



July 23, 2021

L-2021-137
GL 2004-02
10 CFR 50.54(f)

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

RE: St. Lucie Nuclear Plant, Units 1 and 2
Docket Nos. 50-335 and 50-389
Renewed Facility Operating Licenses DPR-67 and NPF-16
GL 2004-02 Debris Transport Calculation Non-Conservatism

References:

1. Florida Power & Light Company letter L-2017-210, Updated Final Response to NRC Generic Letter 2004-02, December 20, 2017 (ADAMS Accession No. ML17362A108)
2. Florida Power & Light Company letter L-2020-165, Supplement to Updated Final Response to NRC Generic Letter 2004-02, December 4, 2020 (ADAMS Accession No. ML20339A501)

In Reference 1, as supplemented by Reference 2, Florida Power & Light Company (FPL) provided an updated final response to Generic Letter (GL) 2004- 02, Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors, (ADAMS Accession No. ML042360586), for St. Lucie Units 1 and 2 (St. Lucie).

Recently, FPL learned of a non-conservatism in the St. Lucie debris transport evaluation that supported the submittal in Reference 1. Specifically, the non-conservatism occurred when determining the debris transport fractions for postulated reactor nozzle breaks, which incorrectly applied the pool fill-up transport fractions for selected debris types, resulting in non-conservative transported debris quantities. The issue has been entered into the St. Lucie corrective action program (CAP), and the calculations containing the non-conservatism have been revised. The revision increased the overall transport fractions for the fine debris from 97% to 100% for the reactor nozzle breaks. Table 3.e.6-14 and Table 3.e.6-17 of the enclosure to this letter provide the corrected debris transport fraction values for the reactor nozzle breaks for St. Lucie. These tables supersede Table 3.e.6-14 and Table 3.e.6-17 of Reference 1. The non-conservatism did not impact the limiting breaks scenarios evaluated in Reference 1, as shown in existing Table 3.e.6-19 through Table 3.e.6-21 of Reference 1. As a result, the conclusions specified in Reference 1 are not affected.

This letter contains no new regulatory commitments.

Should you have any questions regarding this submittal, please contact Mr. Wyatt Godes, St. Lucie Licensing Manager, at (772) 467-7435.

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

Executed on July 23, 2021

Sincerely,



Daniel DeBoer
Site Vice President
St. Lucie Nuclear Plant

DD/jam/rcs

Enclosure

cc: USNRC Regional Administrator, Region II
USNRC Project Manager, St. Lucie Nuclear Plant, Units 1 and 2
USNRC Senior Resident Inspector, St. Lucie Nuclear Plant, Units 1 and 2
Ms. Cindy Becker, Florida Department of Health

Table 3.e.6-14 (Revised), PSL1 Overall Transport Fractions for a Reactor Cavity Break

Debris Type	Debris Size		1 Train	2 Train
Generic Fiberglass	Fines		-	-
	Small Pieces	Transport as Erosion Fines	-	-
		Transport as Small Pieces	-	-
	Large Pieces	Transport as Erosion Fines	-	-
		Transport as Large Pieces	-	-
Intact Blankets		-	-	
Nukon	Fines		100%	100%
	Small Pieces	Transport as Erosion Fines	9%	9%
		Transport as Small Pieces	29%	47%
	Large Pieces	Transport as Erosion Fines	8%	8%
		Transport as Large Pieces	4%	7%
Intact Blankets		0%	0%	
Thermal-Wrap	Fines		100%	100%
	Small Pieces	Transport as Erosion Fines	9%	9%
		Transport as Small Pieces	29%	47%
	Large Pieces	Transport as Erosion Fines	8%	8%
		Transport as Large Pieces	4%	7%
Intact Blankets		0%	0%	
Temp-Mat	Fines		100%	100%
	Small Pieces	Transport as Erosion Fines	9%	9%
		Transport as Small Pieces	83%	83%
	Large Pieces	Transport as Erosion Fines	8%	8%
		Transport as Large Pieces	73%	73%
Intact Blankets		0%	0%	
Mirror RMI	Fines		5%	13%
	Large Pieces		6%	11%
Transco RMI	Fines		5%	13%
	Large Pieces		6%	11%
Transco RMI (inside cavity)	Fines		3%	7%
	Large Pieces		0%	0%
Non-banded Cal-Sil	Fines		100%	100%
	Small Pieces	Transport as Erosion Fines	17%	17%
		Transport as Small Pieces	6%	14%
Banded Cal-Sil	Fines		100%	100%
	Small Pieces	Transport as Erosion Fines	17%	17%
		Transport as Small Pieces	6%	14%
Qualified Coatings	Particulate		100%	100%
Unqualified Coatings	Particulate		100%	100%
Latent Debris	Particulate/Fiber		100%	100%

Table 3.e.6-17 (Revised), PSL2 Overall Transport Fractions for a Reactor Cavity Break

Debris Type	Debris Size		1 Train	2 Train
LDFG	Fines		-	-
	Small Pieces	Transport as Erosion Fines	-	-
		Transport as Small Pieces	-	-
	Large Pieces	Transport as Erosion Fines	-	-
		Transport as Large Pieces	-	-
Intact Blankets		-	-	
Nukon	Fines		100%	100%
	Small Pieces	Transport as Erosion Fines	10%	9%
		Transport as Small Pieces	10%	18%
	Large Pieces	Transport as Erosion Fines	8%	8%
		Transport as Large Pieces	2%	5%
Intact Blankets		0%	0%	
Nukon (inside cavity)	Fines		100%	100%
	Small Pieces	Transport as Erosion Fines	10%	10%
		Transport as Small Pieces	5%	8%
	Large Pieces	Transport as Erosion Fines	10%	10%
		Transport as Large Pieces	0%	0%
Intact Blankets		0%	0%	
Mirror RMI	Fines		1%	9%
	Large Pieces		2%	5%
Mirror RMI (inside cavity)	Fines		1%	4%
	Large Pieces		0%	0%
Transco RMI	Fines		-	-
	Large Pieces		-	-
Cal-Sil	Fines		100%	100%
	Small Pieces	Transport as Erosion Fines	17%	17%
		Transport as Small Pieces	1%	7%
Qualified Coatings	Particulate		100%	100%
Unqualified Coatings	Particulate		100%	100%
Latent Debris	Particulate/Fiber		100%	100%