-04, Revision 0, also states in Section 3.3.2, "Other Risk Information (including other PRAs and screening methods)," that the characterization of the adequacy of risk information should include "a basis for why the other risk information adequately reflects the as-built, as-operated plant."

The staff reviewed, Table 3, "Cooper Other External Hazards Disposition," from the "Risk Informed Completion Time and 10CFR50.69 External Hazards Assessment Report," in context of snow load. It states that for the disposition for 10CFR50.69, "[p]er the IPEEE, all roof structures are designed for a snow load of 20 psf." This table states that this value is consistent with ANSI A58.1-1982a. The table concludes that snow load causing dynamic loads are considered to be negligible. The text in Table 3 for the disposition for 10CFR50.69 is the identical text as in Attachment 4 of the Enclosure to the 10CFR50.69 LAR. It is unclear to the NRC staff whether the risk of this hazard is adequately considered for this application.

As stated in NEI 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guidance," Revision 4 (ADAMS Accession No. ML16354B421), Section 8.2, "snow, ice, and extreme cold can, in principle, occur at any site. However, for the purposes of this guideline, we are interested in extreme events that could impede or prevent the deployment of the baseline FLEX capability." The NRC staff found Figure 8-1, "Record 3 Day Snowfalls" and Figure 8-2 "Maximum Ice Storm Severity Maps" in Section 8.2 useful. The staff requests information regarding how Cooper's approach to snow and ice loads is consistent with NEI 12-06, Revision 4, Section 8.2 "Approach to snow, ice, and extreme cold challenges."

In addition, the staff could not find any references to "snow" or "ice" in the Cooper UFSAR for the bounding rain and snow loads used in the structural analysis. The staff is requesting a justification for screening the risk associated with snowfall from the application (e.g., by comparing historical maximum snowfall against the design basis, showing that the occurrence frequency of snowfall events that could challenge the plant is low).

NRC Follow Up Request:

Revise the NRC 50.69 audit request RAB-02 to include information of site response to snow events regarding building roof tops. Also provide insights into 3 day snow accumulations.

NPPD Response

The snow hazard screening for CNS was based on the CNS IPEEE and updated using the external hazard screening significance process consistent with ASME/ANS RA-Sa-2009. The screening disposition in the CNS external hazards assessment and 10 CFR 50.69 LAR, Attachment 4, concluded that the snow hazard is negligible based on Screening Criteria C1 and C4.

Direct Effects

For direct snow loading effects, the IPEEE identified that CNS roof structures are designed for a

minimum snow load of 20 pounds per square foot (psf), which is consistent with ANSI A58.1-1982. Historical weather information for Nebraska City, Nebraska, near CNS, identifies the largest recorded daily snowfall during the period 1895–2026 as 24 inches on February 26, 1912. The reviewed historical snowfall information also identifies a maximum 3-day snowfall record of 24 inches for the February 25–27, 1912 event, which is consistent with the 24-inch daily snowfall record reported for Nebraska City on February 26, 1912. [Reference: https://www.extremeweatherwatch.com/cities/nebraska-city/year-1912#february]

Other high monthly snowfall periods were reviewed to determine whether they identified a larger short-duration accumulation. The second-highest monthly snowfall was 32.3 inches in March 1948; however, the snowfall was distributed over multiple days, including 10 inches on March 5 and 11 inches on March 6, with no snow on March 4 or March 7. This review did not identify a short-duration snowfall event exceeding the February 25–27, 1912 3-day snowfall total of 24 inches. [Reference: https://www.extremeweatherwatch.com/cities/nebraska-city/year-1948#march]

Using a conservative 30-inch snowfall, which exceeds this historical daily snowfall record, and a 10:1 snow-to-water ratio, the equivalent water content would be approximately 3 inches. Since 1 inch of water weighs approximately 5.2 psf, the corresponding snow load would be approximately 15.6 psf, which is below the 20 psf design-basis snow load.

Note 1: An inch of water weighs about 5.2 psf. [https://roofobservations.com/water-weight-calculator/#weight-of-water-by-unit-of-volume-and-temperature]
Note 2: A conservative "rule-of-thumb" for snow ratios states that for every 10-inches of snow there is an equivalent of 1-inch of water (10:1 ratio) [https://www.weather.gov/arx/why_snowratios].

Based on this comparison, the historical snowfall information reviewed for the vicinity of CNS does not challenge the design-basis roof snow load for safety-related structures. Therefore, direct snow loading effects are screened under Criterion C1.

Indirect Effects

For indirect effects, the snow hazard was evaluated for potential impacts on offsite power, access, and flooding. Potential loss-of-offsite-power (LOOP) effects from snow, ice, or related winter storm conditions are included in the CNS internal events PRA/IPEEE through weather-related LOOP and transient initiators. Potential flooding effects from snowmelt or precipitation are included in the external flooding evaluation, including the site hydrology and drainage evaluations. Therefore, these indirect effects are addressed under Criterion C4.

NEI 12-06

With respect to NEI 12-06, Revision 5, Section 8.2, snow, ice, and extreme cold are considered because they may affect the deployment of the baseline FLEX capability. NEI 12-06, Revision 5, states that snow, ice, and extreme cold can occur at any site and that sites should consider the applicable temperature ranges and weather conditions for storing and deploying FLEX equipment. It further states that plants above the 35th parallel, such as CNS, should provide capability to address impedances caused by extreme snowfall with snow removal equipment, and that sites in regions susceptible to significant ice storms should consider ice-storm impacts on FLEX strategies.

NEI 12-06, Revision 5, Section 8.3 further provides that, for sites subject to significant snowfall and ice storms, FLEX equipment should be stored in structures meeting the plant design basis or equivalent ASCE 7-10 evaluations for snow, ice, and cold conditions; FLEX equipment should be maintained within a temperature range to support timely function; and snow/ice removal should be provided as needed to obtain and transport FLEX equipment from storage to its deployment location. NEI 12-06, Revision 5, also recognizes that severe snow and ice storms can affect site access and staging areas for off-site materials and equipment.

CNS maintains FLEX-specific programmatic and procedural controls that address these considerations. The CNS FLEX, Hardened Containment Vent System (HCVS), and DAMS Program Document states that protection of FLEX equipment from extreme cold is performed in accordance with NEI 12-06 Section 8.3.1, including storage of equipment in structures designed to or evaluated equivalent to ASCE 7-10 for the plant's design basis for snow, ice, and cold conditions. The document further states that the FLEX Storage Building roofs are designed to meet the plant design roof snow load.

During a Winter Warning, CNS Emergency Procedure 5.1WEATHER directs contacting Maintenance for snow and ice removal or temporary heating as needed, alongside other monitoring actions such as checking intake screens for accumulation, monitoring the Fire Pump House roof for snow covering FP-P-D engine muffler exhaust pipes, and inspecting building ventilation units for snow and ice buildup or high differential pressure. In support of winter accessibility, FLEX Support Guideline 5.10FLEX.20 provides instructions for clearing FLEX deployment pathways and staging areas, including areas in front of FLEX Storage Buildings and the designated routes to FLEX equipment deployment locations, which must be accessible for Beyond Design Basis FLEX operations. Together, these procedures establish coordinated operational controls that ensure critical equipment, ventilation pathways, and FLEX deployment routes remain functional and accessible during snow and ice conditions.

Based on the above, direct snow loading effects are bounded by the CNS design basis, and indirect effects associated with snow, ice, and extreme cold are addressed through the CNS internal events PRA/IPEEE, external flooding evaluation, winter-weather procedure controls, and FLEX program controls. Therefore, the snow hazard remains appropriately screened as negligible for the CNS 10 CFR 50.69 application.

Audit Question RAB-03: Screening the High Winds Hazard

NEI 00-04, Revision 0, Section 5, "Component Safety Significance Assessment" states, "If the plant does not have an external hazards PRA, then it is likely to have an external hazards screening evaluation that was performed to support the requirements of the IPEEE." NEI 00-04, Revision 0, also states in Section 3.3.2, "Other Risk Information (including other PRAs and screening methods)," that the characterization of the adequacy of risk information should include "a basis for why the other risk information adequately reflects the as-built, as-operated plant."

The staff reviewed, Table 3, "Cooper Other External Hazards Disposition," from the "Risk Informed Completion Time and 10CFR50.69 External Hazards Assessment Report," in context of high winds. Regarding 10CFR50.69, the report states that "no SSCs are credited in the screening determination of high-wind and tornado-missile hazards. CNS screens these hazards based on the demonstrated capability of the plant's Seismic Category I structural envelope to withstand the design-basis tornado missile spectrum, as documented in the USAR and

confirmed in the IPEEE and the NRC's Final Safety Evaluation." The report also states that "the design tornado wind speed has a frequency much lower than 1E-6/yr, so the core damage risk associated with design tornado wind speeds is also less than 1E-6/yr."

Regarding FLEX, the staff requests information regarding how the protection of FLEX equipment is consistent with NEI 12-06, "Diverse and Flexible Coping Strategies (FLEX) Implementation Guidance," Revision 4 (ADAMS Accession No. ML16354B421), Section 7 which applies to the protection of FLEX equipment from high wind hazards.

NPPD Response:

CNS implemented its FLEX strategies in accordance with the NRC-endorsed guidance in NEI 12-06. The NRC subsequently documented completion of the actions required by Order EA-12-049 for CNS in its letter dated October 21, 2020 (ML20290A405).

The CNS site is subject to high-wind hazards, including tornadoes. Consistent with Section 7 of NEI 12-06, Revision 4, the CNS FLEX storage strategy provides reasonable assurance that a high-wind event will not prevent the availability of the required FLEX capability. As described in the CNS FLEX and HCVS Program Document, Revision 4, NEDC 14-001 established the design requirements for two pre-engineered metal FLEX Storage Buildings that house the portable Phase 2 FLEX equipment. The two buildings are aligned in the north-south direction with the maximum achievable site separation consistent with the NEI 12-06 separation criteria. This separation provides reasonable assurance that at least one FLEX Storage Building will remain available following a beyond-design-basis external event. Because the strategy relies on separation, the buildings are not designed to provide tornado-missile protection.

The FLEX Storage Buildings were designed to bound the applicable requirements of ASCE 7-10 using site-specific soil-classification information. One complete set of FLEX equipment is stored in each building to meet the N+1 equipment criterion. Equipment that could be damaged by movement, or could damage other equipment if it moved, is tied down within the buildings. Thus, the storage configuration provides two separated, complete FLEX equipment sets and protects the stored equipment against applicable wind and structural loads.

The FLEX deployment strategy also addresses the potential effects of an external event on access and transportation routes. FLEX Support Guideline 5.10FLEX.20, Revision 5, "Debris Removal," recognizes that portable FLEX equipment must be transported from the FLEX Storage Buildings to outdoor staging areas and that equipment staging areas, haul paths, and hose and cable routes may require clearing following a beyond-design-basis external event. The guideline also addresses clearing paths and setup areas for equipment delivered from the SAFER Regional Response Center.

Debris-removal equipment and FLEX tow vehicles are stored in the CNS FLEX Storage Facilities and are maintained using the same N+1 approach as the FLEX equipment. The FLEX and HCVS Program Document also states that deployment does not require electrical power to move or release the equipment because the FLEX Storage Building doors are mechanically operated. ER 2016-002, "FLEX Portable Equipment Deployment Path Liquefaction Evaluation," provides reasonable assurance that the pathways from the FLEX Storage Buildings to the equipment deployment areas will be travelable once debris has been cleared. Operations personnel designated to operate the debris-removal equipment receive practical training and demonstrate the ability to clear staging areas and haul paths.

These provisions provide reasonable assurance that the required FLEX equipment will remain available and deployable following a high-wind event, consistent with the protection, separation, transport, and debris-removal principles of NEI 12-06. The FLEX equipment and strategies are maintained under the CNS FLEX and Hardened Containment Vent System Program, including applicable maintenance, testing, configuration-control, procedure, and training requirements.

The high-wind and tornado-missile screening used for 10 CFR 50.69 is based independently on the capability of the CNS Seismic Category I structural envelope and associated design-basis tornado-missile protection features. FLEX equipment is not credited as part of the high-wind or tornado-missile screening determination. Therefore, the FLEX information described above demonstrates that the FLEX capability is protected and deployable consistent with NEI 12-06, but it does not constitute an additional SSC credit necessary to support screening of the high-wind hazard for 10 CFR 50.69.

ATTACHMENT 2

Proposed Facility Operating License Mark-up

Cooper Nuclear Station, Docket No. 50-298, Renewed Operating License No. DPR-46

(9) Upon implementation of Amendment No. 230 adopting TSTF-448-A, Revision 3, the determination of control room envelope (CRE) unfiltered air inleakage as required by SR 3.7.4.4, in accordance with Specification 5.5.13.c.(i), the assessment of CRE habitability as required by Specification 5.5.13.c.(ii), and the measurement of CRE pressure as required by Specification 5.5.13.d, shall be considered met. Following implementation:

(a) The first performance of SR 3.7.4.4, in accordance with Specification 5.5.13.c.(i), shall be within the specified Frequency of 6 years, plus the 18-month allowance of SR 3.0.2, as measured from July 12, 2004, the date of the most recent successful tracer gas test. (The tracer gas test was stated to have been performed in July, 2004, in the September 30, 2004 letter response to Generic Letter 2003-01).

(b) The first performance of the periodic assessment of CRE habitability, Specification 5.5.13.c.(ii), shall be within the next 9 months.

(c) The first performance of the periodic measurement of CRE pressure, Specification 5.5.13.d, shall be within 18 months, plus the 138 days allowed by SR 3.0.2, as measured from May 4, 2007, the date of the most recent successful pressure measurement test.

(10) NPPD shall implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 Structures, Systems, and Components (SSCs) using: Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the enhanced risk-informed categorization methodology for pressure boundary components; the results of the non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009 for other external hazards except for external floods and seismic; an external flood safe shutdown equipment list for applicable external floods; and the alternative seismic approach as described in NPPD submittal letter dated March 19, 2026, and its subsequent associated supplements as specified in License Amendment No. [XXX] dated [DATE].

NPPD will finalize approval of updates and modeling of the FLEX strategies to be consistent with the guidance in the NRC memorandum "Updated Assessment of Industry Guidance for Crediting Mitigating Strategies in Probabilistic Risk Assessments," dated May 6, 2022, (ADAMS Accession No. ML22014A084) prior to implementation of 10 CFR 50.69.

Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above.

D. (Not Used)

E. The Updated Safety Analysis Report (USAR) supplement, as revised, submitted pursuant to 10 CFR 54.21(d), shall be included in the next scheduled update to the USAR required by 10 CFR 50.71(e)(4), as appropriate, following the issuance of this renewed operating license. Commitment Numbers NLS2008071-01 (Revision 1), NLS2008071-02 through 04, NLS2008071-05 (Revision 1), NLS2008071-06 (Revision 1), NLS2008071-07, NLS2008071-08 (Revision 3), NLS2008071-09, NLS2008071-10, NLS2008071-11 (Revision 1), NLS2008071-12 through 15, NLS2008071-16 (Revision 2), NLS2008071-17 through 22, NLS2008071-23 (Revision 1), NLS2008071-24, NLS2008071-25 (and Supplement 1), NLS2008071-26, NLS2009100-1 (Revision 1), NLS2009100-2, NLS2009100-3, NLS2010019-01, NLS2010019-02, NLS2010044-01, NLS2010050-01 through NLS2010050-03, NLS2010050-04 (Revision 1), NLS2010050-05 (Revision 1), NLS2010050-06, NLS2010062-01, and NLS2010062-02 shall be incorporated in the first update to the USAR required by 10 CFR 50.71(e)(4) following incorporation of the original USAR supplement. Until these respective updates are complete, the licensee may not make changes to the information in the supplement, or the above commitments. Following incorporation of the supplement and commitments into the USAR, the need for Commission approval of any changes will be governed by 10 CFR 50.59.

F. The USAR supplement, as revised, describes certain future activities to be completed prior to and/or during the period of extended operation. The licensee shall complete these activities in accordance with Appendix A of NUREG-1944, "Safety Evaluation Report Related to the License Renewal of Cooper Nuclear Station," dated October 2010, as supplemented by letters from the licensee to the U.S. Nuclear Regulatory Commission (NRC) dated November 15 and 18, 2010. The licensee shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.

G. This license is effective as of the date of issuance and shall expire at midnight, January 18, 2034.

FOR THE NUCLEAR REGULATORY COMMISSION

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Attachments:
Appendices A&B - Technical Specifications
Appendix C - Additional Conditions

Date of Issuance: November 29, 2010