

**From:** Donna Skay  
**To:** internet:patricia.s.furio@ccnppi.com  
**Date:** 6/3/02 3:01PM  
**Subject:** questions on SIT amendment

Pat,  
attached are 3 questions that we would like to discuss in a conference call. Please let me know when you would be available to talk with us.  
Thanks,  
Donna

Request for Additional Information (SPSB)  
Safety Injection Tank (SIT) Verification Frequency License Amendment for Calvert Cliffs  
(TAC # MB3974 & MB3975)

1. The frequency of a large break LOCA is assumed to be  $2E-6$ /yr. It is stated that this frequency is derived from a log normal interpolation of the data provided in NUREG/CR-5750 for large break LOCAs. However, it is not clear how the  $2E-6$ /yr frequency was derived. NUREG/CR-5750 recommends a mean value of  $5E-6$ /yr for large break frequency in PWRs. Please clarify.

2. On page 4 it is stated:

*"The SIT boron concentration sample data is evaluated using data after these [check valve seat] replacements. This replacement reduced the amount of leakage into the SITs. The SIT concentration sample data is evaluated using data after these replacements.....there is less than a 0.2% chance that the boron concentration will fall below 2300 ppm on a single SIT given monthly surveillance."*

The staff needs more detailed information about the data and the approach used to calculate the likelihood of low (below 2300 ppm) boron concentration given current and proposed surveillance requirements. This additional information should include all data points used, a brief description of the "median ranking method" as well as the major steps and important intermediate results needed to understand what and how was done.

3. On page 2 it is stated:

*"To justify this proposed change, the SIT levels, volume additions, leakage in, leakage out, and sample concentrations (for the RCS and SITs) were evaluated for both units for a six month period from July 1, 1999 to December 31, 1999. A review has shown this period to be representative of SIT behavior since 1997."*

Please explain how the review has shown that the data for those six months are representative for the entire period since the valve seats have been replaced. Were data from this six month period only used in the risk assessment? Were there any instances, since valve seat replacement, where the boron concentration was found by sampling to be close or below 2300 ppm? Were there any instances, since valve seat replacement, where the in-leakage flow rate was such that if it had been allowed to

continue for six months without proper boron addition would cause the SIT boron concentration to fall below 2300 ppm? Please explain and provide data to support your statements, as needed.

The table provided in page 2 includes data for a six month period and lists boron concentration at the beginning and the end of such period. This information does not show whether there would be instances of low boron concentration at the end of the six month period if the information from the monthly sampling had not been available. Low boron concentration at the end of the six month period could occur since leakage out of the tank can mask leakage into the tank and proper addition of boron would not have occurred without the monthly sampling. Please explain and provide data to support your conclusion.

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**From:** Donna Skay  
**Created By:** DMS6@nrc.gov

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