

THE CINCINNATI GAS & ELECTRIC COMPANY

March 18, 1983  
JCH-83-L27

NUCLEAR REGULATORY COMMISSION  
Zimmer Nuclear Power Station  
Unit 1  
P. O. Box 2021  
Moscow, Ohio 45153

Attention: W. F. Christianson

RE: Wm. H. Zimmer Nuclear Power Station - Unit 1  
REACTOR RECIRCULATION ELBOW WELD SENSATIZATION  
W. O. 57300 Job E-5590 File 956

Dear Mr. Christianson:

CG&E is continuing with its evaluation of the sensitized RR Elbow Weld found during the NRC Metallography. GE San Jose has received the NRC Metallograph provided by Technimet, Inc. GE is unable to assess the sensitization of the weld based on the information provided. CG&E has elected to bring GE Materials Engineering Group on site to assess this weld for themselves. Based on the phone conversations on 3-18-83 between yourself, J. C. Herman and F. S. Hoover (CG&E) the following agreements were reached:

1. The assessment by GE can be performed on the jobsite in accordance with the NRC letter dated 1-27-83.
2. All work to be performed in accordance with established site programs.

Per NRC request (K. Herring) CG&E will also perform additional material analysis on strut and snubber pins for approximately 21 supports. This analysis is for the lead content of the material. Approximately one gram of the material will be used in this analysis. This may be done either by drilling or replacement of the pin. This analysis is approved in accordance with the NRC letter dated January 27, 1983.

If you have any questions concerning this matter, please contact me at 553-2681 ext. 22.

Very truly yours,

THE CINCINNATI GAS & ELECTRIC CO.

*J. C. Herman*  
J. C. Herman  
Technical Coordinator

8304170413 830414  
PDR ADOCK 05000358  
A PDR

cc: E. A. Borgmann  
H. R. Sager  
B. K. Culver  
J. B. Vorderbrueggen

# LABORATORY REPORT



METCUT RESEARCH ASSOCIATES INC.

3980 Rosslyn Drive, Cincinnati, Ohio 45209 / Teletype: 810-461-2840 Telephone: (513) 271-5100

Henry J. Kaiser Company  
Attn: Scott Hoover  
To: P. O. Box 201  
Moscow, OH 45153

Number: 1912-35244-1

Date: March 21, 1983

Authorization: 9965971443

Project: Chemical Analysis (1) of Twenty-two Chip Samples for Percent Composition of Elemental Lead Content. Elemental Percent Values were obtained in Accordance with ASTM E-350. Results were as follows:

<u>Sample Identification</u>	<u>Lead Content</u>
EX Floor #1	0.001%
EX Floor #2	0.001
0345RS	0.001
050SR-S	0.001
0845RP	0.001
0845RS	0.002
IRH139SR Clamp	0.012
IRH139SR End Attachment	0.001
IRH1525RP	0.002
163SR End Attachment	0.002
1635SRP Extension at Pipe End	0.001
179SRP	0.001
179SRP	0.001
185SRP	0.001
185SRS	0.001
187SRP	0.002
197SR Pin-1 Clevis	0.001
198SRP	0.001
198SRS	0.001
208SRP	0.001
208SRS	0.001

(1) Analysis performed by F. C. Broeman & Company, Cincinnati, OH.

A handwritten signature in cursive script, reading "Thomas D. DiLullo", is written over a horizontal line.  
Thomas D. DiLullo  
Chief Metallographer

# LABORATORY REPORT



## METCUT RESEARCH ASSOCIATES INC.

3980 Rosslyn Drive, Cincinnati, Ohio 45209 / Teletype: 810-461-2840 / Telephone: (513) 271-5100

To: Henry J. Kaiser Company  
ATTN: Scott Hoover  
P.O. Box 201  
Moscow, OH 45153

Number: 1912-35244-2

Date: March 22, 1983

Authorization: 7070-51-800

Project: Chemical Analysis (1), Hardness and Tensile Testing of One Part  
Identified as Clamp No. 1RH139SR.

### I. Chemical Analysis

Chemical composition of the submitted clamp was performed in accordance with ASTM E-30 and E-315. Elemental percent values were as follows.

#### Limits of AISI 4140

Carbon	0.40%	0.38% - 0.43%
Manganese	0.76	0.75 - 1.00
Phosphorus	0.015	0.040 Max.
Sulphur	0.018	0.040 Max.
Silicon	0.22	0.20 - 0.35
Chromium	0.80	0.30 - 1.10
Molybdenum	0.27	0.15 - 0.25
Nickel	0.15	---
Lead	0.012	---

(1) Analysis performed by F. C. Broeman & Company of Cincinnati, Ohio.

### II. Tensile Results

Tensile specimen manufactured from supplied clamp was tested at room temperature using methods prescribed in ASTM E8.

Nominal Gage Section: 0.25" diameter x 1.0" long  
Strain Rate thru 0.2% Yield: 0.005 in./in./min.  
Head Rate thence to Failure: 0.05 in./in.

Thomas D. DiLullo  
Chief Metallographer

Louis J. Fritz, Manager  
Creep, Stress Rupture & Tensile Testing

# LABORATORY REPORT (cont'd)



**METCUT RESEARCH ASSOCIATES INC.**

3980 Rosslyn Drive, Cincinnati, Ohio 45209 / Teletype: 810-461-2840 / Telephone: (513) 271-5100

Number: 1912-35244-2

<u>MRAI</u> <u>Number</u>	<u>Specimen</u> <u>Identification</u>	<u>Y.S.</u> <u>(ksi)</u>	<u>0.2% Y.S.</u> <u>(ksi)</u>	<u>Elong.</u> <u>(%)</u>	<u>R.A.</u> <u>(%)</u>
T-40260	1RH139SR (Clamp)	131.8	114.1	21.0	66.7

## III. Hardness

Hardness values were performed in accordance with ASTM E-18. Direct (1)  
hardness of the part averaged 26.0 Rc.

(1) Average of five readings.