



**PSE&G** Public Service  
Electric and Gas  
Company

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Robert L. Mittl General Manager  
Nuclear Assurance and Regulation

February 14, 1985

Director of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
7920 Norfolk Avenue  
Bethesda, Maryland 20814

Attn: Mr. Albert Schwencer, Chief  
Licensing Branch 2  
Division of Licensing

Gentlemen:

RESPONSE TO HCGS SER OPEN ITEM 3  
HOPE CREEK GENERATING STATION  
DOCKET NO. 50-354

The Hope Creek Generating Station Safety Evaluation Report (SER), Sections 5.2.4.3 and 6.6.3, identify a requirement for Public Service Electric and Gas Company (PSE&G) to provide for NRC staff review acceptable resolutions to three (3) concerns associated with the Hope Creek Pre-Service Inspection (PSI) program. These concerns were previously identified to PSE&G in Request for Additional Information Number 1 (RAI-1), dated October 23, 1984, as RAI-1 Items 1, 2, and 3. The SER identifies these same concerns as part of SER Open Item 3.

By PSE&G request, a meeting was held on November 26, 1984, with NRC Materials Engineering Branch (MTEB) personnel to discuss the staff's concerns with the PSI program. Based on information obtained at this meeting, PSE&G has prepared responses to Items 1, 2, and 3 of RAI-1, and hereby submits these responses as the attached. This portion of SER Open Item 3, therefore, is considered closed unless PSE&G is notified otherwise.

The remaining portion of SER Open Item 3 requires PSE&G to submit relief requests, with supporting justifications, for all components that will not be examined to the requirements of the ASME code, as specified in Sections 5.2.4.3 and 6.6.3 of the SER. As acknowledged in the referenced SER sections,

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the specific areas where code requirements for pre-service and/or in-service inspection cannot be met will be identified after the pre-service examinations are performed. Based on the current pre-service examination schedule, all PSI relief requests will be submitted by November 1, 1985.

Should you have any questions in this regard, please contact us.

Very truly yours,

*H. L. Mitchell/scr*

Attachments

C D. H. Wagner  
USNRC Licensing Project Manager

A. R. Blough  
USNRC Senior Resident Inspector

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ATTACHMENT A

PSE&G RESPONSES TO NRC REQUEST FOR  
ADDITIONAL INFORMATION NUMBER 1 (RAI-1)  
REGARDING THE HOPE CREEK GENERATING STATION  
PRE-SERVICE INSPECTION PROGRAM

NRC RAI-1, Item 1:

Paragraph 10 CFR 50.55a(b)(2)(iv) requires that ASME Code Class 2 piping welds in the RHR systems, ECCS systems, and CHR systems shall be examined. The staff review of the Hope Creek PSI program shows extensive numbers of surface-only examinations for piping welds in such systems. In addition, these systems should not be completely exempted from pre-service volumetric examination based on Section XI exclusion criteria contained in IWC-1220. To satisfy the inspection requirements of General Design Criteria 36, 39, 42, and 45, the PSI must include volumetric examination of a representative sample of welds in the RHR, ECCS, and CHR systems. The PSI program should be revised to include a volumetric examination of a representative sample of the welds in these systems. At other BWR's, the selection of welds and examination methods contained in Code Section XI Winter 1983 Addenda Paragraph IWC-1220 and Tables IWC-2500 has been determined to be acceptable. This should make the PSI examination methods more compatible with future ISI requirements.

PSE&G Response:

The Hope Creek Pre-Service Examination plan (PSI) is being augmented to include additional welds selected in accordance with the 1983 Edition of ASME Section XI, Winter 1983 Addenda. These additional welds are identified in Attachment 1. The PSI plan submitted April 13, 1984, is being revised to incorporate these augmented inspections. The revised plan will be submitted by March 18, 1985.

NRC RAI-1, Item 2:

The staff review of the PSI plan indicates that the use of cladding on piping welds may interfere with effective ultrasonic examination. Plans for qualification of the volumetric examination procedure to be used on the subject welds should be discussed. Standard, minimum code radiography may not be capable of detecting service-induced degradation because the detection of cracks is strongly dependent on the angle of the central axis of the radiation beam with respect to the predominant crack plane. If radiography is planned, provide the technical justification, including qualifications and procedure requirements to demonstrate that the radiography procedure is effective for volumetric examinations.

The Applicant should also provide detailed information describing the specific welds with corrosion resistant cladding and typical dimensions of the cladding.



PSE&G Response:

In addition to the information presented by PSE&G on November 26, 1984 (see NRC meeting summary dated December 18, 1984, for details), the NRC requested more detailed information on typical cladding dimensions of CRC weld joints. Attachment 2 shows sketches of the Reactor Recirculation Loop piping Loop A and B and cladding dimensions for various nominal pipe sizes.

NRC RAI-1, Item 3:

The staff review of the PSI plan has not identified any pre-service examinations scheduled for the Scram Discharge Volume (SDV) system. NUREG-0803, "Generic Safety Evaluation Report Regarding Integrity of BWR Scram System Piping," recommended that periodic ISI of the SDV system be performed that meets the requirements for ASME Code Class 2 piping. This document was implemented by Generic Letter 81-35 dated August 31, 1981, and was addressed to all BWR holders of CP's and Applicants for OL's. Therefore, the PSI plan should be revised to reflect the appropriate pre-service examinations of the SDV system required by Section XI of the ASME Code and recommended by NUREG-0803.

PSE&G Response:

The SDV system at Hope Creek is designed and fabricated to Nuclear Class 2 requirements and will be visually examined during pressure tests (VT-2) in accordance with the 1977 Edition of Section XI as a Nuclear Class 2 System. In accordance with IWC 1220 (b), this system is exempt from other examination requirements. The PSI plan submitted April 13, 1984, has been revised identifying the above information and will be submitted to the NRC by March 18, 1985.

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## Attachment 1

### Augmented Class 2 Preservice Weld Inspections

#### Residual Heat Removal System Piping

Line Number	Weld Number	
1-BC-18GGB-004B	8	Pipe to Elbow
	11	Pipe to Tee
1-BC-18GGB-004C	2	Pipe to Elbow
	3	Elbow to Pipe
1-BC-12GGB-004B	3	Elbow to Pipe
1-BC-18GGB-019A	3	Pipe to Valve
	10	Pipe to Elbow
1-BC-12GGB-019	2	Pipe to Elbow
	3	Elbow to Pipe
1-BC-18GGB-027	3	Elbow to Pipe
	7	Pipe to Valve
1-BC-30HBB-044	1	Reducer to Flange
1-BC-24HBB-044	4	Elbow to Pipe
1-BC-30HBB-046	3	Pipe to Flange
1-BC-24HBB-046	2	Elbow to Pipe
1-BC-18GGB-050A	6	Pipe to Tee
1-BC-18GGB-050B	1	Tee to Pipe
	5	Elbow to Pipe
	6	Pipe to Elbow
	8	Pipe to Elbow
1-BC-18GGB-063A	8	Pipe to Elbow
	12	Pipe to Elbow
	14	Pipe to Tee
	16	Pipe to Tee
	21	Pipe to Elbow
1-BC-12GGB-063A	1	Reducer to Pipe
	2	Pipe to Elbow
1-BC-12GGB-063B	1	Reducer to Pipe
	3	Elbow to Pipe

1-BC-18GGB-066A	3	Pipe to Valve
	7	Pipe to Elbow
	20	Elbow to Pipe
1-BC-18GGB-072	6	Pipe to Tee
	12	Pipe to Valve
	14	Pipe to Elbow
	15	Elbow to Pipe
1-BC-18GGB-075	3	Elbow to Pipe
	5	Elbow to Valve
1-BC-30HBB-087	3	Pipe to Flange
1-BC-24HBB-087	1	Nozzle to Elbow
1-BC-30HBB-088	2	Flange to Pipe
1-BC-24HBB-088	3	Pipe to Elbow

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Reactor Core Spray System Piping

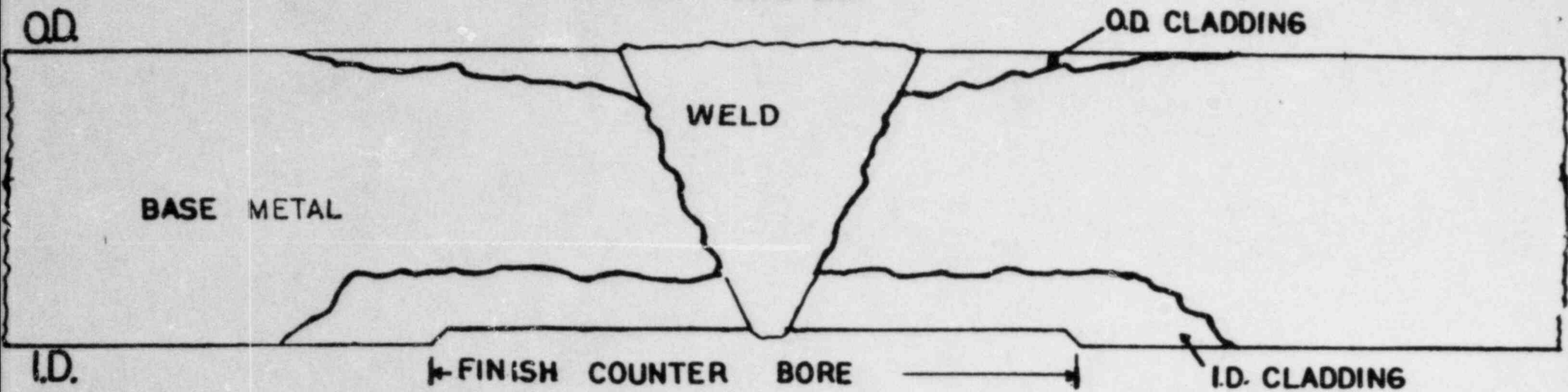
1-BE-14GGB-008	5	Pipe to Elbow
	8	Elbow to Pipe
	11	Pipe to Elbow
	13	Pipe to Elbow
	16	Elbow to Pipe
	17	Pipe to Elbow
	18	Elbow to Elbow
	19	Elbow to Pipe
	20	Pipe to Elbow
	21	Elbow to Pipe
	22	Pipe to Tee
	23	Tee to Pipe
	24	Flange to Reducer
1-BE-14GGB-009	6	Elbow to Pipe
	8	Elbow to Pipe
	11	Pipe to Elbow
	14	Pipe to Elbow
	15	Elbow to Pipe
	18	Pipe to Elbow
	19	Elbow to Elbow
	20	Elbow to Pipe
	21	Pipe to Elbow
	22	Elbow to Pipe
	24	Tee to Pipe

1-BE-12GBB-015	1 4	Reducer to pipe Valve to Pipe
1-BE-12GBB-016	1 4	Reducer to Elbow Valve to Pipe
1-BE-12GBB-017	4 5	Valve to Pipe Pipe to Elbow
1-BE-12GBB-018	2 3	Elbow to Pipe Pipe to Valve
1-BE-16HBB-044	16	Pipe to Flange
1-BE-16HBB-045	15	Tee to Pipe
1-BE-16HBB-046	17	Flange to Pipe
1-BE-16HBB-047	14	Pipe to Tee

D-LFL-5



# CRC WELD



## MATERIALS

PIPE-304 STAINLESS SOLUTION HEAT TREATED  
 WELD-308L  
 CLADDING-308L

## DIMENSIONS

NOMINAL PIPE SIZE	I. D.		WALL THICKNESS		CLADDING O.D.	THICKNESS I. D.
	FINAL MIN.	AS-BUILT MAX.	FINAL MIN.	AS-BUILT MAX.		
28	25.450"	26.477"	1.100"	2.400"*	ESTIMATED 0.19"	APPROXIMATELY 0.25"
22	19.937"	19.994"	1.020"	1.240"	ESTIMATED 0.19"	APPROXIMATELY 0.25"
20	18.360"	18.363"	0.790"	0.880"	ESTIMATED 0.19"	APPROXIMATELY 0.25"
12	11.488"	11.525"	0.599"	0.811"	APPROXIMATELY 0.19"	APPROXIMATELY 0.25"
4	3.865"	3.875"	0.397"	0.537"	ESTIMATED 0.19"	APPROXIMATELY 0.25"

\* HEAVY WALLS ARE TYPICAL  
OF FITTINGS

