

Ernest J. Kapopoulos, Jr.
H. B. Robinson Steam Electric Plant Unit 2
Site Vice President

3581 West Entrance Road Hartsville, SC 29550

> o: 843.951.1701 f: 843.951.1319

Emie.Kapopoulos@duke-energy.com

Serial: RA-20-0088

10 CFR 50.4 10 CFR 50.54(f)

U.S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, DC 20555-0001

H. B. Robinson Steam Electric Plant, Unit No. 2
Docket Number 50-261
Renewed Facility Operating License No. DPR-23

Subject: Supplement to H.B. Robinson Steam Electric Plant, Unit No. 2, Seismic

Probabilistic Risk Assessment (SPRA) Submittal – Enclosure Update

Reference: Duke Energy Letter, H.B. Robinson Steam Electric Plant, Unit No. 2 – Seismic

Probabilistic Risk Assessment (SPRA), Response to March 12, 2012, Request for Information Regarding Recommendation 2.1: Seismic, of the Near-Term Task Force Related to the Fukushima Dai-ichi Nuclear Power

Plant Accident, dated December 12, 2019

Ladies and Gentlemen:

In a letter dated December 12, 2019 (i.e., Reference), Duke Energy Progress, LLC (Duke Energy), provided the seismic probabilistic risk assessment (SPRA) associated with the seismic hazard reevaluation for H. B. Robinson Steam Electric Plant, Unit No. 2 (HBRSEP).

The purpose of this submittal is to provide updated information to two tables included in the enclosure to the above submittal. The errors were administrative in nature, and do not affect the final SPRA results. Enclosure 1 to this letter contains the marked-up pages, and Enclosure 2 contains the typed pages incorporating the corrections. The two pages provided are the only affected pages and serve as replacement pages to the same two pages in the referenced submittal.

There are no regulatory commitments associated with this letter.

Please address any comments or questions regarding this matter to Mr. Art Zaremba, Director - Nuclear Fleet Licensing, at (980) 373-2062.

U.S. Nuclear Regulatory Commission

Serial: RA-20-0088

Page 2 of 2

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

Executed on 31 MARCH____, 2020

Sincerely.

Ernest J. Kapopoulos, Jr. Site Vice President

Enclosures:

- 1. Revised Pages for Table 5.4-2 and Table 5.5-2 (Mark-Up)
- 2. Revised Pages for Table 5.4-2 and Table 5.5-2 (Typed)

cc: L. Dudes, USNRC Regional Administrator, Region II
M. Fannon, USNRC Sr. Resident Inspector - HBRSEP
A. Hon, USNRC NRR Project Manager - HBRSEP

Enclosure 1

Revised Pages for Table 5.4-2 and Table 5.5-2 (Mark-Up) (Total of 2 pages)

H. B. ROBINSON SEISMIC PROBABILISTIC RISK ASSESSMENT SUMMARY REPORT

Component	Description	FV	Median Capacity (g)	βr	βu	Failure Mode ²	Fragility Method ²
SF-TB-CLASS-3- POUND	Turbine Building Class 3 - Pounding- induced cracking	43.71%	0.28	0.13	0.25	RAB pounding induced cracking and splitting of the mezzanine floor slab resulting in loss of structural integrity.	sov
SF-TK-DG-FOSTRG- TNK_SETTLE	DFOST Liquefaction- Induced Settlement	12.57%	N/A¹	N/A	N/A	Failure of EDG-B pipe at RAB penetration. Probability of failure at PGA: PGA(g) - Probability 0.265g - 0.388 0.325g - 0.569 0.582g - 0.887 0.717g - 0.966	SOV
SF-TB_CRANE	Turbine Building Gantry Crane	11.81%	0.29	0.21	0.24	Failure of A-frame anchor bolts	sov
SF-TP-SDAFW- PMP_SETTLE	SDAFW Liquefaction- Induced Settlement	7.01%	N/A¹	N/A	N/A	Failure of AFW discharge piping where the 4 in. diameter pipe meets the 6x4 reducing elbow. Probability of failure at PGA: PGA(g) - Probability 0.265g - 0.168 0.325g - 0.263 0.582g - 0.609 0.717g - 0.708	sov
[[]]	[]	[]]	N/A¹	N/A	N/A		sov

[[]]

[[]

H. B. ROBINSON SEISMIC PROBABILISTIC RISK ASSESSMENT SUMMARY REPORT

]]

Component	Description	FV	Median Capacity (a)	βr	βu	Failure Mode ²	Fragility Method ²
[[]]	[]	[]]]	N/A¹	N/A	N/A		sov
SF-TP-SDAFW- PMP_SETTLE	SDAFW Liquefaction- Induced Settlement	4.19%	N/A¹	N/A	N/A	Failure of AFW discharge piping where the 4 in. diameter pipe meets the 6x4 reducing elbow. Probability of failure at PGA: PGA(g) - Probability 0.265g - 0.168 0.325g - 0.263 0.582g - 0.609 0.717g - 0.708	SOV
SF-RAB	Reactor Auxiliary Building	2.74%	1.12	0.24	0.26	Flexural failure of piles.	Rep.
SF-TR-UG- INTAKE_SETTLE	Underground Cable Trays at Intake Liquefaction- Induced Settlement	2.45%	N/A¹	N/A	N/A	Liquefaction-induced settlement failure at Intake Structure. Probability of failure at PGA: PGA(g) - Probability 0.265g - 0.110 0.325g - 0.180 0.582g - 0.450 0.717g - 0.570	Rep.

Page **74** of **198**

Enclosure 2

Revised Pages for Table 5.4-2 and Table 5.5-2 (Typed)
(Total of 2 pages)

H. B. ROBINSON SEISMIC PROBABILISTIC RISK ASSESSMENT SUMMARY REPORT

Component	Description	FV	Median Capacity (g)	βr	βu	Failure Mode ²	Fragility Method ²
SF-TB-CLASS-3- POUND	Turbine Building Class 3 - Pounding- induced cracking	43.71%	0.28	0.13	0.25	RAB pounding induced cracking and splitting of the mezzanine floor slab resulting in loss of structural integrity.	sov
ALLEY THE LOW		des	ALC:	ph.	Yel	Failure of EDG-B pipe at RAB penetration.	
SF-TK-DG-FOSTRG- TNK_SETTLE	DFOST Liquefaction- Induced Settlement	12.57%	N/A ¹	N/A	N/A	Probability of failure at PGA: PGA(g) - Probability 0.265g - 0.388 0.325g - 0.569	sov
					m	0.582g - 0.887 0.717g - 0.966	T H
SF-TB_CRANE	Turbine Building Gantry Crane	11.81%	0.29	0.21	0.24	Failure of A-frame anchor bolts	sov
SF-TP-SDAFW-	SDAFW Liquefaction-			proc		Failure of AFW discharge piping where the 4 in. diameter pipe meets the 6x4 reducing elbow. Probability of failure at PGA:	ed.
PMP_SETTLE	Induced Settlement	7.01%	N/A ¹	N/A	N/A	PGA(g) - Probability 0.265g - 0.168 0.325g - 0.263 0.582g - 0.609 0.717g - 0.708	SOV
			389]]	857
[[]]	1)	[]]	N/A ¹	N/A	N/A		sov
						Miles Wall to Called Street	
-		I.A.		-		11	-

[[

H. B. ROBINSON SEISMIC PROBABILISTIC RISK ASSESSMENT SUMMARY REPORT

]]

Component	Description	FV	Median Capacity (g)	βr	βu	Failure Mode ²	Fragility Method ²
	[]		N/A ¹	N/A	N/A		sov
				4		HERT DUD	
SF-TP-SDAFW- PMP_SETTLE	SDAFW Liquefaction- Induced Settlement	4.19%	N/A ¹	N/A	N/A	Failure of AFW discharge piping where the 4 in. diameter pipe meets the 6x4 reducing elbow. Probability of failure at PGA: PGA(g) - Probability 0.265g - 0.168 0.325g - 0.263 0.582g - 0.609 0.717g - 0.708	sov
SF-RAB	Reactor Auxiliary Building	2.74%	1.12	0.24	0.26	Flexural failure of piles.	Rep.
SF-TR-UG- INTAKE_SETTLE	Underground Cable Trays at Intake Liquefaction- Induced Settlement	2.45%	N/A¹	N/A	N/A	Liquefaction-induced settlement failure at Intake Structure. Probability of failure at PGA: PGA(g) - Probability 0.265g - 0.110	Rep.
	massa satisman	60.00	100			0.325g - 0.180 0.582g - 0.450 0.717g - 0.570	104

]]