SIEMENS
Westinghouse

May 16, 2002

United States Regulatory Commission
Document Control Station P1-37
Washington, D. C. 20555-001

Subject: **Missile Analysis Methodology for General Electric (GE) Nuclear Steam Turbine Rotors by Siemens Westinghouse Power Corporation (SWPC).**

Dear Sirs,

Siemens Westinghouse Power Corporation proposes to inspect and perform missile analysis on General Electric low pressure nuclear rotors currently licensed under the United States Nuclear Regulatory Commission. Siemens Westinghouse Power Corporation (SWPC) experience combines the activities of formerly Westinghouse Electric Corporation and Siemens Power Corporation in the inspection for and analysis of rotor missile probabilities. SWPC currently has over 100 nuclear rotors in operation by licensee/users in the U.S.

We request that the NRC provide us with their position on this proposal with required actions if required for SWPC of the licensee/user to adopt this methodology.

SWPC has significant history in the submission and subsequent approval by the NRC of documents relating to the inspection and approval of missile probability analysis and inspection interval calculations since 1981. A list of these documents is shown in figure 1. The reports and approval documents are attachments 1 to 5a. A sample probability analysis report for General Electric rotors is shown in attachment 6. SWPC plans to follow the methodology summarized in this attachment when performing the missile analysis.

Data for the analysis could be retrieved from licensee/user files. If not available, information may be determined by physical measurements and non-destructive chemical measurements and hardness readings. These values can be correlated through relations derived from the database of rotor discs of similar chemistry in SWPC files including SWPC and General Electric records.

If possible, we request an estimate of time and expense for providing a review of our proposal. Your reply to our submittal by June 15, 2002 would be kindly appreciated. Our internal target to begin implementation of this plan is November 2002. Your help in achieving this date would be most helpful.

Sincerely,

Peter Bird

Peter Bird
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Siemens Westinghouse Power Systems (SWPC) Experience in Missile Analysis and NRC Reviews and Approvals
by
Westinghouse Steam Turbine Generator Division
and
Siemens Power Corporation
Now Organized as a part of Siemens Westinghouse Power Corporation

Attachment 1: Memorandum MSTG-1-P: CRITERIA FOR LOW PRESSURE NUCLEAR TURBINE DISC INSPECTION. Submitted to: NUCLEAR REGULATORY COMMISSION, June 1981.
Attachment 1a: Approval of Westinghouse Method of determining inspection intervals for nuclear LP rotors August 26, 1981.

Attachment 2: Topical Report WSTG-1-P:PROCEDURE FOR ESTIMATING THE PROBABILITY OF STEAM TURBINE DISC RUPTURE FROM STRESS CORROSION CRACKING. SUBMITTED TO: NUCLEAR REGULATORY COMMISSION, May, 1981.

Attachment 3:Topical Report WSTG-2-P-A: MISSILE ENERGY METHODS FOR NUCLEAR STEAM TURBINES. Submitted to: NUCLEAR REGULATORY COMMISSION, May 1981.

Attachment 4:Topical Report WSTG-3-P-A: ANALYSIS OF THE PROBABILITY OF A NUCLEAR TURBINE REACHING DESTRUCTIVE OVERSPEED. Submitted to: NUCLEAR REGULATORY COMMISSION, July 1984

Attachments 2, 3 and 4 include Nuclear Regulatory Approval letter dated February 2,1987.

Attachment 5:Engineering Report ER-9605: MISSILE PROBABILITY ANALYSIS METHODOLOGY FOR LIMERICK GENERATING STATION, UNITS 1&2 WITH SIEMENS RETROFIT TURBINES, REVISION NO. 2, June 18, 1987.

Attachment 5a: Approval letter from Nuclear Regulatory Commission including turbine rotor inspection intervals and valve testing frequencies (TAC NOS. M99341 AND M99342), February 3,1998

Attachment 6: Example of General Electric Missile Probability Analysis, June 7. 1999