



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

August 23, 1989

*Aggarwal*  
AC 93-1

PDR

MEMORANDUM FOR: James M. Taylor  
Acting Executive Director  
for Operations

FROM: Edward L. Jordan, Chairman  
Committee to Review Generic Requirements

SUBJECT: MINUTES OF CRGR MEETING NUMBER 167

The Committee to Review Generic Requirements (CRGR) met on Wednesday, August 9, 1989 from 1:00-5:00 p.m. A list of attendees for this meeting is attached (Enclosure 1). The following items were addressed at the meeting:

1. L. Shao (RES), R. Bosnak (RES), and W. Norris (RES) presented for CRGR review a proposed amendment to 10 CFR Part 50.55a, Codes and Standards. This amendment incorporates by reference subsection IWE of the ASME Code, and addresses inservice inspection requirements for metallic containment liners. The Committee recommended against forwarding the proposed amendment to the Commission on the basis that the safety benefit was not demonstrated as necessary to ensure adequate protection, as the staff had claimed. This matter is discussed in Enclosure 2.
2. L. Shao (RES), R. Bosnak (RES), and S. Aggarwal (RES) presented for CRGR review a proposed Regulatory Guide DG-1002, "Isolation Devices." The Committee recommended against forwarding the proposed regulatory guide to the Commission on the basis that an analysis is needed since some of the criteria included in the guide would constitute a backfit for some licensees. This matter is discussed in Enclosure 3.
3. W. Minners (RES), R. Baer (RES), and F. Cherny (RES) presented for CRGR review proposed resolutions for Generic Issue 70, "Power Operated Relief Valve and Block Valve Reliability" and Generic Issue 94, "Additional Low-Temperature Overpressure Protection for Light Water Reactors." The Committee did not complete their review of these items and will continue their review at the next scheduled meeting. This matter is discussed in Enclosure 4.

In accordance with the EDO's July 18, 1983 directive concerning "Feedback and Closure of CRGR Reviews," a written response is required from the cognizant office to report agreement or disagreement with the CRGR recommendations in these minutes. The response, which is required within five working days after receipt of these minutes, is to be forwarded to the CRGR Chairman and if there is disagreement with CRGR recommendations, to the EDO for decisionmaking.

(625)  
8909140258

25pp.

Questions concerning these meeting minutes should be referred to Jim Conran (492-9855).

Original Signed by:  
E. L. Jordan

Edward L. Jordan, Chairman  
Committee to Review Generic  
Requirements

Enclosures:  
As stated

cc w/enclosures:  
Commission (5)  
SECY  
J. Lieberman  
P. Norry  
M. Malsch  
Regional Administrators  
CRGR Members

Distribution: (w/o enc.)

Central File  
PDR (NRC/CRGR)  
S. Treby  
W. Little  
M. Lesar  
P. Kadambi (w/enc.)  
CRGR CF (w/enc.)  
CRGR SF (w/enc.)  
M. Taylor (w/enc.)  
L. Shao (w/enc.)  
R. Bosnak (w/enc.)  
W. Minners (w/enc.)  
W. Norris (w/enc.)  
S. Aggarwal (w/enc.)  
R. Baer (w/enc.)  
E. Jordan (w/enc.)  
J. Heltemes (w/enc.)  
J. Conran (w/enc.)  
C. Sakenas (w/enc.)

OFC	: AEOD:CRGR	: AEOD:BO	: C/CRGR/AEOD	:	:	:	:
NAME	: JConran:cg	: CJHeltemes	: ELJordan	:	:	:	:
DATE	: 8/17/89	: 8/22/89	: 8/22/89	:	:	:	:

ATTENDANCE LIST  
FOR  
CRGR MEETING NO. 167

August 9, 1989

CRGR MEMBERS

E. Jordan  
J. Sniezek  
L. Reyes  
G. Arlotto  
J. Goldberg  
B. Morris (for D. Ross)

NRC STAFF

J. Conran  
C. Sakenas  
D. Allison  
L. Shao  
R. Bosnak  
W. Norris  
A. Murphy  
G. Millman  
J. Costello  
C. Y. Cheng  
K. Wichman  
R. Hermann  
S. Aggarwal  
J. Joyce  
B. Hayes  
M. Vagins  
S. Newberry  
C. Douth  
W. Minners  
R. Baer  
F. Cherny  
R. Kirkwood  
G. Mazetis  
E. Throm  
M. Lopez-Otin

Enclosure 2 to the Minutes of CRGR Meeting No. 167  
Proposed Amendment to 10 CFR Part 50.55a,  
Codes and Standards

August 9, 1989

TOPIC

L. Shao (RES), R. Bosnak (RES), and W. Norris (RES) presented for CRGR review a proposed amendment to 10 CFR Part 50.55a, Codes and Standards. This amendment incorporates by reference the 1989 edition of Subsection IWE, "Requirements for Class MC and Metallic Liners of Class CC Components of Light-Water-Cooled Power Plants," of Section XI of the ASME B&PV Code. A copy of the slides used by the staff to guide their presentation and the discussions with the Committee at this meeting is attached to this enclosure.

BACKGROUND

The packages submitted by the staff for CRGR review of this matter were transmitted by memoranda dated June 13, 1989 and July 6, 1989, E. S. Beckjörd to E. L. Jordan. The packages included the following:

1. the proposed rule
2. summary of CRGR review items
3. Regulatory Analysis

CONCLUSIONS/RECOMMENDATIONS

As a result of their review of this matter, including discussions with the staff at this meeting, the Committee recommended against forwarding the proposed rule to the Commission on the basis of being needed to ensure adequate protection. The staff was unable to demonstrate that a sufficient safety problem existed or that existing requirements (Appendix J) were insufficient to ensure that licensees would address the issue. The consensus of the Committee was that this endorsement would go well beyond any present inspection requirements, especially in visual inspection of liner welds.

Although the Committee supported the coatings inspection, it was noted that the very real problem of corrosion, especially of inaccessible surfaces, was not addressed although a number of real instances have occurred. If additional guidance is needed in this area, the Committee recommended that the staff develop guidance in this area, outside the ASME Code context, if necessary.

Before returning this package to the Committee, the safety benefit resulting from this action should be demonstrated, or the action should be revised to only address the safety issue.

It was recognized by the Committee that this is the first time a consensus standard has failed to be incorporated based on backfit considerations.

PROPOSED AMENDMENT TO  
10 CFR PART 50.55a  
CODES AND STANDARDS FOR  
NUCLEAR POWER PLANTS

Task Leader: Wallace E. Norris  
Office of Nuclear Regulatory Research  
CRGR Meeting of August 9, 1989

PROPOSED RULE

INCORPORATES BY REFERENCE THE 1989 EDITION OF SUBSECTION IWE, "REQUIREMENTS FOR CLASS MC AND METALLIC LINERS OF CLASS CC COMPONENTS OF LIGHT-WATER-COOLED POWER PLANTS", OF SECTION XI, OF THE ASME B&PV CODE

## SCOPE

- o CLASS MC (METAL CONTAINMENTS) PRESSURE-RETAINING COMPONENTS (e.g., CONTAINMENT WELDS, PENETRATION WELDS, AIRLOCK WELDS, SEALS AND GASKETS)
  
- o CLASS CC (CONCRETE CONTAINMENTS) PRESSURE-RETAINING COMPONENTS (e.g., METALLIC SHELL AND PENETRATION LINER WELDS)



## REVIEW AND STAFF APPROVAL

- o THERE ARE TWO PACKAGES WHICH ARE TO BE COMBINED
- o THE MAIN PACKAGE WOULD INCORPORATE BY REFERENCE THE 1986 EDITION WITH ADDENDA THROUGH THE 1987 ADDENDA
- o THE SECOND PACKAGE WOULD INCORPORATE BY REFERENCE THE 1988 ADDENDA
- o THESE TWO PACKAGES COMBINED ARE THE 1989 EDITION
- o THE 1989 EDITION IS IDENTICAL TO THE 1986 EDITION AS MODIFIED BY THE 1986 THROUGH THE 1988 ADDENDA



## STATEMENT OF THE PROBLEM

- o CURRENTLY THERE IS NO CONSISTENT ISI OF CONTAINMENTS
- o SECTION III (CONSTRUCTION CODE) DOES NOT REQUIRE CORROSION ALLOWANCES
- o STUDIES SUCH AS TIRGALEX AND NPAR ASSIGN CONTAINMENTS THE HIGHEST PRIORITY IN RISK STUDIES
- o EROSION OF THE METAL DRYWELL SHELL AT ONE PLANT WAS FOUND TO BE OCCURRING AT THE RATE OF 20 MILS/YEAR.
- o AT ANOTHER PLANT, TORUS SHELL WALL THICKNESS WAS AT OR BELOW MINIMUM SPECIFIED WALL THICKNESS.
- o THREE OTHER PLANTS WILL NEED TO CLEAN AND RECOAT THEIR TORI.

## OBJECTIVES

- o ENSURE THE CONTAINMENT MAINTAINS PRESSURE RETAINING INTEGRITY
- o ESTABLISH NRC POSITION ON A GENERIC BASIS

SUBSECTION IWE WOULD SATISFY, IN PART,

- o GENERAL DESIGN CRITERION 1 (Quality Assurance Program)
- o GENERAL DESIGN CRITERION 16 (Containment Design Conditions)
- o GENERAL DESIGN CRITERION 53 (Appropriate Surveillance Program)

## OBJECTIVES (SLIDE 2)

SUBSECTION IWE WOULD SATISFY, IN PART,

- o TECHNICAL SPECIFICATIONS SECTION 4.6.1.7  
(Visual inspection of containment during Type A test)
  
- o TECHNICAL SPECIFICATIONS SECTION 4.6.1.7.3  
(Visual inspection of accessible interior and exterior surfaces)

OBJECTIVES (SLIDE 3)

SUBSECTION IWE WOULD SATISFY, IN PART,

- o THE GENERAL INSPECTION REQUIRED BY APPENDIX J
- o APPENDIX B OF PART 50  
(Documented Quality Assurance Program)

DESCRIPTION OF THE ACTIVITY REQUIRED BY LICENSEE

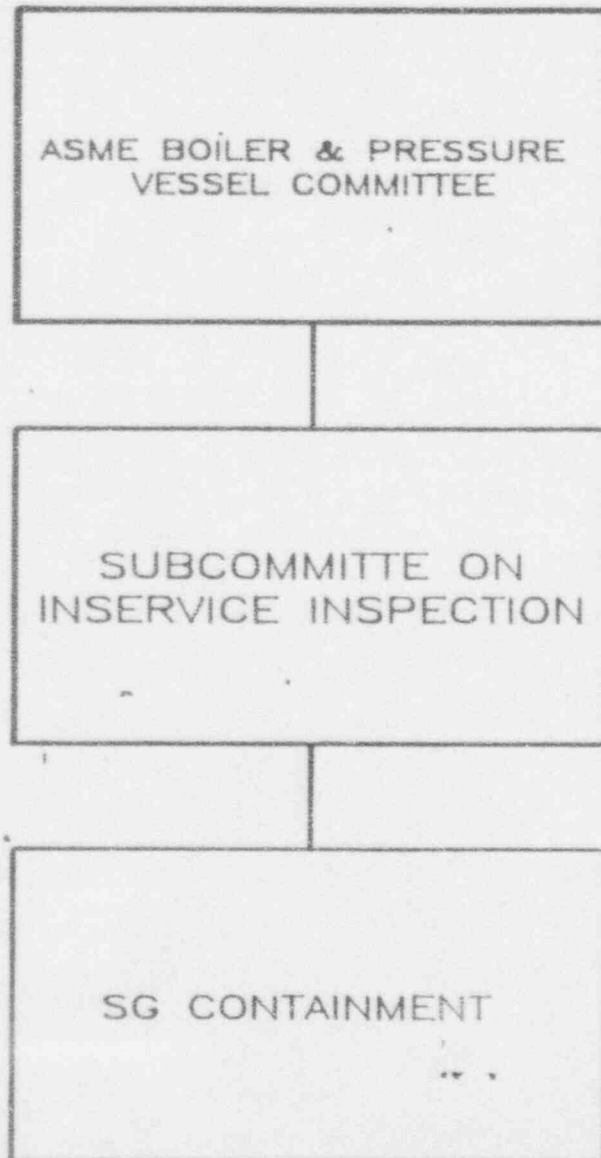
- o DEVELOPMENT OF AN INSERVICE INSPECTION (ISI) PLAN
- o PERIODIC UPDATES TO ISI PLAN
- o PERIODIC INSERVICE INSPECTIONS IN CONFORMANCE WITH THE ISI PLAN

# INDUSTRY PARTICIPATION IN SUBSECTION IWE DEVELOPMENT

ASME BOILER & PRESSURE  
VESSEL COMMITTEE

SUBCOMMITTEE ON  
INSERVICE INSPECTION

SG CONTAINMENT



## ASME BOILER & PRESSURE VESSEL CODE

SINCE 1972 THE NRC HAS BEEN ENDORSING THE CODE

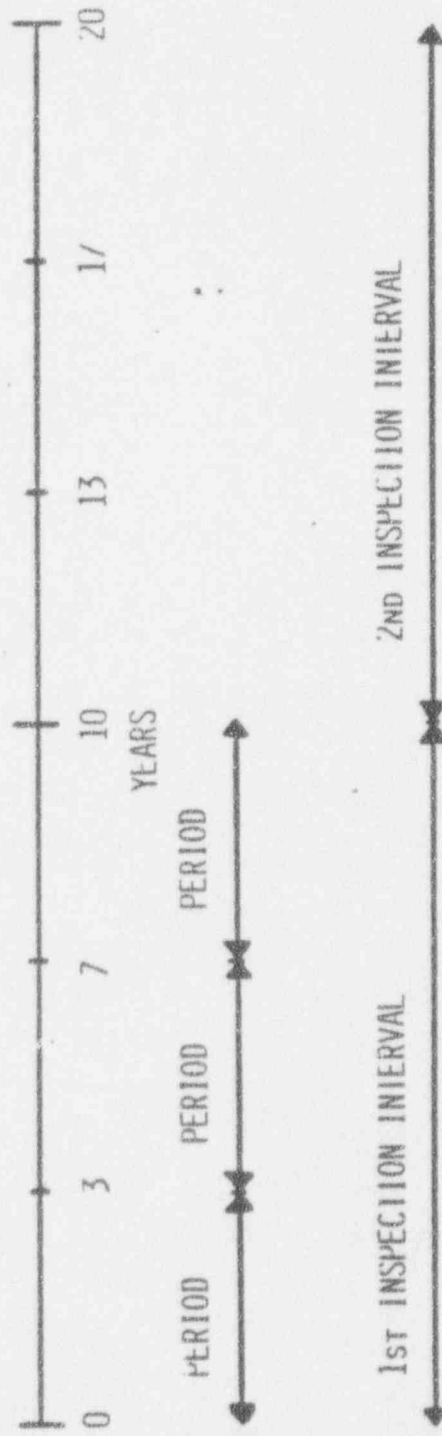
- o SECTION III - RULES FOR CONSTRUCTION OF NPP COMPONENTS
  - CLASS 1, CLASS 2, AND CLASS 3 COMPONENTS
  
- o SECTION XI - RULES FOR ISI OF NPP COMPONENTS
  - SUBSECTION IWA: GENERAL REQUIREMENTS
  - SUBSECTION IWB: CLASS 1 COMPONENTS
  - SUBSECTION IWC: CLASS 2 COMPONENTS
  - SUBSECTION IWD: CLASS 3 COMPONENTS
  - SUBSECTION IWE: CLASS MC COMPONENTS
  - SUBSECTION IWL: CLASS CC COMPONENTS (RECENTLY PASSED BY THE SUBCOMMITTEE)



## PROPOSED MODIFICATION AND LIMITATION

- o MODIFICATION - LICENSEES WILL BE REQUIRED TO IMPLEMENT SUBSECTION IWE DURING THE FIRST PERIOD OF THE NEXT INSPECTION INTERVAL WHICH INCORPORATES SUBSECTION IWE
  
- o LIMITATION - EDITIONS NO EARLIER THAN THE 1989 EDITION SHALL BE USED.

INSPECTION INTERVALS AND PERIODS



POTENTIAL IMPACT ON RADIOLOGICAL EXPOSURE OF EMPLOYEES

- o IMPLEMENTATION OF THIS PROPOSED RULE IS NOT EXPECTED TO SIGNIFICANTLY INCREASE THE OCCUPATIONAL EXPOSURE ASSOCIATED WITH THE ISI EXAMINATIONS
- o \$600 PER REACTOR OR \$75,000 FOR THE REACTOR POPULATION ARE VIEWED AS NIL WHEN COMPARED TO COST OF IMPLEMENTATION

BACKFIT STATEMENT - 50.109(a)(4)(ii)

THE NRC STAFF HAS DETERMINED THAT SUBSECTION IWE PROVIDES MINIMUM REQUIREMENTS FOR THE CONTAINMENT INSPECTIONS, AND, REPRESENTS RESPONSIBLE APPLICATION OF ENGINEERING JUDGEMENT TO ENSURE ADEQUATE PROTECTION OF THE PUBLIC HEALTH AND SAFETY.

## COSTS

- o ALL PLANTS ARE AFFECTED
- o THERE IS A ONE-TIME COST TO A FACILITY OF APPROXIMATELY \$241K TO DEVELOP THE ISI PLAN
- o TO COMPLY WITH THE ISI REQUIREMENTS THEN, THE COST TO FACILITY OVER A 30 YEAR PERIOD (1988 DOLLARS) WILL BE ROUGHLY \$478K

SAFETY IMPACT OF CHANGES IN FACILITY OPERATION

SUBSECTION IWE EXAMINATIONS WOULD BE PERFORMED

DURING PLANNED SHUTDOWNS AND WOULD NOT IMPACT

FACILITY OPERATION

## OTHER IMPACTS OF IMPLEMENTATION

SUBSECTION IWE AUGMENTS THE GENERAL INSPECTION CALLED FOR IN APPENDIX J. IT PROVIDES A CONSISTENT SET OF RULES WITH APPROPRIATE EXAMINATION DETAILS FOR CONTAINMENT STRUCTURES



## POTENTIAL IMPACT OF DIFFERENCES IN FACILITY TYPE

- o APPLIES TO ALL PLANTS
- o RELIEF REQUESTS EXPECTED TO BE FEW IN NUMBER
- o OLDER PLANT DESIGNS MAY NOT BE ABLE TO COMPLY WITH ACCEPTABILITY PROVISIONS

SINCE

- o RECENT OPERATING EXPERIENCE INDICATE DEGRADATION OF CONTAINMENTS
- o TOTAL ABSENCE OF ANY SPECIFIC ISI PROGRAM

CONCLUSION

- o RULE SHOULD BE IMPLEMENTED AS SOON AS PRACTICABLE

Enclosure 3 to the Minutes of CRGR Meeting No. 167  
Proposed Regulatory Guide DG-1002, "Isolation Devices"

August 9, 1989

TOPIC

L. Shao (RES), R. Bosnak (RES) and S. Aggarwal (RES) presented for CRGR review a proposed Regulatory Guide DG-1002, "Isolation Devices." Copies of the slides used by the staff to guide their presentation and the discussions with the Committee at this meeting are attached to this enclosure.

BACKGROUND

The documents submitted for CRGR review in this matter were transmitted by memorandum dated July 21, 1989, E. S. Beckjord to E. L. Jordan and included a copy of the draft regulatory guide and responses to the CRGR Charter requirements.

CONCLUSIONS/RECOMMENDATIONS

As a result of their review of this matter, including discussions with the staff at this meeting, the Committee recommended against forwarding the draft regulatory guide to the Commission on the basis that a backfit analysis was not performed. The Committee stated that although these positions may reflect staff practice, there is no previously documented staff position which addresses all of the criteria listed in the regulatory guide, and an analysis is needed which shows that there would be a substantial benefit from implementation, since this would be a backfit for some licensees.