



NUCLEAR ENERGY INSTITUTE

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January 15, 1997

Mr. Gus C. Lainas, Acting Director
Division of Engineering
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555-001

SUBJECT: Steam Generator Degradation Specific Management (SGDSM)
Database Protocol (Project No. 689)

Dear Mr. Lainas:

We are providing the enclosed proposed protocol for the EPRI SGDSM database. This revision incorporates comments received during recent discussions with both Ted Sullivan and Phil Rush of the NRC staff regarding the protocol submitted in our August 30, 1996, letter. We respectfully request NRC review and approval at the earliest opportunity.

We understand that the NRC is processing a request for additional information (RAI) concerning Addendum 1 of the SGDSM database that was submitted in our September 18, 1996, letter. We are anxious to receive the RAI in order to resolve any outstanding issues.

It is important that industry receive NRC acceptance of the protocol and the database in time for use during the spring 1997 outages. Completion of this effort no later than February 1, 1997 would be most helpful.

If you have questions, please call Clive Callaway at (202) 739-8114.

Sincerely,

David J. Modeen

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c: Stewart L. Magruder, NRC
NRC Public Document Room (Project Number 689)
Bob Thomas, EPRI

SGDSM DATABASE PROTOCOL

1. The pulled tube database will be updated each March to add additional data from the prior calendar year for steam generator tubes which have been burst, leak, and metallurgically tested, as necessary. This updated database will include updated correlations and a list of plants which provided pulled tube data (including the number of intersections).
2. Utilities with spring outages commencing prior to June 1 will have the option of using the latest database and correlations submitted as an information copy to the NRC (by the end of March) or the prior version of the database and correlations, providing there is not a significant, non-conservative shift in the correlations as discussed in item 5 below. This approach is necessary to ensure sufficient time is available to finalize plant-specific procedures and conduct analyst training prior to the outage.
3. Utilities may request NRC approval of modifications to the database and correlations in accordance with the guidance contained in Generic Letter (GL) 95-05. Examples which would require specific approval include questionable data, application of revised exclusion criteria, or use of a revised probability of detection. The annual update of the correlations discussed in item 1 above will occur regardless of specific requests for NRC approval of changes to the database or correlations. If specific approval of modifications to the database or correlations is requested from the NRC staff, the modifications will not be used until the NRC approves the correlations.
4. Data may be excluded as appropriate under the approved exclusion criteria referenced in GL 95-05. Exclusion of data will be reported in the individual utility 90-day reports and in the pull tube database.
5. If any domestic pulled tube data falls outside the 95% / 95% prediction interval for the latest correlations, the data point will be identified to the NRC staff in accordance with GL 95-05 by the appropriate utility in the required 90-day report. If the data point results in a significant, non-conservative shift in the correlations, industry representatives will request a meeting with the NRC staff or issue a new database and revised correlations. If a revision to the correlations is required it will be issued and effective within three months of submittal of the 90-day report. The following are criteria to be used in defining a 'significant non-conservative' shift in the burst and tube leakage correlations:

- Burst Correlation

For repair limits equal to the voltages approved by GL 95-05 (one or two volts), revise the correlation if the voltage at the structural limit of 1.4 times main steam line break (MSLB) differential pressure is reduced by more than 1.0 volt from the current burst correlation. Note

that this criterion does not apply to plant specific repair limits based on locked tube support plate models (e.g., Commonwealth Edison three volt limit).

For voltage repair limits higher than those approved in GL 95-05 revise the burst correlation if the voltage at the structural limit of 1.4 times MSLB differential pressure is reduced by more than 0.5 volt from current correlation.

- Leak Rate or Probability of Leakage (POL) Correlation

Update the leak rate correlation if the value from the mean regression line at the voltages associated with the largest repair limit or the structural limit increases by more than 25% (1.25 factor on the values associated with the repair limit and structural limit for the current correlation).

Update the POL correlation if the value from the mean regression line at the voltage associated with the approved largest repair limit increases by more than 25% (1.25 factor on value of current correlation).

The above are useful thumbrules for making judgments of 'significant non-conservative' changes without involving detailed burst probability or leakage calculations. If the structural limit does not change much, it can be reasonable to expect that the uncertainties that enter a burst probability calculation will also not change much. For leakage, indications above the repair limit will dominate the leakage calculation and therefore use of the repair limit to judge the significance of the changes is reasonable.

This guideline should not exclude an update when the nature of the change makes it relatively obvious that a correlation update is required. For example, dramatic changes in slope for which it is difficult to define in advance a precise criteria for significance.