

YANKEE ATOMIC ELECTRIC COMPANY

B.3.2.1
WYR 80-85



20 Turnpike Road Westborough, Massachusetts 01581

July 24, 1980

United States Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Mr. Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing

Reference: (a) License No. DPR-3 (Docket No. 50-29)
(b) YAEC Letter to USNRC dated October 18, 1979 (WYR 79-118)
(c) USNRC Letter to YAEC dated October 30, 1979
(d) YAEC Letter to USNRC dated November 19, 1979 (WYR 79-141)

Subject: Item 2.1.9 - Hydrogen Monitoring System

Dear Sir:

In References (b) and (d), Yankee committed to install a containment hydrogen monitor by January 1, 1981. A description of the system and a discussion of how it meets the intent of Reference (c) is provided below. We request that you evaluate the acceptability of the proposed system to satisfy the requirements of the referenced document. Since our efforts to implement our design will continue to proceed in parallel, we ask that this evaluation be performed in a timely fashion.

The system will be comprised of two redundant analyzers - an existing Bendix Analyzer and a new Comsip Inc., Model K-III Thermal Conductivity Analyzer. Compliance of each device with the requirements of Reference (c) is described below.

The Comsip Analyzer will be the primary analyzer and is scheduled for delivery in late 1980. This analyzer is being type qualified in accordance with IEEE 323-1974 and IEEE 344-1975. The unit can be remotely tested by introducing a gas of known hydrogen concentration. Continuous indication and recording will be provided in the main control room. The analyzer operates in two ranges, 0-10% and 0-20% hydrogen concentration by volume.

The existing Bendix Analyzer, purchased in 1972, will be the secondary analyzer. This analyzer has been in use for several years and has operated without problems. It is located in an area not subject to adverse environmental effects (pipe whip, jet impingement, etc.) and is qualified by

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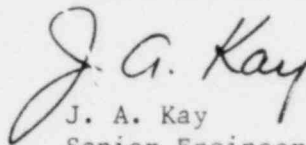
experience for the service which it is required. The unit can be tested locally by the introduction of a gas of known hydrogen concentration. At the present time local display is available, however, remote indication will be provided in the main control room by January 1, 1981. The analyzer operates in two ranges, 0-5% and 0-20% hydrogen concentration by volume.

We believe the system described above meets the intent of the criteria specified in Reference (c). The design provisions of Regulatory Guide 1.97 to include qualification, redundancy and testability have been considered.

If you have any questions or require any further information, please contact us.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY



J. A. Kay
Senior Engineer - Licensing

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