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Docket Number 50-346

License Number NPF-3

Serial Number 1-1274

May 15, 2002

Mr. J. E. Dyer, Administrator
United States Nuclear Regulatory Commission
Region III
801 Warrenville Road
Lisle, IL 60532-4351

Subject: Supplemental Information in Response to NRC Question Number 24 on
the Preliminary Probable Cause Summary Report dated March 22, 2002

Ladies and Gentlemen:

On April 30, 2002, Davis-Besse Nuclear Power Station, Unit 1 (DBNPS) submitted to the NRC letter Serial Number 1-1272, "Responses to NRC Questions on the Preliminary Probable Cause Summary Report dated March 22, 2002" regarding the Reactor Pressure Vessel (RPV) head degradation. The purpose of this letter is to provide the NRC with supplemental information on crack profiles for significant cracks on nozzles 2 and 3, as discussed in the response to question number 24 of the aforementioned letter.

Cracks that extend above the root of the J-Groove weld were profiled. Crack profiles are provided for two cracks on nozzle 3 and seven cracks on nozzle 2. Elevation values are referenced from the Control Rod Drive nozzle flange face.

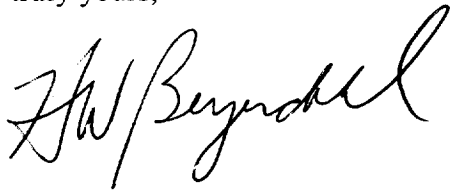
Some of the crack profiles show what appears to be a separate inside diameter (ID) connected crack above the main crack. According to the UT-Level III Examiner, it is possible that this is actually connected to the main crack, however, the data shows separation between the cracks. The separation could be caused by loss of contact due to weld shrinkage and may account for what appears to be two separate cracks when in fact they may be the same crack.

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In addition, a revised ultrasonic examination data sheet and top-down profile are enclosed for nozzle 2, which includes the recently added flaw 13 that was discussed with the NRC during the May 7, 2002 Root Cause Analysis Meeting. Flaw 13 was not identified in the Root Cause Analysis Report, which was submitted to the NRC on April 18, 2002 by letter Serial Number 1-1270, therefore, the enclosed revision to Table 2 and Figure 9 are provided to update that report. A Condition Report has been generated to evaluate the omission of flaw 13 from the Root Cause Analysis Report.

If you have any questions or require additional information, please contact Mr. David H. Lockwood, Manager – Regulatory Affairs, at (419) 321-8450.

Very truly yours,

A handwritten signature in black ink, appearing to read "D.H. Lockwood". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Enclosure and Attachment

cc: USNRC Document Control Desk
D.V. Pickett, DB-1 NRC/NRR Project Manager
C.S. Thomas, DB-1 Senior Resident Inspector
Utility Radiological Safety Board

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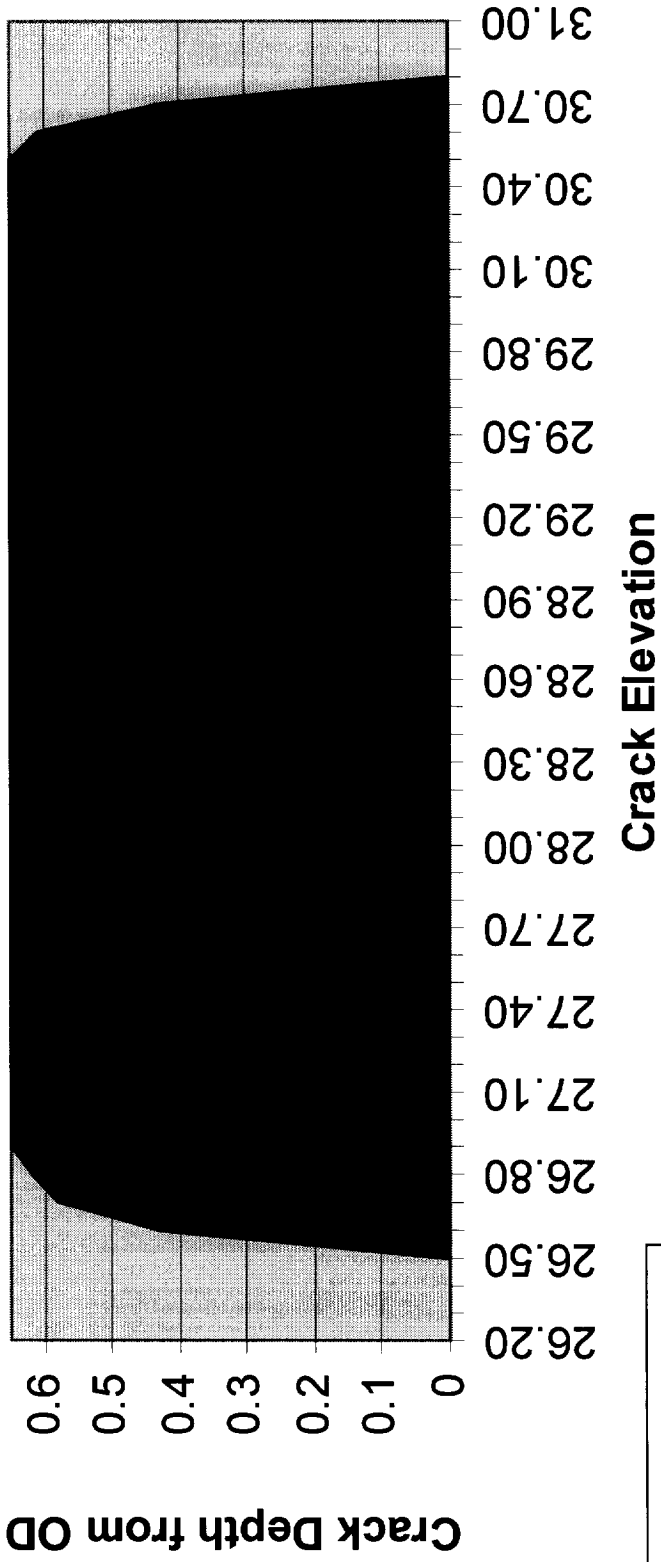
Nozzle 3

Flaw #1

| | |
|------------------------|------------------|
| Wall Tk. | 0.649 in. |
| | Elevation |
| Crack Start | 26.6 in. |
| Crack End | 30.68 in. |
| Upper Weld Edge | 27.8 in. |
| Lower Weld Edge | 29.1 in. |
| End of Nozzle | 30.75 in. |

| Meas. Location | Elevation | Depth from Tube OD | UT Depth from ID |
|----------------|-----------|--------------------|------------------|
| A | 26.60 | 0.429 | 0.22 |
| B | 26.70 | 0.579 | 0.07 |
| C | 26.80 | 0.619 | 0.03 |
| D | 26.90 | 0.649 | 0 |
| E | 27.00 | 0.649 | 0 |
| F | 27.10 | 0.649 | 0 |
| G | 27.20 | 0.649 | 0 |
| H | 27.30 | 0.649 | 0 |
| I | 27.40 | 0.649 | 0 |
| J | 27.50 | 0.649 | 0 |
| K | 27.60 | 0.649 | 0 |
| L | 27.70 | 0.649 | 0 |
| M | 27.80 | 0.649 | 0 |
| N | 27.90 | 0.649 | 0 |
| O | 28.00 | 0.649 | 0 |
| P | 28.10 | 0.649 | 0 |
| Q | 28.20 | 0.649 | 0 |
| R | 28.30 | 0.649 | 0 |
| S | 28.40 | 0.649 | 0 |
| T | 28.50 | 0.649 | 0 |
| U | 28.60 | 0.649 | 0 |
| V | 28.70 | 0.649 | 0 |
| W | 28.80 | 0.649 | 0 |
| X | 28.90 | 0.649 | 0 |
| Y | 29.00 | 0.649 | 0 |
| Z | 29.10 | 0.649 | 0 |
| AA | 29.20 | 0.649 | 0 |
| AB | 29.30 | 0.649 | 0 |
| AC | 29.40 | 0.649 | 0 |
| AD | 29.50 | 0.649 | 0 |
| AE | 29.60 | 0.649 | 0 |
| AF | 29.70 | 0.649 | 0 |
| AG | 29.80 | 0.649 | 0 |
| AH | 29.90 | 0.649 | 0 |
| AI | 30.00 | 0.649 | 0 |
| AJ | 30.10 | 0.649 | 0 |
| AK | 30.20 | 0.649 | 0 |
| AL | 30.30 | 0.649 | 0 |
| AM | 30.40 | 0.649 | 0 |
| AN | 30.50 | 0.649 | 0 |
| AO | 30.60 | 0.609 | 0.04 |
| AP | 30.70 | 0.429 | 0.22 |

Crack Profile for Nozzle 3, Flaw #1



All dimensions are inches

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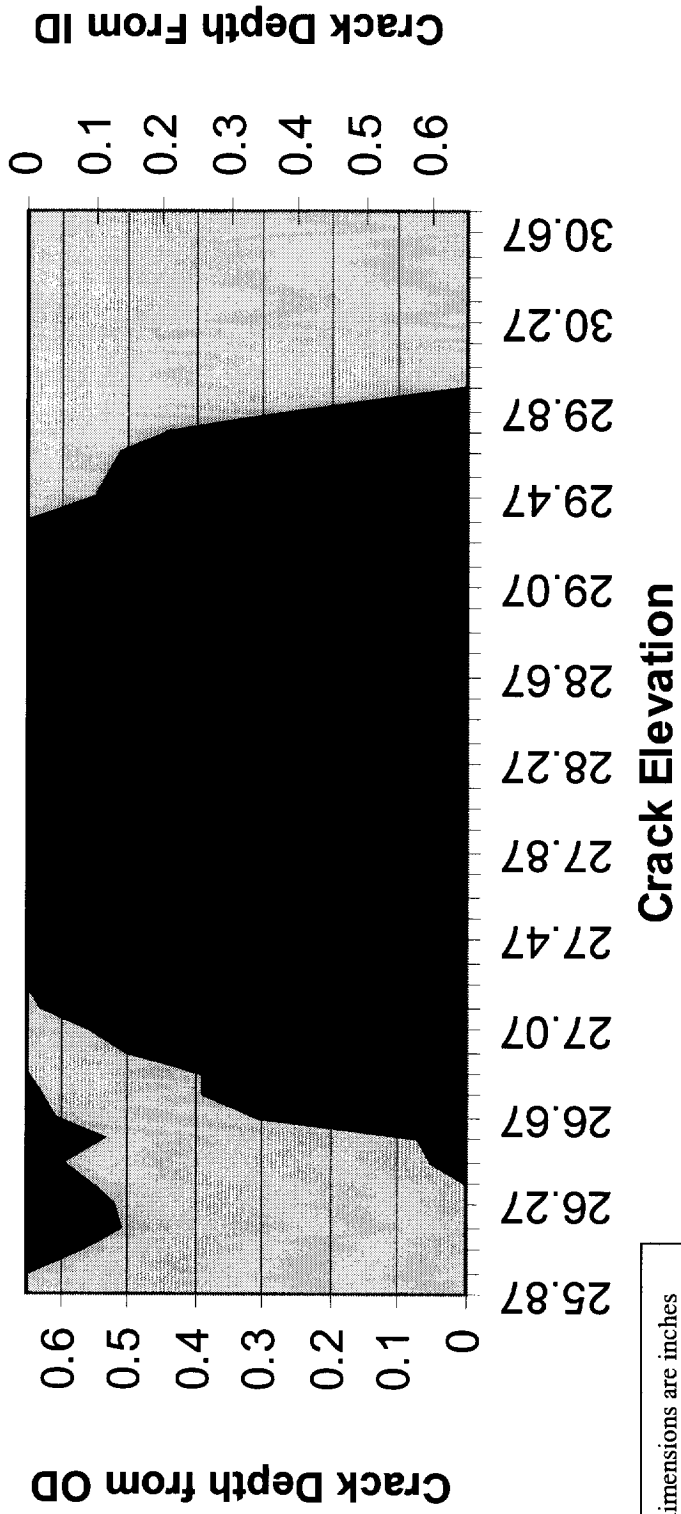
Nozzle 3

Flaw #4

| | |
|-----------------|------------------|
| Wall Tk. | 0.649 in. |
| | Elevation |
| Crack Start | 26.07 in. |
| Crack End | 29.89 in. |
| Upper Weld Edge | 26.9 in. |
| Lower Weld Edge | 28.4 in. |
| End of Nozzle | 30.75 in. |

| Meas. Location | Elevation | Depth from Tube OD | OD Connected Portion | ID Connected Portion |
|----------------|-----------|--------------------|----------------------|----------------------|
| | | | UT Depth from ID | UT Depth from ID |
| A | 26.07 | | | 0.08 |
| B | 26.17 | | | 0.14 |
| C | 26.27 | | | 0.13 |
| D | 26.37 | | | 0.09 |
| E | 26.47 | 0.049 | 0.6 | 0.05 |
| F | 26.57 | 0.069 | 0.58 | 0.11 |
| G | 26.67 | 0.309 | 0.34 | 0.04 |
| H | 26.77 | 0.389 | 0.26 | 0.02 |
| I | 26.87 | 0.389 | 0.26 | |
| J | 26.97 | 0.499 | 0.15 | |
| K | 27.07 | 0.559 | 0.09 | |
| L | 27.17 | 0.629 | 0.02 | |
| M | 27.27 | 0.649 | 0 | |
| N | 27.37 | 0.649 | 0 | |
| O | 27.47 | 0.649 | 0 | |
| P | 27.57 | 0.649 | 0 | |
| Q | 27.67 | 0.649 | 0 | |
| R | 27.77 | 0.649 | 0 | |
| S | 27.87 | 0.649 | 0 | |
| T | 27.97 | 0.649 | 0 | |
| U | 28.07 | 0.649 | 0 | |
| V | 28.17 | 0.649 | 0 | |
| W | 28.27 | 0.649 | 0 | |
| X | 28.37 | 0.649 | 0 | |
| Y | 28.47 | 0.649 | 0 | |
| Z | 28.57 | 0.649 | 0 | |
| AA | 28.67 | 0.649 | 0 | |
| AB | 28.77 | 0.649 | 0 | |
| AC | 28.87 | 0.649 | 0 | |
| AD | 28.97 | 0.649 | 0 | |
| AE | 29.07 | 0.649 | 0 | |
| AF | 29.17 | 0.649 | 0 | |
| AG | 29.27 | 0.649 | 0 | |
| AH | 29.37 | 0.649 | 0 | |
| AI | 29.47 | 0.549 | 0.1 | |
| AJ | 29.57 | 0.529 | 0.12 | |
| AK | 29.67 | 0.509 | 0.14 | |
| AL | 29.77 | 0.439 | 0.21 | |
| AM | 29.87 | 0.249 | 0.4 | |

Crack Profile for Nozzle 3, Flaw #4



All dimensions are inches

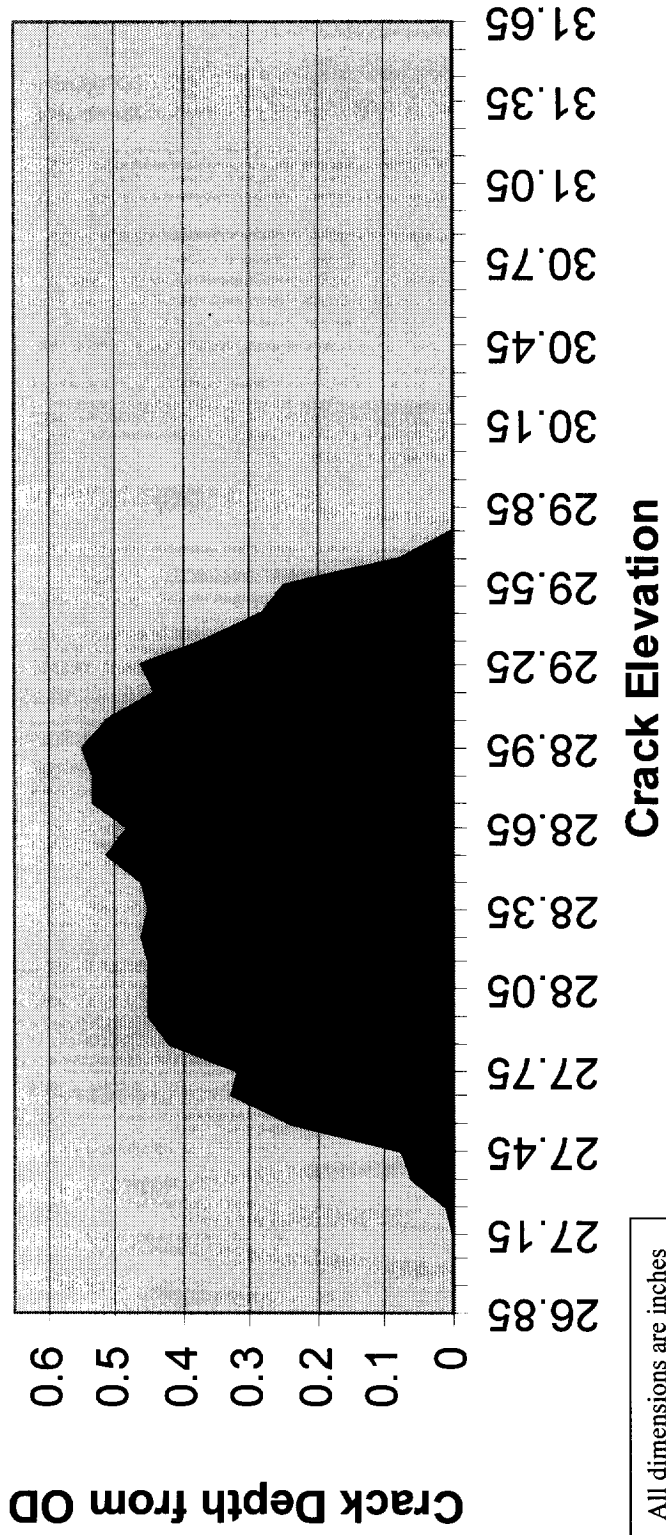
Nozzle 2

Flaw #1

| | |
|------------------------|------------------|
| Wall Tk. | 0.649 in. |
| | Elevation |
| Crack Start | 27.25 in. |
| Crack End | 29.51 in. |
| Upper Weld Edge | 27.8 in. |
| Lower Weld Edge | 29.1 in. |
| End of Nozzle | 30.78 in. |

| Meas. Location | Elevation | Depth from Tube OD | UT Depth from ID |
|----------------|-----------|--------------------|------------------|
| A | 27.25 | 0.009 | 0.64 |
| B | 27.35 | 0.059 | 0.59 |
| C | 27.45 | 0.079 | 0.57 |
| D | 27.55 | 0.239 | 0.41 |
| E | 27.65 | 0.329 | 0.32 |
| F | 27.75 | 0.319 | 0.33 |
| G | 27.85 | 0.419 | 0.23 |
| H | 27.95 | 0.449 | 0.2 |
| I | 28.05 | 0.449 | 0.2 |
| J | 28.15 | 0.449 | 0.2 |
| K | 28.25 | 0.459 | 0.19 |
| L | 28.35 | 0.449 | 0.2 |
| M | 28.45 | 0.459 | 0.19 |
| N | 28.55 | 0.509 | 0.14 |
| O | 28.65 | 0.479 | 0.17 |
| P | 28.75 | 0.529 | 0.12 |
| Q | 28.85 | 0.529 | 0.12 |
| R | 28.95 | 0.549 | 0.1 |
| S | 29.05 | 0.509 | 0.14 |
| T | 29.15 | 0.439 | 0.21 |
| U | 29.25 | 0.459 | 0.19 |
| V | 29.35 | 0.369 | 0.28 |
| W | 29.45 | 0.279 | 0.37 |
| X | 29.55 | 0.249 | 0.4 |
| Y | 29.65 | 0.079 | 0.57 |
| Z | 29.75 | 0 | 0.649 |

Crack Profile for Nozzle 2, Flaw #1



All dimensions are inches

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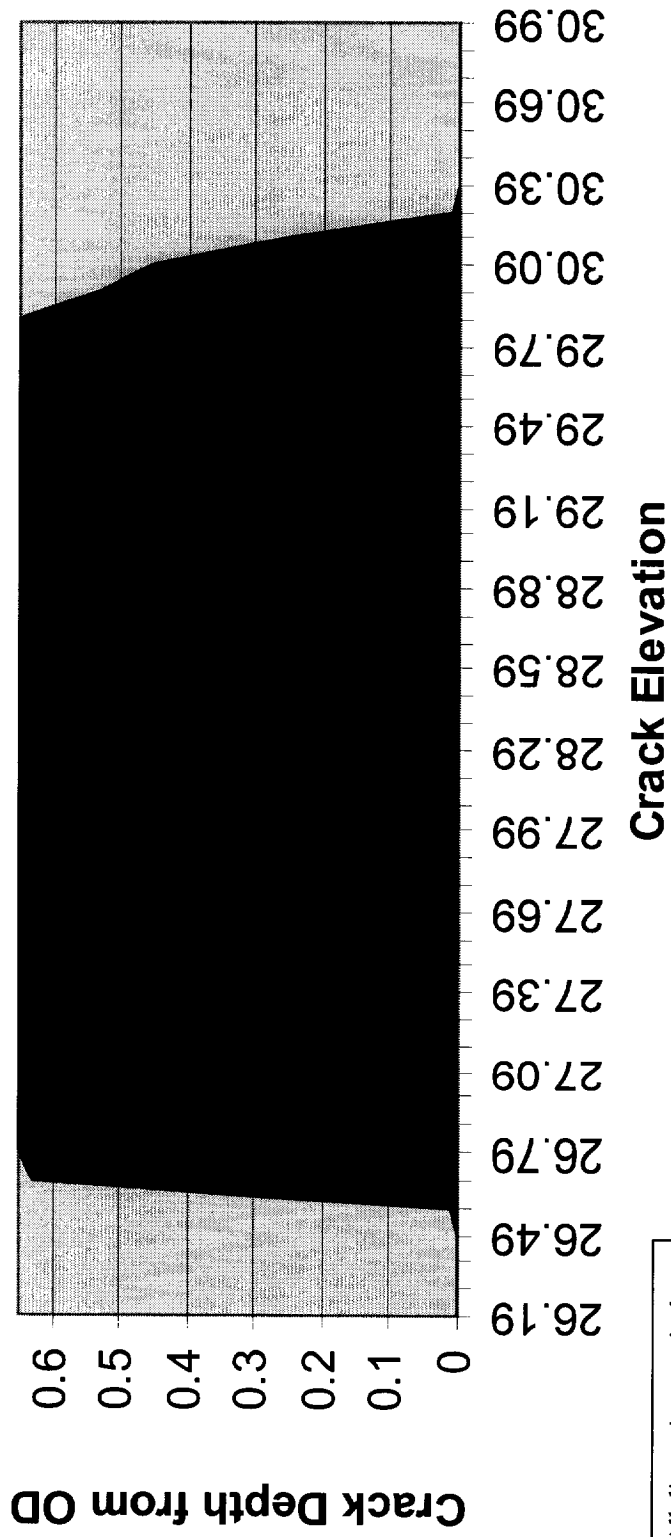
Nozzle 2

Flaw #2

| | |
|------------------------|------------------|
| Wall Tk. | 0.649 in. |
| | Elevation |
| Crack Start | 26.59 in. |
| Crack End | 30.37 in. |
| Upper Weld Edge | 27.4 in. |
| Lower Weld Edge | 29 in. |
| End of Nozzle | 30.78 in. |

| Meas. Location | Elevation | Depth from Tube OD | UT Depth from ID |
|----------------|-----------|--------------------|------------------|
| A | 26.59 | 0.009 | 0.64 |
| B | 26.69 | 0.629 | 0.02 |
| C | 26.79 | 0.649 | 0 |
| D | 26.89 | 0.649 | 0 |
| E | 26.99 | 0.649 | 0 |
| F | 27.09 | 0.649 | 0 |
| G | 27.19 | 0.649 | 0 |
| H | 27.29 | 0.649 | 0 |
| I | 27.39 | 0.649 | 0 |
| J | 27.49 | 0.649 | 0 |
| K | 27.59 | 0.649 | 0 |
| L | 27.69 | 0.649 | 0 |
| M | 27.79 | 0.649 | 0 |
| N | 27.89 | 0.649 | 0 |
| O | 27.99 | 0.649 | 0 |
| P | 28.09 | 0.649 | 0 |
| Q | 28.19 | 0.649 | 0 |
| R | 28.29 | 0.649 | 0 |
| S | 28.39 | 0.649 | 0 |
| T | 28.49 | 0.649 | 0 |
| U | 28.59 | 0.649 | 0 |
| V | 28.69 | 0.649 | 0 |
| W | 28.79 | 0.649 | 0 |
| X | 28.89 | 0.649 | 0 |
| Y | 28.99 | 0.649 | 0 |
| Z | 29.09 | 0.649 | 0 |
| AA | 29.19 | 0.649 | 0 |
| AB | 29.29 | 0.649 | 0 |
| AC | 29.39 | 0.649 | 0 |
| AD | 29.49 | 0.649 | 0 |
| AE | 29.59 | 0.649 | 0 |
| AF | 29.69 | 0.649 | 0 |
| AG | 29.79 | 0.649 | 0 |
| AH | 29.89 | 0.649 | 0 |
| AI | 29.99 | 0.529 | 0.12 |
| AJ | 30.09 | 0.449 | 0.2 |
| AK | 30.19 | 0.239 | 0.41 |
| AL | 30.29 | 0.009 | 0.64 |

Crack Profile for Nozzle 2, Flaw #2



All dimensions are inches

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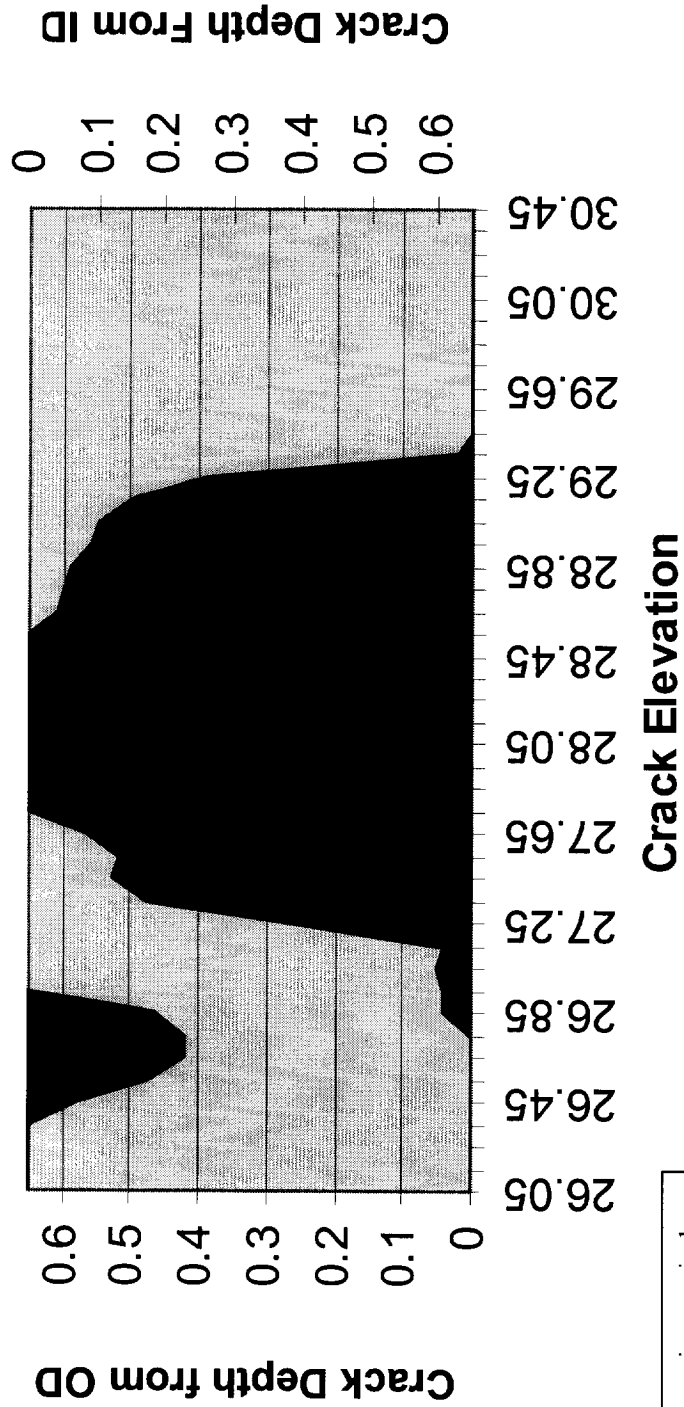
Nozzle 2

Flaw #4

| | |
|-----------------|------------------|
| Wall Tk. | 0.649 in. |
| | Elevation |
| Crack Start | 26.45 in. |
| Crack End | 29.39 in. |
| Upper Weld Edge | 27.2 in. |
| Lower Weld Edge | 28.95 in. |
| End of Nozzle | 30.78 in. |

| Meas. Location | Elevation | Depth from Tube OD | OD Connected Portion | ID Connected Portion |
|----------------|-----------|--------------------|----------------------|----------------------|
| | | | UT Depth from ID | UT Depth from ID |
| A | 26.45 | | | 0.07 |
| B | 26.55 | | | 0.17 |
| C | 26.65 | | | 0.23 |
| D | 26.75 | | | 0.23 |
| E | 26.85 | 0.039 | 0.61 | 0.18 |
| F | 26.95 | 0.039 | 0.61 | |
| G | 27.05 | 0.049 | 0.60 | |
| H | 27.15 | 0.039 | 0.61 | |
| I | 27.25 | 0.269 | 0.38 | |
| J | 27.35 | 0.479 | 0.17 | |
| K | 27.45 | 0.529 | 0.12 | |
| L | 27.55 | 0.519 | 0.13 | |
| M | 27.65 | 0.569 | 0.08 | |
| N | 27.75 | 0.649 | 0.00 | |
| O | 27.85 | 0.649 | 0.00 | |
| P | 27.95 | 0.649 | 0.00 | |
| Q | 28.05 | 0.649 | 0.00 | |
| R | 28.15 | 0.649 | 0.00 | |
| S | 28.25 | 0.649 | 0.00 | |
| T | 28.35 | 0.649 | 0.00 | |
| U | 28.45 | 0.649 | 0.00 | |
| V | 28.55 | 0.649 | 0.00 | |
| W | 28.65 | 0.609 | 0.04 | |
| X | 28.75 | 0.599 | 0.05 | |
| Y | 28.85 | 0.589 | 0.06 | |
| Z | 28.95 | 0.559 | 0.09 | |
| AA | 29.05 | 0.549 | 0.10 | |
| AB | 29.15 | 0.499 | 0.15 | |
| AC | 29.25 | 0.389 | 0.26 | |
| AD | 29.35 | 0.019 | 0.63 | |

Crack Profile for Nozzle 2, Flaw #4



All dimensions are inches

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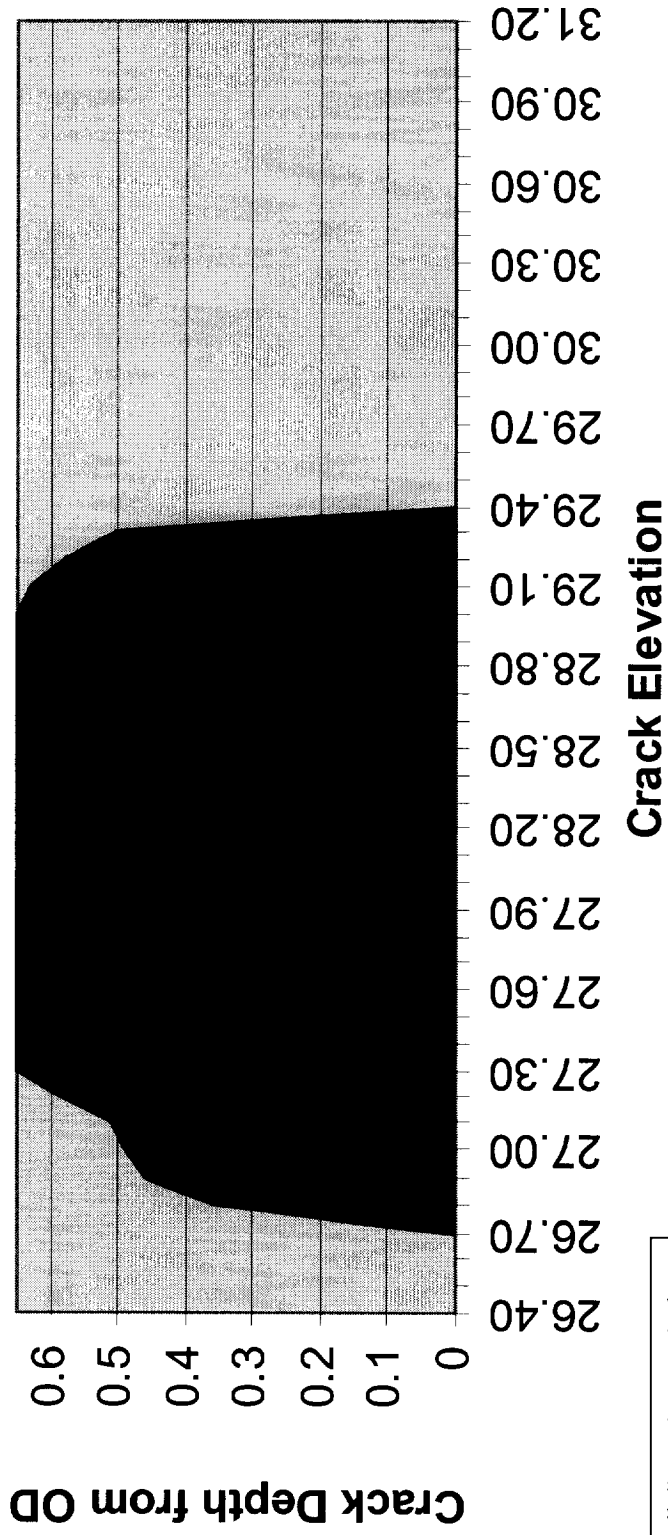
Nozzle 2

Flaw #6

| | |
|------------------------|------------------|
| Wall Tk. | 0.649 in. |
| | Elevation |
| Crack Start | 26.8 in. |
| Crack End | 29.36 in. |
| Upper Weld Edge | 27.4 in. |
| Lower Weld Edge | 28.75 in. |
| End of Nozzle | 30.78 in. |

| Meas. Location | Elevation | Depth from Tube OD | UT Depth from ID |
|----------------|-----------|--------------------|------------------|
| A | 26.80 | 0.359 | 0.29 |
| B | 26.90 | 0.459 | 0.19 |
| C | 27.00 | 0.489 | 0.16 |
| D | 27.10 | 0.509 | 0.14 |
| E | 27.20 | 0.589 | 0.06 |
| F | 27.30 | 0.649 | 0 |
| G | 27.40 | 0.649 | 0 |
| H | 27.50 | 0.649 | 0 |
| I | 27.60 | 0.649 | 0 |
| J | 27.70 | 0.649 | 0 |
| K | 27.80 | 0.649 | 0 |
| L | 27.90 | 0.649 | 0 |
| M | 28.00 | 0.649 | 0 |
| N | 28.10 | 0.649 | 0 |
| O | 28.20 | 0.649 | 0 |
| P | 28.30 | 0.649 | 0 |
| Q | 28.40 | 0.649 | 0 |
| R | 28.50 | 0.649 | 0 |
| S | 28.60 | 0.649 | 0 |
| T | 28.70 | 0.649 | 0 |
| U | 28.80 | 0.649 | 0 |
| V | 28.90 | 0.649 | 0 |
| W | 29.00 | 0.649 | 0 |
| X | 29.10 | 0.629 | 0.02 |
| Y | 29.20 | 0.579 | 0.07 |
| Z | 29.30 | 0.499 | 0.15 |

Crack Profile for Nozzle 2, Flaw #6



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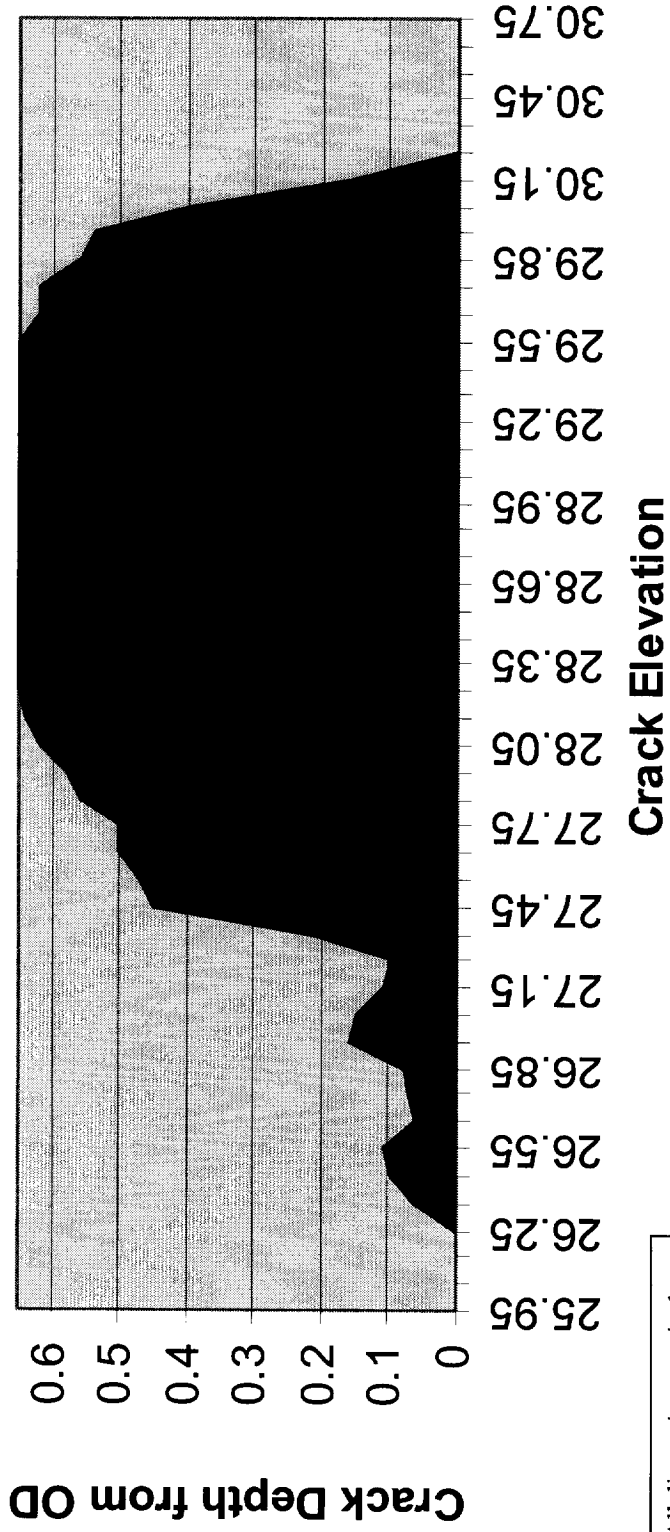
Nozzle 2

Flaw #8

| | |
|------------------------|------------------|
| Wall Tk. | 0.649 in. |
| | Elevation |
| Crack Start | 26.35 in. |
| Crack End | 30.16 in. |
| Upper Weld Edge | 27.45 in. |
| Lower Weld Edge | 28.9 in. |
| End of Nozzle | 30.78 in. |

| Meas. Location | Elevation | Depth from Tube OD | UT Depth from ID |
|----------------|-----------|--------------------|------------------|
| A | 26.35 | 0.059 | 0.59 |
| B | 26.45 | 0.099 | 0.55 |
| C | 26.55 | 0.109 | 0.54 |
| D | 26.65 | 0.059 | 0.59 |
| E | 26.75 | 0.069 | 0.58 |
| F | 26.85 | 0.079 | 0.57 |
| G | 26.95 | 0.159 | 0.49 |
| H | 27.05 | 0.149 | 0.5 |
| I | 27.15 | 0.109 | 0.54 |
| J | 27.25 | 0.099 | 0.55 |
| K | 27.35 | 0.209 | 0.44 |
| L | 27.45 | 0.449 | 0.2 |
| M | 27.55 | 0.469 | 0.18 |
| N | 27.65 | 0.499 | 0.15 |
| O | 27.75 | 0.499 | 0.15 |
| P | 27.85 | 0.559 | 0.09 |
| Q | 27.95 | 0.579 | 0.07 |
| R | 28.05 | 0.619 | 0.03 |
| S | 28.15 | 0.639 | 0.01 |
| T | 28.25 | 0.649 | 0 |
| U | 28.35 | 0.649 | 0 |
| V | 28.45 | 0.649 | 0 |
| W | 28.55 | 0.649 | 0 |
| X | 28.65 | 0.649 | 0 |
| Y | 28.75 | 0.649 | 0 |
| Z | 28.85 | 0.649 | 0 |
| AA | 28.95 | 0.649 | 0 |
| AB | 29.05 | 0.649 | 0 |
| AC | 29.15 | 0.649 | 0 |
| AD | 29.25 | 0.649 | 0 |
| AE | 29.35 | 0.649 | 0 |
| AF | 29.45 | 0.649 | 0 |
| AG | 29.55 | 0.649 | 0 |
| AH | 29.65 | 0.619 | 0.03 |
| AI | 29.75 | 0.619 | 0.03 |
| AJ | 29.85 | 0.559 | 0.09 |
| AK | 29.95 | 0.539 | 0.11 |
| AL | 30.05 | 0.399 | 0.25 |
| AM | 30.15 | 0.159 | 0.49 |

Crack Profile for Nozzle 2, Flaw #8



All dimensions are inches

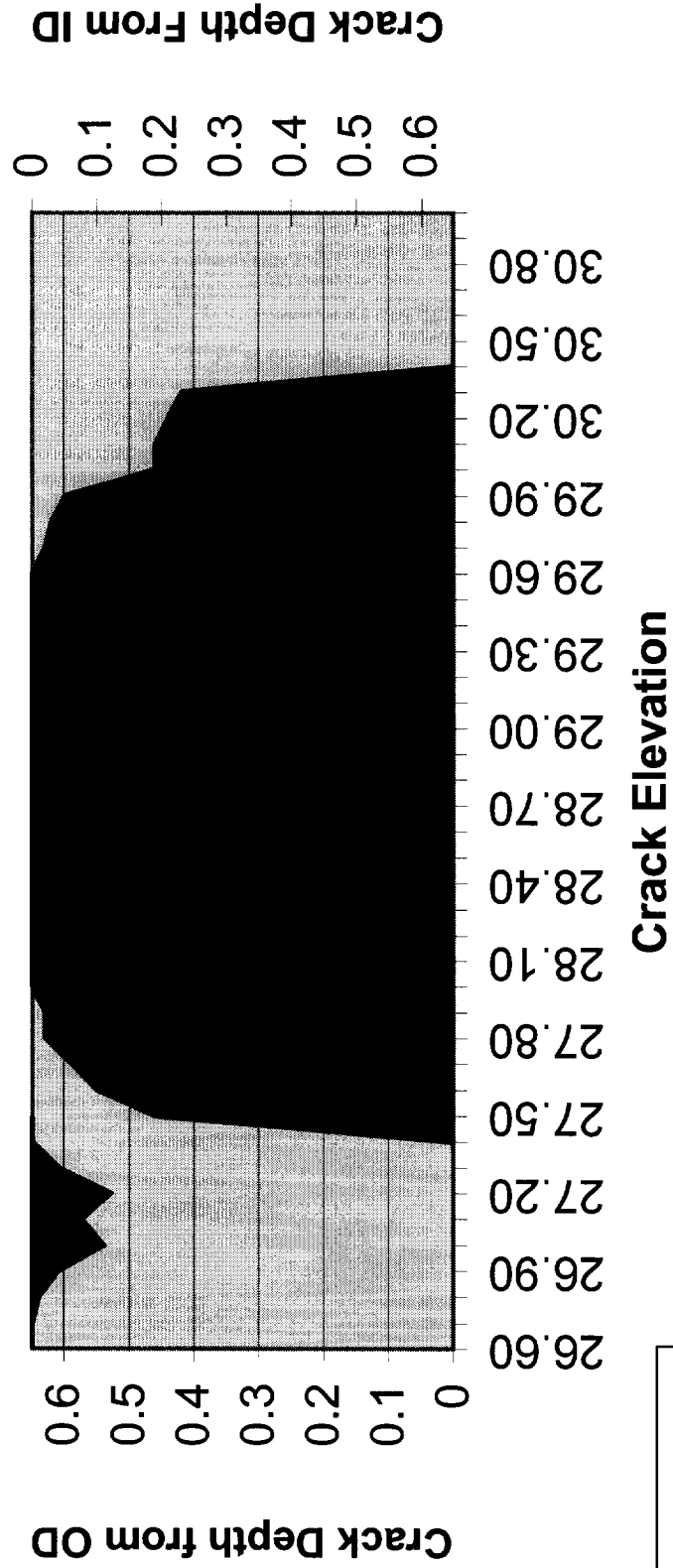
Nozzle 2

Flaw #10

| | |
|------------------------|------------------|
| Wall Tk. | 0.649 in. |
| | Elevation |
| Crack Start | 26.8 in. |
| Crack End | 30.35 in. |
| Upper Weld Edge | 27.4 in. |
| Lower Weld Edge | 29 in. |
| End of Nozzle | 30.78 in. |

| Meas. Location | Elevation | Depth from Tube OD | OD Connected Portion | ID Connected Portion |
|----------------|-----------|--------------------|----------------------|----------------------|
| | | | UT Depth from ID | UT Depth from ID |
| A | 26.80 | | | 0.01 |
| B | 26.90 | | | 0.04 |
| C | 27.00 | | | 0.11 |
| D | 27.10 | | | 0.076 |
| E | 27.20 | | | 0.12 |
| F | 27.30 | | | 0.04 |
| G | 27.40 | | | |
| H | 27.50 | 0.459 | 0.19 | |
| I | 27.60 | 0.549 | 0.1 | |
| J | 27.70 | 0.589 | 0.06 | |
| K | 27.80 | 0.629 | 0.02 | |
| L | 27.90 | 0.629 | 0.02 | |
| M | 28.00 | 0.649 | 0 | |
| N | 28.10 | 0.649 | 0 | |
| O | 28.20 | 0.649 | 0 | |
| P | 28.30 | 0.649 | 0 | |
| Q | 28.40 | 0.649 | 0 | |
| R | 28.50 | 0.649 | 0 | |
| S | 28.60 | 0.649 | 0 | |
| T | 28.70 | 0.649 | 0 | |
| U | 28.80 | 0.649 | 0 | |
| V | 28.90 | 0.649 | 0 | |
| W | 29.00 | 0.649 | 0 | |
| X | 29.10 | 0.649 | 0 | |
| Y | 29.20 | 0.649 | 0 | |
| Z | 29.30 | 0.649 | 0 | |
| AA | 29.40 | 0.649 | 0 | |
| AB | 29.50 | 0.649 | 0 | |
| AC | 29.60 | 0.649 | 0 | |
| AD | 29.70 | 0.629 | 0.02 | |
| AE | 29.80 | 0.619 | 0.03 | |
| AF | 29.90 | 0.599 | 0.05 | |
| AG | 30.00 | 0.459 | 0.19 | |
| AH | 30.10 | 0.459 | 0.19 | |
| AI | 30.20 | 0.439 | 0.21 | |
| AJ | 30.30 | 0.419 | 0.23 | |

Crack Profile for Nozzle 2, Flaw #10



All dimensions are inches

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Nozzle 2

Flaw #13

| | |
|------------------------|------------------|
| Wall Tk. | 0.649 in. |
| | Elevation |
| Crack Start | 26.6 in. |
| Crack End | 29.81 in. |
| Upper Weld Edge | 27.4 in. |
| Lower Weld Edge | 28.7 in. |
| End of Nozzle | 30.78 in. |

| Meas. Location | Elevation | Depth from Tube OD | OD Connected Portion |
|----------------|-----------|--------------------|----------------------|
| | | | UT Depth from ID |
| A | 26.60 | 0.599 | 0.05 |
| B | 26.70 | 0.649 | 0.00 |
| C | 26.80 | 0.649 | 0.00 |
| D | 26.90 | 0.649 | 0.00 |
| E | 27.00 | 0.649 | 0.00 |
| F | 27.10 | 0.649 | 0.00 |
| G | 27.20 | 0.649 | 0.00 |
| H | 27.30 | 0.579 | 0.07 |
| I | 27.40 | 0.389 | 0.26 |
| J | 27.50 | 0.409 | 0.24 |
| K | 27.60 | 0.409 | 0.24 |
| L | 27.70 | 0.379 | 0.27 |
| M | 27.80 | 0.389 | 0.26 |
| N | 27.90 | 0.419 | 0.23 |
| O | 28.00 | 0.369 | 0.28 |
| P | 28.10 | 0.429 | 0.22 |
| Q | 28.20 | 0.489 | 0.16 |
| R | 28.30 | 0.469 | 0.18 |
| S | 28.40 | 0.449 | 0.20 |
| T | 28.50 | 0.499 | 0.15 |
| U | 28.60 | 0.549 | 0.10 |
| V | 28.70 | 0.539 | 0.11 |
| W | 28.80 | 0.649 | 0.00 |
| X | 28.90 | 0.649 | 0.00 |
| Y | 29.00 | 0.649 | 0.00 |
| Z | 29.10 | 0.649 | 0.00 |
| AA | 29.20 | 0.599 | 0.05 |
| AB | 29.30 | 0.619 | 0.03 |
| AC | 29.40 | 0.429 | 0.22 |
| AD | 29.50 | 0.359 | 0.29 |
| AE | 29.60 | 0.239 | 0.41 |
| AF | 29.70 | 0.039 | 0.61 |
| AG | 29.80 | 0.009 | 0.64 |

Crack Profile for Nozzle 2, Flaw #13



All dimensions are inches

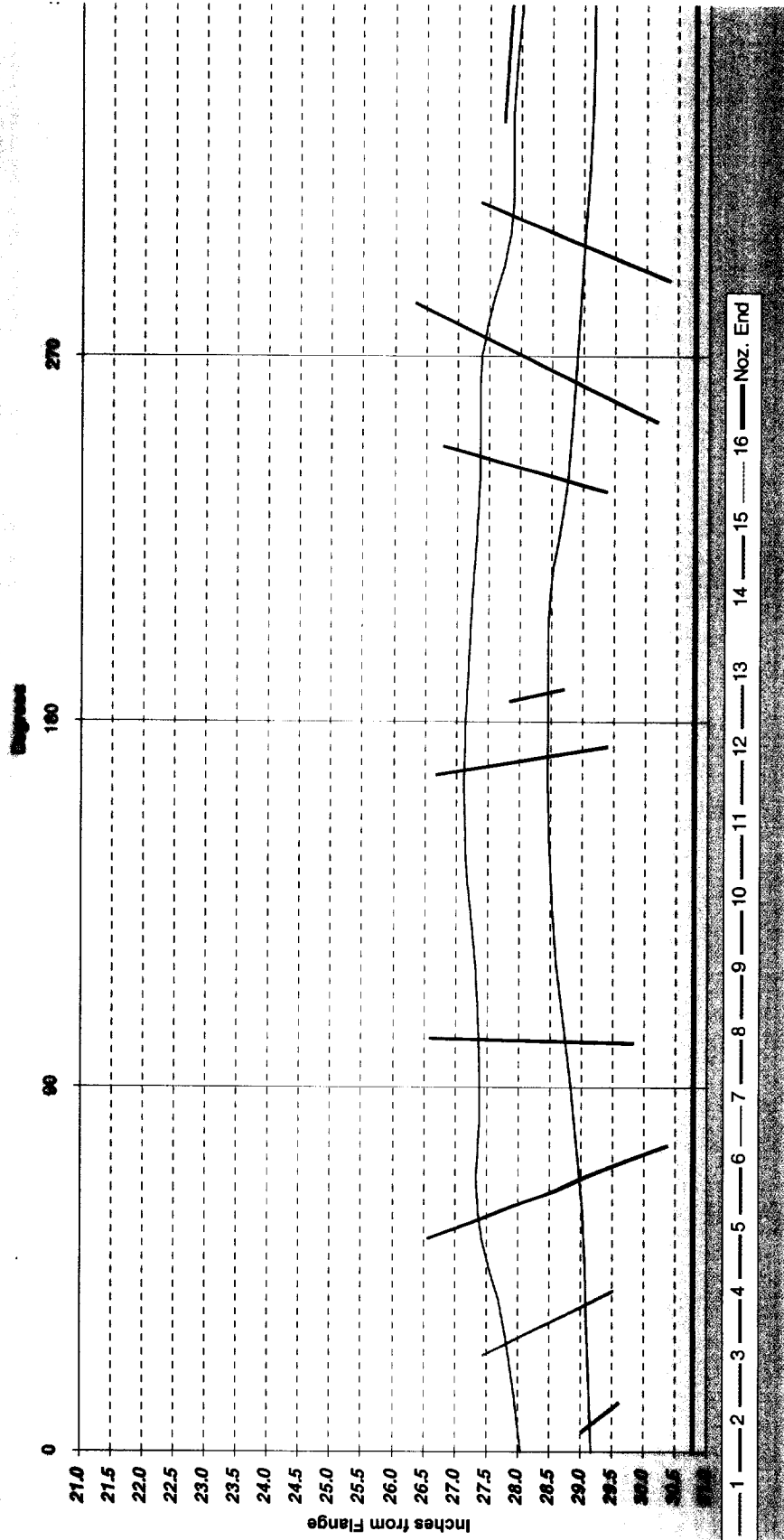
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Table 2. Nozzle 2 NDE Examination Results

| FRAMATOME ANIF | | CRDM Nozzle Ultrasonic Examination Data Sheet | | | | | | | | | | Nozzle: 2 | | | | |
|---|-----------------|---|-------------|--------------------------|-------------|---------------------|-------------------|--------------------------|------------|-------------------|-------------------|----------------|-------------------|------------------|----------------------|----------------|
| Customer: FENOC | | Plant: Davis Besse | | Unit: N/A | | Thicknes: 0.649 | | Nozzle Dimensions: (in.) | | ID: 2.765 | | OD: 4.06 | | | | |
| Procedure: 54-ISI-100-08 | | CA: FRA-02-002, DB-02-012 | | Nozzle Dimensions: (in.) | | Probe Serial No.'s: | | Ch 1 | | Ch 2 | | Ch 3 | | | | |
| Downhill Side of Nozzle (deg.): 315 | | End of Noz. (in.): 30.78 | | Setup: 1 | | Stop: 360, 30.77 | | 21GF-01004-30L | | 21GC-01001-55L | | 22CD-01001-65L | | | | |
| Axial Scan | | Start: -5, 16.1 | | Stop: 360, 30.77 | | Setup: 1 | | 21GA-01004-45L | | 2623-01002-60S | | 2624-01005-60S | | | | |
| Files: T2061_09.12.19 | | Start: 0, 18.95 | | Stop: 360, 29.52 | | Setup: 2 | | 2623-01002-60S | | 2624-01005-60S | | | | | | |
| Circ. Scan | | Start: 0, 18.95 | | Stop: 360, 29.52 | | Setup: 2 | | 2623-01002-60S | | 2624-01005-60S | | | | | | |
| Files: T2061_07.25.10 | | Start: 0, 18.95 | | Stop: 360, 29.52 | | Setup: 2 | | 2623-01002-60S | | 2624-01005-60S | | | | | | |
| Flaw No. | Surface (ID/OD) | Depth to Flaw Tip | End Point 1 | | End Point 2 | | Axial Total (in.) | Adjusted Circ. Extent | | Flaw Length (in.) | Flaw Angle (deg.) | Flaw TWD (in.) | Flaw Aspect Ratio | Flaw Orientation | Weld Location @ Flaw | |
| | | | Min (in.) | Max (in.) | Min (deg.) | Max (deg.) | | Min (deg.) | Max (deg.) | | | | | | Min | Max |
| 1 | OD | 0.236 | 27.46 | 291.0 | 275.0 | 240.0 | 2.05 | 24.0 | 40.0 | -0.57 | 2.13 | 165 | 0.41 | 0.19 | AXIAL | In Weld Region |
| 2 | OD | TW | 26.59 | 262.0 | 30.37 | 240.0 | 3.78 | 53.0 | 75.0 | -0.78 | 3.86 | 168 | 0.65 | 0.17 | AXIAL | In Weld Region |
| 3 | | | | | | | | | | | | | | | | |
| 4 | OD | TW | 26.69 | 148.0 | 29.39 | 141.0 | 2.70 | 167.0 | 174.0 | -0.25 | 2.71 | 175 | 0.65 | 0.24 | AXIAL | In Weld Region |
| 5 | OD | 0.33 | 27.87 | 130.0 | 127.0 | 127.0 | 0.83 | 185.0 | 188.0 | -0.11 | 0.84 | 173 | 0.32 | 0.38 | AXIAL | In Weld Region |
| 6 | OD | TW | 26.8 | 67 | 29.36 | 78 | 2.56 | 248.0 | 237.0 | 0.39 | 2.59 | 9 | 0.65 | 0.25 | AXIAL | In Weld Region |
| 7 | | | | | | | | | | | | | | | | |
| 8 | OD | TW | 26.35 | 32 | 30.16 | 61 | 3.81 | 283.0 | 254.0 | 1.03 | 3.95 | 15 | 0.65 | 0.16 | AXIAL | In Weld Region |
| 9 | | | | | | | | | | | | | | | | |
| 10 | OD | TW | 27.39 | 7 | 30.35 | 26 | 2.96 | 308.0 | 289.0 | 0.67 | 3.04 | 13 | 0.65 | 0.21 | AXIAL | In Weld Region |
| 11 | OD | 0.344 | 27.9 | 314 | 27.75 | 347 | 0.15 | 361.0 | 328.0 | 1.17 | 1.18 | 83 | 0.31 | 0.26 | CIRC. | 0.1 |
| 12 | OD | 0.572 | 29.02 | 320 | 29.6 | 327 | 0.58 | 5.0 | 12.0 | 0.25 | 0.63 | 23 | 0.08 | 0.12 | AXIAL | In Weld Region |
| 13 | OD | TW | 26.6 | 259.0 | 29.81 | 258.1 | 3.21 | 101.9 | 101.0 | -0.03 | 3.21 | 179 | 0.65 | 0.20 | AXIAL | In Weld Region |
| 14 | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | |
| Revision 2 5/4/02 | | | | | | | | | | | | | | | | |
| WELD | | Data Loc. | 315 | 345 | 15 | 45 | 75 | 105 | 135 | 165 | 195 | 225 | 255 | 285 | 315 | Degrees |
| PROFILE | | Noz. Loc. | 0 | 30 | 60 | 90 | 120 | 150 | 180 | 210 | 240 | 270 | 300 | 330 | 360 | Degrees |
| | | Noz. End | 30.78 | 30.78 | 30.78 | 30.78 | 30.78 | 30.78 | 30.78 | 30.78 | 30.78 | 30.78 | 30.78 | 30.78 | 30.78 | Inches |
| | | MAX. | 29.17 | 29.09 | 29.02 | 28.84 | 28.61 | 28.49 | 28.46 | 28.49 | 28.76 | 28.92 | 29.04 | 29.14 | 29.17 | Inches |
| | | MIN. | 28.06 | 27.79 | 27.36 | 27.39 | 27.31 | 27.16 | 27.16 | 27.24 | 27.36 | 27.39 | 27.84 | 27.89 | 28.06 | Inches |
| Notes: Adjusted Circ. Extent is relative to downhill side of nozzle; clockwise looking down. TWD is Through-Wall Dimension | | | | | | | | | | | | | | | | |
| Comments: Data was encoded with positive Theta going counterclockwise. Adjusted circ. positions have corrected the position to read clockwise looking down. | | | | | | | | | | | | | | | | |
| Flaws #3, 7, and 9 were identified as axial flaws using the circ. blade probe but are not confirmed with the rotating UT. Therefore, flaws #3, 7, and 9 are not relevant. | | | | | | | | | | | | | | | | |
| Analyzed by: K.C.Gebetsberger | | Date: 3/5/2002 | | Analyzed by: M.G. Hacker | | Date: 3/5/2002 | | | | | | | | | | |

Revision 2

Figure 9. Nozzle 2 Crack Locations and Sizing



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License Number NPF-3
Serial Number 1-1274
Attachment
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COMMITMENT LIST

The following list identifies those actions committed to by the Davis-Besse Nuclear Power Station (DBNPS) in this document. Any other actions discussed in the submittal represent intended or planned actions by the DBNPS. They are described only for information and are not regulatory commitments. Please notify the Manager - Regulatory Affairs (419-321-8450) at the DBNPS of any questions regarding this document or associated regulatory commitments.

COMMITMENTS

DUE DATE

None