UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 29, 2021

Dr. Jennifer L. Uhle
Vice President, Generations
and Suppliers Nuclear Energy Institute
1201 F Street, NW, Suite 1100
Washington, DC 20004

SUBJECT: U.S. NUCLEAR REGULATORY COMMISION FOLLOW UP ON THE PROCESS FOR ONGOING ASSESSMENT OF NATURAL HAZARDS INFORMATION

Dear Dr. Uhle:

I am writing to share the NRC staff's recent activities and plans for engagement with stakeholders on details of the NRC's seismic hazard characterization updates.

The staff plans to share information and engage stakeholders through the process of updating seismic hazard characterization for nuclear power plants. This will ensure that all are making decisions based on the same information and collectively understand which new information may be significant. Recently, the NRC staff revised the NTTF R2.1 geologic profiles and site response results for a number of the Central and Eastern United States (CEUS) plants based on its additional research. The NRC staff published these updated geologic profiles and site response results as NUREG/KM-0017, "Seismic Hazard Evaluations for U.S. Nuclear Power Plants: Near-Term Task Force Recommendation 2.1 Results," in the first quarter of fiscal year 2022 (ADAMS Accession No. ML21344A126). The NRC staff recently completed an evaluation of site response analysis methodologies through a Level 2 Senior Seismic Hazard Analysis Committee (SSHAC) and published these results in a research information letter (RIL) in the first quarter of fiscal year 2022 (ADAMS Accession No. ML21323A056). The NRC staff's updated seismic hazard curves will use NGA-East Ground Motion Models (GMM) and CEUS seismic source models, with the latest geologic site profiles and the revised site response analysis approaches, consistent with the NRC staff's process for ongoing assessment of updated natural hazard information. The NRC's findings related to this information will be discussed in a series of public meetings in order to facilitate sharing of information and a common understanding of the significance of new information.

The enclosure to this letter provides the anticipated schedule for the general milestones for the planned stakeholder collaboration on the development of NRC staff's updated seismic hazard curves. The anticipated schedule may change depending on the findings or other factors.

Information on updated site hazards may be required to be reported to the NRC under Title 10 of the *Code of Federal Regulations* (10 CFR) 50.9(b), which states that each applicant or licensee shall notify the Commission of information identified by the applicant or licensee as having for the regulated activity a significant implication for public health and safety or common defense and security. By email from the U.S. Nuclear Regulatory Commission (NRC)

dated October 29, 2021, Agencywide Documents Access and Management System (ADAMS) Accession No. ML21344A143, clarification was provided regarding reporting information requirements on updated site hazards. In addition to the information in this email, some available resources can be useful to determine whether the information is significant, including:

- Plant-specific licensing basis (e.g., license conditions) for approved risk-informed programs
- NUREG/BR-0058, which provides guidance on delta risk and how this information could be considered in decision making (ADAMS Accession No. ML17100A480)
- Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-informed decisions on plant specific changes to the licensing basis" (ADAMS Accession No. ML17317A256)
- NUREG-0800, "Standard Review plan for the Review of Safety Analysis Reports for Nuclear Power plants," Chapter 19 (ADAMS Accession No. ML070810350)
- Any increased seismic hazard should be considered in making operability determinations (Inspection Manual Chapter 0326, ADAMS Accession No. ML19273A878)
- Requirements to report unanalyzed conditions under 10 CFR 50.72(b)(3)(ii)(B). The NRC uses the NUREG/BR-0058 as guidance in determining which unanalyzed conditions are required to be reported.
- NRC enforcement manual (Part II) Section 1.5.4, "Enforcement Process for Incomplete/Inaccurate Information" and Section 1.5.5, "Violations of Reporting Requirements," which provides guidance on how the NRC dispositions violations of 10 CFR 50.9 and 10 CFR 50.72
- NRR Office Instruction LIC-208, "Process for the Ongoing Assessment of Natural Hazards Information," which will be released to the public in the second quarter of fiscal year 2022

If you have any questions, please contact Jenise Thompson at Jenise.Thompson@nrc.gov.

Sincerely,

Eric Benner Signed by Benner, Eric on 12/29/21

Eric Benner, Director
Division of Engineering and External Hazards,
Office of Nuclear Reactor Regulation

Enclosure: General Milestones

GENERAL MILESTONES

STAKEHOLDER INTERACTION ON THE
DEVELOPMENT OF NUCLEAR REGULATORY
COMMISSION STAFF UPDATED HAZARD CURVES

Date	**Milestone**
1Q-FY22	NRC development and verification of seismic analyses computer code
2Q-FY22	• Run NRC computer codes for operating plants in CEUS • Initial screening using NUREG/KM-0017 results
2Q-FY22	Public Meeting - stakeholder interaction
3Q-FY22	• Run advanced site response analyses for screened sites • Screen updated site seismic hazard curves compared to NRC NTTF R2.1 confirmatory hazard curves
3Q-FY22	Public Meeting - stakeholder interaction
4Q-FY22	• Assessment of screened sites for risk significance
4Q-FY22	Public Meeting - stakeholder interaction

Enclosure

SUBJECT: U.S. NUCLEAR REGULATORY COMMISION FOLLOW UP ON THE PROCESS FOR ONGOING ASSESSMENT OF NATURAL HAZARDS INFORMATION DATED: DECEMBER 29, 2021

DISTRIBUTION:
PUBLIC
RidsNrrDorl Resource
RidsOgcMailCenter Resource
RidsNrrOd Resource
LCandelario-Quintana, NRR
BHarris, OGC
BHayes, NRR
CMunson, NRR
JThompson, NRR
EBenner,NRR
JAke, RES
AVeil, NRR
AKock, NRR

ADAMS ACCESSION NO.: ML21312A077 *** via e-mail**

OFFICE	NRR/DEX/EXHB	NRR/DEX/EXHB	NRR/DEX/EXHB: BC	NRR/DEX: SL	NRR/DORL
NAME	LCandelario-Quintana	JThompson	BHayes	CMunson	LFields
DATE	11/08/2021	11/09/2021	11/09/2021	11/17/2021	11/22/2021
OFFICE	OGC-NLO	NRR/DEX: D	NRR:DD		
NAME	BHarris	EBenner	AKock		
DATE	11/22/2021	12/02/2021	12/14/2021		

OFFICIAL RECORD COPY

Enclosure

SUBJECT: U.S. NUCLEAR REGULATORY COMMISION FOLLOW UP ON THE PROCESS FOR ONGOING ASSESSMENT OF NATURAL HAZARDS INFORMATION DATED: DECEMBER 29, 2021

Identical letters sent to:

Mr. Chris Bakken
Executive Vice President
Nuclear Operations & Chief Nuclear Officer
Entergy Nuclear
1340 Echelon Parkway
Jackson, MS 39213

Dr. Bob Coffey
Executive Vice President
Nuclear Division & Chief Nuclear Officer
Nextera Energy
700 Universe Blvd
Juno Beach, FL 33408

Rob Choromokos
Electric Power Research Institute
1300 West WT Harris Blvd
Charlotte, NC 28262

John Richards
Electric Power Research Institute
1300 West WT Harris Blvd
Charlotte, NC 28262

Letter to NEI: U.S. NUCLEAR REGULATORY COMMISION FOLLOW UP ON THE PROCESS FOR ONGOING ASSESSMENT OF NATURAL HAZARDS INFORMATION DATE December 29, 2021

DISTRIBUTION:
RidsNrrDorlResource, NRR/DORL
RidsOgcMailCenterResource, OGC
RidsNrrOdResource, NRR
LCandelario, NRR/DEX/EXHB
BHarris, OGC/GCRPS/RMR/NLO
BHayes, NRR/DEX/EXHB
CMunson, NRR/DEX
JThompson, NRR/DEX/EXHB
EBenner, NRR/DEX
JAke, RES/DE
AVeil, NRR
AKock, NRR

ADAMS Accession No.: ML21312A078; Ltr ML21312A077 *** via email NRR-106**

OFFICE	NRR/DEX/EXHB	NRR/DEX/EXHB*	NRR/DEX	NRR/DEX
NAME	JThompson *JT*	BHayes *BH*	CMunson *CM*	EBenner *EB*
DATE	Nov 8, 2021	Nov 9, 2021	Nov 10, 2021	Nov 18, 2021
OFFICE	NRR/DORL/LLPB*	OGC/GCRPS/RMR /NLO*	NRR	NRR/DEX
NAME	LFields *LF*	BHarris *BH*	AKock *AK*	EBenner *EB*
DATE	Nov 23, 2021	Dec 2, 2021	Dec 29, 2021	Dec 29, 2021

OFFICIAL RECORD COPY