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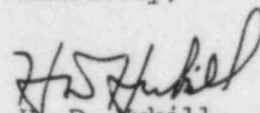
Office of Nuclear Reactor Regulations
Attn: John F. Stolz, Chief
Operating Reactors Branch No. 4
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Stolz:

Three Mile Island Nuclear Station Unit I (TMI-1)
Operating License No. DPR-50
Docket No. 50-289
Containment Pressure and Hydrogen Monitors (II.F.1)

Licensee letter 5211-83-323 dated November 28, 1983, forwarded design information on the subject monitors pursuant to NUREG 0737 II.F.1. Enclosed are corrections to that letter, as indicated by margin bars, regarding proposed surveillance requirements.

Sincerely,


H. D. Mukill,
Director, TMI-1

HDH:RAS:mle
Attachments

cc: Dr. T. E. Murley
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DESIGN AND QUALIFICATION OF THE CONTAINMENT HYDROGEN MONITOR (CHM)

- (1) Seismic/Environmental Qualification - The sample lines are supported seismically as is all other equipment in accordance with Reg. Guide 1.100 and IEEE 344-1975. The environment qualification of the Containment Hydrogen Monitor has been reviewed against the DOR Guidelines. The results of this evaluation have been included in licensee letter 5211-83-076, May 16, 1983.
- (2) Single Failure - The Containment Hydrogen Monitor has redundant safety grade channels and is powered by a class 1E power source and therefore, single failure proof. The alarms and computer inputs are not safety related.
- (3) Power Sources - The power supplies for the Hydrogen Monitor are provided from redundant 1E power supplies (vital bus).
- (4) Availability - The CHM is on-line continuously during normal operations. Samples are drawn continuously during accident and post accident conditions. Operability requirements have been addressed in a Tech Spec. Change Request No. 114.
- (5) QA Requirements - The CHM with the exception of the alarms and computer inputs are nuclear safety related and the applicable sections of the GPU Nuclear OQA Plan are invoked.
- (6) Continuous Operation - See (4)
- (7) Recording Instrumentation - A recorder for each channel is located in the Control Room and will provide continuous recording.
- (8) Identification - The Containment Hydrogen Monitoring instrumentation has been "human factored" and the recorders are located on the left front panel in the Control Room.
- (9) Isolation Devices - The CHM System is self contained and does not interface with other systems. Therefore no isolation devices are provided.
- (10) Testing - Surveillance requirements are addressed in Technical Specifications Change Request No. 114.
- (11) Surveillance - See (10)
- (12) Removal From Service - Testing shall be performed in accordance with the applicable portions of Reg. Guide 1.118 for testing of instrument channels.

ATTACHMENT A

DESIGN AND QUALIFICATION OF THE CONTAINMENT PRESSURE MONITOR

- (1) Seismic/Environmental Qualification - The seismic qualification of the pressure transmitter and signal conditioning equipment is in accordance with RC 1.100 and IEEE-344 1975. Each channel recorder and associated power supply has a steel protective shield surrounding them to serve as a seismic barrier from other non seismic qualified components. Environmental qualification of the containment pressure monitor was included in licensee letter 5211-83-076, May 16, 1983.
- (2) Single Failure - The containment pressure monitor is composed of redundant safety grade, Class 1E equipment channels and power sources which have both narrow and wide range recorder indication and are therefore single failure proof.
- (3) Power Sources - The containment pressure monitor is energized by separate power supplies from Class 1E uninterruptible power. The signal conditioning cabinets provide additional isolation of the non 1E computer signal from the 1E recorder signal in each channel.
- (4) Availability - The containment pressure indicator is in constant operation during all plant operating modes, infrequent operation, accident conditions and post accident conditions. Operability requirements have been addressed in Technical Specification Change Request No. 114.
- (5) QA Requirements - The portion of the containment pressure indication external to the Control Room panel has been designated nuclear safety related under the applicable section of the GPUN OQA Plan.
- (6) Continuous Indication - See response to Item (4). Any component malfunction or loss of power leaves intact a redundant channel for indication.
- (7) Recording Instrumentation - The 0-10 VDC output signal of each channel is routed to 1 of 2 Bailey Controls 2 pen recorders in the Control Room with strip chart output for trending.
- (8) Display Instrumentation - The recorders are mounted on the front of the PLF vertical panel, behind the control console. This will be a normal CRO work area for post-accident conditions.
- (9) Isolation - See (3)
- (10) Testing - Surveillance requirements are addressed in Technical Specification Change Request No. 114.