

April 22, 1997

MEMORANDUM TO: John N. Hannon, Director  
Project Directorate III-1, DRPW

FROM: Beth A. Wetzel, Project Manager  
Project Directorate III-1, DRPW

ORIGINAL SIGNED BY BAW

SUBJECT: MEETING WITH NUCLEAR ENERGY INSTITUTE (NEI) ON GENERIC LETTER  
(GL) 96-06, "ASSURANCE OF EQUIPMENT OPERABILITY AND  
CONTAINMENT INTEGRITY DURING DESIGN BASIS ACCIDENT CONDITIONS"

DATE & TIME: Wednesday, April 30, 1997  
8:30 a.m. - 12:30 p.m.

LOCATION: One White Flint North  
Room 4B6  
11555 Rockville Pike  
Rockville, Maryland

PURPOSE: Meeting with NEI to discuss GL 96-06. A proposed agenda and  
questions for discussion are attached.

PARTICIPANTS\*: NRC participants are from the Office of Nuclear Reactor  
Regulation (NRR).

NRC (NRR)

L. Marsh C. Saadu  
R. Wessman W. Long  
G. Hubbard B. Wetzel  
K. Manoly J. Fair  
J. Tatum

NEI

K. Cozens, et al.

Attachments: As stated (2)

CONTACT: Beth Wetzel, NRR  
(301) 415-1355

\*Meetings between NRC technical staff and applicants or licensees are open for  
interested members of the public, petitioners, intervenors, or other parties  
to attend as observers pursuant to "Commission Policy Statement on Staff  
Meetings Open to the Public" 59 Federal Register 48340, 9/20/94.

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**PROPOSED AGENDA**  
**NRC/NEI MEETING ON GL 96-06**

**APRIL 30, 1997**

<u>ITEM</u>	<u>TOPIC</u>	<u>RESPONSIBLE PARTY</u>
1.	Welcome and Opening Remarks	NRC NEI
2.	GL 96-06 Submittals: Status and Observations	NRC
3.	GL 96-06: Questions and Responses	NEI NRC
4.	EPRI GL 96-06 programs on Over Pressurization and Waterhammer (Tentative)	EPRI
5.	Concluding Remarks	NRC NEI
6.	Adjournment	

**INDUSTRY GL 96-06 QUESTIONS FOR DISCUSSION  
WITH THE NRC STAFF**

**QUESTION 1:**

A number of NRC staff communications on near and long term use of ASME Section III Appendix F, "Analysis Methodology & Limits," have been provided to industry, but some confusion remains with regards to its use. The NRC staff is requested to provide clarification about the following:

- a) If Appendix F is within a plant's licensing basis, is it acceptable for use as a long-term over pressurization solution.
- b) If the answer to a) is yes, can a plant without Appendix F as a part of its licensing basis restart from a planned or unplanned outage while pursuing a license amendment to make Appendix F a part of the plant's licensing basis.
- c) If a plant is processing a licensing change to add Appendix F to its licensing basis, what types of considerations should be included in the submittal.
- d) If a plant has committed to a schedule for making modifications and/or procedural changes as a long-term over pressurization solution, is it permitted, prior to making the scheduled modification, to pursue a license amendment to make Appendix F a part of the plant's licensing basis.

**QUESTION 2:**

What information does the NRC need to approve the use of ASME III, Appendix F as a licensing basis for piping systems designed to ANSI B31.1?

**QUESTION 3:**

Is the following considered an acceptable justification for evaluating the failure mode effect of a stuck open relief valve, occurring post accident, located between two closed containment isolation valves?

The reason a relief valve opens is because the pressure has increased between the two containment isolation valves. Consequently, due to the tightness of the subject isolation valves, the opening of the relief valve confirms the containment integrity is provided by the isolation valves and associated piping.

#### QUESTION 4:

**Set Pressure (LOCA ONLY):** The design codes used by licensees are silent on "provisions" to be taken for relieving the excess pressure. The 1967 edition of ANSI B31.1 does not address set pressure requirements. Newer editions do by reference to ASME Section VIII, paragraphs UG-126 through UG-133. The newer versions of ASME Section III (W 1973 and forward) also do not address set pressure/relief capacity for faulted conditions.

Does the NRC staff agree that it is acceptable for a plant to set thermal relief valves at a pressure high enough to prevent unnecessary actuation during normal operation, but low enough to meet current ASME Section VIII (ANSI B31.1) or ASME Section III guidance. This option does not propose revising system design pressures, but does propose reevaluating the components for the maximum (set plus accumulation) faulted condition pressure.

The NRC staff is also requested to respond to the following specific questions:

##### **ANSI B31.1 Applications:**

Does the NRC staff agree that it is permissible to use a relief valve set pressure equal to  $1.09 P_w$ , where  $P_w$  equals the pipe or valve rated pressure, assuming all components subjected to that pressure are shown acceptable under the faulted condition loading?

##### **ASME Code Applications:**

Does the NRC staff agree it is permissible to use a relief valve set pressure equal to  $0.91 P^*$ , where  $P^*$  equals the lower of  $2 P_a$  (Pipe) or  $1.5 P_a$  (Valve), assuming all components subjected to that pressure are shown acceptable under the faulted condition loading?

The basis of the 1.09 and 0.91 factors is a 10% accumulation, bringing the maximum pressure to  $1.09 \times 1.1 = 1.2 P_a$  (permitted by B31.1 and Section VIII) and  $1.1 (0.91) = P^*$  (permitted by Section III).

#### QUESTION 5:

If waterhammer and/or two-phase flow were not specifically addressed during initial plant/system design and licensing, can an analytical approach be used without introducing an un-reviewed safety question (USQ) per 10CFR50.59, provided that the analysis shows that applicable code allowables are met and provided appropriate support modifications are installed?

**QUESTION 6:**

If tests are conducted and confirm that piping and valves exposed to an external temperature increase of up to 250° F are not challenged structurally, will the NRC staff consider accepting the test results as basis for endorsing an ASME Code Case (relief protection is not necessary when the temperature increase is less than or equal to 250° F) being developed.