

NRR-PMDAPEm Resource

From: Buckberg, Perry
Sent: Thursday, March 17, 2016 9:34 AM
To: Frehafer, Ken
Cc: Snyder, Mike; Cross, William; 'Katzman, Eric'
Subject: Request for Additional Information - St Lucie Vacuum Gothic LAR - MF6980/MF6981
Attachments: St Lucie MF6980 MF6981 SCVB RAIs 3-17-16.pdf

Ken,

By license amendment request letter dated October 15, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15301A765), Florida Power & Light Company (the licensee) requested NRC approval to update the St. Lucie Plant Unit Nos. 1 and 2 containment vacuum analyses using GOTHIC, credit the design basis ability of the containment vessels to withstand greater external pressure and update the Technical Specifications (TSs) to revise the allowable containment operating pressure range.

The U.S. Nuclear Regulatory Commission Staff reviewed the submittal and identified areas where it needs additional information and clarification to complete its review. The Request for Additional Information (RAI) is attached. The NRC requests that the licensee respond to this RAI within 45 days of this email.

Thanks,

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U.S. Nuclear Regulatory Commission

Office of Nuclear Reactor Regulation

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REQUEST FOR ADDITIONAL INFORMATION
ST. LUCIE, UNITS 1 AND 2
LICENSE AMENDMENT REQUEST FOR
CONTAINMENT VACUUM GOTHIC ANALYSES AND CONFORMING CHANGES
DOCKET NOS. 50-335 AND 50-389
CACs MF6980 & MF6981

By letter dated October 15, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15301A765), Florida Power & Light (the licensee) submitted a license amendment request (LAR) for NRC approval to update the St. Lucie Plant Unit Nos. 1 and 2 containment vacuum analyses using GOTHIC, credit the design basis ability of the containment vessels to withstand greater external pressure and update the Technical Specifications (TSs) to revise the allowable containment operating pressure range. The staff review of the licensee's 10/15/15 LAR has resulted in the following requests for additional information:

RAI-MF6980/1-SCVB-01

How will the higher Containment Spray (CS) flow rates be incorporated? Will these CS flow rates be updated in the Updated Final Safety Analysis Reports (UFSARs)? Does the increase in flow rate impact any additional analyses?

RAI-MF6980/1-SCVB-02

Explain further the conclusion that for Unit 1 the GOTHIC benchmarking results appear more reasonable and conservative than the UFSAR's results.

RAI-MF6980/1-SCVB-03

For Unit 1, the maximum allowable initial differential pressure between the containment and annulus is -0.49 psid. What is the analytical limit used for the updated analyses? What is the margin between the TS and analytical limit?

RAI-MF6980/1-SCVB-04

For St. Lucie Unit 2, the maximum allowable initial differential pressure between the containment and annulus is -0.42 psid. What is the analytical limit used for the updated analyses? What is the margin between the TS and analytical limit?

RAI-MF6980/1-SCVB-05

In the St. Lucie Unit 2 benchmarking of GOTHIC, what is the impact of modeling the butterfly valve to open instantaneously with no delay?

RAI-MF6980/1-SCVB-06

For both Unit 1 and Unit 2, the butterfly valve setpoints changed by a significant amount and the range was removed from the TSs. How was the valve verified to respond appropriately at these new setpoints? How will the removal of the range change the operation of the valve?

RAI-MF6980/1-SCVB-07

In Attachment 5 to Florida Power & Light (FPL) letter (L-2010-259) dated November 22, 2010 (ML103560419), for St Lucie Unit 1 extended power uprate, Table 2.6.6-1 specifies total maximum spray flow rate (for 2 pumps) equal to 9000 gpm.

For Unit 1, Section 3.2 of the October 15, 2015, LAR specifies a total of 6750 gpm as the current UFSAR spray flow rate and Section 3.3 specifies 6950 gpm as the proposed total spray flow rate. The licensee used 6750 gpm for GOTHIC benchmarking vacuum analysis and 6950 gpm for the proposed GOTHIC vacuum analysis. Since 9000 gpm is the maximum total containment spray flow rate, please explain why the proposed analysis is not based on this value.

RAI-MF6980/1-SCVB-08

In Attachment 5 to Florida Power & Light letter (L-2011-21) dated February 25, 2010, for St Lucie Unit 2 extended power uprate, Table 2.6.6-1 specifies total maximum spray flow rate per pump 4,500 gpm (for 1 pumps) equal to 9000 gpm for 2 pumps.

For Unit 2, Section 3.2 of the October 15, 2015, LAR specifies total of 6900 gpm as the current UFSAR spray flow rate and Section 3.3 specifies 7250 gpm as the proposed total spray flow rate. The licensee used 6900 gpm for GOTHIC benchmarking vacuum analysis and 7250 gpm for the proposed GOTHIC vacuum analysis. Since 9000 gpm is the maximum total containment spray flow rate, please explain why the proposed analysis is not based on this value.