MARK III CONTAINMENT
HYDROGEN CONTROL OWNERS GROUP
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November 14, 1985
HGN-068

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

Attention: Mr. Robert Bernero

Dear Mr. Bernero:

SUBJECT: HCOG Submittals to the NRC

The Hydrogen Control Owners Group (HCOG) submitted the Hydrogen Control Program Plan by letter HGN-024 dated 12/31/84. This submittal received intensive review from the Nuclear Regulatory Commission (NRC) staff and resulted in several meetings between HCOG and the NRC in January and February, 1985. During these discussions the staff agreed that expeditious review and approval of the information submitted by the HCOG is essential to the maintenance of the program schedule.

Since July of this year, the HCOG has transmitted to the NRC information concerning a variety of issues. These issues are critical to the 1/4 scale test program as well as the entire HCOG program. The Attachment to this letter provides a list of several submittals recently transmitted to the NRC by HCOG. HCOG considers feedback from the staff on these submittals vital to the success of the HCOG program. HCOG would like to note that the prompt and expeditious review of the information in the past has enabled HCOG to make significant progress towards resolution of the hydrogen control issue. The issues delineated in the Attachment are considered by HCOG to be important milestones in the HCOG program and HCOG would like to indicate that prompt review and acceptance of this information is necessary to ensure that progress continues to be made towards resolution of the hydrogen control issue.

We look forward to meeting with you on November 20, 1985 to discuss these issues.

This submittal was compiled by HCOG from the best information available for submittal to the Nuclear Regulatory Commission. The submittal is believed to be complete and accurate, but it is not submitted on any specific plant docket. The information contained in this letter and its attachments should

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not be used for evaluation of any specific plant unless the information has been endorsed by the appropriate member utility. HCOG members may individually reference this letter in whole or in part as being applicable to their specific plants.

Very truly yours,

Sam H Hobbs

SHH:bms
Attachment

cc: Mr. Carl R. Stahle (w/a)
Hydrogen Control Project Manager
U. S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, D. C. 20555

Mr. Charles G. Tinkler (w/a)
Containment Systems Branch
Office of Nuclear Reactor Regulation
Washington, D. C 20555

Sandia National Laboratories
Attention: John C. Cummings
Organization 1512
P. O. Box 5800
Albuquerque, New Mexico 87185

ATTACHMENT ONE TO HGN-068

LETTER NUMBER: HGN-037

DATE: 7/29/85

SUBJECT: Report Concerning Adequacy of QSTF Heat Sink Modeling

INFORMATION SUBMITTED:

Heat Loss report analyzing thermal responses of:

1) QSTF in GGNS configuration,
2) Concrete wall Mark III containment,
3) Steel shell Mark III containment, and
4) QSTF scaled up to full scale using Froude modeling techniques

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LETTER NUMBER: HGN-040

DATE: 7/12/85

SUBJECT: Revision 3 of Hydrogen Control Program Plan

INFORMATION SUBMITTED:

This revision addressed:

1) Comments from 4/2/85 NRC letter,
2) Decisions made in 5/22/85 HCOG/NRC meeting
3) New hydrogen time release histories accepted by 6/24/85 NRC letter

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LETTER NUMBER: HGN-047

DATE: 8/1/85

SUBJECT: Initial 1/4 Scale Facility Test Conditions

INFORMATION SUBMITTED:

The following initial conditions to be used in the test facility prior to injecting hydrogen:

1) Suppression pool and upper pool assumed normal prior to accident,
2) HGE initiated by SORV or a DWB equivalent in size to SORV,
3) RPV depressurizes due to accident and operator manually depressurizes through ADS valves,
4) Suppression pool makeup or upper pool dump automatically actuated,

5) Upon spray actuation, RHR takes suction from suppression pool at 150°F and cools it to 125°F before transferring to spray header,
6) Air in QSTF assumed to be isolated and heated by increase in suppression pool temperature

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LETTER NUMBER: HGN-049

DATE: 8/28/85

SUBJECT: 1/4 Scale Test Facility Igniter Placement and Containment Thermocouple Temperature Response and Location

INFORMATION SUBMITTED:

Responses to informal staff questions which provided:

1) Drawings showing locations of igniters in the test facility,
2) Justification that igniter locations in the test facility are appropriate for a Froude scaled facility,
3) Verification that temperature response characteristics of thermocouples used to actuate simulated containment sprays in test facility are comparable to those used in actual plants,
4) Verification that locations of thermocouples used to actuate sprays in test facility correspond to actual plant configurations

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LETTER NUMBER: HGN-055

DATE: 9/27/85

SUBJECT: Evaluation of SBO and ATWS contributions to HGEs

INFORMATION SUBMITTED:

Qualitative discussion concerning SBO and ATWS events as initiators of HGEs which demonstrated that:

1) SBO contribution is 4.5% of total core melt frequency
2) ATWS sequence does not contribute to containment failure from hydrogen combustion, therefore not considered a plausible HGE
3) SBO and ATWS events need not be considered significant initiators of HGEs