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December 13, 1990

Dr. T.E. Murley, Director
Office Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attn: Document Control Desk

Subject: Braidwood Station Units 1 and 2
Inservice Inspection Program (ISI)
NRC Docket Nos. 50-456 and 50-457

Reference: (a) May 21, 1990 S.P. Sands letter
to T.J. Kovach
(b) August 15, 1990 S.C. Hunsader
letter to T.E. Murley

Reference (a) provided the NRC request for additional information in support of the ongoing NRC review of the Braidwood Unit 1 and 2 ISI program. In order to clarify what was required in this request, a teleconference was conducted on July 11, 1990 between Commonwealth Edison, the NRC staff and Idaho National Engineering Laboratory (I.N.E.L.). The data requested during this teleconference was provided in reference (b). One issue, left open on July 11, 1990, was the topic of a teleconference between the same parties, on November 14, 1990. As a result of this teleconference certain relief requests and notes contained in the Braidwood ISI Program have been revised or deleted. The enclosure describes these changes and provides the Edison response to the remaining item requested in reference (a). Accordingly, enclosed are new revisions to be included in the NRC's copy of the Braidwood ISI Program.

Please address any questions concerning this submittal to this office.

Very truly yours,

A.R. Checca
Nuclear Licensing Administrator

/lmw/sc1/ID139

cc: Resident Inspector-BW
S. Sands-NRR
W. Shafer-RIII

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NRC Request:

In Commonwealth Edison's September 18, 1986 submittal, the Licensee committed to examine a random sampling of 7.5% of the large bore (greater than 4 inches) piping circumferential welds in the Safety Injection, Chemical and Volume Control, and Containment Spray systems. This submittal states that "These welds will be examined over the ten year inspection interval as described in the ISI Program and will be tracked for the life of the plant." However, this commitment is not reflected in the Braidwood Nuclear Power Station, Units 1 and 2, First 10-Year Interval ISI Program Plan. The staff notes that the Chemical and Volume Control system and 6, 8, 12, 14 and 24-inch lines in the Safety Injection system have been exempted from inservice volumetric examinations based on the pressure/temperature exemption criteria in Section XI.

Verify that volumetric examinations of a 7.5% sampling of the Class 2 piping welds in these systems will be performed, as identified in the September 18, 1986 submittal, and that the ISI Program Plan will be revised accordingly for both Units 1 and 2. The Licensee should note that later Code editions and addenda do not permit pressure/temperature exemptions for RHR and ECC systems.

Edison Response:

The NRC has expressed a concern dealing with intergranular stress corrosion cracking (IGSCC) in lines that contain stagnant borated water. Braidwood Station will perform augmented volumetric examinations on class two ECCS systems; Containment Spray (CS), Chemical and Volume Control (C.V.), Residual Heat Removal (R.H.) and Safety Injection (SI) that are not currently subject to volumetric examination as required by code. The inspections shall include seven and one-half percent (7.5%) of the total population of circumferential welds in piping greater than four inches (4") nominal pipe size which contains stagnant borated water. Nominal pipe wall thickness and pressure/temperature exemptions do not apply.

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NOTE 10

The NRC has expressed a concern dealing with intergranular stress corrosion cracking (IGSCC) in lines that contain stagnant borated water. Braidwood Station will perform augmented volumetric examinations on class two ECCS systems; Containment Spray (CS), Chemical and Volume Control (C.V.), Residual Heat Removal (R.H.) and Safety Injection (SI) that are not currently subject to volumetric examination as required by code. The inspections shall include seven and one-half percent (7.5%) sampling > 4" Nominal pipe size of the total population of circumferential welds which contain stagnant borated water. Nominal pipe wall thickness and pressure/temperature exemptions do not apply.

RELIEF REQUEST NR-12

1. SYSTEM: Residual Heat Removal (Residual Heat Removal Heat Exchanger).
2. NUMBER OF ITEMS: 6

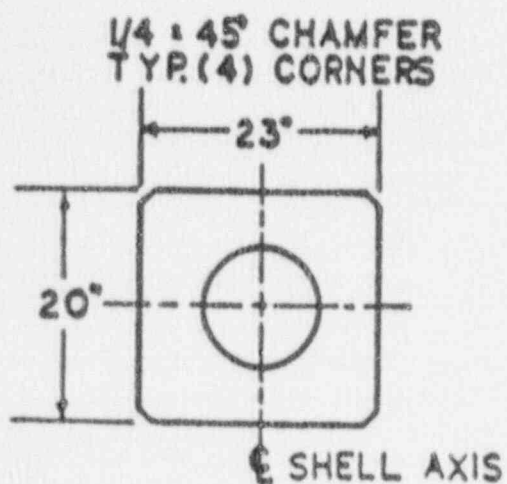
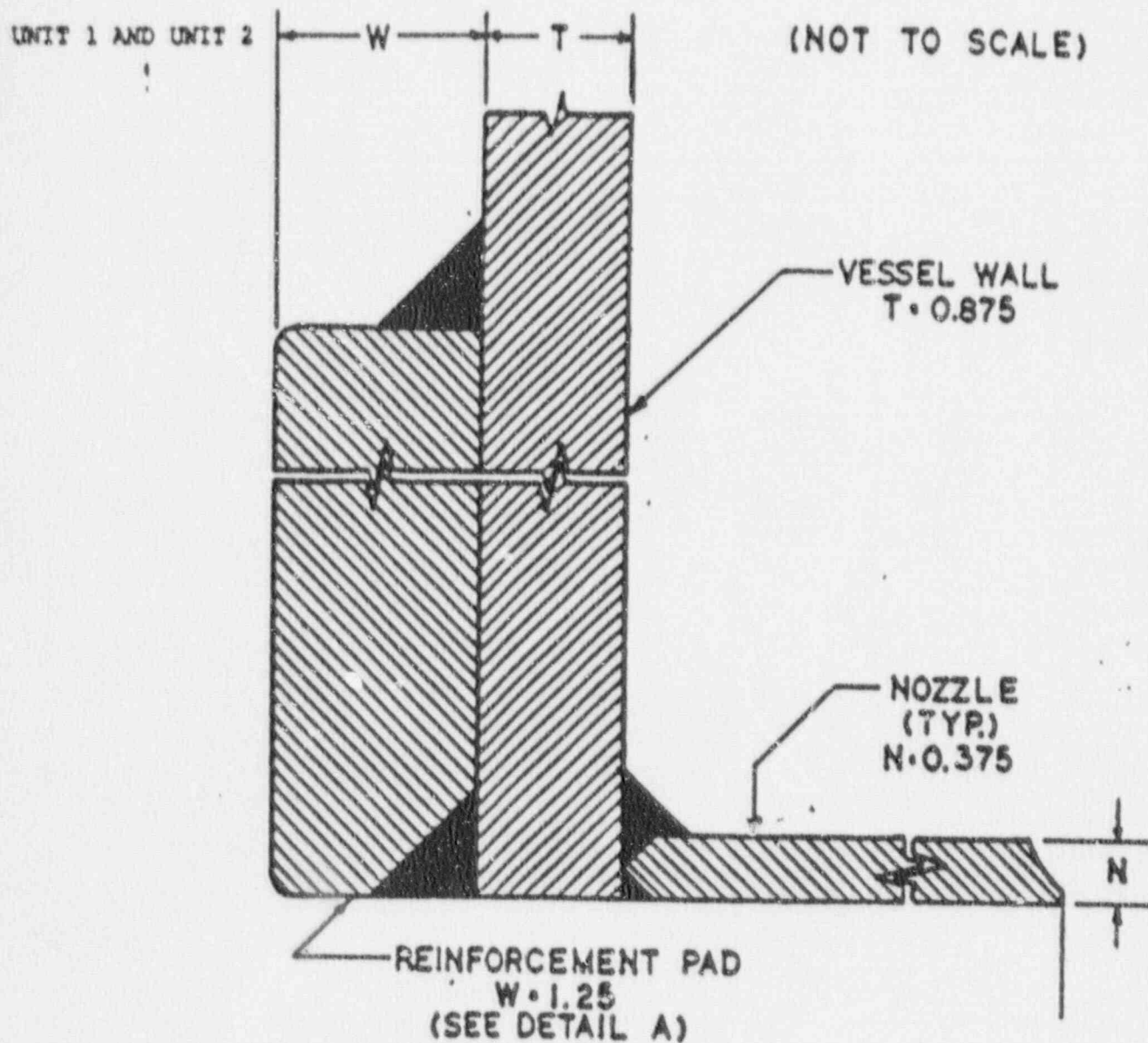
<u>Component Number</u>	<u>Weld Number</u>	<u>Attachment Numbers</u>	<u>Restricted Exam</u>
1RH02AA	RHXN-01, RHXN-02	1	Inner Radii and Nozzle to Vessel Weld
2RH02AA	RHXN-01, RHXN-02	1	Inner Radii and Nozzle to Vessel Weld

3. A.S.M.E. CODE CLASS: 2
4. A.S.M.E. CODE SECTION XI REQUIREMENTS: Subsection IWC, Table IWC-2500-1, Examination Category C-B, Item C2.22 requires volumetric examination of the nozzle inner radius and Item C2.21 requires volumetric and surface examination of the Nozzle to Shell weld of the regions described in Figure IWC 2500-4(a) or (b), for nozzles without reinforcing plate in vessels >1/2 in. nominal thickness. Examinations shall be conducted on nozzles at terminal ends of piping runs selected for examination under Examination Category C-F, each inspection interval.
5. BASIS FOR RELIEF: The nozzles listed above contain inherent geometric constraints which limit the ability to perform meaningful ultrasonic examinations.

The Residual Heat Removal Heat Exchanger is approximately 7/8 in. nominal wall thickness with nozzles of 1 1/4 inch diameter and approximately 3/8 in. in nominal wall thickness. The configuration is best characterized as a fillet welded nozzle using an internal reinforcement pad and, thereby is not analogous to a full penetration butt welded nozzle as shown in Figure IWC-2520-4. In addition, the inner radius of the reinforcement pad would be representative of the nozzle inner radius required for inspection. The inherent geometric constraints of the nozzle design prevent the performance of the required ultrasonic examinations of the nozzle inner radius, see attachment 1. A nozzle-to-shell UT may not achieve full ASME coverage of the weld area.

RELIEF REQUEST NR-12

6. ALTERNATE TEST METHOD: The welds listed above will receive the required Section XI surface examinations. Visual examination (VT-1) of the nozzle inner radii shall be performed either directly or remotely to the extent practical when disassembly is required for maintenance purposes not to exceed once per inspection interval. In addition, visual examination (VT-2) shall be performed each inspection period on all pressure retaining components. A best effort UT shall be performed on the RHR HX nozzle-to-shell welds on a frequency consistent with ASME Section XI.
7. JUSTIFICATION: The VT-1 examination will assure early detection of detrimental flaws. Therefore, in performing the proposed alternative examinations during disassembly for maintenance, an adequate level of structural integrity can be assured for continued plant operation.
8. APPLICABLE TIME PERIOD: This relief will be required for the first 120 month inspection interval.



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