

VERMONT YANKEE NUCLEAR POWER CORPORATION

SEVENTY SEVEN GROVE STREET
RUTLAND, VERMONT 05701

B.3.2.1
WVY-80-123

REPLY TO:
ENGINEERING OFFICE
TURNPIKE ROAD
WESTBORO, MASSACHUSETTS 01581
TELEPHONE 617-366-9011

August 28, 1980

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

Attention: Office of Nuclear Reactor Regulation

- References:
- (a) License No. DPR-28 (Docket No. 50-271)
 - (b) USNRC Letter to All Operating Nuclear Power Plants dated October 30, 1979
 - (c) VYNPC Letter (WVY 80-52) to USNRC dated April 1, 1980
 - (d) USNRC Letter to VYNPC, Ippolito to Smith, dated May 20, 1980

Subject: Hydrogen Monitoring System

Dear Sir:

Pursuant to Section 50.59 of the Commission's Rules and Regulations, Vermont Yankee Nuclear Power Corporation hereby proposes the following changes to Appendix A of the Operating License.

Proposed Change:

Delete "Containment Air Sampling System" valves 109-75A-D; 1&2 and 109-76A & B from Technical Specification Table 4.7.2b. Add valves VG-23, VG-26, 109-76A & B to Technical Specification Table 4.7.2a.

Reason and Bases for Change:

Following the TMI-2 incident, the NRC, through NUREG-0578 and subsequent clarifying letters, Reference (b), required process monitoring instrumentation for measurement and indication of hydrogen concentration inside the primary containment to be installed by January 1, 1981.

Reference (c) proposed a method for satisfying this requirement; NRC staff approval of our concept is documented in Reference (d).

As described in Reference (c), a hydrogen monitoring subsystem has been installed as part of the Containment Air Dilution (CAD) system. It utilizes portions of original plant piping and currently is isolated by valves

109-75A-D; 1&2. However, the hydrogen monitoring subsystem was designed and installed to be an integral part of the containment and as such does not require a system isolation. A second line, which branches off the sample inlet header goes to a radiation monitor. Solenoid valves VG23, VG26 and 109-76A&B were installed in the radiation monitor inlet and outlet lines to close on receipt of a primary containment isolation signal and provide containment isolation. A sketch is attached to illustrate this arrangement.

The changes delineated on the attached, revised Technical Specification pages will allow the containment hydrogen monitoring system to be operated post-accident thus satisfying the short-term lessons learned requirement.

Safety Considerations:

The hydrogen monitoring system was installed as part of the CAD system and was designed to meet Seismic Category I requirements. This subsystem is therefore considered as integral part of the primary containment and need not be isolated from it. Sample system valves 109-75A-D; 1&2 will not receive a PCIS signal, however, they are capable of being remotely operated from the main control room for the purpose of selecting an appropriate sample point. The inlet line to the containment radiation monitor now branches off from the hydrogen monitoring subsystem and is capable of being isolated from it (and hence, the primary containment) by two solenoid operated valves (VG-23&26) that are classified as Group 3 isolation valves.

For the reasons described above, the deletion of isolation valves 109-75A-D; 1&2 and 109-76A&B from Table 4.7.2b and the addition of valves VG23&26 and 109-76A&B to Table 4.7.2a would not increase the probability of previously evaluated accidents, create the possibility of a different type of accident, or reduce the margins of safety as defined in the bases of the Vermont Yankee Technical Specifications.

The hydrogen monitoring system will provide the operator with additional information to aid in the assessment of plant conditions following the unlikely event of a loss of coolant accident.

This proposed change has been reviewed by the Vermont Yankee Nuclear Safety Audit and Review Committee.

Fee Determination:

This proposed change requires an approval that involves a single safety issue and is deemed not to involve a significant hazards consideration. For these reasons, Vermont Yankee Nuclear Power Corporation proposes this change as a Class III Amendment. A payment of \$4000.00 is enclosed.

Schedule of Change:

Reference (b) requires that containment hydrogen indication be installed by January 1, 1981. It is Vermont Yankee's intent to make any necessary modifications during the 1980 fall refueling outage; as such Commission approval of this change is required before plant shutdown (September 26, 1980).

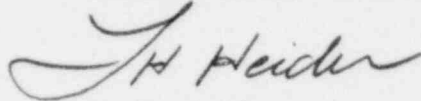
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We trust this submittal is acceptable to you; however, should you have any questions, please contact us.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION

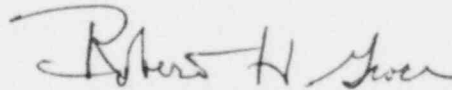


L. H. Heider
Vice President

Enclosure

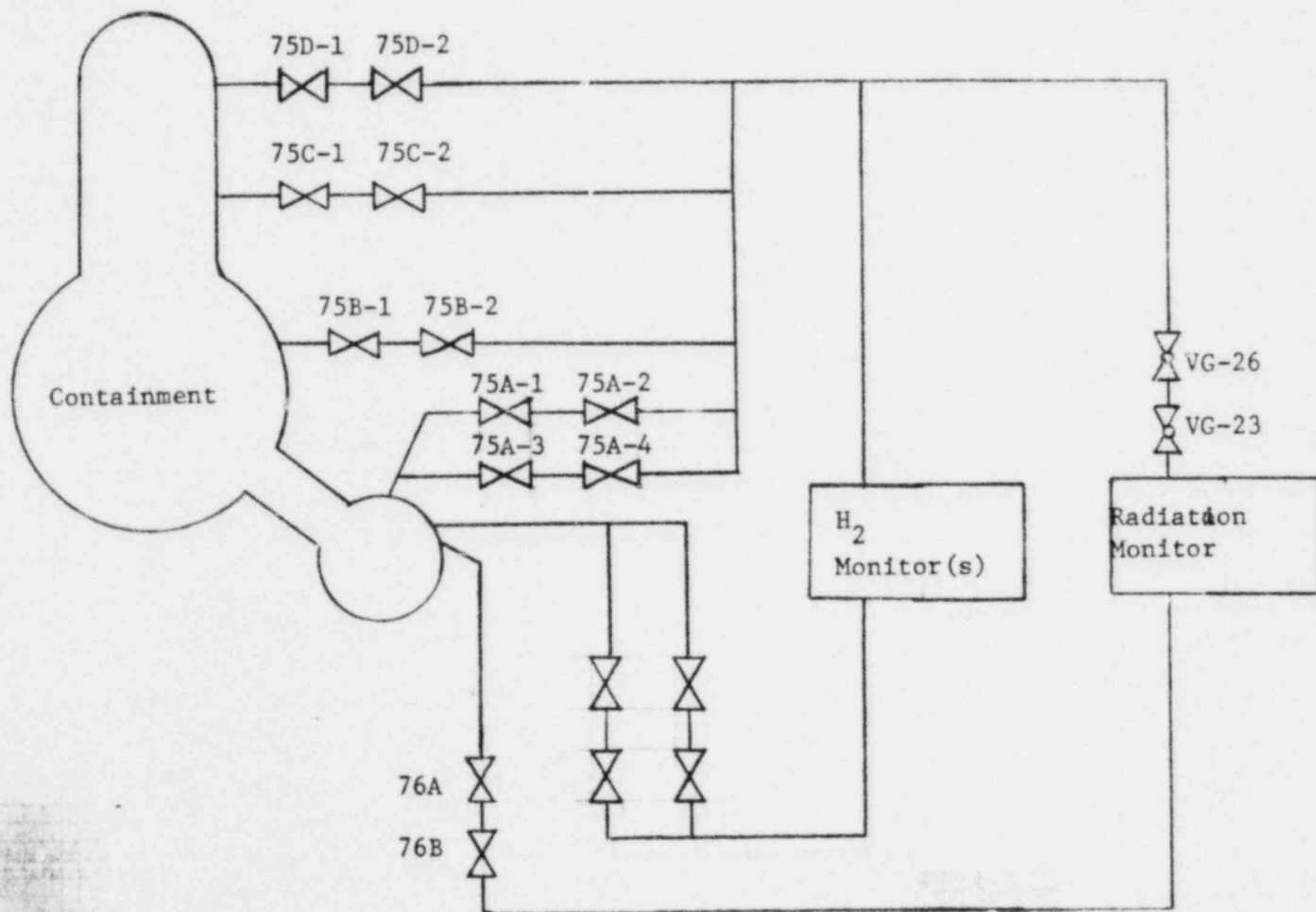
COMMONWEALTH OF MASSACHUSETTS))ss.
COUNTY OF WORCESTER)

Then personally appeared before me, L. H. Heider, who, being duly sworn, did state that he is a Vice President of Vermont Yankee Nuclear Power Corporation, that he is duly authorized to execute and file the foregoing request in the name and on the behalf of Vermont Yankee Nuclear Power Corporation, and that the statements therein are true to the best of his knowledge and belief.



Robert H. Groce Notary Public
My Commission Expires September 14, 1984





YANKEE ATOMIC ELECTRIC COMPANY
20 TURNPIKE ROAD, WESTBORO, MASS.

NUCLEAR SERVICES DIVISION

DWG. NO.

DRAWN BY

CHECKED BY

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TITLE

HYDROGEN
MONITORING
SYSTEM