

August 19, 2003

To: Virginia Electric and Power Company

FROM: Stephen Monarque, Project Manager */RA/*
Project Directorate II, Section 1
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: NORTH ANNA POWER STATION, UNITS 1 AND 2 - FACSIMILE
TRANSMISSION OF QUESTIONS FOR PROPOSED TECHNICAL
SPECIFICATIONS CHANGES, USE OF FRAMATOME ANP ADVANCED
MARK-BW FUEL (TACS MB4714, AND MB4715)

A facsimile of the attached questions on Small Break Loss-of-Coolant Accident was transmitted on August 19, 2003 to Mr. Tom Shaub of Virginia Electric and Power Company (VEPCO). These questions were transmitted in order to allow VEPCO to determine the response time needed to address this request for additional information.

ADAMS ACCESSION NO: ML032320002

NORTH ANNA POWER STATION, UNIT 2

SMALL BREAK LOSS-OF-COOLANT-ACCIDENT QUESTIONS

A. OVERALL APPLICABILITY TO NORTH ANNA, UNIT 2

The same questions asked regarding the overall applicability of the proposed large break LOCA (LBLOCA) methodology to North Anna Unit 2 (NA-2) also apply to the proposed small break LOCA (SBLOCA) methodology.

Q1. To show that the referenced generically approved LOCA analysis methodologies apply specifically to the NA-2 plant, provide a statement that VEPCO and its vendor have ongoing processes which assure that the ranges and values of the input parameters for the NA-2 LOCA analysis bound the ranges and values of the as-operated plant parameters. Furthermore, if the NA-2 plant-specific analyses are based on the model and/or analyses of any other plant (NA-1), then justify that the model or analyses apply to NA-2. (e.g. if the other design has a different vessel internals design the model wouldn't apply to NA-2.)

(Since these applicability questions have already been asked regarding the proposed LBLOCA methodology, these questions regarding the proposed SBLOCA methodology may be answered by referring to the responses to those LBLOCA questions, if they apply.)

B. APPLICABILITY OF THE SBLOCA MODEL AND ANALYSES RESULTS

The discussion of mixed cores in the submittal did address the effects of the mixed core on PCT and oxidation for M-5 fuel, but it does not seem to address the PCT and oxidation for the other fuel. In its Rulemaking Hearing dated December 28, 1983, the Nuclear Regulatory Commission stated, regarding the performance criteria of 10 CFR 50.46 (b): "In view of the lack of experience in this hypothetical situation, we think it prudent to apply our criteria to all of the core and not to exempt any part."

Q2. Provide PCT and oxidation results for the other (non-FTI) fuel in the core.

(Note: In a letter to NEI dated November 8, 1999, Gary M. Holahan, reiterated the NRC position that "total oxidation" encompasses accident and pre-accident oxidation. This position continues to apply. Therefore, in response to Q2, provide total oxidation for the "other" (non-FTI) fuel, including pre-accident oxidation, plus LOCA cladding outside oxidation, plus cladding inside oxidation. This clarification also applies to LBLOCA Question 10.)

Q3. The loop seal elevation and core level figures in the May 27, 2003, do not have a common indicated reference value such that the relative elevation of the top of the core, the bottom of the core, the top of the loop seal, and the bottom of the loop seal can be cross referenced versus each other. Only by indirect means can a reader estimate the level of the top and bottom of the core, and the top and bottom of the loop seal, on their respective graphs. There is no way to correlate the core graph elevations versus the loop seal elevations. Provide graphs that are consistently labeled.