June 15, 2000

MEMORANDUM TO: William H. Bateman, Chief
Mechanical & Chemical Engineering Branch
Division of Engineering

FROM: Robert A. Hermann, Senior Level Advisor
for Materials Science
Mechanical & Chemical Engineering Branch
Division of Engineering

SUBJECT: TRIP REPORT - ASME SECTION XI, TASK GROUP ON TEMPER BEAD WELDING, WORKING GROUP ON INSPECTION OF SYSTEMS AND COMPONENTS, WORKING GROUP ON WELDING AND SPECIAL PROCESSES AND SUB-GROUP ON REPAIRS, REPLACEMENTS AND MODIFICATIONS

On May 15-19, 2000 I attended the above-stated meetings, as well as the Sub Committee on Inservice Inspection,Section XI, meeting. The discussion of actions and voting record for the Sub-Committee may be found in Mr. Norris's trip report. I interfaced with the various NRC members of the respective working groups reporting to the subgroup prior to the meeting and with the NRC representative to Section XI prior to his meeting to achieve consistency with the NRC position taken on the various Code items. The items discussed and the actions taken for the respective committees are shown on the attachment. The basis for any negative votes at a committee are also included. Of particular interest was an action at both working groups as to whether brazed components could be leak tested instead of hydrostatically tested. It was our position that this was not considered by the Code in developing the basis to permit leak testing in lieu of hydro-static testing. Details are in the attachment

I attended the Working Group on Inspection of Systems and Components as an Alternate for Mr. McLellan. I have provided him with a list of the actions acted upon at the working group,

Attachment: As stated

CONTACT: R. A. Hermann, EMCB/DE
415-2768

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Mechanical & Chemical Engineering Branch
Division of Engineering

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ATTACHMENT 1

ASME Section XI: Subgroup on Repair, Replacement and Modification Robert Hermann, NRR

Meeting Date	**Meeting Location**	
05/17/2000	Toronto	
Item	**WG ID**	**TG ID**
	RRM 99-19	RRM 99-19

ItemDescription
Process Intent Inquiry IN 99-28 Brazing Within Scope of Code Case N416-1

Action Description
3.4/3.3 I don't think the issues of braze joints was considered in changing from hydrostatic test to a leakage test after repair.

Vote
Disapprove
Vote Memo
10-1-1 for 3.4 I voted negative. 8-2-2 for 3.3 I voted negative. Negative vote was broader than fracture mechanics evaulations were not done for braze joints to provide a technical basis. Braze joints were not considered by the special working group on pressure testing. NDE requirement referenced ND5360 is a a visual exam for workmanship. This is hardly more comprehensive than those contained in other construction codes. Repair/replacement components would be to the design code of record for a plant or to later approved editions of Section III. Some components such as containment fan coolers were built to owners' requirements and built as replacements to braze joints design configurations that were questionable, certainly not to ASME code standards in terms of braze joins designed and system integrity. Hydrostatic pressure tests performed at 1.10 or 1.25 Psv or Pd as appropriate are at test pressures well above system operating pressures for most Class 3 systems where braze joints might be used. These elevated pressure hydrostatic provide the most meaningful test of joint tightness and overall system integrity for braze joints.

Meeting Date	**Meeting Location**	
05/17/2000	Toronto	
Item	**WG ID**	**TG ID**
	RRM 00-08	RRM 00-08

ItemDescription
Update to 1998 ed with 2000 Addenda

Action Description
Alternative Requirements to repair and replacement documentation requirements and inservice summary report preparation and submission.

Vote
Approve
Vote Memo
Unanimous

Meeting Date	**Meeting Location**	
05/17/2000	Toronto	
Item	**WG ID**	**TG ID**
	RRM 96-13	RRM 96-13

ItemDescription
Code Case N-600 Sharing of Welder Performance Qualification

Action Description

Vote
Approve
Vote Memo
Unanimously approved. I disagree with NRC negative. Appendix B program and case are adequate as is.

Meeting Date	**Meeting Location**	
05/17/2000	Toronto	
Item	**WG ID**	**TG ID**
	RRM 99-01	RRM 99-01

ItemDescription
Machine GTAW Temper Bead Post Bake and NDE Hold Time Revisions (Code Case)

Action Description
Removed 48 hold time. However, post hydrogen bake was returned regardless of test results that demonstrated cracking was not a problem if low hydrogen materials used.

Vote
Approve
Vote Memo
Unanimous 12-0-0

Meeting Date	**Meeting Location**	
	05/17/2000 Toronto	
Item	**WG ID**	**TG ID**
	RRM 94-15	RRM 94-15

ItemDescription
Develop Section XI Procurement Rules (Including Incorporation of N-517 and N-528)

Action Description
IWA4210: Procurement rules as written by WGRPR did not include all NRC comments for including requirments of CC N517-1, CC N528, GL 98-09 and other areas such as commercial grade dedication.

Vote
Approve
Vote Memo
Close per examples approved.
N-602 - Pursue owners' to use Appendix B, in lieu of Section III progress.
94-14 - Purchase exchange.

Meeting Date	**Meeting Location**	
05/17/2000	Toronto	
Item	**WG ID**	**TG ID**
	RRM 99-18	RRM 99-18

ItemDescription
Risk Informed RRM Activities

Action Description
Report given on progress

Vote
No Action
Vote Memo

ASME Section XI: Working Group on Welding & Special Repair Processes Robert Hermann, NRR

Item
RRM 00-06

TG ID (All * fields completed when "n/a")
RRM 00-06

Item Description
CC N-XXX Alternate Performance Qualification Requirements for Butter Bead - Temper Bead Welding for Class MC and Class CC Metallic Liners

Meeting Dates	**Meeting Location**	*** Priority**
05/16/2000	Toronto	

*** Action**	*** WG Action Description**
	Code Revision to IWE 4650 - look to see what needs to be done to IWE 4650; 98 Edition, 99 Addenda

Vote	**Vote Memo**

*** Maintain Safety**	*** Reduce Unnecessary Regulatory Burden**	*** Increase Efficiency and Effectiveness**	*** Increase Public Confidence**
Y	**Y**	**Y**	**Y**

*** PillarMemo**

Item
RRM 00-05

TG ID (All * fields completed when "n/a")
RRM 00-05

Item Description
Revisions to Code Case N-561 and N-562 to Enhance NRC Acceptability

Meeting Dates	Meeting Location	* Priority
05/16/2000	Toronto	

* Action	* WG Action Description

Vote	Vote Memo

* Maintain Safety	* Reduce Unnecessary Regulatory Burden	* Increase Efficiency and Effectiveness	* Increase Public Confidence
Y		Y	Y

*** PillarMemo**

Item
RRM 99-02

TG ID (All * fields completed when "n/a")
RRM 99-02

Item Description
Revisions to Code to Parallel Revisions to Code Case N-432

Meeting Dates
05/16/2000

Meeting Location
Toronto

*** Priority**

*** Action**

*** WG Action Description**

Vote

Vote Memo

*** Maintain Safety**

*** Reduce Unnecessary Regulatory Burden**

*** Increase Efficiency and Effectiveness**

*** Increase Public Confidence**

*** PillarMemo**

Item
RRM 99-02

TG ID (All * fields completed when "n/a")
RRM 99-02

Item Description
Revisions to Code to Parallel Revisions to Code Case N-432

Meeting Dates
05/16/2000

Meeting Location
Toronto

*** Priority**

*** Action**

*** WG Action Description**
Summary of paragraphs where welding/brazing referenced. Identified items where braze appropriate or needs WG consideration.

Vote
No Action

Vote Memo

*** Maintain Safety**

*** Reduce Unnecessary Regulatory Burden**

*** Increase Efficiency and Effectiveness**

*** Increase Public Confidence**

*** PillarMemo**

Item	**TG ID (All * fields completed when "n/a")**
RRM 98-09	RRM 98-09

Item Description

Eliminate Grinding of First Layer of SMAW Temper Bead Welds

Meeting Dates	**Meeting Location**	*** Priority**
05/16/2000	Toronto	

*** Action**	*** WG Action Description**

Vote	**Vote Memo**
Approve	Unanimous approval

*** Maintain Safety**	*** Reduce Unnecessary Regulatory Burden**	*** Increase Efficiency and Effectiveness**	*** Increase Public Confidence**
Y	**Y**	**Y**	**Y**

*** PillarMemo**

Item
RRM 00-03

TG ID (All * fields completed when "n/a")
RRM 00-03

Item Description
Weld Overlay Repair of Defects in Socket Welds

Meeting Dates
05/16/2000

Meeting Location
Toronto

*** Priority**

*** Action**

*** WG Action Description**

Vote

Vote Memo
No Action - to be removed by designers. More examples to be tested. Simulation to be added to require other actions if failure less than operating cycle.

* Maintain Safety	* Reduce Unnecessary Regulatory Burden	* Increase Efficiency and Effectiveness	* Increase Public Confidence
Y	Y	Y	

*** PillarMemo**

Item
RRM 99-13

TG ID (All * fields completed when "n/a")
RRM 99-13

Item Description
ASME Section XI Adoption of Temper Bead Rules

Meeting Dates	**Meeting Location**	*** Priority**
05/16/2000	Toronto	

*** Action**	*** WG Action Description**

Vote	**Vote Memo**
	Report from Sperks on Section XI.. Temper bead code case. Need to look at changes to Section XI rules to see what needs to be changed. Also need to evaluate if Section XI rules are adequate for controlling production rules. Sections not approved for publication only for comment from Construction Code.

*** Maintain Safety**	*** Reduce Unnecessary Regulatory Burden**	*** Increase Efficiency and Effectiveness**	*** Increase Public Confidence**
Y	**Y**	**Y**	

*** PillarMemo**

Item
RRM 99-01

TG ID (All * fields completed when "n/a")
RRM 99-01

Item Description
Machine GTAW Temper Bead Post Bake and NDE Hold Time Revisions (Code Case)

Meeting Dates
05/16/2000

Meeting Location
Toronto

*** Priority**

*** Action**

*** WG Action Description**

Vote
Approve

Vote Memo
Passed. Revised to incorporate hydrogen bake. 48 hour hold time with no bake removed.

*** Maintain Safety**
Y

*** Reduce Unnecessary Regulatory Burden**
Y

*** Increase Efficiency and Effectiveness**
Y

*** Increase Public Confidence**

*** PillarMemo**

Item
RRM 96-20

TG ID (All * fields completed when "n/a")
RRM 96-20

Item Description
Revise alternate qualification requirements in N-573 and IWA-4440 to include Repair Organization

Meeting Dates
05/16/2000

Meeting Location
Toronto

*** Priority**

*** Action**

*** WG Action Description**

Vote

Vote Memo
No Action

* Maintain Safety	* Reduce Unnecessary Regulatory Burden	* Increase Efficiency and Effectiveness	* Increase Public Confidence
Y	Y		Y

*** PillarMemo**

Item
RRM 00-04

TG ID (All * fields completed when "n/a")
RRM 00-04

Item Description
Revise IWA-4600 to Address Limitations on Size of Repairs

Meeting Dates	**Meeting Location**	*** Priority**
05/16/2000	Toronto	

*** Action**	*** WG Action Description**
	Discussion of additional work to expand 100 sq in limitation. Plan to be developed for RRAC funding. To indulge configurations, inside or ouside, and with/without flaws.

Vote	**Vote Memo**

*** Maintain Safety**	*** Reduce Unnecessary Regulatory Burden**	*** Increase Efficiency and Effectiveness**	*** Increase Public Confidence**
	Y	Y	

*** PillarMemo**

ASME Section XI: Task Group on Temper Bead Repair Robert Hermann, NRR

Item (TG ID)	Item Description
RRM 99-01	Machine GTAW Temper Bead Post Bake and NDE Hold Time Revisions (Code Case)

Meeting Date	Meeting Location	PriorityID
05/15/2000	Toronto	

ActionID	Action Description

VoteID	VoteMemo
Approve	Revised to incorporate hydrogen bake. 48 hour hold with no bake removed. Unanimously approved

Maintain Safety	Reduce Unncessary Regulatory Burden	Increase Efficiency and Effectiveness	Increase Public Confidence
Y	Y	Y	Y

Pillar Memo

Item (TG ID)	Item Description
RRM 99-13	ASME Section XI Adoption of Temper Bead Rules

Meeting Date	Meeting Location	PriorityID
05/15/2000	Toronto	

ActionID	Action Description

VoteID	VoteMemo
	Deferred to working group

Maintain Safety	Reduce Unncessary Regulatory Burden	Increase Efficiency and Effectiveness	Increase Public Confidence
Y	Y	Y	Y

Pillar Memo

Item (TG ID)	Item Description
RRM 98-09	Eliminate Grinding of First Layer of SMAW Temper Bead Welds

Meeting Date	Meeting Location	PriorityID
05/15/2000	Toronto	

ActionID	Action Description

VoteID	VoteMemo
Approve	Use of carbon/low allow steels weld materials on P-8 discussed (not to be done). It would enhance the White Paper to add a P-13 qualification over carbon/low alloy steels. Unanimously approved

Maintain Safety	Reduce Unncessary Regulatory Burden	Increase Efficiency and Effectiveness	Increase Public Confidence
Y	Y	Y	Y

Pillar Memo

Item (TG ID)	Item Description
RRM 00-04	Revise IWA-4600 to Address Limitations on Size of Repairs

Meeting Date	Meeting Location	PriorityID
05/15/2000	Toronto	

ActionID	Action Description

VoteID	VoteMemo
	Evaluate what locations could be done over 100 sq in. Consider inside, outside repairs with or without flaws and restraints.

Maintain Safety	Reduce Unncessary Regulatory Burden	Increase Efficiency and Effectiveness	Increase Public Confidence
Y	Y		Y

Pillar Memo

Item (TG ID)	Item Description
RRM 00-06	CC N-XXX Alternate Performance Qualification Requirements for Butter Bead - Temper Bead Welding for Class MC and Class CC Metallic Liners

Meeting Date	Meeting Location	PriorityID
05/15/2000	Toronto	

ActionID	Action Description

VoteID	VoteMemo
	No actions - need to clarify qpplications

Maintain Safety	Reduce Unncessary Regulatory Burden	Increase Efficiency and Effectiveness	Increase Public Confidence
Y	Y		Y

Pillar Memo

Item (TG ID)	Item Description
RRM 99-14	Incorporate CC N-638 Ambient Preheat Machine GTAW Temper Bead Requirements for P1 Gr. 1 Through P3 Gr. 3

Meeting Date	Meeting Location	PriorityID
05/15/2000	Toronto	

ActionID	Action Description

VoteID	VoteMemo
	Dave Watsky to work up.

Maintain Safety	Reduce Unncessary Regulatory Burden	Increase Efficiency and Effectiveness	Increase Public Confidence
Y		Y	Y

Pillar Memo

ASME Section XI: Task Group on Overlay of Socket Welds Robert Hermann, NRR

Item (TG ID)	Item Description
RRM XX	Code Case on Socket Weld Overlays

Meeting Date	Meeting Location	PriorityID
05/15/2000	Toronto	

ActionID	Action Description
	No Action

VoteID	VoteMemo
	Item discussed - case to be revised

Maintain Safety	Reduce Unncessary Regulatory Burden	Increase Efficiency and Effectiveness	Increase Public Confidence
Y	Y		Y

Pillar Memo