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 RHODE, G. K. Niagara Mohawk Power Corp.  
 RECIP. NAME: RECIPIENT AFFILIATION  
 BRUNNER, E. J. Division of Resident & Project Inspection

SUBJECT: Interim deficiency rept, originally reported on 810227, re possible horizontal crack in Unit 2, primary containment liner base, ring T-weld. Ultrasonic exam of joint will be performed using dual pitch & catch technique by 810831.

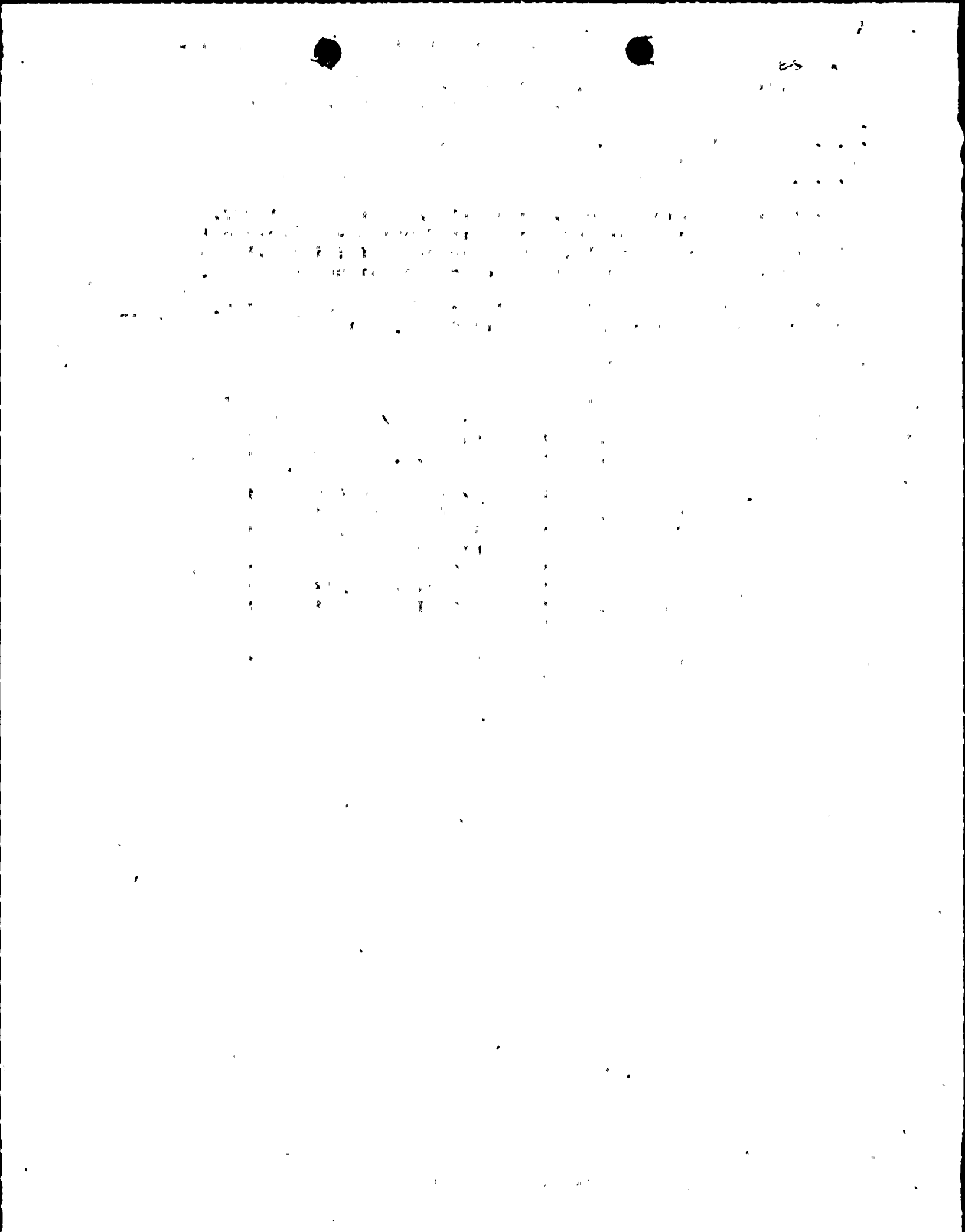
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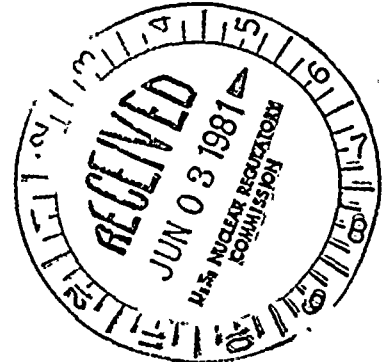


May 28, 1981

Office of Inspection and Enforcement  
Region I  
Attention: Mr. Elden J. Brunner, Acting Director  
Division of Resident and Project Inspection  
U. S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406

Dear Mr. Brunner:

Re: Nine Mile Point Unit 2  
Docket No. 50-410



Attached is an interim report in accordance with 10CFR50.55(e) for a potential deficiency regarding a possible horizontal defect in the Nine Mile Point Unit 2 primary containment liner base ring T-weld. This potential deficiency was originally reported to Mr. Kister of your staff on February 27, 1981 and was the subject of an interim 50.55(e) report dated March 30, 1981.

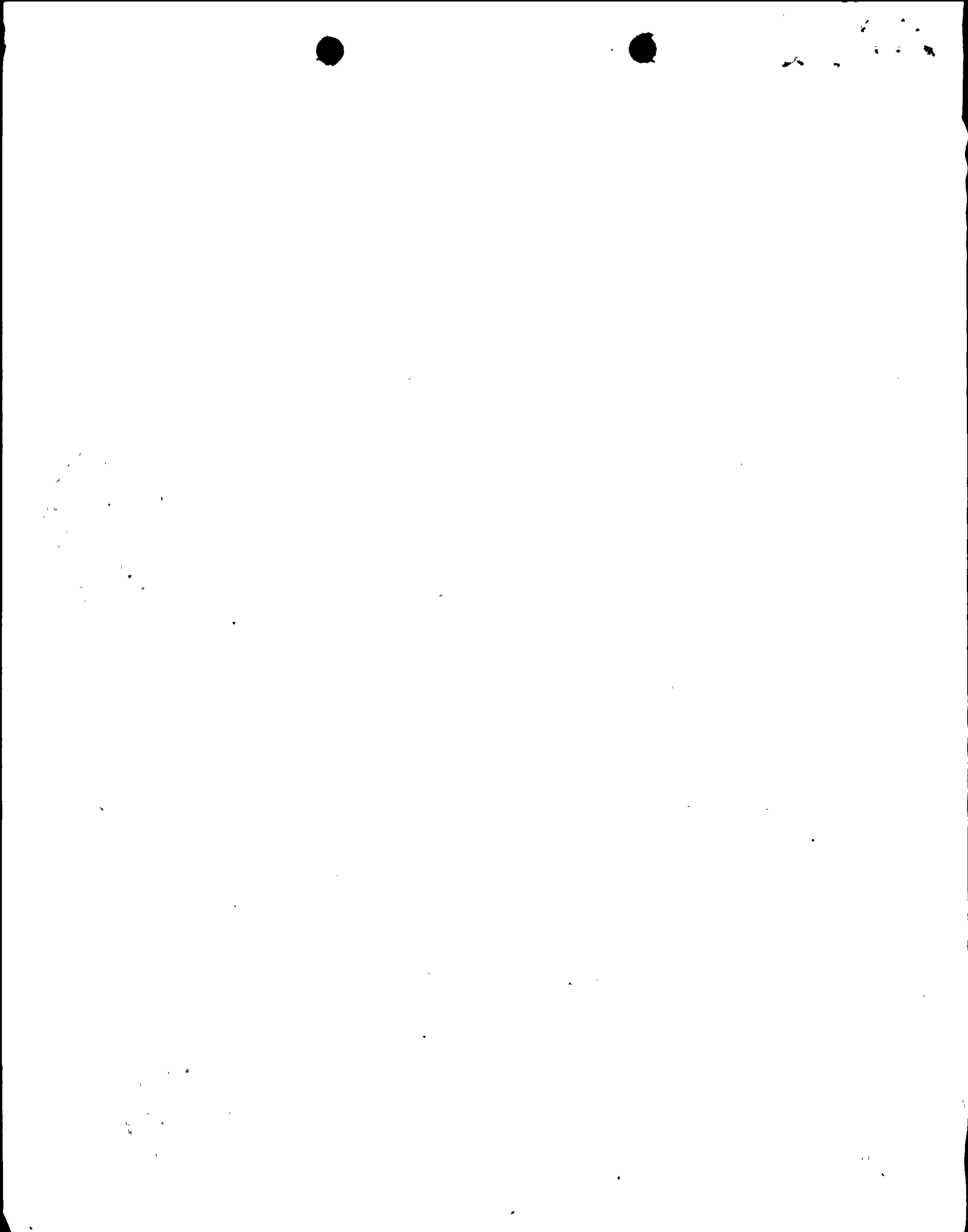
As indicated in our interim report dated March 30, 1981, although the existence of the defect in the Unit 2 weld has not been verified, a horizontal crack was discovered during the rework of a similar weld on the Gulf States Utilities River Bend Project. There is a reasonable basis to believe that a horizontal defect could exist in the root of the double bevel T-weld on Unit 2, since both liners were fabricated by the same vendor using a similar welding process and procedure and during the same time span.

This weld was also the subject of another potentially reportable 10 CFR 50.55(e) deficiency which was initially reported to your office on May 18, 1979. The ultrasonic examination performed for this potential deficiency was performed in accordance with ASME Section III, NE-5000 and was sufficient to detect the type of indications normally found in this type of weld joint. However, a supplementary ultrasonic examination technique is required to adequately detect the unique type of horizontal crack observed in the River Bend metallurgical samples.

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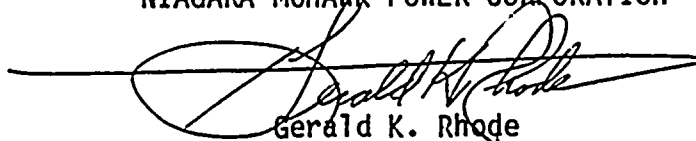


Page 2  
May 28, 1981

A final report will be submitted by October 30, 1981.

Very truly yours,

NIAGARA MOHAWK POWER CORPORATION

A handwritten signature in dark ink, appearing to read "Gerald K. Rhode", is written over a horizontal line. The signature is stylized and cursive.

Gerald K. Rhode  
Vice President  
System Project Management

PEF:ja  
Attachment  
xc: Director of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555



11-11-11

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT UNIT 2

DOCKET NO. 50-410

Interim Report to Potentially  
Reportable 10 CFR 50.55(e) Deficiency  
Involving the Primary Containment  
Liner Base Ring T-weld

Description of the Potential Deficiency

The base ring T-weld is 285 feet 11 inches long and is located in the bottom of the suppression pool at the junction of the floor liner and the wall liner. It is shown conceptually in Figure 12.5-5 of the Unit 2 Preliminary Safety Analysis Report (the test channel shown in this Figure has not been installed yet). It consists of 20 shop-fabricated assemblies each containing approximately 13 feet 3 inches of double bevel weld with 5/8-inch fillets on each side. Between each of the above assemblies is a 1-foot-long segment, field welded with a single bevel backing bar weld with a 5/8-inch fillet on one side. The cross section of the joint is an inverted tee formed by two 1 1/4-inch-thick plates, the base plate being 6 inches wide and the riser plate being 9 inches high. Cadweld sleeves are welded to the underside of the base on a 22-inch spacing. The plate material is SA 537 CL2.

The weld in question is the double bevel portion of the weld joint which was welded in the fabrication shop of Graver Northeast, Incorporated, in mid-1976. The root passes of this weld were made by a shielded metal arc welding (SMAW) process and the remaining passes were completed by a submerged arc welding (SAW) process using twin electrodes, one from each side of the weld. The reason for suspecting that this deficiency could exist on Unit 2 is because defects were found during the rework of a similar weld on the River Bend Project. Metallurgical samples taken from the River Bend weld confirmed the existence of horizontal cracks.

Corrective Action

As part of the corrective action on the potentially reportable deficiency reported on May 18, 1979, concerning the inadequate ultrasonic examination performed by Graver, the total length of the weld was reexamined. Single transducer 70° and 45° UT was used and indications were recorded.

A review of the ultrasonic examination performed on the joint has been conducted. It was concluded that it was performed according to ASME III NF 5000 code requirements and that the single 45° and 70° transducer used is sufficient to detect the type of indications normally found in this type of weld joint. A study of the techniques used to examine the weld was made on samples from the River Bend Project which contained the horizontal defect and it was concluded that the single 70° and 45° transducer would not reliably detect the unique horizontal defect, but a dual 70° pitch and catch technique (as shown in the attached Figure 1) would.

Additional ultrasonic examination of the joint will be performed utilizing the dual 70° pitch and catch technique to determine whether the horizontal defect exists and needs to be reworked along with the indications recorded by the single 45° and 70° examinations. This ultrasonic examination will be performed by August 31, 1981 and the results reported to you in a final report by October 30, 1981.



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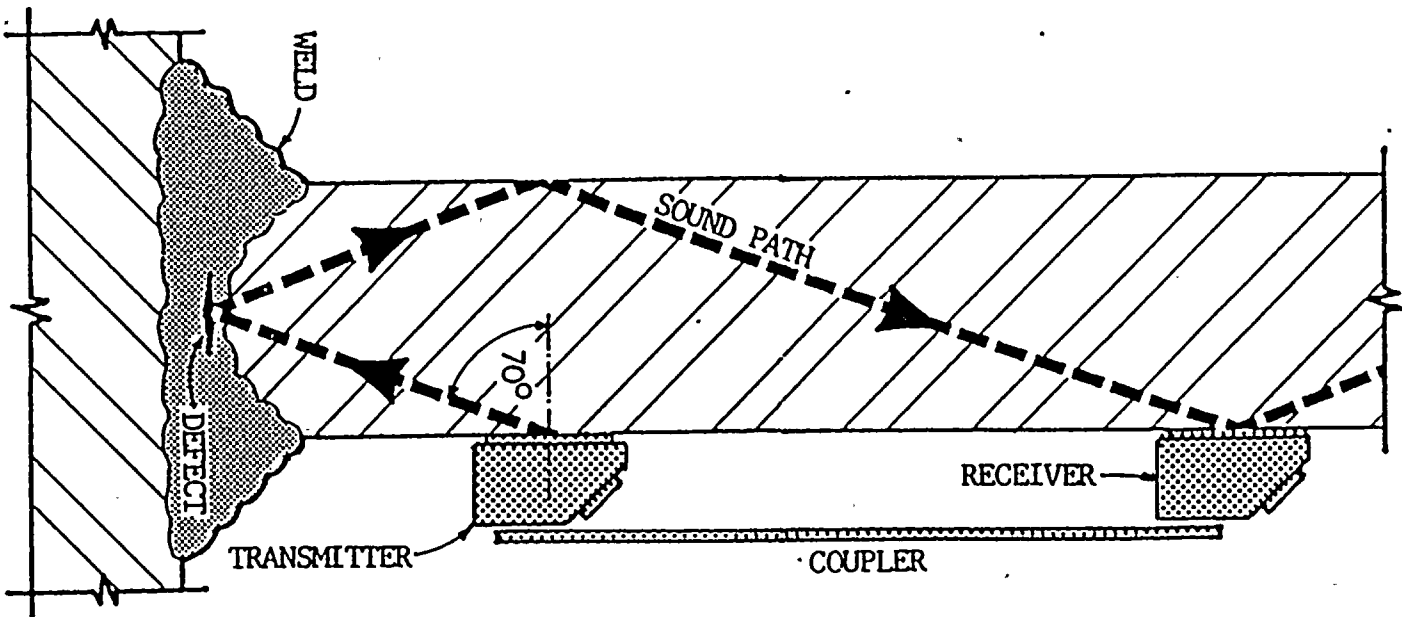


FIGURE 1

TWO PROBES COUPLED TOGETHER  
 AT A PRESET DISTANCE AND  
 ULTRASOUND IS BOUNCED FROM  
 TRANSMITTER TO RECEIVER;  
 IF NO DEFECT IS PRESENT  
 NO SOUND IS DEFLECTED.

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