

August 18, 2000

MEMORANDUM TO: File

FROM: N. Kalyanam, Project Manager, Section 1  
Project Directorate IV & Decommissioning  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation */RA/*

SUBJECT: RESPONSE TO QUESTIONS ON THE ERRORS IN THE PWR  
ASSEMBLY LIFTOFF CALCULATIONS

By letter dated January 11, 2000, Siemens Power Corporation (SPC) informed the NRC of errors in the calculational approach it used to evaluate the potential for pressurized water reactor fuel assembly liftoff. In order to review the significance of the errors, the staff requested additional information in a teleconference on March 7, 2000.

The purpose of this memorandum is to place into ADAMS the electronic mail received from SPC on March 8, 2000. This document contains the response from SPC to the questions.

Project No. 702

Attachment: E-mail from J. Mallay, dated March 8, 2000

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DATE	08/18/00	08/18/00	08/18/00

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**From:** "Mallay, James" <James\_Mallay@nfuel.com>  
**To:** "nxk@nrc.gov" <nxk@nrc.gov>  
**Date:** Wed, Mar 8, 2000 5:23 PM  
**Subject:** FW: Response to Muffet's Questions

Kaly, This note is in response to questions asked by Muffet Chatterton on Tuesday, March 7, in a telephone call to me. I thought it best that the responses go through you with copy to Muffet. Jim

> -----Original Message-----

> From: Holm, Jerry S.  
> Sent: Wednesday, March 08, 2000 11:22 AM  
> To: Mallay, James  
> Subject: Response to Muffet's Questions

>

> Muffet:

>

> Responses are provided below for the two questions that you posed  
> regarding the PWR fuel assembly liftoff issue discussed in the letter  
> NRC:00:003, January 11, 2000. The letter informed the NRC of errors SPC  
> identified in the calculational approach used to evaluate the potential  
> for PWR fuel assembly liftoff. An evaluation of all PWRs for which SPC  
> supplies fuel indicated that the SPC criterion for fuel assembly liftoff  
> would be satisfied for all except two reactors. The impact of not  
> satisfying the criterion was determined to be insignificant from a safety  
> standpoint.

>

>

> Question 1: Are these assemblies already past the point at which they  
> might lift off? When was (or will) this point reached?

>

> Response 1: The affected SPC fuel has already reached an exposure where  
> positive hold-down margin exists. This point was reached at about an  
> exposure of about 3,000 MWd/MTU in early 2000.

>

>

> Question 2: Will the licensee examine these assemblies between cycles?

>

> Response 2: The licensee does not plan to perform any special inspection  
> of the fuel in these two reactors. The licensee has in the past performed  
> underwater camera visual inspections of the SPC fuel assemblies as part of  
> their normal fuel surveillance program ( a total of about 6 reloads of  
> potentially affected fuel) and no evidence of unusual wear has been  
> observed.

>

> SPC is confident that operation for short periods of time in a levitated  
> condition will not be detrimental to the fuel assembly or interfacing  
> reactor internals. While conservative calculations indicate that  
> levitation for short periods of time was possible SPC believes that it is  
> highly unlikely that the fuel assemblies actually levitated.

>

> Jim Mallay

>

**CC:** "msc1@nrc.gov" <msc1@nrc.gov>