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January 6, 1983

Mr. Darrell G. Eisenhut
Director of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Generic Letter No. 82-32
Potential Steam Generator Related Generic Requirements
Comments on SAI's Value Impact Analysis

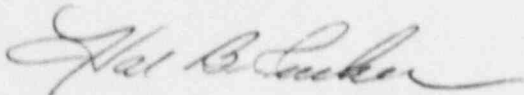
Dear Mr. Eisenhut:

Your letter of December 9, 1982 provided for comment a value impact analysis of potential steam generator related generic requirements performed by Science Applications, Inc. Attached are the comments of Duke Power Company on this value impact analysis. Duke Power previously commented on the proposed requirements themselves in my letter of September 2, 1982.

Overall, we are in general agreement with the safety and public risk assessments made by Science Applications, Inc. and with most of the value impact assessments. The major items of comment are in areas where a lack of knowledge of the Once Through Steam Generators (OTSG) utilized on B&W designed systems biased the results of the analysis. The OTSG's compact features and significantly larger number of tubes cannot be ignored when considering generic requirements in the areas of secondary side visual inspections and Eddy Current inspections.

We appreciate the opportunity to comment on this analysis. We believe that by working closely together the utilities and the NRC can achieve more in this important area than can each working independently. We would be pleased to meet with you to discuss these comments or any other aspect of steam generator regulation.

Very truly yours,



Hal B. Tucker

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Comments on Value Impact Analysis of Proposed
Steam Generator Related Generic Regulatory Requirements

1. Prevention and Detection of Loose Parts and Foreign Objects

A) The value impact of the proposed secondary side visual inspection was biased by an assumed ability to be able to perform these inspections. As noted in our September 2, 1982 letter, the area between the inside of the tube shroud and the outside of the tube bundle is very restricted with few access areas in the Once Through Steam Generators. The impact of modifying the steam generators to perform these inspections far outweigh any perceived benefits and actually would increase the probability of introducing foreign objects. Also, the draining and opening to atmosphere of the secondary side of the steam generator to perform the periodic visual inspections would actually be detrimental to the steam generator.

B) We agree with the values of the quality assurance procedures for steam generator work. Duke currently utilizes such procedures and has found no significant impacts to their incorporation.

C) The value of a secondary side Loose Parts Monitoring System was found to be fairly low in the analysis even assuming a 70 percent probability of SGTR reduction. As stated in our September 2, 1982 letter, Duke has found that the current state of the art in these systems is insufficient to offer any significant usefulness on the turbulent secondary side of steam generators.

D) We believe that a proper quality assurance program accompanied by a visual inspection in the immediate vicinity of any steam generator work offers the best potential for prevention and detection of loose parts and foreign objects.

2. Inservice Inspection Program

A) The value impact analysis was heavily biased in this area by a lack of knowledge of the Once Through Steam Generator (OTSG) design. The SAI analysis of the Supplementary Sampling requirements attempted to bound the impact of accomplishing a 100 percent tube inspection by assuming that 2900 tubes remained to be inspected after the initial inspection group. Since each OTSG has over 15,500 tubes this is certainly not a bounding analysis. Since even a small tube leak could require a 100 percent tube inspection under the proposed requirements, the costs of replacement power alone for the additional three to four weeks of critical path time make the impact of this requirement far outweigh any benefit. During refueling ISI the requirement would actually be a disincentive to perform any inspection beyond the absolute minimum required as described in our September 2, 1982 letter.

B) For the proposed requirement to perform an Eddy Current ISI when shut down for any tube leak, the SAI analysis was biased by the assumption

that units would run indefinitely with tube leaks below Technical Specification limits. There are many non-safety related reasons why Duke prefers to shut down and repair even small leaks. Even in these cases we perform ECT to help improve the reliability of our units. Utilities such as Duke that shut down and repair even small tube leaks would be heavily penalized by this proposed requirement.

C) The SAI impact estimate of \$100-150K for plant specific analyses of the limiting number of tube failures is low. Our experience has shown a cost of more than \$300K for such an analytic effort.

3. Improved Eddy Current Techniques

A) As described in our September 2, 1982 letter, the real impact in imposing these requirements is the detrimental influence they will have on advancing the state of the art in the fast expanding field of ECT. The SAI analysis did not even recognize this very significant impact. Rather than defining the techniques to be utilized in inspecting tubes, a better approach is to define the goals of the inspections and allow industry to continue refining and developing testing techniques. For this purpose, the first requirement listed on page IV.3-1 of the SAI report seems to be a step in the right direction and is sufficient to gain the benefits in this area.

B) Duke must take very serious exception to yet another erroneous statement concerning B&W plants. On page IV.3-4 the report states that "only single-frequency testing is performed at Babcock & Wilcox units." This is simply not true. To our knowledge no B&W unit performs only single-frequency testing and certainly at Oconee multifrequency testing has been utilized since 1978. Duke Power is a firm believer in utilizing new technology in this area, and we feel that the ECT performed at the three B&W units at Oconee is superior to any in the industry including Westinghouse and Combustion Engineering. Such misstatements regarding B&W units as found in this report only serve to confuse the issues.

5. Secondary Water Chemistry Program

The report provides an excellent assessment of the values in this area. While we believe that the impact estimated by SAI is too low, we concur with the overall findings and believe this program has more value than all of the others combined. The related condenser ISI, when tied to condenser and secondary water chemistry performance, is a necessary ingredient to a successful secondary water chemistry program.

Proposed Requirements 4 and 7 through 12

We agree with the report that the impact of these requirements exceed any perceived benefits.