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 FACIL: 50-244 Robert Emmet Ginna Nuclear Plant, Unit 1, Rochester G 05000244
 AUTH. NAME: MAIER, J. E. AUTHOR AFFILIATION: Rochester Gas & Electric Corp.
 RECIP. NAME: CRUTCHFIELD, D. RECIPIENT AFFILIATION: Operating Reactors Branch 5

SUBJECT: Submits addl info re proposed tubesheet sleeve design, per request. Info addresses inspectability, pullout & corrosion potential. Fifty tubesheet sleeves will be installed during present refueling outage, per 830420 ltr.

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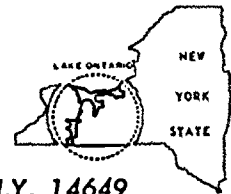
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JOHN E. MAIER
Vice President

TELEPHONE
AREA CODE 716 546-2700

April 26, 1983

Director of Nuclear Reactor Regulation
Attention: Mr. Dennis M. Crutchfield, Chief
Operating Reactors Branch No. 5
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Steam Generator Sleaving
R. E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Crutchfield:

On April 20, 1983 we submitted information to you regarding a proposed tubesheet sleeve design. In subsequent telephone conversations, you have requested some additional information regarding the tubesheet sleeves. The following is in response to those requests:

1. Inspectability - The upper expansion transition in the existing steam generator tube resulting from the upper tubesheet sleeve explosive weld can be inspected using our standard eddy current equipment and techniques. By using lower frequencies we can detect flaws in this transition comparable in size to what we can currently detect in the existing tube roll transition. Exact sizing of these indications will be somewhat more difficult due to the lower frequencies required. However, if flaws are detected in this area, additional inspections will be performed using more sensitive techniques such as the rotating, radial differential probe method developed for inspection of the braze/expansion area of brazed sleeves. This equipment is described in our March 25, 1983 letter. The attached drawing shows details of the area to be inspected. The geometry is very similar to that in the braze/expansion area.
2. Pullout - The upper expansion transition in the existing steam generator tube resulting from the tubesheet sleeve explosive weld is a minimum of 1 inch below the top of the tubesheet. In Section 6.2.3.3 of our April 26, 1982 Steam Generator Evaluation Report there is an analysis of pullout. That analysis shows a

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DATE April 26, 1983
TO Mr. Dennis M. Crutchfield

2

maximum stretch of 0.14 inches under worst case pressure loading. Although that analysis was performed specifically for pullout from a tube support plate, the conclusions are equally valid for the tubesheet.

3. Corrosion Potential - To date, no detectable tubesheet intergranular attack (IGA) has been found within 4 inches of the top of the tubesheet at Ginna. As a result of the crevice flushing process, the detectable indications, in general, are being found farther below the top of the tubesheet with time. These results, together with the all volatile secondary water treatment (AVT) currently utilized at Ginna, reduces the probability of corrosion above the proposed tubesheet sleeves.

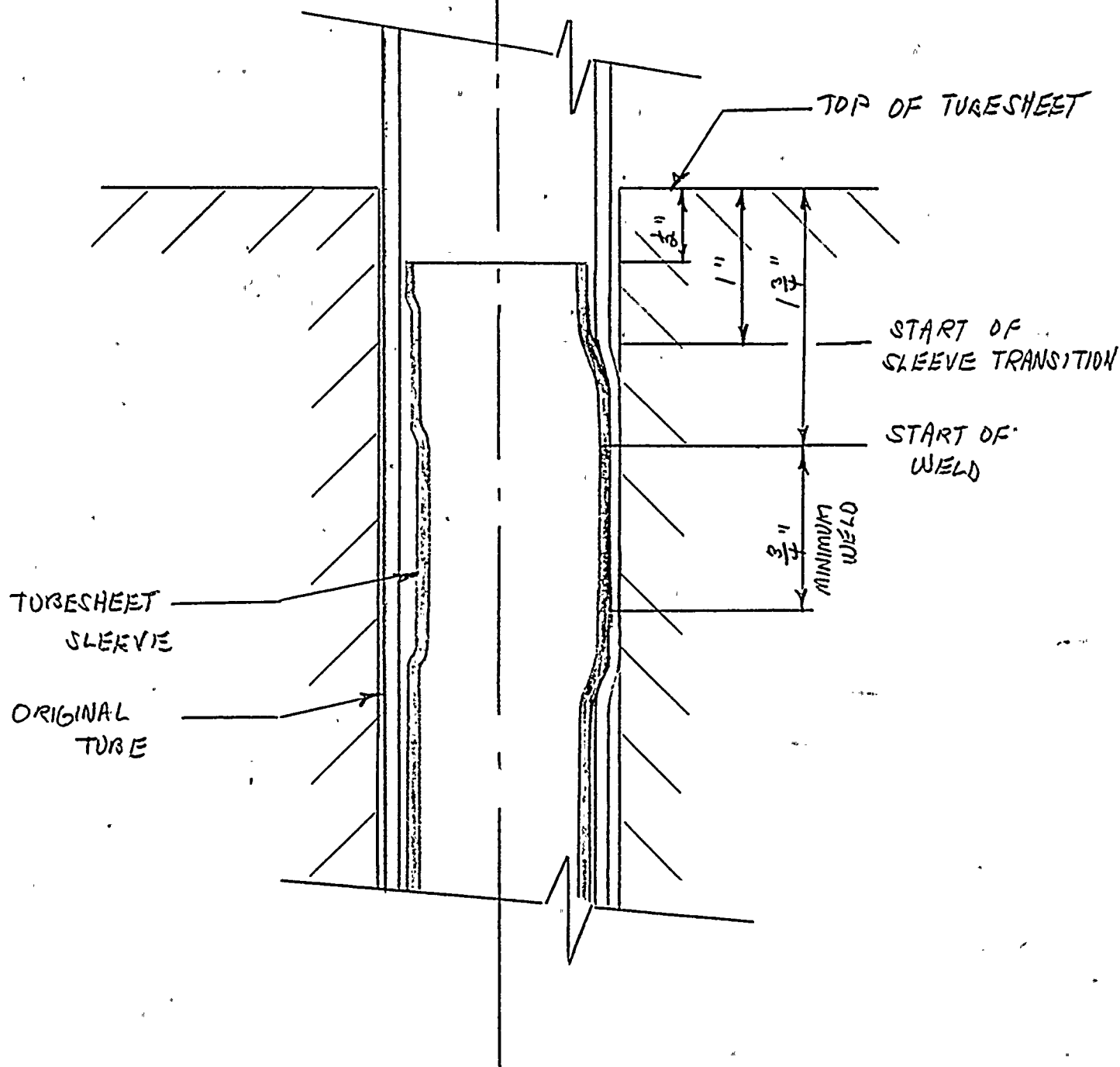
As indicated in our April 20 letter, we are planning to install approximately 50 tubesheet sleeves during our present refueling outage. Materials are currently in place at Ginna for installation of tubesheet sleeves. Preparation and review of the tubesheet sleeve installation procedure will be completed in the very near future.

Very truly yours,


John E. Maier

BEFORE EXPLOSIVE
WELD

AFTER EXPLOSIVE
WELD



TUBESHEET SLEEVE

UPPER END.

