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NUCLEAR PRODUCTION DEPARTMENT

December 31, 1981

U. S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, D. C.   20555

Attention: Mr. Harold R. Denton, Director

Dear Mr. Denton:

SUBJECT: Grand Gulf Nuclear Station
Units 1 and 2
Docket Nos. 50-416 and 50-417
File 0260/0653/5011/15180
Proposed Technical Specification
for Containment Leakrate
AECM-81/510

Our letter to you, AECM-81/213, dated June 26, 1981, transmitted our proposed changes to the Grand Gulf Standard Technical Specifications (STS). In that transmittal (subsection 3.6.1.2), containment leakage was limited to 0.437% by weight of containment air for a 24 hour period at a test pressure of 11.5 psig.

The most recent "Proof and Review" version of this section (dated November 20, 1981), provided to MP&L for concurrence by R. Bottimore of your office, reduced this allowed leakage value. In subsequent telephone conversations held December 22 and 23, 1981, between J. Read of Accident Evaluation Branch and members of the staffs of MP&L and Bechtel Power, information was provided justifying the original value proposed in our letter of June 26, 1981, referenced above. A summary of the calculational basis for the 0.437% leakage criteria, as discussed with Mr. Read, is provided as Attachment 1 to this letter.

As detailed in Attachment 1, the MP&L proposed leakrate criteria includes the total leakage from the main st. m isolation valves (MSIV). This is appropriate because the integrated leak rate test at Grand Gulf is conducted with the drywell and containment volumes communicating and with the reactor vessel vented to the drywell atmosphere. In this configuration test pressure will be applied to the MSIV's.

The proposed leakrate limit of 0.437% was used in the analysis of offsite and control room personnel radiation exposure. As stated in FSAR subsection 15.6.5, the analysis results indicated that calculated doses are within the guidelines of 10 CFR 100 and General Design Criteria 19, and Appendix A to 10 CFR 50.

On the basis of the referenced conversations, it is our understanding that Accident Evaluation Branch will recommend a technical specification change based on the following MP&L commitments. We assume this will result in a revised "Proof and Review" version of STS subsection 3.6.1.2.
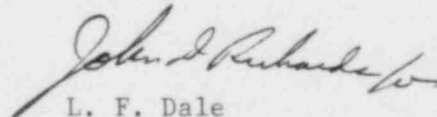
Member Middle South Utilities System

1. Containment leakage rate shall be limited to an overall integrated
    leakage rate of less than or equal to 0.437% by weight of the
    combined containment and drywell air per 24 hours at the prescribed
    test pressure.

2. With regard to leakage past the main steam isolation valves, the
    combined leakage from all main steam lines (four) shall not exceed
    100 SCF per hour.

3. Appropriate surveillance testing of each main steam isolation valve
    will be conducted at intervals no greater than 18 months.

If additional information or clarification is required, please advise
this office.

Yours truly,

L. F. Dale
Manager of Nuclear Services

JGC/JDR:ph

Attachment 1: Containment Leakrate Criteria

cc: Mr. N. L. Stampley (w/o)
     Mr. R. B. McGehee (w/o)
     Mr. T. B. Conner (w/o)
     Mr. G. B. Taylor (w/o)

     Mr. Richard C. DeYoung, Director (w/o)
     Office of Inspection & Enforcement
     U. S. Nuclear Regulatory Commission
     Washington, D. C. 20555

Containment Leakrate Criteria

Presented below is a summary of the method used to calculate an allowed leakage criteria for the containment's overall integrated leak rate test.

Information used in calculations: (See FSAR Table 6.2-1)
Net free volumes, cu.ft.,   Drywell   270,128
                             Containment 1,400,236
                             Total   1,670,364

Design containment leakage   .35% (See Note 1)
     (volume percent, containment only)
MSIV leakage criteria, SCF per hour   100
     (total allowed for four main steam lines)

1. Leakage in SCFH associated with containment design value (.35 volume %).

$$\frac{.35 \times 10^{-2} \times 1.400232 \times 10^{6}}{24} = 204.20 \text{ SCFH}$$

2. Total containment leakage allowed including main steam lines.

    $100 + 204.20 = 304.20$ SCFH

3. Overall leakage criteria, based on total volume of containment and drywell.

$$\frac{304.20 \times 24 \times 100}{1.670364 \times 10^{6}} = 0.437\%$$

(In this calculation weight and volume percentages are equivalent.)

Note 1:   As discussed with J. Read of Accident Evaluation Branch in a telephone conversation held December 23, 1981, with G. Cesare of Mississippi Power & Light, an error was noted in FSAR Table 6.2-1. This table incorrectly states that the design leakage of .35% is based on the combined volume of the drywell and containment. This value is based on the containment volume only. FSAR Table 6.2-1 will be revised in the next available amendment to correct this error.