



*Perry Nuclear Power Plant  
10 Center Road  
P.O. Box 97  
Perry, Ohio 44081*

**Frank R. Payne**  
*Site Vice President, Perry Nuclear*

440-280-5382

April 17, 2020  
L-19-143

10 CFR 50.55a

ATTN: Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

SUBJECT:  
Perry Nuclear Power Plant  
Docket No. 50-440, License No. NPF-58  
Impractical American Society of Mechanical Engineers Boiler and Pressure Vessel  
Code Section XI Examination Requirements

Pursuant to 10 CFR 50.55a(g)(5)(iii), Energy Harbor Nuclear Corp. hereby provides the Nuclear Regulatory Commission (NRC) with the basis for the determination that the inservice examination of the welds listed below, as specified by the American Society of Mechanical Engineers Boiler and Pressure Vessel Code Section XI, or as specified by the NRC approved Risk-Informed Inservice Inspection Program, have been determined to be impractical. These determinations are based on experience obtained during the Perry Nuclear Power Plant, Unit No.1 third 10-year inservice inspection interval, which began May 18, 2009 and ended May 17, 2019.

The affected welds are:


1. Reactor vessel shell-to-flange weld 1B13-AE
2. Feedwater nozzle to vessel weld 1B13-N4A-KA
3. Feedwater nozzle to vessel weld 1B13-N4B-KA
4. Feedwater nozzle to vessel weld 1B13-N4C-KA
5. Feedwater nozzle to vessel weld 1B13-N4D-KA
6. Feedwater nozzle to vessel weld 1B13-N4E-KA
7. Feedwater nozzle to vessel weld 1B13-N4F-KA
8. Control rod drive housing to flange weld 1B13-02/35-FW
9. Control rod drive housing to flange weld 1B13-54/15-FW
10. Feedwater nozzle to safe end weld 1B13-N4C-KB
11. Reactor recirculation pipe to sweep-o-let weld 1B33-0028

Information to support the basis for the impracticality determinations is enclosed.

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There are no regulatory commitments contained in this submittal. If there are any questions or if additional information is required, please contact Mr. Phil H. Lashley, Acting Manager – Nuclear Licensing and Regulatory Affairs, at (330) 315-6808.

Sincerely,



Frank R. Payne

Enclosure:

Perry Nuclear Power Plant, 10 CFR 50.55a Request IR-062, Rev. 0

cc: NRC Region III Administrator  
NRC Resident Inspector  
NRC Project Manager

L-19-143  
Enclosure

Perry Nuclear Power Plant  
10 CFR 50.55a Request IR-062, Rev. 0  
(36 pages follow)

**Relief Request**  
**in Accordance with 10 CFR 50.55a(g)(5)(iii)**  
- Inservice Inspection Impracticability -

**1. ASME Code Component(s) Affected**

The Perry Nuclear Power Plant (PNPP) Class 1 welds with limited inservice inspection (ISI) examinations are listed in the Attachment, Table 1.

Code Class: 1  
Examination Categories: B-A, B-D, B-O and R-A  
Item Numbers: B1.30, B3.90, B14.10, R2.11 and R2.ND

**2. Applicable Code Edition and Addenda**

The applicable ASME Boiler and Pressure Vessel Code of Record (hereafter referred to as the "Code") edition and addenda for the third PNPP ISI interval is ASME Section XI, *Rules for Inservice Inspection of Nuclear Power Plant Components*, 2001 Edition through 2003 Addenda, (Reference 1). The Appendix VIII requirements and use of performance demonstration initiative (PDI) requirements at PNPP are in accordance with the 2001 Edition of Section XI as conditioned by 10 CFR 50.55a(b)(2).

**3. Applicable Code Requirements**

As an alternative to the requirements above for ASME Section XI Examination Category B-F and B-J welds, Energy Harbor Nuclear Corp. received NRC authorization for PNPP on November 14, 2012 to use a risk-informed inservice inspection (RI-ISI) program (Reference 2). The duration of this alternative to Section XI is for the third 10-year ISI interval. This program is based in part on using ASME Code Case N-578, "Risk-Informed Requirements for Class 1, 2, and 3 Piping, Method B, Section XI, Division 1" (Reference 3), and EPRI Topical Report TR-112657 "Revised Risk-Informed Inservice Inspection Evaluation Procedure" (Reference 4), as guidance. Examination Categories B-F and B-J welds were included under Examination Category R-A of the new RI-ISI program.

ASME Code Case N-460, "Alternative Examination Coverage for Class 1 and Class 2 Welds," (Reference 5), states that a reduction in examination coverage due to part geometry or interference for any Class 1 and 2 weld is acceptable provided that the reduction in coverage is less than 10 percent (%) (greater than 90% coverage is obtained).

Table IWB-2500-1, Examination Category B-A, *Pressure Retaining Welds in Reactor Vessel*

Item B1.30 shell-to-flange weld requires the volumetric examination depicted in Figure IWB-2500-4.

Table IWB-2500-1, Examination Category B-D, *Full Penetration Welded Nozzles in Vessels*

Per ASME Code Case N-613-1 (Reference 6 item B3.90 nozzle-to-vessel welds previously ultrasonically examined using the examination volumes of Figures IWB-2500-7(a), (b), and (c) may be examined using the reduced examination volumes as specified in ASME Code Case N-613-1 Figures 1, 2, and 3.

Table IWB-2500-1, Examination Category B-O, *Pressure Retaining Welds in Control Rod Drive (CRD) and Instrument Nozzle Housings*

Item B14.10 reactor vessel welds in CRD housings requires the volumetric or surface examinations depicted in Figure IWB-2500-18.

Examination Category R-A, Table 1 of Code Case N-578, *Risk-Informed Requirements for Class 1, 2, and 3 Piping, Method B, Section XI, Division 1* (Reference 3)

The RI-ISI program utilizes non-standard item numbering, combining risk category and degradation mechanism. For the items listed, a R2.11 item is a Risk Category 4 or 5 weld subjected to thermal fatigue (equivalent to R1.11 of N-578), and a R2.ND is a Risk Category 4 or 5 weld with no credible degradation mechanism.

Per Code Case N-578, Table 1, Examination Categories, welds subjected to thermal fatigue or with no degradation mechanism require the volumetric examination depicted in Figure IWB-2500-8(c), as modified by Note 1 of Table 1.

#### **4. Impracticality of Compliance**

Pursuant to 10 CFR 50.55a(g)(5)(iii), Energy Harbor Nuclear Corp. has determined that compliance with the code requirements of achieving greater than 90% coverage of the welds and items listed in this request is impractical. The determination is based on actual demonstrated limitations experienced when attempting to comply with the code examination requirements. The details of the examination coverage for the welds summarized below are attached.

Table IWB-2500-1, Examination Category B-A, *Pressure Retaining Welds in Reactor Vessel*

Item B1.30 reactor vessel shell-to-flange weld 1B13-AE is a Class 1, pressure retaining weld. The examination is limited to a single sided examination from the shell side due to the proximity of the reactor vessel flange and interference from the reactor vessel flange leak-off nozzle N17. The examination volume obtained is 2.9% greater than the prior examination due to improved technology and changes in scanner configuration. In order to achieve more credible one-sided coverage of the weld, and in accordance with IWA-2240, in lieu of Section V, Article 4 ultrasonic examinations, the examinations were performed using Section XI, Appendix VIII, Supplement 4 and 6 procedures and personnel that were qualified for single-sided examination.

Examination Category B-D, *Full Penetration Welded Nozzles in Vessels*

Item B3.90 reactor vessel feedwater nozzle-to-vessel welds 1B13-N4A-KA through 1B13-N4F-KA are Class 1, pressure retaining welds. The examination is limited due to the configuration of the nozzle forging.

Examination Category B-O, *Pressure Retaining Welds in Control Rod Drive (CRD) and Instrument Nozzle Housings*

Item B14.10 reactor vessel welds in CRD housing-to-flange welds 1B13-02/35-FW and 1B13-54/15-FW are Class 1 welds that require a volumetric or surface examination in 10% of the peripheral CRD housings as depicted in Figure IWB-2500-18 for greater than 90% of the weld volume or surface area. The examination is limited on these lower CRD welds due to the proximity of adjacent components and cables.

Examination Category: R-A, *Risk-Informed Requirements for Class 1, 2, and 3 Piping, Method B, Section XI, Division 1 (Reference 3)*

Item R2.11 feedwater nozzle-to-safe end weld 1B13-N4C-KB is a Class 1 pressure retaining dissimilar metal weld. This weld was classified in the RI-ISI program as a medium risk weld subject to thermal degradation. Additionally, this weld has been repaired by a full structural overlay in accordance with NUREG-0313 Rev. 2, "Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping," Category E, with the repair and overlay design approved by the NRC (Reference 7). Design of the full structural weld overlay limited scanning of the required volume on the upstream side of the component.

Item R2.ND risk-informed weld 1B33-0028 is a Class 1, pressure retaining weld joining a nominal 16-inch diameter pipe to a 16-inch by 12-inch sweep-o-let on the

reactor recirculation system ring header. This RI-ISI weld is a Category 4 weld not subjected to a credible degradation mechanism, constructed of stainless steel (NUREG-0313, Category A). Volumetric coverage was limited by the configuration of the sweep-o-let to pipe weld allowing only single sided scanning. Per 10 CFR 50.55a(b)(2)(xv)(A)(2), for austenitic welds, full coverage credit from a single side may be claimed only after completing a successful single-sided Appendix VIII demonstration using flaws on the opposite side of the weld. This weld was examined using the latest techniques and PDI procedures.

## **5. Burden Caused by Compliance**

To comply with the code required examination volumes for obtaining greater than 90% coverage for the welds listed in this relief request, the welds and their associated components would have to be physically modified or disassembled beyond their current design. Overall, components and fittings associated with the welds listed in this relief request are constructed of standard design items meeting typical national standards that specify required configurations and dimensions. To replace these items with alternate configurations to enhance examination coverage would require unique redesign and fabrication. Because these items are in the Class 1 boundary and form a part of the reactor coolant pressure boundary, their redesign and fabrication would be an extensive effort based on the limitations that exist.

Radiographic testing (RT) is not a desired option in lieu of ultrasonic testing (UT) because RT is limited in the ability to detect service-induced flaws. Additionally, the water must be drained from the systems where radiography is to be performed. This increases operational risk through prolonged system restoration times and increased general radiation dose rates over a much broader area than in the area of the weld being examined.

Overall, it is not possible to obtain examination coverage of greater than 90% of the required code examination volume or area for the welds and items in this request without extensive design modifications. Examinations have been performed to the maximum extent possible.

The examination techniques used for each weld or item in this relief request were reviewed to determine if additional coverage could be achieved by improving those techniques, and none could be identified.

## **6. Proposed Alternative and Basis for Use**

### Proposed Alternative

In lieu of the ASME BPV Section XI greater than 90% surface or volumetric examination requirement, the Energy Harbor Nuclear Corp. proposes limited

examination coverage for the subject welds achieved by UT and surface liquid penetrant testing (PT) as listed in the attachment.

### Basis for Use

The in-service examinations of selected welds and items were performed in accordance with the requirements of 10 CFR 50.55a and the ASME BPV Section XI, 2001 Edition through the 2003 Addenda, including Appendix VIII requirements in accordance with the 2001 edition of Section XI and applicable PDI requirements. When a component was found to have condition(s) that limit the examination volume the licensee is required to submit this information to the enforcement and regulatory authorities having jurisdiction at the plant site. This relief request addresses areas where these conditions exist and where the required amount of coverage is reduced below that required by ASME BPV Section XI.

The weld examinations listed in this relief request were performed to the maximum extent possible for each of the welds identified with limitations in Table 1. Plant-specific or industry operating experience regarding potential degradation specific to welds in this relief request has been considered with the identification of potential degradation mechanisms within the scope of the applied RI-ISI program.

All the Class 1 welds with limited examinations included in this relief request are located inside the drywell at PNPP. Operational leakage from the reactor coolant system (RCS) within the drywell is monitored per Technical Specification 3.4.5, *RCS Operational Leakage* with the following requirements:

- a. No pressure boundary leakage
- b. Less than or equal to ( $\leq$ ) 5 gallons per minute (gpm) unidentified leakage
- c.  $\leq$  30 gpm total leakage averaged over the previous 24-hour period; and
- d.  $\leq$  2 gpm increase in unidentified leakage within the previous 24-hour period in Mode 1.

Monitoring of operational leakage will provide early detection of any RCS leakage within the drywell. Additionally, system leakage tests (VT-2 examinations) are performed each refueling outage as required by ASME BPV Section XI to detect RCS leakage from Class 1 piping.

## **7. Duration of Proposed Alternative**

This relief request is applicable to the PNPP third 10-year ISI interval, which began on May 18, 2009 and ended on May 17, 2019.



## **8. Precedent**

Prior relief was granted for ASME Item B1.30 under Perry Relief Request IR-057 (Reference 9). Prior relief was granted for ASME Item B3.90 welds under Perry Relief Request IR-001 (Reference 8). Prior relief was granted for ASME Item B14.10 welds under Perry Relief Request IR-009 (Reference 8).

## **9. References**

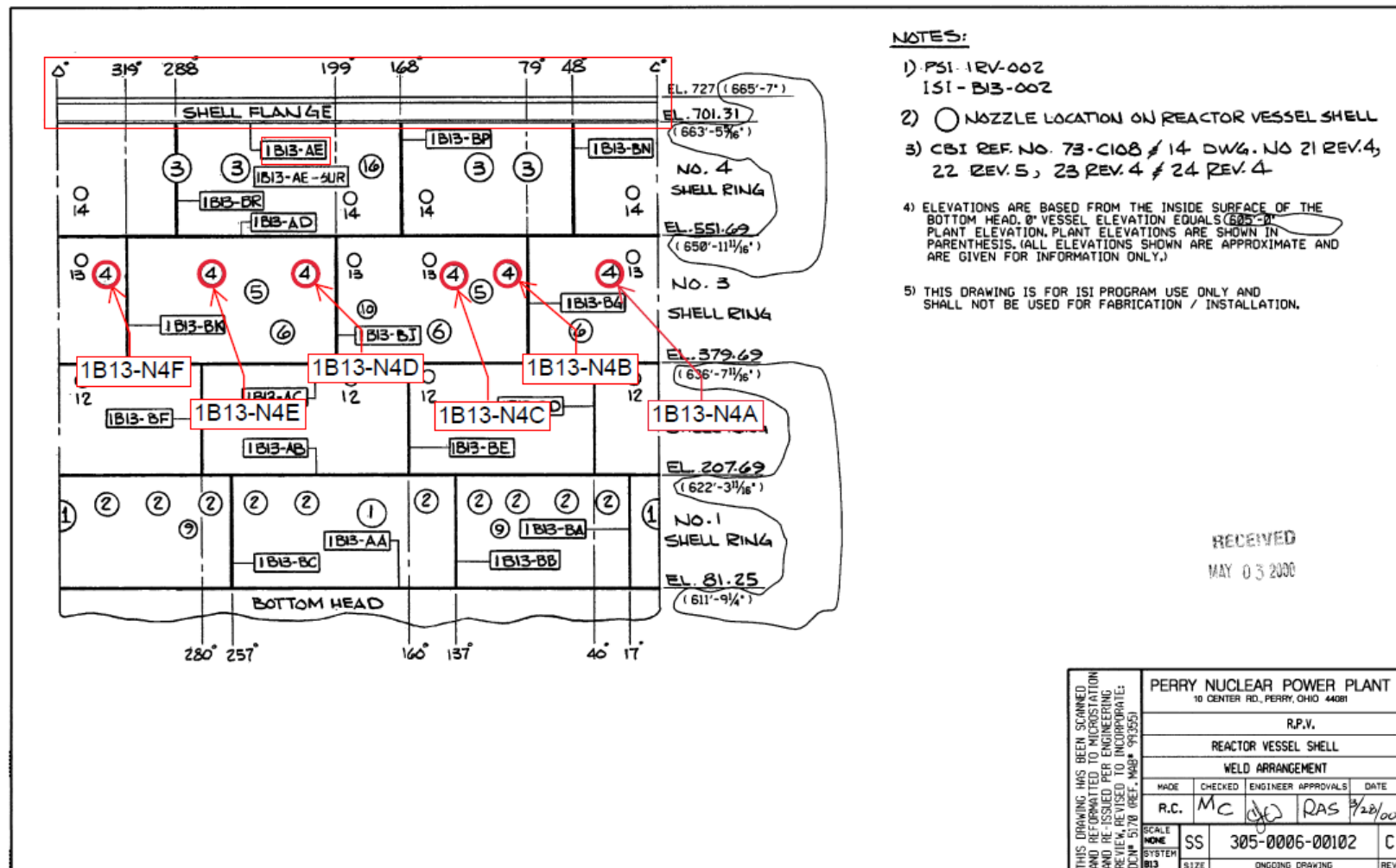
1. ASME Boiler and Pressure Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plants," 2001 Edition through 2003 Addenda.
2. NRC Letter to FENOC, "Perry Nuclear Power Plant, Unit 1 – Safety Evaluation in Support of 10 CFR 50.55a Requests for Alternative Examination Requirements for American Society of Mechanical Engineers Class 1 Piping Welds (TAC No. ME7564)," dated November 14, 2012 (ML12313A153).
3. ASME Code Case N-578, "Risk-Informed Requirements for Class 1, 2, and 3 Piping, Method B, Section XI, Division 1."
4. EPRI Topical Report TR-112657 "Revised Risk-Informed Inservice Inspection Evaluation Procedure," Rev B-A, December 1999 (ML013470102).
5. ASME Code Case N-460, "Alternative Examination Coverage for Class 1 and Class 2 Welds, Section XI, Division 1."
6. ASME Code Case N-613-1, "Ultrasonic Examination of Full Penetration Nozzles in Vessels, Examination Category B-D, Item No's. B3.10 and B3.90, Reactor Nozzle-to-Vessel Welds, Figs. IWB-2500-7(a), (b), and (c), Section XI, Division 1."
7. NRC Letter to FENOC, "Safety Evaluation of Proposed Alternatives to ASME Code Requirements for Repair and Inspection of a Feedwater Nozzle to Safe-End Weld – Perry Nuclear Power Plant (TAC No. MA5061)," dated April 29, 1999
8. NRC Letter to FENOC, "Safety Evaluation of the Inservice Inspection Program Second 10-Year Interval Relief Requests for Relief for FirstEnergy Nuclear Operating Company – Perry Nuclear Power Plant, Unit 1 (TAC No. MA3437)," dated November 22, 1999.
9. NRC Letter to FENOC, "Perry Nuclear Power Plant, Unit No. 1 – Request for Relief Related to Inservice Inspection Relief Requests Nos. IR-056 and IR-057 (TAC Nos MD8198 and MD8199)," dated December 16, 2008 (ML083100284).

The following table tabulates the examination results for the welds and items associated with this relief request.

| Table 1               |          |               |   |   |                             |                                    |  |
|-----------------------|----------|---------------|---|---|-----------------------------|------------------------------------|--|
| Component Information |          |               |   |   |                             |                                    |  |
| Exam Cat.             | Item No. | Component ID  | Item Description  | Material 1 and Product Form             | Material 2 and Product Form | Examination Code Coverage Obtained | Examination Limitations and Results  |
| B-A                   | B1.30    | 1B13-AE       | No. 4 shell ring to shell flange circumferential seam (Figures 1, 2A, Report A) | SA-533 Gr. B Cl. 1 Plate w/ SS cladding | SA-508 Class II Forging     | UT=70.9%                           | Exam was limited due to proximity of N17 nozzle drain line and the configuration of the RPV flange. Two acceptable indications |
| B-D                   | B3.90    | 1B13-N4A-KA   | Feedwater nozzle N4A to vessel weld (Figures 1, 3B, 4B, Report B)               | SA-533 Gr. B Cl. 1 Plate w/ SS cladding | SA-508 Class II Forging     | UT=83.2%                           | Nozzle design limits scan due to nozzle taper. No recordable indications   |
| B-D                   | B3.90    | 1B13-N4B-KA   | Feedwater nozzle N4B to vessel weld (Figures 1, 5C, 6C, Report C)               | SA-533 Gr. B Cl. 1 Plate w/ SS cladding | SA-508 Class II Forging     | UT=83.2%                           | Nozzle design limits scan due to nozzle taper. No recordable indications   |
| B-D                   | B3.90    | 1B13-N4C-KA   | Feedwater nozzle N4C to vessel weld (Figures 1, 7D, 8D, Report D)               | SA-533 Gr. B Cl. 1 Plate w/ SS cladding | SA-508 Class II Forging     | UT=83.2%                           | Nozzle design limits scan due to nozzle taper. No recordable indications   |
| B-D                   | B3.90    | 1B13-N4D-KA   | Feedwater nozzle N4D to vessel weld (Figures 1, 9E, 10E, Report E)              | SA-533 Gr. B Cl. 1 Plate w/ SS cladding | SA-508 Class II Forging     | UT=83.2%                           | Nozzle design limits scan due to nozzle taper. No recordable indications   |
| B-D                   | B3.90    | 1B13-N4E-KA   | Feedwater nozzle N4E to vessel weld (Figures 1, 11F, 12F, Report F)             | SA-533 Gr. B Cl. 1 Plate w/ SS cladding | SA-508 Class II Forging     | UT=82.7%                           | Nozzle design limits scan due to nozzle taper. No recordable indications   |
| B-D                   | B3.90    | 1B13-N4F-KA   | Feedwater nozzle N4F to vessel weld (Figures 1, 13G, 14G, Report G)             | SA-533 Gr. B Cl. 1 Plate w/ SS cladding | SA-508 Class II Forging     | UT=83.2%                           | Nozzle design limits scan due to nozzle taper. Three acceptable indications (no through-wall depth)                            |
| B-O                   | B14.10   | 1B13-02/35-FW | CRD Housing to Flange weld (Figures 15, 16)                                     | SA-312 TP304 Seamless Pipe              | SA-182 F304 Forging         | PT=85%                             | Exam was limited due to proximity of other components.   |

|     |        |               |  |                                     |   |          |  |
|-----|--------|---------------|--|-------------------------------------|---|----------|--|
| B-O | B14.10 | 1B13-54/15-FW | CRD Housing to Flange weld (Figures 15, 16)                          | SA-312 TP304 Seamless Pipe          | SA-182 F304 Forging                         | PT=75%   | Exam was limited due to proximity of other components  |
| R-A | R2.11  | 1B13-N4C-KB   | Feedwater nozzle N4C to safe end (overlayed) (Figures 1, 17, and 18) | SB-166 Forging                      | SA-508 Class II Forging Overlay is Alloy 52 | UT=70.5% | Design of full structural weld overlay does not permit scanning of required volume on upstream side. Existing recordable indications (lack of bond, lack of fusion) unchanged. |
| R-A | R2.ND  | 1B33-0028     | 16" pipe to 16" x 12" sweepolet (Figures 19H, 20H, Reports H)        | SA-358 Type 304 Class 1 welded pipe | SA-403 WP304 sweepolet                      | UT=50%   | Design configuration limitation, no scans from the sweepolet side of the weld. No recordable indications.  |

Figure 1  
Examination Category: B-A, B-D and R-A  
Item No. B1.30, B3.90 and R2.11  
Component ID: 1B13-AE, 1B13-N4A-KA through 1B13-N4F-KA and 1B13-N4C-KB



Report A  
Examination Category: B-A  
Item No. B1.30  
Component ID: 1B13-AE

**Perry Unit 1 RFO17 1B13-AE Circumferential Seam**

| Weld Length = 801.50<br>Exam Volume = 78.70 |   | CODE CROSS-SECTIONAL AREA     |                  | TOTAL CODE COVERAGE         |                         |                     |
|---|---|-------------------------------|------------------|-----------------------------|-------------------------|---------------------|
|   |   | Required Exam<br>Area Sq. in. | Area<br>Examined | Percent of Area<br>Examined | Weld Length<br>Examined | Percent<br>Examined |
| 70° T-Scan (S6 NS)                          | A | 14.3                          | 8.1              | 10.3%                       | 788.00                  | 5.1%                |
| 45° T-Scan (S6 FV)                          | A | 53.5                          | 51.0             | 64.8%                       | 785.00                  | 31.7%               |
| 60° T-Scan (S4 LKUP)                        | A | 10.9                          | 10.9             | 6.9%                        | 782.00                  | 3.4%                |
| 60° T-Scan (S4 LKDN)                        | A | 10.9                          | 0.0              | 0.0%                        | 0.00                    | 0.0%                |
| 70° P-Scan (S6 NS)                          | A | 14.3                          | 6.6              | 8.4%                        | 797.00                  | 4.2%                |
| 45° P-Scan (S6 FV)                          | A | 53.5                          | 35.0             | 44.5%                       | 794.00                  | 22.0%               |
| 60° P-Scan (S4 LKCW)                        | A | 10.9                          | 7.3              | 4.6%                        | 791.00                  | 2.3%                |
| 60° P-Scan (S4 LKCC)                        | A | 10.9                          | 7.3              | 4.6%                        | 791.00                  | 2.3%                |
| 70° T-Scan (S6 NS)                          |   |                               |                  |                             |                         |                     |
| 45° T-Scan (S6 FV)                          |   |                               |                  |                             |                         |                     |
| 60° T-Scan (S4 LKUP)                        |   |                               |                  |                             |                         |                     |
| 60° T-Scan (S4 LKDN)                        |   |                               |                  |                             |                         |                     |
| 70° P-Scan (S6 NS)                          |   |                               |                  |                             |                         |                     |
| 45° P-Scan (S6 FV)                          |   |                               |                  |                             |                         |                     |
| 60° P-Scan (S4 LKCW)                        |   |                               |                  |                             |                         |                     |
| 60° P-Scan (S4 LKCC)                        |   |                               |                  |                             |                         |                     |
| 70° T-Scan (S6 NS)                          |   |                               |                  |                             |                         |                     |
| 45° T-Scan (S6 FV)                          |   |                               |                  |                             |                         |                     |
| 60° T-Scan (S4 LKUP)                        |   |                               |                  |                             |                         |                     |
| 60° T-Scan (S4 LKDN)                        |   |                               |                  |                             |                         |                     |
| 70° P-Scan (S6 NS)                          |   |                               |                  |                             |                         |                     |
| 45° P-Scan (S6 FV)                          |   |                               |                  |                             |                         |                     |
| 60° P-Scan (S4 LKCW)                        |   |                               |                  |                             |                         |                     |
| 60° P-Scan (S4 LKCC)                        |   |                               |                  |                             |                         |                     |

% Total Composite Coverage = 70.9%

Comments: A - Automated scanning was limited due to the proximity of the N17 nozzle drain line and the configuration of the RPV flange.  
Unable to obtain full coverage for inner 15% T due to single side scanning restrictions specified in 10 CFR 50.55a (xxiv).

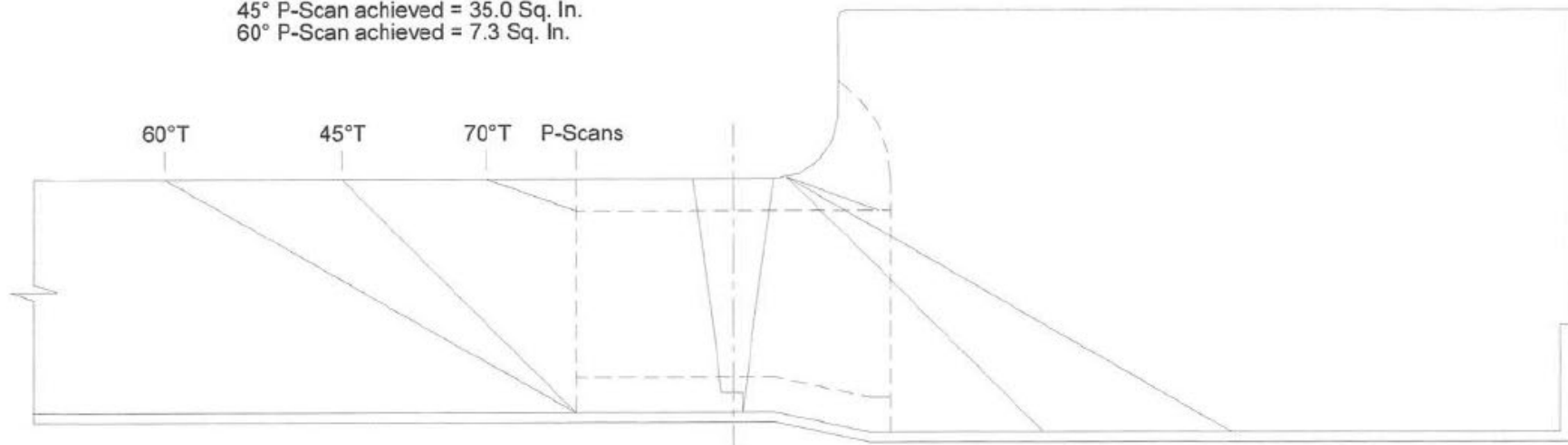
Note - Rounding methods may affect calculated values. FV-Full volume, NS-Near Surface. Weld length in inches.

Figure 2A  
Examination Category: B-A  
Item No. B1.30  
Component ID: 1B13-AE

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## Perry Unit 1 1B13-AE Vessel to Flange Weld

70° Exam Volume = 14.3 Sq. In.  
45° Exam Volume = 53.5 Sq. In.  
60° Exam Volume = 10.9 Sq. In.  
70° T-Scan achieved = 8.1 Sq. In.  
45° T-Scan achieved = 51.0 Sq. In.  
60° T-Scan achieved = 10.9 Sq. In.  
70° P-Scan achieved = 6.6 Sq. In.  
45° P-Scan achieved = 35.0 Sq. In.  
60° P-Scan achieved = 7.3 Sq. In.



Auto UT coverage plot for single sided scans

Report B  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4A-KA


|  <b>HITACHI</b>  | <b>SP2000 RPV Examination<br/>Coverage Calculation Sheet</b> |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
|---|--|--------------------------------|---------------------------|------------------------------------|--------------------------|----------------------|--|--|-------------------------------|---------------------------|---------------------------------|--------------------------|----------------------|--------------------|---|-----|-----|-------|-----|------|--------------------|---|------|------|-------|-----|-------|-----------------|---|-----|-----|-------|-----|------|--------------------|---|-----|-----|------|-----|------|--------------------|---|------|-----|-------|-----|-------|-----------------|---|-----|-----|-------|-----|------|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--|--|--|--|------------------------------------|--|--|
| <b>Perry Nuclear Power Plant, 1R14, 2013<br/>1B13-N4A-KA</b>  |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="width: 20%;">Weld Length =<br/>Exam Volume =</th> <th rowspan="2" style="width: 5%;">360.<br/>20.5</th> <th colspan="2" style="width: 25%;">CODE CROSS-SECTIONAL AREA</th> <th colspan="3" style="width: 47%;">TOTAL CODE COVERAGE</th> </tr> <tr> <th style="width: 15%;">Required Exam<br/>Area Sq. in.</th> <th style="width: 10%;">Area Scanned<br/>Automated</th> <th style="width: 10%;">Percent<br/>of Area<br/>Automated</th> <th style="width: 10%;">Weld Length<br/>Automated</th> <th style="width: 10%;">Percent<br/>Automated</th> </tr> </thead> <tbody> <tr> <td>70° T-Scan (S6 NS)</td> <td>A</td> <td>3.3</td> <td>2.8</td> <td>13.7%</td> <td>360</td> <td>6.8%</td> </tr> <tr> <td>45° T-Scan (S6 FV)</td> <td>A</td> <td>14.1</td> <td>13.9</td> <td>67.8%</td> <td>360</td> <td>33.9%</td> </tr> <tr> <td>60° T-Scan (S4)</td> <td>A</td> <td>3.1</td> <td>3.1</td> <td>15.1%</td> <td>360</td> <td>7.6%</td> </tr> <tr> <td>70° P-Scan (S6 NS)</td> <td>A</td> <td>3.3</td> <td>1.7</td> <td>8.3%</td> <td>360</td> <td>4.1%</td> </tr> <tr> <td>45° P-Scan (S6 FV)</td> <td>A</td> <td>14.1</td> <td>9.5</td> <td>46.3%</td> <td>360</td> <td>23.2%</td> </tr> <tr> <td>IRS P-Scan (S4)</td> <td>A</td> <td>3.1</td> <td>3.1</td> <td>15.1%</td> <td>360</td> <td>7.6%</td> </tr> <tr><td colspan="7"> </td></tr> <tr> <td>70° T-Scan (S6 NS)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>45° T-Scan (S6 FV)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>60° T-Scan (S4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>70° P-Scan (S6 NS)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>45° P-Scan (S6 FV)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>IRS P-Scan (S4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr><td colspan="7"> </td></tr> <tr> <td>70° T-Scan (S6 NS)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>45° T-Scan (S6 FV)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>60° T-Scan (S4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>70° P-Scan (S6 NS)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>45° P-Scan (S6 FV)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>IRS P-Scan (S4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4"></td> <td colspan="3" style="text-align: right;">% Total Composite Coverage = 83.2%</td> </tr> </tbody> </table> |  | Weld Length =<br>Exam Volume = | 360.<br>20.5              | CODE CROSS-SECTIONAL AREA          |                          | TOTAL CODE COVERAGE  |  |  | Required Exam<br>Area Sq. in. | Area Scanned<br>Automated | Percent<br>of Area<br>Automated | Weld Length<br>Automated | Percent<br>Automated | 70° T-Scan (S6 NS) | A | 3.3 | 2.8 | 13.7% | 360 | 6.8% | 45° T-Scan (S6 FV) | A | 14.1 | 13.9 | 67.8% | 360 | 33.9% | 60° T-Scan (S4) | A | 3.1 | 3.1 | 15.1% | 360 | 7.6% | 70° P-Scan (S6 NS) | A | 3.3 | 1.7 | 8.3% | 360 | 4.1% | 45° P-Scan (S6 FV) | A | 14.1 | 9.5 | 46.3% | 360 | 23.2% | IRS P-Scan (S4) | A | 3.1 | 3.1 | 15.1% | 360 | 7.6% |  |  |  |  |  |  |  | 70° T-Scan (S6 NS) |  |  |  |  |  |  | 45° T-Scan (S6 FV) |  |  |  |  |  |  | 60° T-Scan (S4) |  |  |  |  |  |  | 70° P-Scan (S6 NS) |  |  |  |  |  |  | 45° P-Scan (S6 FV) |  |  |  |  |  |  | IRS P-Scan (S4) |  |  |  |  |  |  |  |  |  |  |  |  |  | 70° T-Scan (S6 NS) |  |  |  |  |  |  | 45° T-Scan (S6 FV) |  |  |  |  |  |  | 60° T-Scan (S4) |  |  |  |  |  |  | 70° P-Scan (S6 NS) |  |  |  |  |  |  | 45° P-Scan (S6 FV) |  |  |  |  |  |  | IRS P-Scan (S4) |  |  |  |  |  |  |  |  |  |  | % Total Composite Coverage = 83.2% |  |  |
| Weld Length =<br>Exam Volume =  | 360.<br>20.5   |                                |                           | CODE CROSS-SECTIONAL AREA          |                          | TOTAL CODE COVERAGE  |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
|   |  | Required Exam<br>Area Sq. in.  | Area Scanned<br>Automated | Percent<br>of Area<br>Automated    | Weld Length<br>Automated | Percent<br>Automated |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° T-Scan (S6 NS)  | A  | 3.3                            | 2.8                       | 13.7%                              | 360                      | 6.8%                 |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° T-Scan (S6 FV)  | A  | 14.1                           | 13.9                      | 67.8%                              | 360                      | 33.9%                |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 60° T-Scan (S4)   | A  | 3.1                            | 3.1                       | 15.1%                              | 360                      | 7.6%                 |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° P-Scan (S6 NS)  | A  | 3.3                            | 1.7                       | 8.3%                               | 360                      | 4.1%                 |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° P-Scan (S6 FV)  | A  | 14.1                           | 9.5                       | 46.3%                              | 360                      | 23.2%                |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| IRS P-Scan (S4)   | A  | 3.1                            | 3.1                       | 15.1%                              | 360                      | 7.6%                 |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
|   |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° T-Scan (S6 NS)  |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° T-Scan (S6 FV)  |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 60° T-Scan (S4)   |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° P-Scan (S6 NS)  |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° P-Scan (S6 FV)  |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| IRS P-Scan (S4)   |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
|   |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° T-Scan (S6 NS)  |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° T-Scan (S6 FV)  |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 60° T-Scan (S4)   |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° P-Scan (S6 NS)  |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° P-Scan (S6 FV)  |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| IRS P-Scan (S4)   |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
|   |  |                                |                           | % Total Composite Coverage = 83.2% |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| Comments: A - Automated scanning was restricted due to the nozzle configuration.  |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| Note - Rounding methods may affect calculated values. UC-Underclad, FV-Full volume, NS-Near Surface. Weld length in degrees.  |  |                                |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |



Figure 3B  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4A-KA

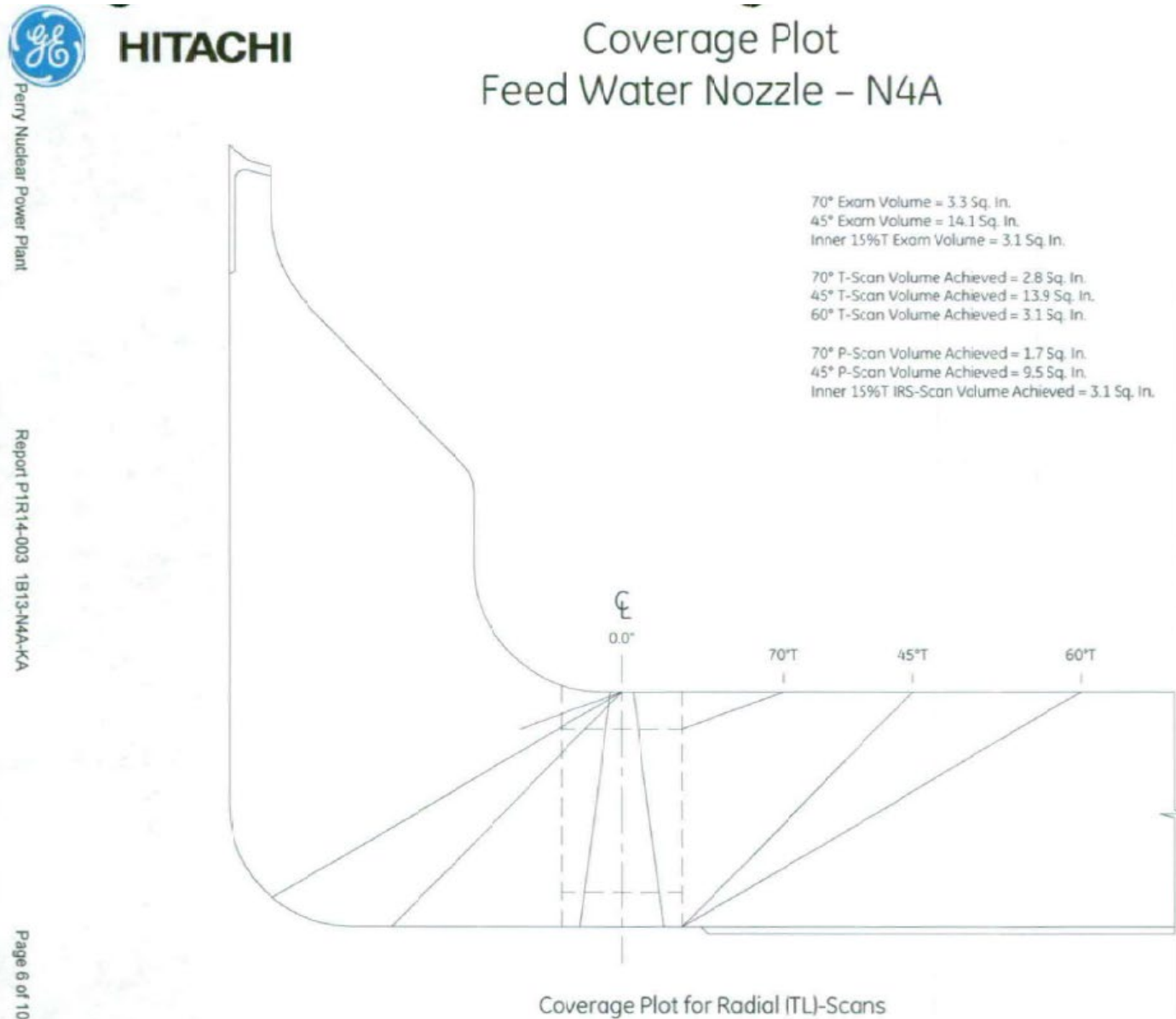
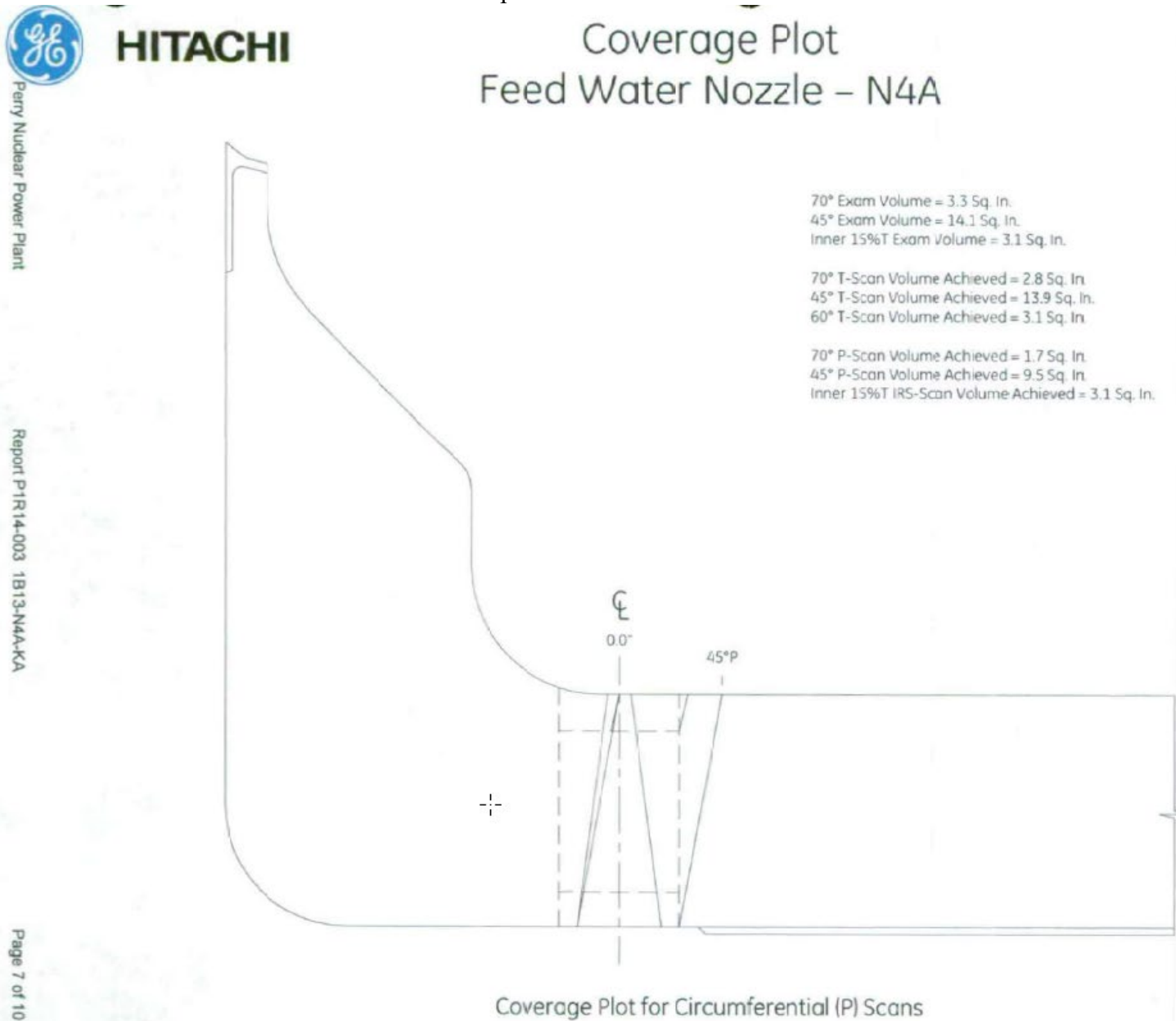




Figure 4B  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4A-KA



Report C  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4B-KA


|  <b>HITACHI</b>                             | <b>SP2000 RPV Examination<br/>Coverage Calculation Sheet</b>   |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
|--|--|----------------------------|------------------------|---------------------------|-----------------------|---------------------|--|--|----------------------------|------------------------|---------------------------|-----------------------|-------------------|--------------------|---|-----|-----|-------|-----|------|--------------------|---|------|------|-------|-----|-------|-----------------|---|-----|-----|-------|-----|------|--------------------|---|-----|-----|------|-----|------|--------------------|---|------|-----|-------|-----|-------|-----------------|---|-----|-----|-------|-----|------|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|
| <b>Perry Nuclear Power Plant, 1R14, 2013<br/>1B13-N4B-KA</b>   |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| Weld Length = 360.<br>Exam Volume = 20.5   | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th rowspan="2"></th> <th colspan="2">CODE CROSS-SECTIONAL AREA</th> <th colspan="3">TOTAL CODE COVERAGE</th> </tr> <tr> <th>Required Exam Area Sq. in.</th> <th>Area Scanned Automated</th> <th>Percent of Area Automated</th> <th>Weld Length Automated</th> <th>Percent Automated</th> </tr> </thead> <tbody> <tr> <td>70° T-Scan (S6 NS)</td> <td>A</td> <td>3.3</td> <td>2.8</td> <td>13.7%</td> <td>360</td> <td>6.8%</td> </tr> <tr> <td>45° T-Scan (S6 FV)</td> <td>A</td> <td>14.1</td> <td>13.9</td> <td>67.8%</td> <td>360</td> <td>33.9%</td> </tr> <tr> <td>60° T-Scan (S4)</td> <td>A</td> <td>3.1</td> <td>3.1</td> <td>15.1%</td> <td>360</td> <td>7.6%</td> </tr> <tr> <td>70° P-Scan (S6 NS)</td> <td>A</td> <td>3.3</td> <td>1.7</td> <td>8.3%</td> <td>360</td> <td>4.1%</td> </tr> <tr> <td>45° P-Scan (S6 FV)</td> <td>A</td> <td>14.1</td> <td>9.5</td> <td>46.3%</td> <td>360</td> <td>23.2%</td> </tr> <tr> <td>IRS P-Scan (S4)</td> <td>A</td> <td>3.1</td> <td>3.1</td> <td>15.1%</td> <td>360</td> <td>7.6%</td> </tr> <tr><td colspan="7"> </td></tr> <tr> <td>70° T-Scan (S6 NS)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>45° T-Scan (S6 FV)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>60° T-Scan (S4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>70° P-Scan (S6 NS)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>45° P-Scan (S6 FV)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>IRS P-Scan (S4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr><td colspan="7"> </td></tr> <tr> <td>70° T-Scan (S6 NS)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>45° T-Scan (S6 FV)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>60° T-Scan (S4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>70° P-Scan (S6 NS)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>45° P-Scan (S6 FV)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>IRS P-Scan (S4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> |                            |                        | CODE CROSS-SECTIONAL AREA |                       | TOTAL CODE COVERAGE |  |  | Required Exam Area Sq. in. | Area Scanned Automated | Percent of Area Automated | Weld Length Automated | Percent Automated | 70° T-Scan (S6 NS) | A | 3.3 | 2.8 | 13.7% | 360 | 6.8% | 45° T-Scan (S6 FV) | A | 14.1 | 13.9 | 67.8% | 360 | 33.9% | 60° T-Scan (S4) | A | 3.1 | 3.1 | 15.1% | 360 | 7.6% | 70° P-Scan (S6 NS) | A | 3.3 | 1.7 | 8.3% | 360 | 4.1% | 45° P-Scan (S6 FV) | A | 14.1 | 9.5 | 46.3% | 360 | 23.2% | IRS P-Scan (S4) | A | 3.1 | 3.1 | 15.1% | 360 | 7.6% |  |  |  |  |  |  |  | 70° T-Scan (S6 NS) |  |  |  |  |  |  | 45° T-Scan (S6 FV) |  |  |  |  |  |  | 60° T-Scan (S4) |  |  |  |  |  |  | 70° P-Scan (S6 NS) |  |  |  |  |  |  | 45° P-Scan (S6 FV) |  |  |  |  |  |  | IRS P-Scan (S4) |  |  |  |  |  |  |  |  |  |  |  |  |  | 70° T-Scan (S6 NS) |  |  |  |  |  |  | 45° T-Scan (S6 FV) |  |  |  |  |  |  | 60° T-Scan (S4) |  |  |  |  |  |  | 70° P-Scan (S6 NS) |  |  |  |  |  |  | 45° P-Scan (S6 FV) |  |  |  |  |  |  | IRS P-Scan (S4) |  |  |  |  |  |  |
|  |  |                            |                        | CODE CROSS-SECTIONAL AREA |                       | TOTAL CODE COVERAGE |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
|  |  | Required Exam Area Sq. in. | Area Scanned Automated | Percent of Area Automated | Weld Length Automated | Percent Automated   |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 70° T-Scan (S6 NS)   | A  | 3.3                        | 2.8                    | 13.7%                     | 360                   | 6.8%                |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 45° T-Scan (S6 FV)   | A  | 14.1                       | 13.9                   | 67.8%                     | 360                   | 33.9%               |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 60° T-Scan (S4)  | A  | 3.1                        | 3.1                    | 15.1%                     | 360                   | 7.6%                |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 70° P-Scan (S6 NS)   | A  | 3.3                        | 1.7                    | 8.3%                      | 360                   | 4.1%                |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 45° P-Scan (S6 FV)   | A  | 14.1                       | 9.5                    | 46.3%                     | 360                   | 23.2%               |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| IRS P-Scan (S4)  | A  | 3.1                        | 3.1                    | 15.1%                     | 360                   | 7.6%                |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
|  |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 70° T-Scan (S6 NS)   |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 45° T-Scan (S6 FV)   |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 60° T-Scan (S4)  |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 70° P-Scan (S6 NS)   |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 45° P-Scan (S6 FV)   |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| IRS P-Scan (S4)  |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
|  |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 70° T-Scan (S6 NS)   |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 45° T-Scan (S6 FV)   |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 60° T-Scan (S4)  |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 70° P-Scan (S6 NS)   |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 45° P-Scan (S6 FV)   |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| IRS P-Scan (S4)  |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| % Total Composite Coverage = 83.2%   |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| Comments: A - Automated scanning was restricted due to the nozzle configuration.   |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| Note - Rounding methods may affect calculated values. UC-Underclad, FV-Full volume, NS-Near Surface. Weld length in degrees. |  |                            |                        |                           |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |

Figure 5C  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4B-KA

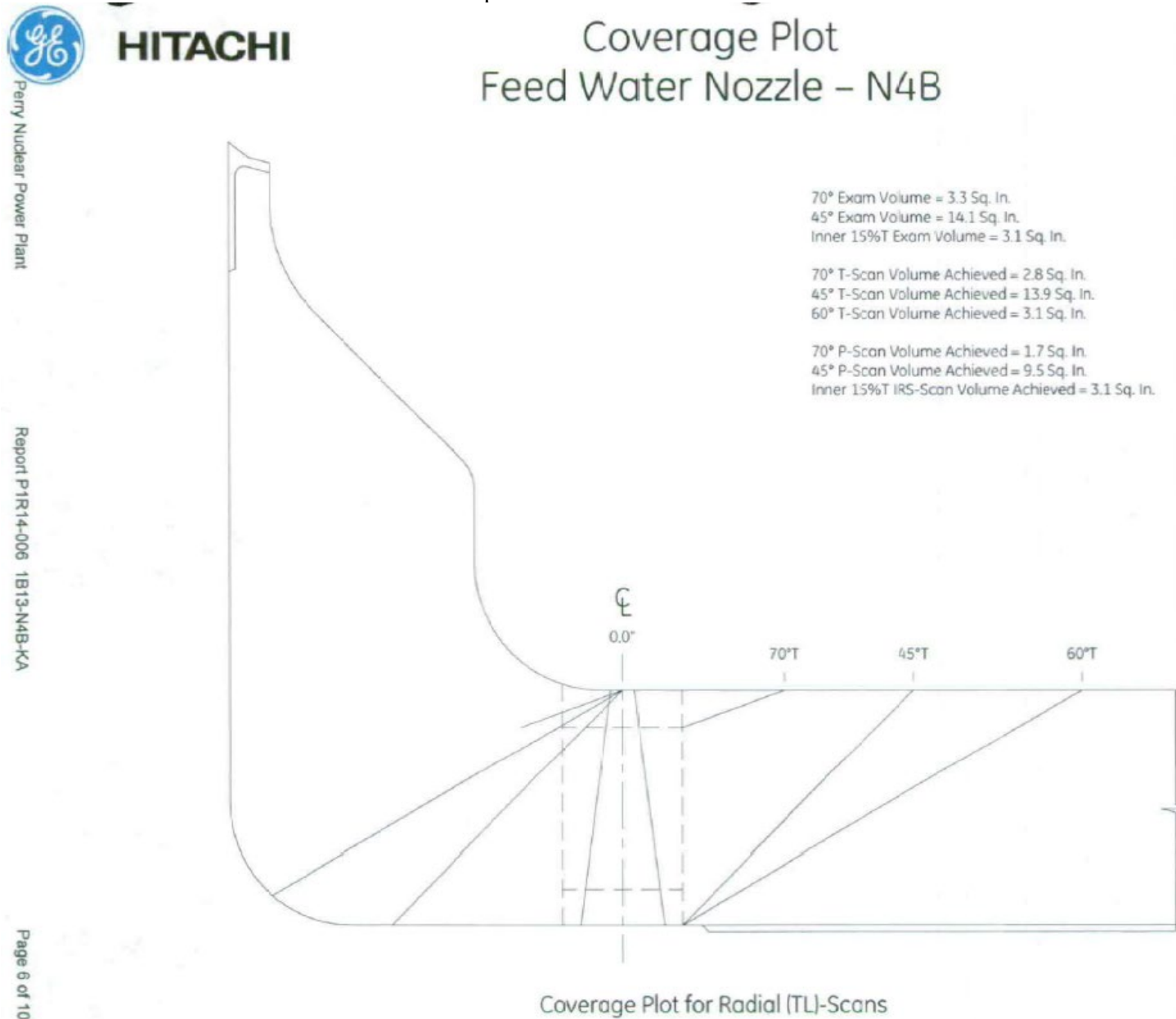
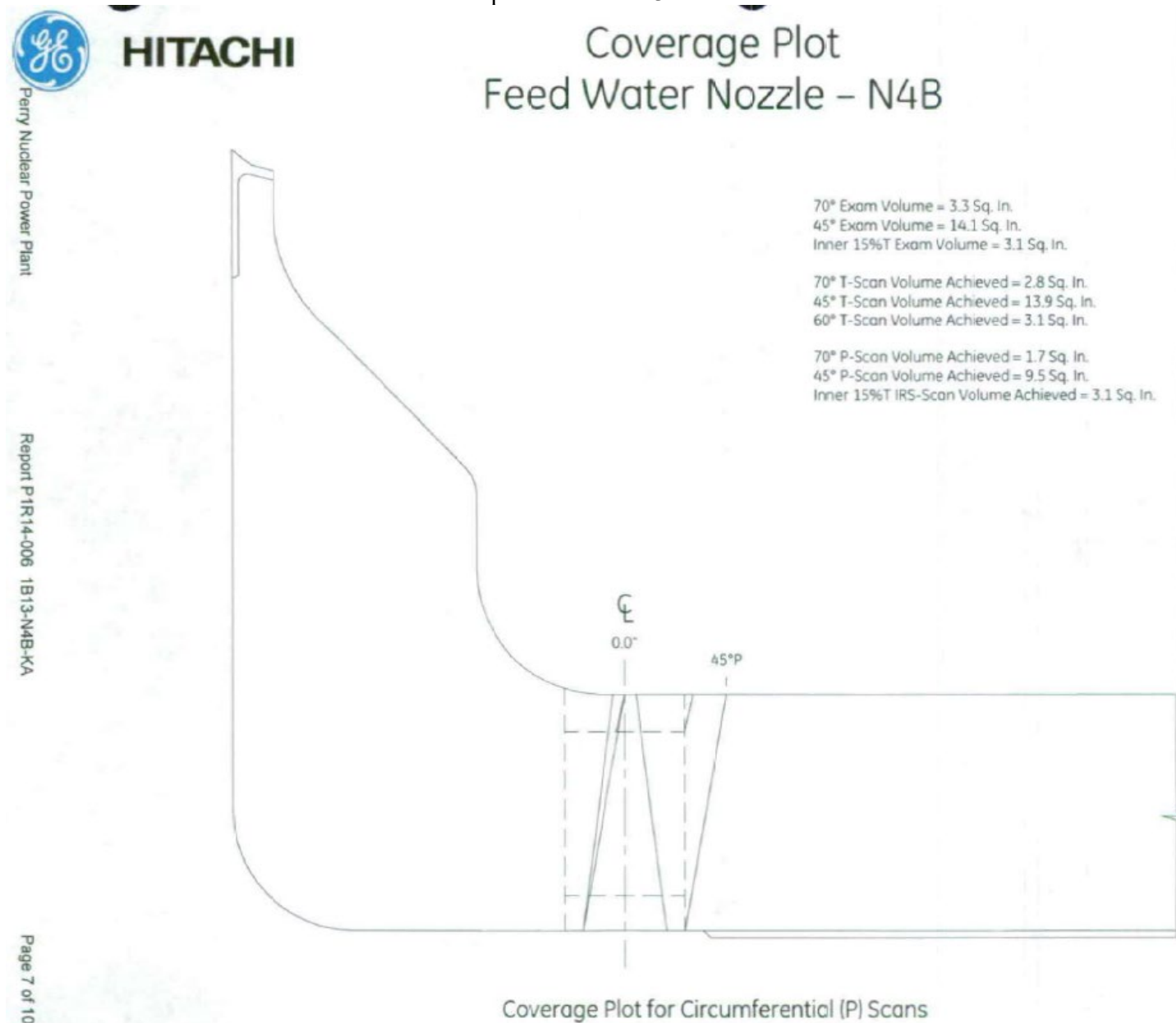


Figure 6C  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4B-KA





Report D  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4C-KA


|   | <b>SP2000 RPV Examination<br/>Coverage Calculation Sheet</b> |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
|--|--|-------------------------------|---------------------------|------------------------------------|--------------------------|----------------------|--|--|-------------------------------|---------------------------|---------------------------------|--------------------------|----------------------|---------------|------|--|--|--|--|--|---------------|------|--|--|--|--|--|--------------------|---|-----|-----|-------|-----|------|--------------------|---|------|------|-------|-----|-------|-----------------|---|-----|-----|-------|-----|------|--------------------|---|-----|-----|------|-----|------|--------------------|---|------|-----|-------|-----|-------|-----------------|---|-----|-----|-------|-----|------|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--|--|--|--|------------------------------------|--|--|
| <b>Perry Nuclear Power Plant, 1R14, 2013<br/>1B13-N4C-KA</b>   |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" rowspan="2"></th> <th colspan="2">CODE CROSS-SECTIONAL AREA</th> <th colspan="3">TOTAL CODE COVERAGE</th> </tr> <tr> <th>Required Exam<br/>Area Sq. in.</th> <th>Area Scanned<br/>Automated</th> <th>Percent<br/>of Area<br/>Automated</th> <th>Weld Length<br/>Automated</th> <th>Percent<br/>Automated</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Weld Length =</td> <td style="text-align: center;">360.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">Exam Volume =</td> <td style="text-align: center;">20.5</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>70° T-Scan (S6 NS)</td> <td style="text-align: center;">A</td> <td style="text-align: center;">3.3</td> <td style="text-align: center;">2.8</td> <td style="text-align: center;">13.7%</td> <td style="text-align: center;">360</td> <td style="text-align: center;">6.8%</td> </tr> <tr> <td>45° T-Scan (S6 FV)</td> <td style="text-align: center;">A</td> <td style="text-align: center;">14.1</td> <td style="text-align: center;">13.9</td> <td style="text-align: center;">67.8%</td> <td style="text-align: center;">360</td> <td style="text-align: center;">33.9%</td> </tr> <tr> <td>60° T-Scan (S4)</td> <td style="text-align: center;">A</td> <td style="text-align: center;">3.1</td> <td style="text-align: center;">3.1</td> <td style="text-align: center;">15.1%</td> <td style="text-align: center;">360</td> <td style="text-align: center;">7.6%</td> </tr> <tr> <td>70° P-Scan (S6 NS)</td> <td style="text-align: center;">A</td> <td style="text-align: center;">3.3</td> <td style="text-align: center;">1.7</td> <td style="text-align: center;">8.3%</td> <td style="text-align: center;">360</td> <td style="text-align: center;">4.1%</td> </tr> <tr> <td>45° P-Scan (S6 FV)</td> <td style="text-align: center;">A</td> <td style="text-align: center;">14.1</td> <td style="text-align: center;">9.5</td> <td style="text-align: center;">46.3%</td> <td style="text-align: center;">360</td> <td style="text-align: center;">23.2%</td> </tr> <tr> <td>IRS P-Scan (S4)</td> <td style="text-align: center;">A</td> <td style="text-align: center;">3.1</td> <td style="text-align: center;">3.1</td> <td style="text-align: center;">15.1%</td> <td style="text-align: center;">360</td> <td style="text-align: center;">7.6%</td> </tr> <tr><td colspan="7"> </td></tr> <tr> <td>70° T-Scan (S6 NS)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>45° T-Scan (S6 FV)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>60° T-Scan (S4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>70° P-Scan (S6 NS)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>45° P-Scan (S6 FV)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>IRS P-Scan 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Exam<br>Area Sq. in. | Area Scanned<br>Automated | Percent<br>of Area<br>Automated | Weld Length<br>Automated | Percent<br>Automated | Weld Length = | 360. |  |  |  |  |  | Exam Volume = | 20.5 |  |  |  |  |  | 70° T-Scan (S6 NS) | A | 3.3 | 2.8 | 13.7% | 360 | 6.8% | 45° T-Scan (S6 FV) | A | 14.1 | 13.9 | 67.8% | 360 | 33.9% | 60° T-Scan (S4) | A | 3.1 | 3.1 | 15.1% | 360 | 7.6% | 70° P-Scan (S6 NS) | A | 3.3 | 1.7 | 8.3% | 360 | 4.1% | 45° P-Scan (S6 FV) | A | 14.1 | 9.5 | 46.3% | 360 | 23.2% | IRS P-Scan (S4) | A | 3.1 | 3.1 | 15.1% | 360 | 7.6% |  |  |  |  |  |  |  | 70° T-Scan (S6 NS) |  |  |  |  |  |  | 45° T-Scan (S6 FV) |  |  |  |  |  |  | 60° T-Scan (S4) |  |  |  |  |  |  | 70° P-Scan (S6 NS) |  |  |  |  |  |  | 45° P-Scan (S6 FV) |  |  |  |  |  |  | IRS P-Scan (S4) |  |  |  |  |  |  |  |  |  |  |  |  |  | 70° T-Scan (S6 NS) |  |  |  |  |  |  | 45° T-Scan (S6 FV) |  |  |  |  |  |  | 60° T-Scan (S4) |  |  |  |  |  |  | 70° P-Scan (S6 NS) |  |  |  |  |  |  | 45° P-Scan (S6 FV) |  |  |  |  |  |  | IRS P-Scan (S4) |  |  |  |  |  |  |  |  |  |  | % Total Composite Coverage = 83.2% |  |  |
|  |  |                               |                           | CODE CROSS-SECTIONAL AREA          |                          | TOTAL CODE COVERAGE  |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
|  |  | Required Exam<br>Area Sq. in. | Area Scanned<br>Automated | Percent<br>of Area<br>Automated    | Weld Length<br>Automated | Percent<br>Automated |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| Weld Length =  | 360.   |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| Exam Volume =  | 20.5   |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° T-Scan (S6 NS)   | A  | 3.3                           | 2.8                       | 13.7%                              | 360                      | 6.8%                 |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° T-Scan (S6 FV)   | A  | 14.1                          | 13.9                      | 67.8%                              | 360                      | 33.9%                |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 60° T-Scan (S4)  | A  | 3.1                           | 3.1                       | 15.1%                              | 360                      | 7.6%                 |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° P-Scan (S6 NS)   | A  | 3.3                           | 1.7                       | 8.3%                               | 360                      | 4.1%                 |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° P-Scan (S6 FV)   | A  | 14.1                          | 9.5                       | 46.3%                              | 360                      | 23.2%                |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| IRS P-Scan (S4)  | A  | 3.1                           | 3.1                       | 15.1%                              | 360                      | 7.6%                 |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
|  |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° T-Scan (S6 NS)   |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° T-Scan (S6 FV)   |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 60° T-Scan (S4)  |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° P-Scan (S6 NS)   |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° P-Scan (S6 FV)   |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| IRS P-Scan (S4)  |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
|  |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° T-Scan (S6 NS)   |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° T-Scan (S6 FV)   |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 60° T-Scan (S4)  |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° P-Scan (S6 NS)   |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° P-Scan (S6 FV)   |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| IRS P-Scan (S4)  |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
|  |  |                               |                           | % Total Composite Coverage = 83.2% |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| Comments: A - Automated scanning was restricted due to the nozzle configuration. <div style="text-align: center;">✚</div>  |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| Note - Rounding methods may affect calculated values. UC-Underclad, FV-Full volume, NS-Near Surface. Weld length in degrees.   |  |                               |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |               |      |  |  |  |  |  |               |      |  |  |  |  |  |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |

Figure 7D  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4C-KA

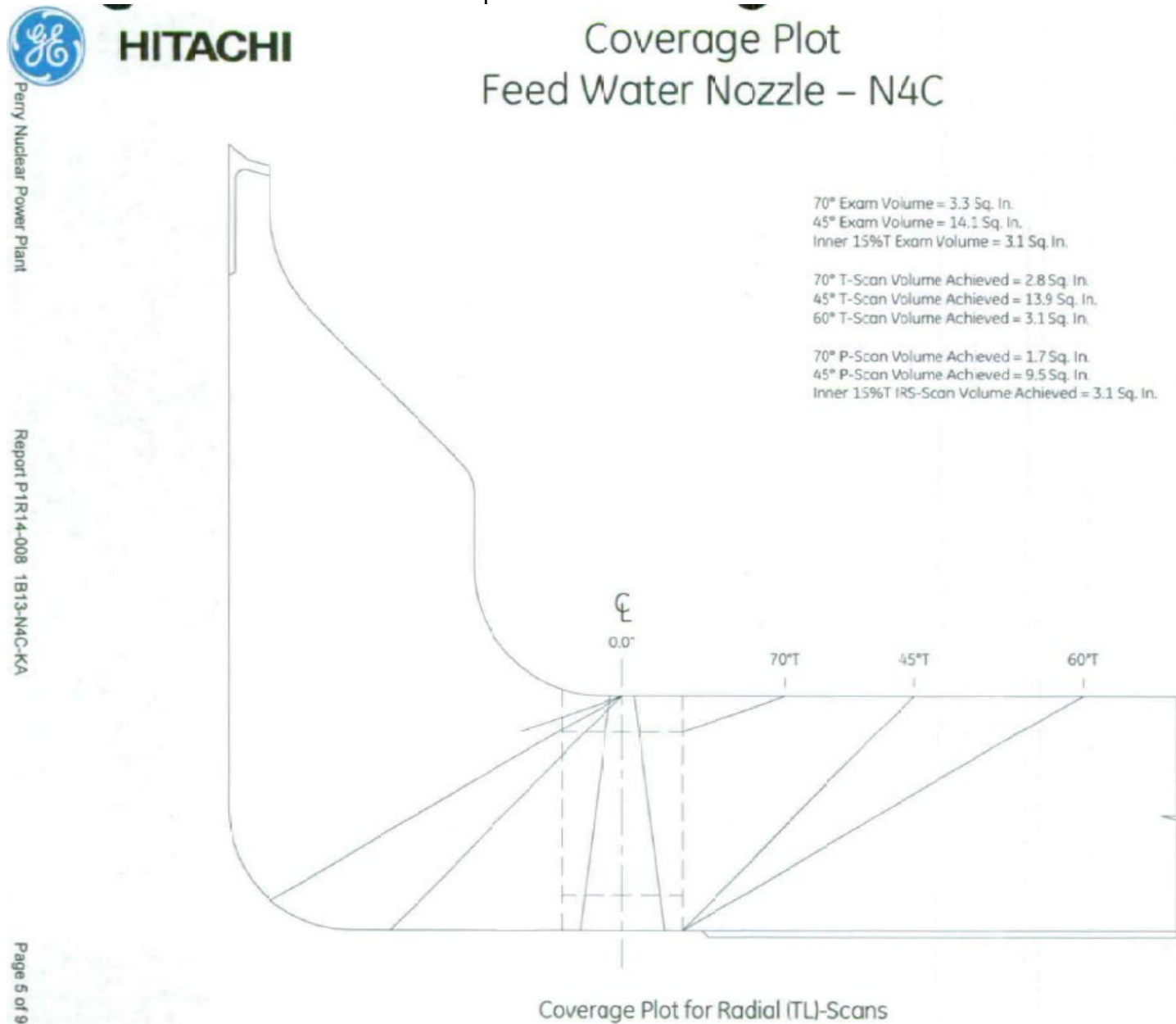
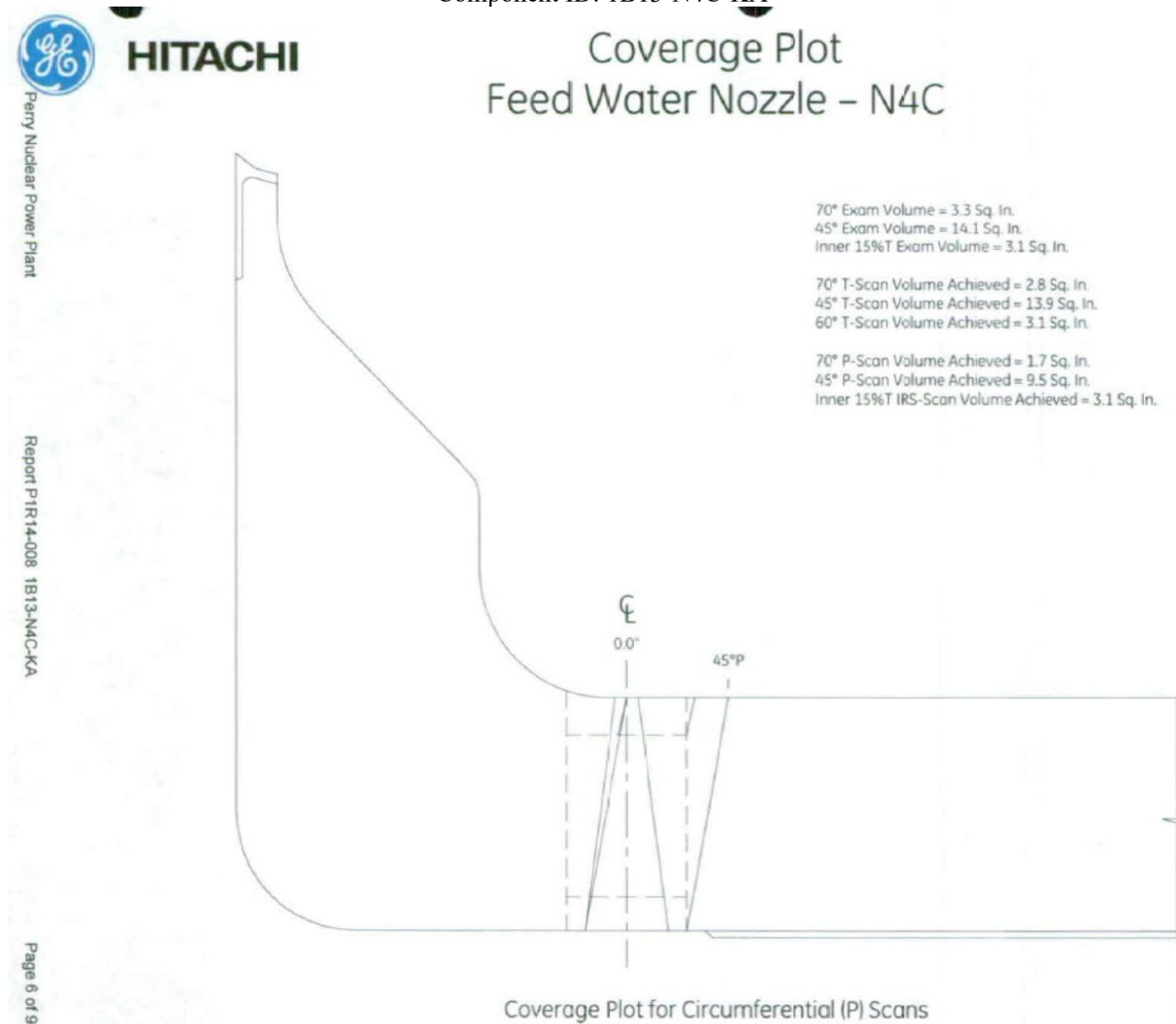


Figure 8D  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4C-KA



Report E  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4D-KA


|  |                |  |                           |                                 |                          |                      |  |
|--|----------------|--|---------------------------|---------------------------------|--------------------------|----------------------|--|
|   | <b>HITACHI</b> | <b>SP2000 RPV Examination<br/>Coverage Calculation Sheet</b> |                           |                                 |                          |                      |  |
| <b>Perry Nuclear Power Plant, 1R14, 2013<br/>1B13-N4D-KA</b>   |                |  |                           |                                 |                          |                      |  |
| Weld Length = 360.<br>Exam Volume = 20.5   |                | CODE CROSS-SECTIONAL AREA                                    |                           | TOTAL CODE COVERAGE             |                          |                      |  |
|  |                | Required Exam<br>Area Sq. in.                                | Area Scanned<br>Automated | Percent<br>of Area<br>Automated | Weld Length<br>Automated | Percent<br>Automated |  |
| 70° T-Scan (S6 NS)   | A              | 3.3  | 2.8                       | 13.7%                           | 360                      | 6.8%                 |  |
| 45° T-Scan (S6 FV)   | A              | 14.1   | 13.9                      | 67.8%                           | 360                      | 33.9%                |  |
| 60° T-Scan (S4)  | A              | 3.1  | 3.1                       | 15.1%                           | 360                      | 7.6%                 |  |
| 70° P-Scan (S6 NS)   | A              | 3.3  | 1.7                       | 8.3%                            | 360                      | 4.1%                 |  |
| 45° P-Scan (S6 FV)   | A              | 14.1   | 9.5                       | 46.3%                           | 360                      | 23.2%                |  |
| IRS P-Scan (S4)  | A              | 3.1  | 3.1                       | 15.1%                           | 360                      | 7.6%                 |  |
|  |                |  |                           |                                 |                          |                      |  |
| 70° T-Scan (S6 NS)   |                |  |                           |                                 |                          |                      |  |
| 45° T-Scan (S6 FV)   |                |  |                           |                                 |                          |                      |  |
| 60° T-Scan (S4)  |                |  |                           |                                 |                          |                      |  |
| 70° P-Scan (S6 NS)   |                |  |                           |                                 |                          |                      |  |
| 45° P-Scan (S6 FV)   |                |  |                           |                                 |                          |                      |  |
| IRS P-Scan (S4)  |                |  |                           |                                 |                          |                      |  |
|  |                |  |                           |                                 |                          |                      |  |
| 70° T-Scan (S6 NS)   |                |  |                           |                                 |                          |                      |  |
| 45° T-Scan (S6 FV)   |                |  |                           |                                 |                          |                      |  |
| 60° T-Scan (S4)  |                |  |                           |                                 |                          |                      |  |
| 70° P-Scan (S6 NS)   |                |  |                           |                                 |                          |                      |  |
| 45° P-Scan (S6 FV)   |                |  |                           |                                 |                          |                      |  |
| IRS P-Scan (S4)  |                |  |                           |                                 |                          |                      |  |
|  |                |  |                           | % Total Composite Coverage =    |                          | 83.2%                |  |
| Rev 0 9/23/05  |                |  |                           |                                 |                          |                      |  |
| Comments: A - Automated scanning was restricted due to the nozzle configuration.   |                |  |                           |                                 |                          |                      |  |
| Note - Rounding methods may affect calculated values. UC-Underclad, FV-Full volume, NS-Near Surface. Weld length in degrees. |                |  |                           |                                 |                          |                      |  |



Figure 9E  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4D-KA

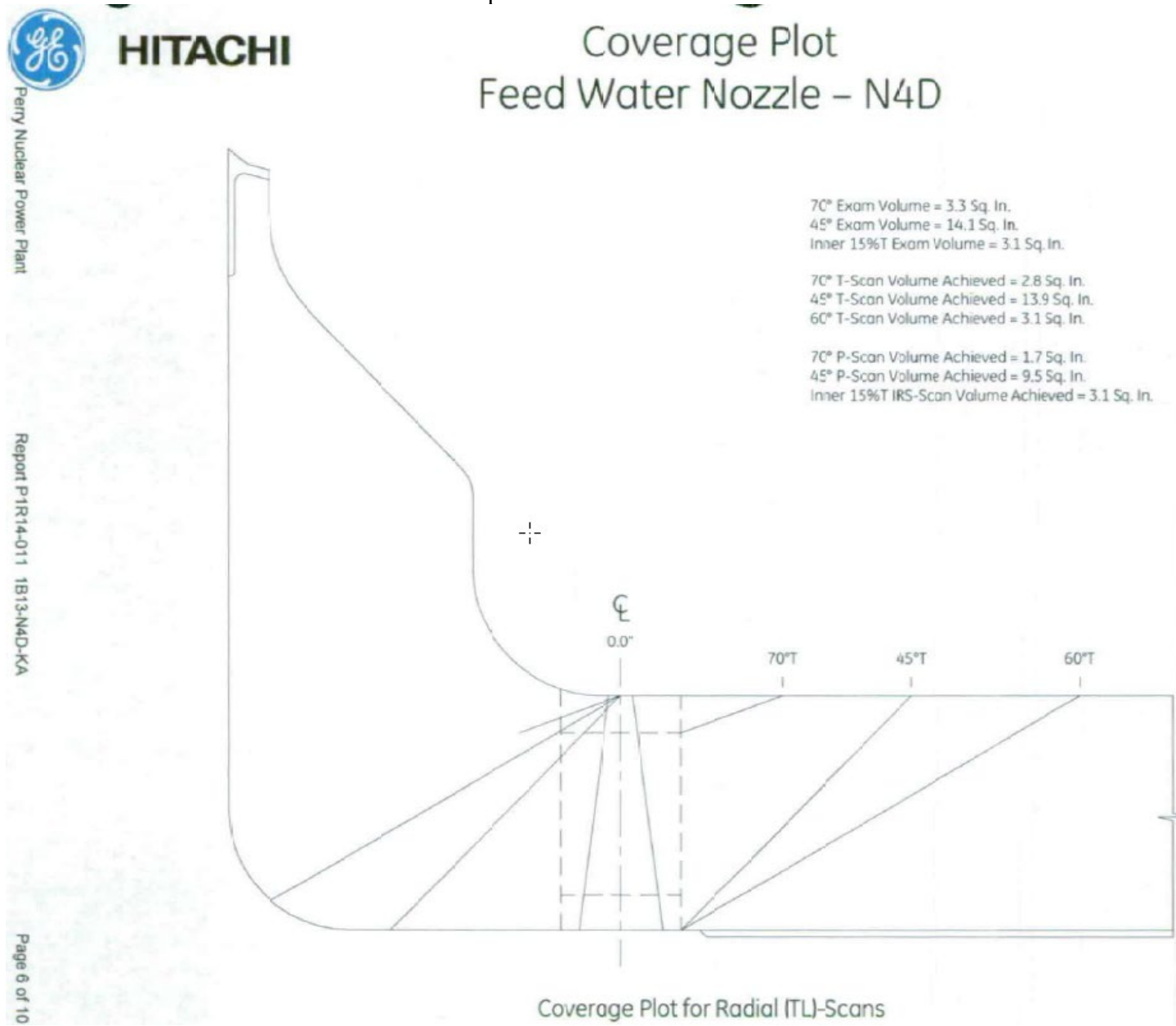
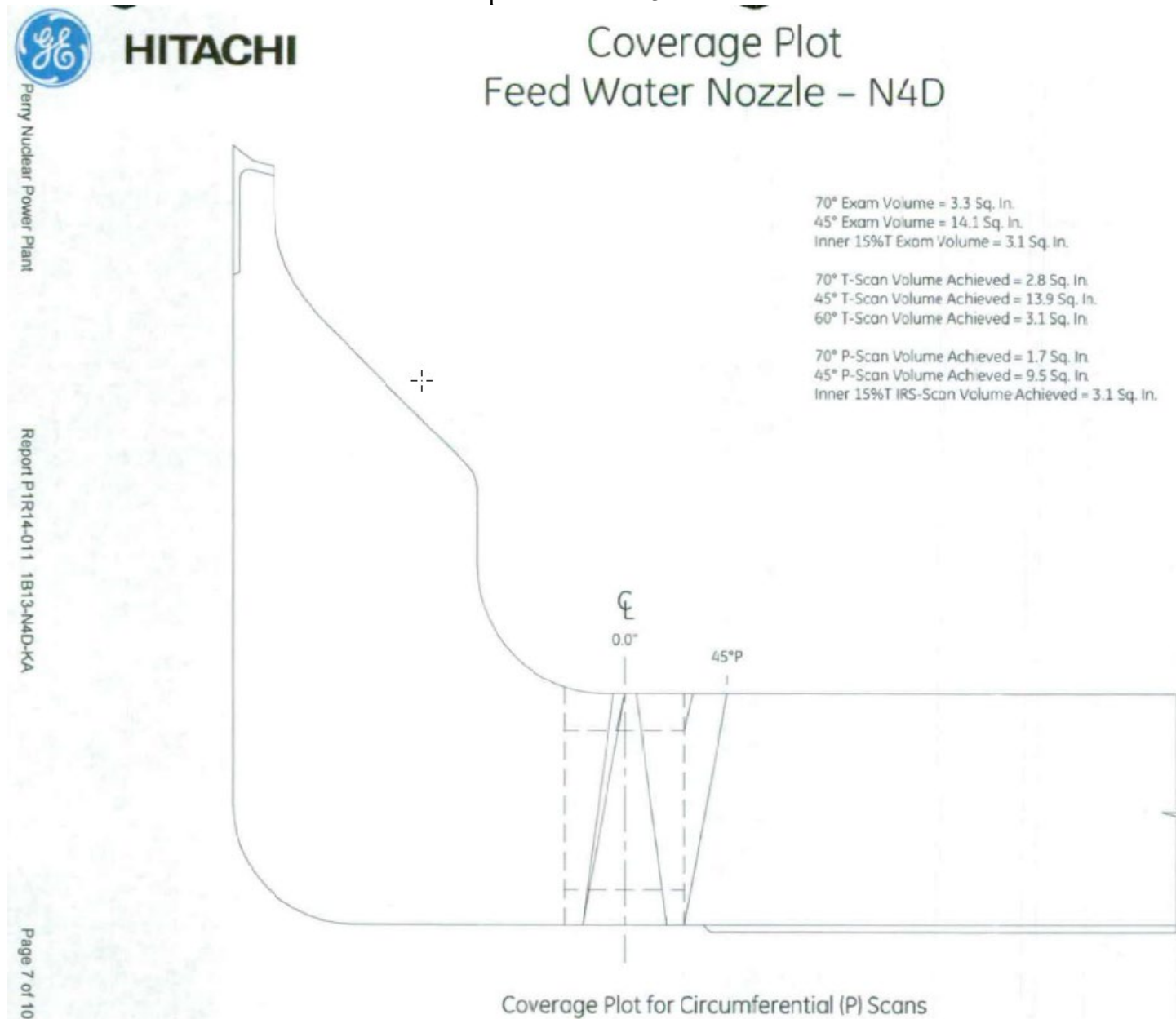


Figure 10E  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4D-KA



Report F  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4E-KA


|   | <h2 style="margin: 0;">SP2000 RPV Examination<br/>Coverage Calculation Sheet</h2> |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
|--|---|--|------------------------|------------------------------------|-----------------------|---------------------|--|--|----------------------------|------------------------|---------------------------|-----------------------|-------------------|--------------------|---|-----|-----|-------|-----|------|--------------------|---|------|------|-------|-----|-------|-----------------|---|-----|-----|-------|-----|------|--------------------|---|-----|-----|------|-----|------|--------------------|---|------|-----|-------|-----|-------|-----------------|-----|-----|-----|-------|-----|------|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|-----|-----|-----|-------|-----|------|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|
| <p><b>Perry Nuclear Power Plant, 1R14, 2013</b><br/><b>1B13-N4E-KA</b></p>   |   |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" rowspan="2">Weld Length = 360.<br/>Exam Volume = 20.5</th> <th colspan="2">CODE CROSS-SECTIONAL AREA</th> <th colspan="3">TOTAL CODE COVERAGE</th> </tr> <tr> <th>Required Exam Area Sq. in.</th> <th>Area Scanned Automated</th> <th>Percent of Area Automated</th> <th>Weld Length Automated</th> <th>Percent Automated</th> </tr> </thead> <tbody> <tr><td>70° T-Scan (S6 NS)</td><td>A</td><td>3.3</td><td>2.8</td><td>13.7%</td><td>360</td><td>6.8%</td></tr> <tr><td>45° T-Scan (S6 FV)</td><td>A</td><td>14.1</td><td>13.9</td><td>67.8%</td><td>360</td><td>33.9%</td></tr> <tr><td>60° T-Scan (S4)</td><td>A</td><td>3.1</td><td>3.1</td><td>15.1%</td><td>360</td><td>7.6%</td></tr> <tr><td>70° P-Scan (S6 NS)</td><td>A</td><td>3.3</td><td>1.7</td><td>8.3%</td><td>360</td><td>4.1%</td></tr> <tr><td>45° P-Scan (S6 FV)</td><td>A</td><td>14.1</td><td>9.5</td><td>46.3%</td><td>360</td><td>23.2%</td></tr> <tr><td>IRS P-Scan (S4)</td><td>A *</td><td>3.1</td><td>3.1</td><td>15.1%</td><td>180</td><td>3.8%</td></tr> <tr><td colspan="7"> </td></tr> <tr><td>70° T-Scan (S6 NS)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>45° T-Scan (S6 FV)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>60° T-Scan (S4)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>70° P-Scan (S6 NS)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>45° P-Scan (S6 FV)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>IRS P-Scan (S4)</td><td>A *</td><td>3.1</td><td>2.7</td><td>13.2%</td><td>180</td><td>3.3%</td></tr> <tr><td colspan="7"> </td></tr> <tr><td>70° T-Scan (S6 NS)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>45° T-Scan (S6 FV)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>60° T-Scan (S4)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>70° P-Scan (S6 NS)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>45° P-Scan (S6 FV)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>IRS P-Scan (S4)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table> |   | Weld Length = 360.<br>Exam Volume = 20.5 |                        | CODE CROSS-SECTIONAL AREA          |                       | TOTAL CODE COVERAGE |  |  | Required Exam Area Sq. in. | Area Scanned Automated | Percent of Area Automated | Weld Length Automated | Percent Automated | 70° T-Scan (S6 NS) | A | 3.3 | 2.8 | 13.7% | 360 | 6.8% | 45° T-Scan (S6 FV) | A | 14.1 | 13.9 | 67.8% | 360 | 33.9% | 60° T-Scan (S4) | A | 3.1 | 3.1 | 15.1% | 360 | 7.6% | 70° P-Scan (S6 NS) | A | 3.3 | 1.7 | 8.3% | 360 | 4.1% | 45° P-Scan (S6 FV) | A | 14.1 | 9.5 | 46.3% | 360 | 23.2% | IRS P-Scan (S4) | A * | 3.1 | 3.1 | 15.1% | 180 | 3.8% |  |  |  |  |  |  |  | 70° T-Scan (S6 NS) |  |  |  |  |  |  | 45° T-Scan (S6 FV) |  |  |  |  |  |  | 60° T-Scan (S4) |  |  |  |  |  |  | 70° P-Scan (S6 NS) |  |  |  |  |  |  | 45° P-Scan (S6 FV) |  |  |  |  |  |  | IRS P-Scan (S4) | A * | 3.1 | 2.7 | 13.2% | 180 | 3.3% |  |  |  |  |  |  |  | 70° T-Scan (S6 NS) |  |  |  |  |  |  | 45° T-Scan (S6 FV) |  |  |  |  |  |  | 60° T-Scan (S4) |  |  |  |  |  |  | 70° P-Scan (S6 NS) |  |  |  |  |  |  | 45° P-Scan (S6 FV) |  |  |  |  |  |  | IRS P-Scan (S4) |  |  |  |  |  |  |
| Weld Length = 360.<br>Exam Volume = 20.5   |   |  |                        | CODE CROSS-SECTIONAL AREA          |                       | TOTAL CODE COVERAGE |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
|  |   | Required Exam Area Sq. in.               | Area Scanned Automated | Percent of Area Automated          | Weld Length Automated | Percent Automated   |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 70° T-Scan (S6 NS)   | A   | 3.3                                      | 2.8                    | 13.7%                              | 360                   | 6.8%                |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 45° T-Scan (S6 FV)   | A   | 14.1                                     | 13.9                   | 67.8%                              | 360                   | 33.9%               |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 60° T-Scan (S4)  | A   | 3.1                                      | 3.1                    | 15.1%                              | 360                   | 7.6%                |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 70° P-Scan (S6 NS)   | A   | 3.3                                      | 1.7                    | 8.3%                               | 360                   | 4.1%                |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 45° P-Scan (S6 FV)   | A   | 14.1                                     | 9.5                    | 46.3%                              | 360                   | 23.2%               |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| IRS P-Scan (S4)  | A *   | 3.1                                      | 3.1                    | 15.1%                              | 180                   | 3.8%                |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
|  |   |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 70° T-Scan (S6 NS)   |   |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 45° T-Scan (S6 FV)   |   |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 60° T-Scan (S4)  |   |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 70° P-Scan (S6 NS)   |   |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 45° P-Scan (S6 FV)   |   |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| IRS P-Scan (S4)  | A *   | 3.1                                      | 2.7                    | 13.2%                              | 180                   | 3.3%                |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
|  |   |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 70° T-Scan (S6 NS)   |   |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 45° T-Scan (S6 FV)   |   |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 60° T-Scan (S4)  |   |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 70° P-Scan (S6 NS)   |   |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| 45° P-Scan (S6 FV)   |   |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| IRS P-Scan (S4)  |   |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
|  |   |  |                        | % Total Composite Coverage = 82.7% |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| <p>Comments: A - Automated scanning was restricted due to the nozzle configuration.<br/>         A* - Coverage reduced due to an area approximately 180° long of marginal uni-directional contact on Channel 4.<br/>         Uni-directional contact is allowed by procedure in accordance with paragraph 7.13.5. Reduction in coverage applied for conservatism.</p>  |   |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |
| <p>Note - Rounding methods may affect calculated values. UC-Underclad, FV-Full volume, NS-Near Surface. Weld length in degrees.</p>  |   |  |                        |                                    |                       |                     |  |  |                            |                        |                           |                       |                   |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |     |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |

Figure 11F  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4E-KA

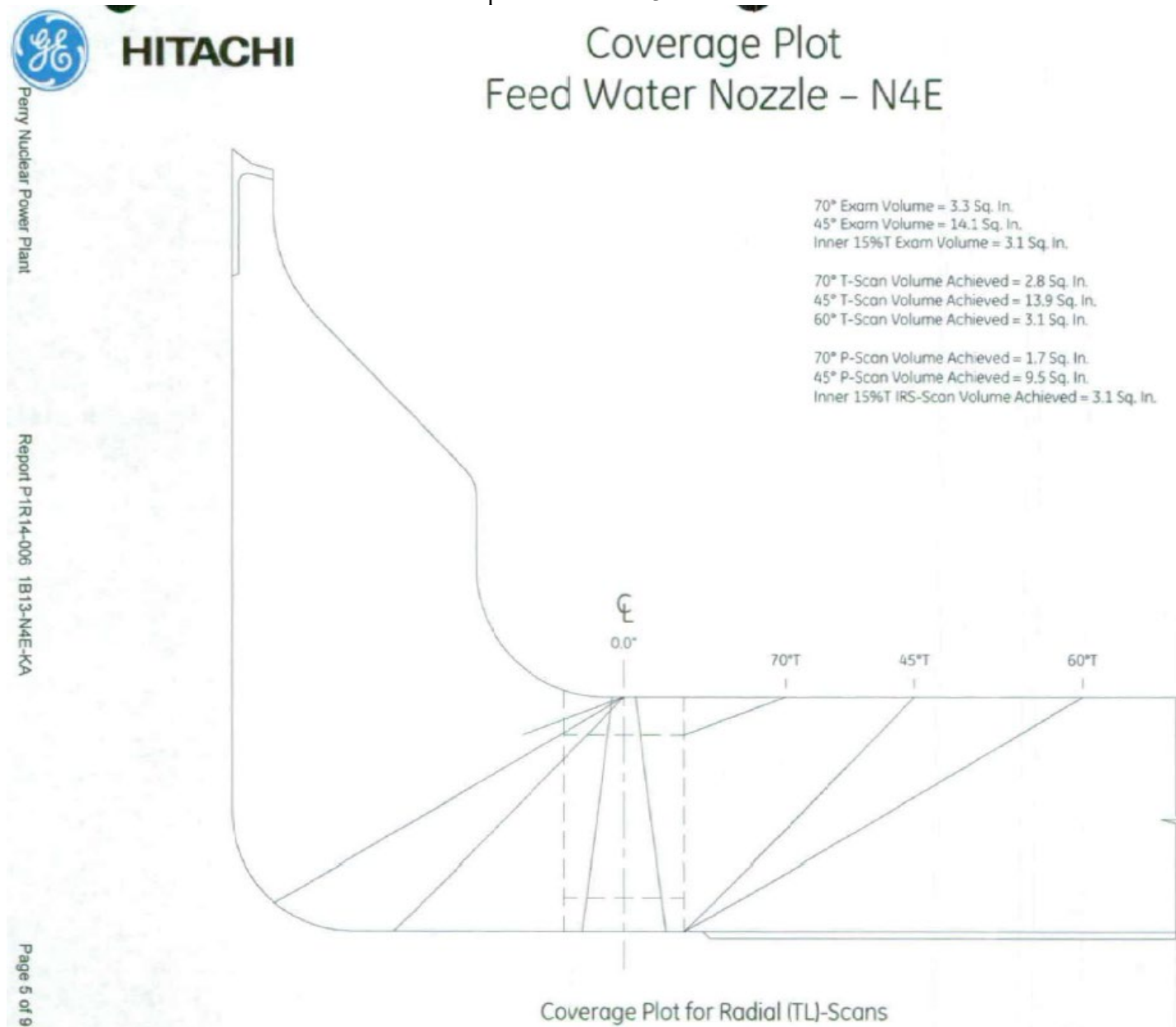
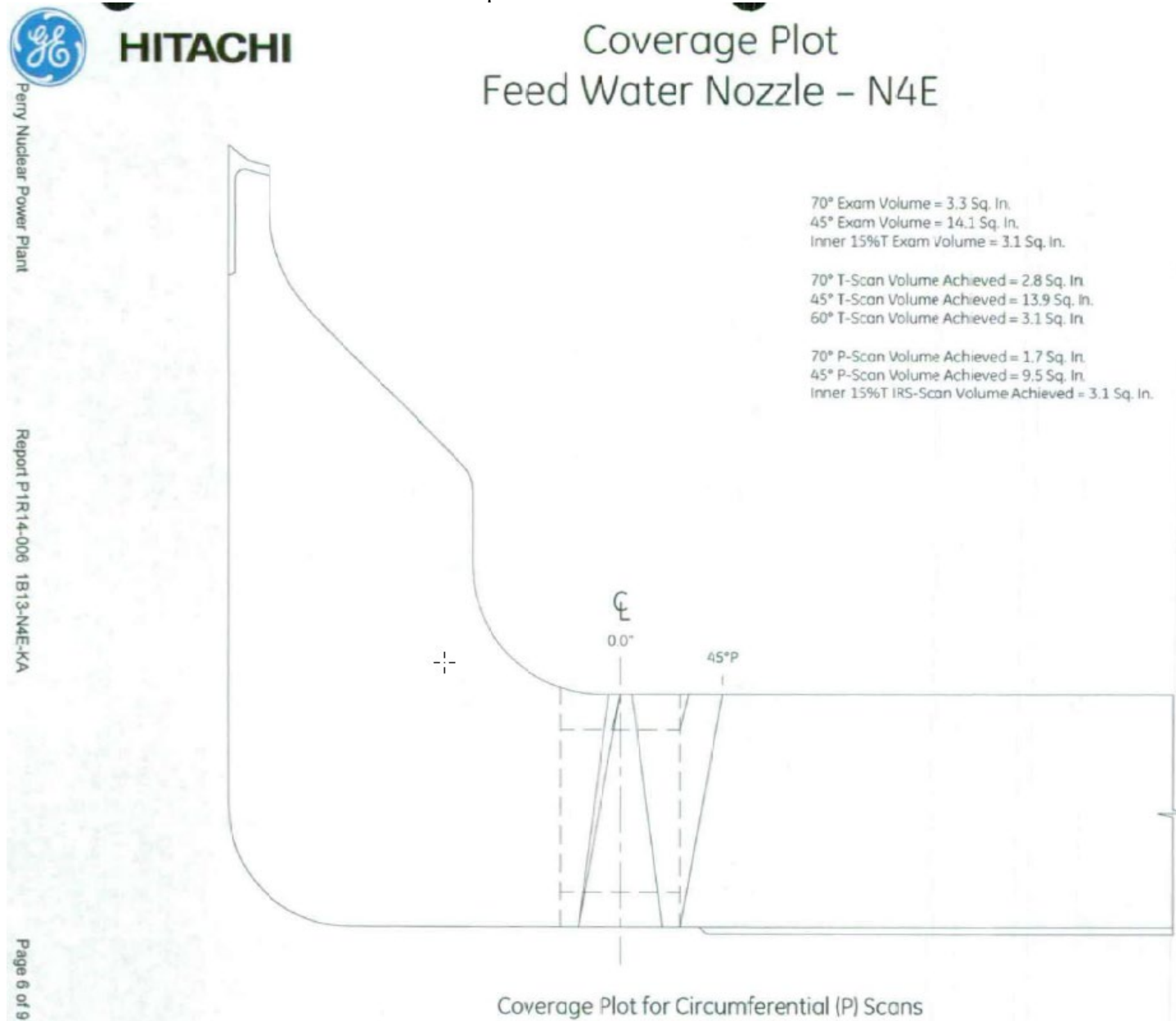


Figure 12F  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4E-KA





Report G  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4F-KA


|    | <b>SP2000 RPV Examination<br/>Coverage Calculation Sheet</b> |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
|---|--|--|---------------------------|------------------------------------|--------------------------|----------------------|--|--|-------------------------------|---------------------------|---------------------------------|--------------------------|----------------------|--------------------|---|-----|-----|-------|-----|------|--------------------|---|------|------|-------|-----|-------|-----------------|---|-----|-----|-------|-----|------|--------------------|---|-----|-----|------|-----|------|--------------------|---|------|-----|-------|-----|-------|-----------------|---|-----|-----|-------|-----|------|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|-----------------|--|--|--|--|--|--|--|--|--|--|------------------------------------|--|--|
| <b>Perry Nuclear Power Plant, 1R14, 2013<br/>1B13-N4F-KA</b>  |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" rowspan="2">Weld Length = 360.<br/>Exam Volume = 20.5</th> <th colspan="2">CODE CROSS-SECTIONAL AREA</th> <th colspan="3">TOTAL CODE COVERAGE</th> </tr> <tr> <th>Required Exam<br/>Area Sq. in.</th> <th>Area Scanned<br/>Automated</th> <th>Percent<br/>of Area<br/>Automated</th> <th>Weld Length<br/>Automated</th> <th>Percent<br/>Automated</th> </tr> </thead> <tbody> <tr> <td>70° T-Scan (S6 NS)</td> <td>A</td> <td>3.3</td> <td>2.8</td> <td>13.7%</td> <td>360</td> <td>6.8%</td> </tr> <tr> <td>45° T-Scan (S6 FV)</td> <td>A</td> <td>14.1</td> <td>13.9</td> <td>67.8%</td> <td>360</td> <td>33.9%</td> </tr> <tr> <td>60° T-Scan (S4)</td> <td>A</td> <td>3.1</td> <td>3.1</td> <td>15.1%</td> <td>360</td> <td>7.6%</td> </tr> <tr> <td>70° P-Scan (S6 NS)</td> <td>A</td> <td>3.3</td> <td>1.7</td> <td>8.3%</td> <td>360</td> <td>4.1%</td> </tr> <tr> <td>45° P-Scan (S6 FV)</td> <td>A</td> <td>14.1</td> <td>9.5</td> <td>46.3%</td> <td>360</td> <td>23.2%</td> </tr> <tr> <td>IRS P-Scan (S4)</td> <td>A</td> <td>3.1</td> <td>3.1</td> <td>15.1%</td> <td>360</td> <td>7.6%</td> </tr> <tr><td colspan="7"> </td></tr> <tr> <td>70° T-Scan (S6 NS)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>45° T-Scan (S6 FV)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>60° T-Scan (S4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>70° P-Scan (S6 NS)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>45° P-Scan (S6 FV)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>IRS P-Scan (S4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr><td colspan="7"> </td></tr> <tr> <td>70° T-Scan (S6 NS)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>45° T-Scan (S6 FV)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>60° T-Scan (S4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>70° P-Scan (S6 NS)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>45° P-Scan (S6 FV)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>IRS P-Scan (S4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4"></td> <td colspan="3" style="text-align: right;">% Total Composite Coverage = 83.2%</td> </tr> </tbody> </table> |  | Weld Length = 360.<br>Exam Volume = 20.5 |                           | CODE CROSS-SECTIONAL AREA          |                          | TOTAL CODE COVERAGE  |  |  | Required Exam<br>Area Sq. in. | Area Scanned<br>Automated | Percent<br>of Area<br>Automated | Weld Length<br>Automated | Percent<br>Automated | 70° T-Scan (S6 NS) | A | 3.3 | 2.8 | 13.7% | 360 | 6.8% | 45° T-Scan (S6 FV) | A | 14.1 | 13.9 | 67.8% | 360 | 33.9% | 60° T-Scan (S4) | A | 3.1 | 3.1 | 15.1% | 360 | 7.6% | 70° P-Scan (S6 NS) | A | 3.3 | 1.7 | 8.3% | 360 | 4.1% | 45° P-Scan (S6 FV) | A | 14.1 | 9.5 | 46.3% | 360 | 23.2% | IRS P-Scan (S4) | A | 3.1 | 3.1 | 15.1% | 360 | 7.6% |  |  |  |  |  |  |  | 70° T-Scan (S6 NS) |  |  |  |  |  |  | 45° T-Scan (S6 FV) |  |  |  |  |  |  | 60° T-Scan (S4) |  |  |  |  |  |  | 70° P-Scan (S6 NS) |  |  |  |  |  |  | 45° P-Scan (S6 FV) |  |  |  |  |  |  | IRS P-Scan (S4) |  |  |  |  |  |  |  |  |  |  |  |  |  | 70° T-Scan (S6 NS) |  |  |  |  |  |  | 45° T-Scan (S6 FV) |  |  |  |  |  |  | 60° T-Scan (S4) |  |  |  |  |  |  | 70° P-Scan (S6 NS) |  |  |  |  |  |  | 45° P-Scan (S6 FV) |  |  |  |  |  |  | IRS P-Scan (S4) |  |  |  |  |  |  |  |  |  |  | % Total Composite Coverage = 83.2% |  |  |
| Weld Length = 360.<br>Exam Volume = 20.5  |  |  |                           | CODE CROSS-SECTIONAL AREA          |                          | TOTAL CODE COVERAGE  |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
|   |  | Required Exam<br>Area Sq. in.            | Area Scanned<br>Automated | Percent<br>of Area<br>Automated    | Weld Length<br>Automated | Percent<br>Automated |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° T-Scan (S6 NS)  | A  | 3.3                                      | 2.8                       | 13.7%                              | 360                      | 6.8%                 |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° T-Scan (S6 FV)  | A  | 14.1                                     | 13.9                      | 67.8%                              | 360                      | 33.9%                |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 60° T-Scan (S4)   | A  | 3.1                                      | 3.1                       | 15.1%                              | 360                      | 7.6%                 |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° P-Scan (S6 NS)  | A  | 3.3                                      | 1.7                       | 8.3%                               | 360                      | 4.1%                 |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° P-Scan (S6 FV)  | A  | 14.1                                     | 9.5                       | 46.3%                              | 360                      | 23.2%                |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| IRS P-Scan (S4)   | A  | 3.1                                      | 3.1                       | 15.1%                              | 360                      | 7.6%                 |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
|   |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° T-Scan (S6 NS)  |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° T-Scan (S6 FV)  |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 60° T-Scan (S4)   |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° P-Scan (S6 NS)  |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° P-Scan (S6 FV)  |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| IRS P-Scan (S4)   |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
|   |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° T-Scan (S6 NS)  |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° T-Scan (S6 FV)  |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 60° T-Scan (S4)   |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 70° P-Scan (S6 NS)  |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| 45° P-Scan (S6 FV)  |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| IRS P-Scan (S4)   |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
|   |  |  |                           | % Total Composite Coverage = 83.2% |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| Comments: A - Automated scanning was restricted due to the nozzle configuration.  |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |
| Note - Rounding methods may affect calculated values. UC-Underclad, FV-Full volume, NS-Near Surface. Weld length in degrees.  |  |  |                           |                                    |                          |                      |  |  |                               |                           |                                 |                          |                      |                    |   |     |     |       |     |      |                    |   |      |      |       |     |       |                 |   |     |     |       |     |      |                    |   |     |     |      |     |      |                    |   |      |     |       |     |       |                 |   |     |     |       |     |      |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |                    |  |  |  |  |  |  |                    |  |  |  |  |  |  |                 |  |  |  |  |  |  |  |  |  |  |                                    |  |  |

Figure 13G  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4F-KA

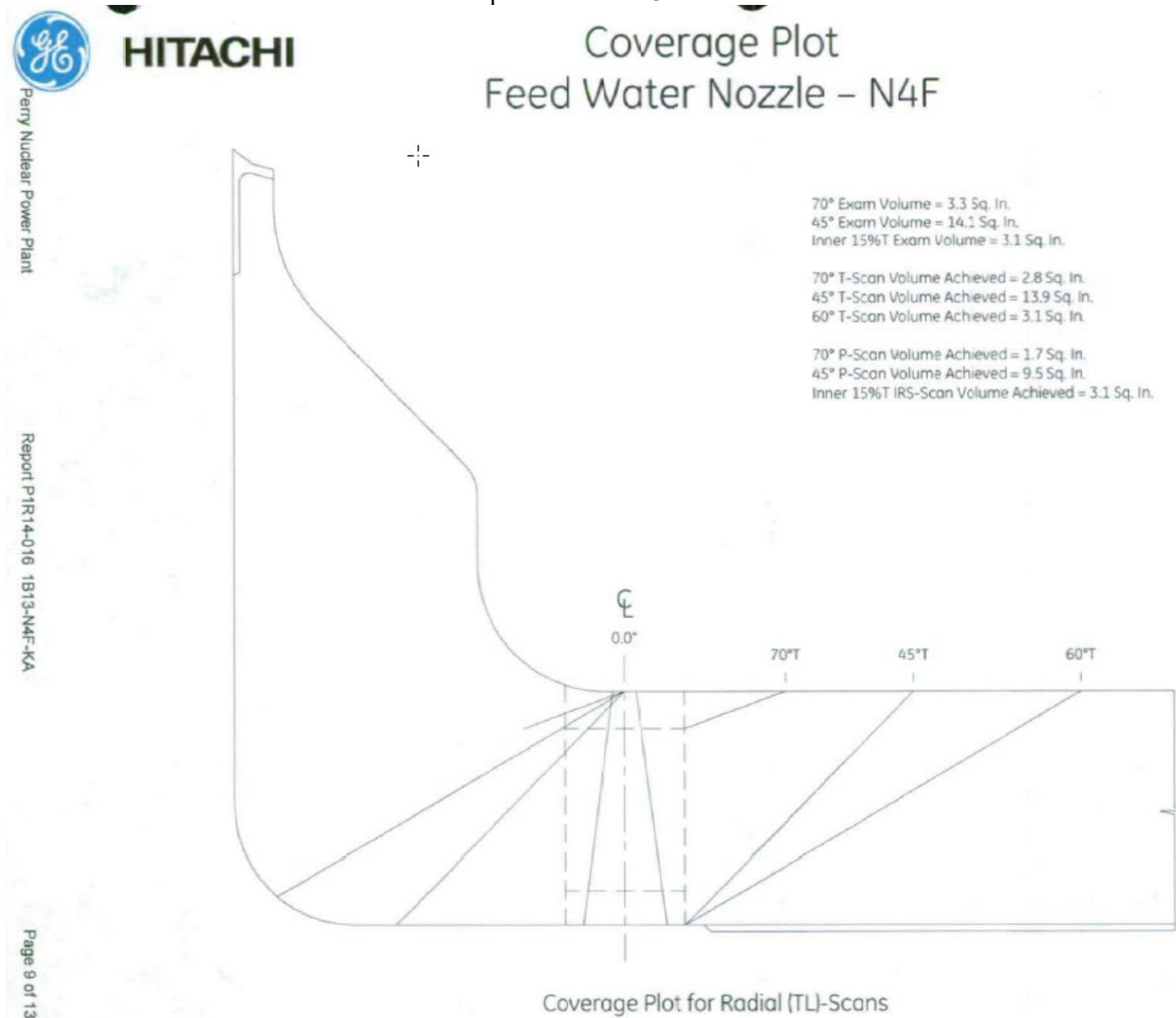
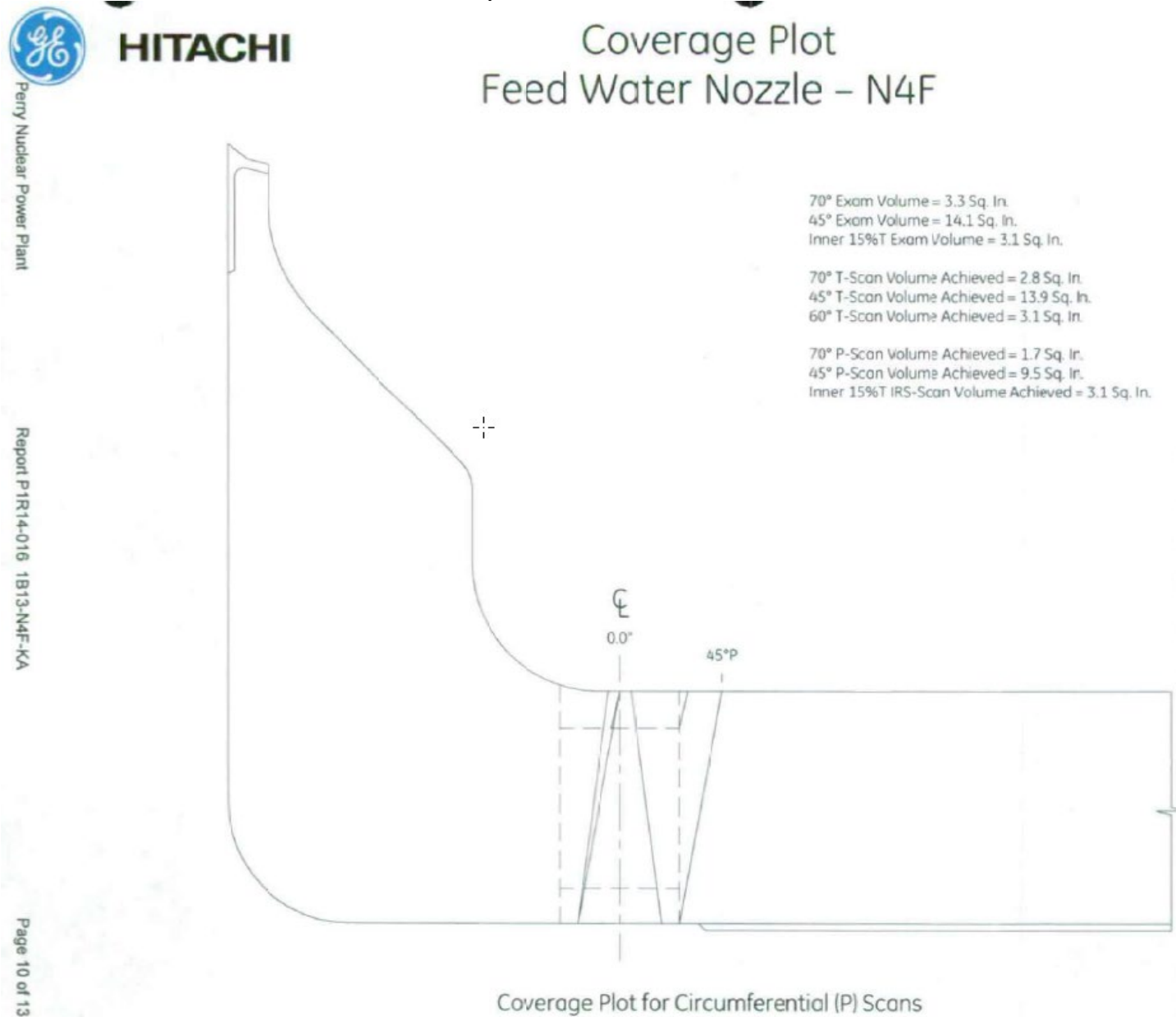


Figure 14G  
Examination Category: B-D  
Item No. B3.90  
Component ID: 1B13-N4F-KA





Component ID: 1B13-02/35-FW and 1B13-54/15-FW

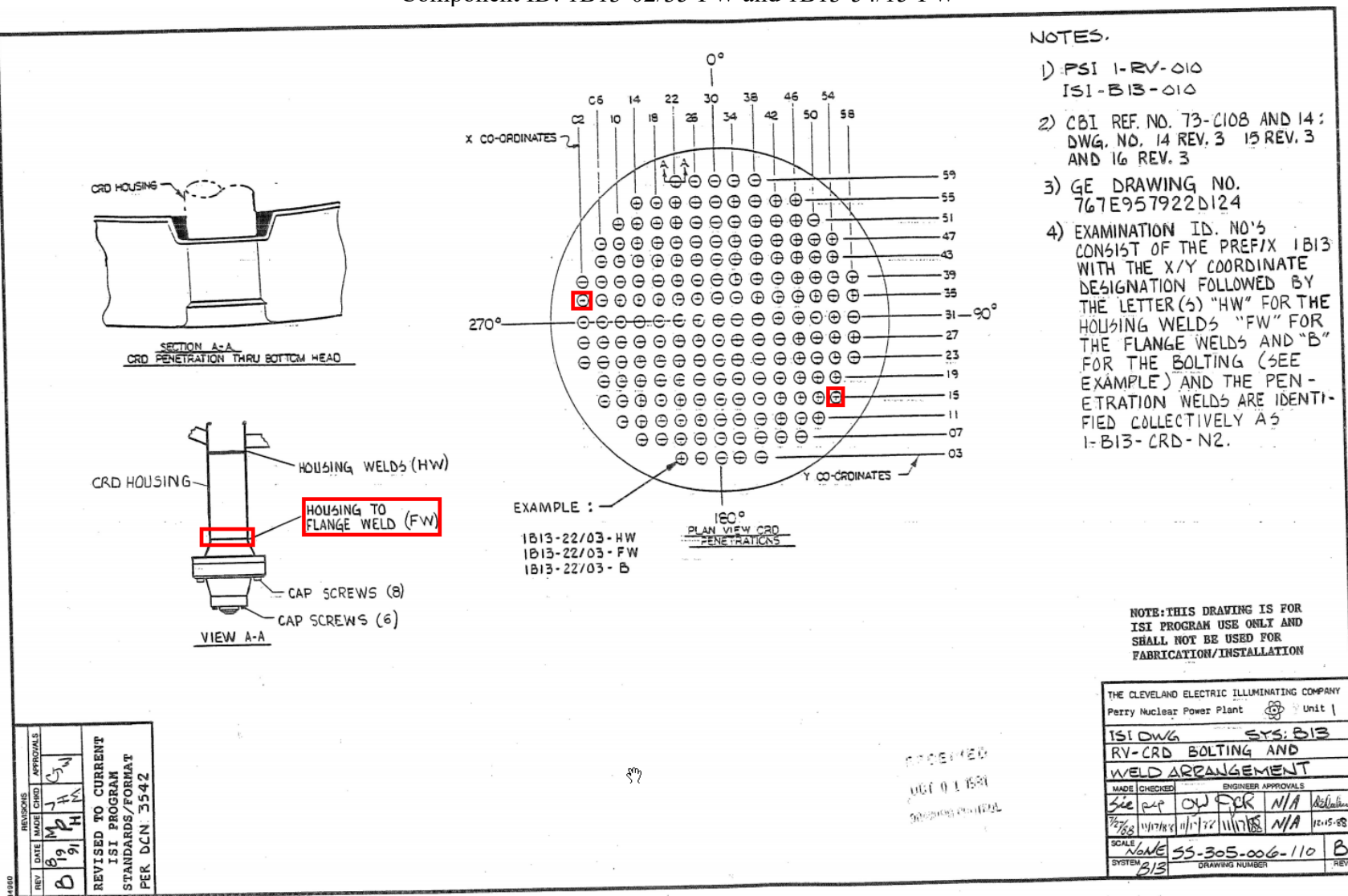


Figure 16  
Examination Category: B-O  
Item No. B14.10  
Component ID: 1B13-02/35-FW and 1B13-54/15-FW  
Typical housing to flange weld configuration

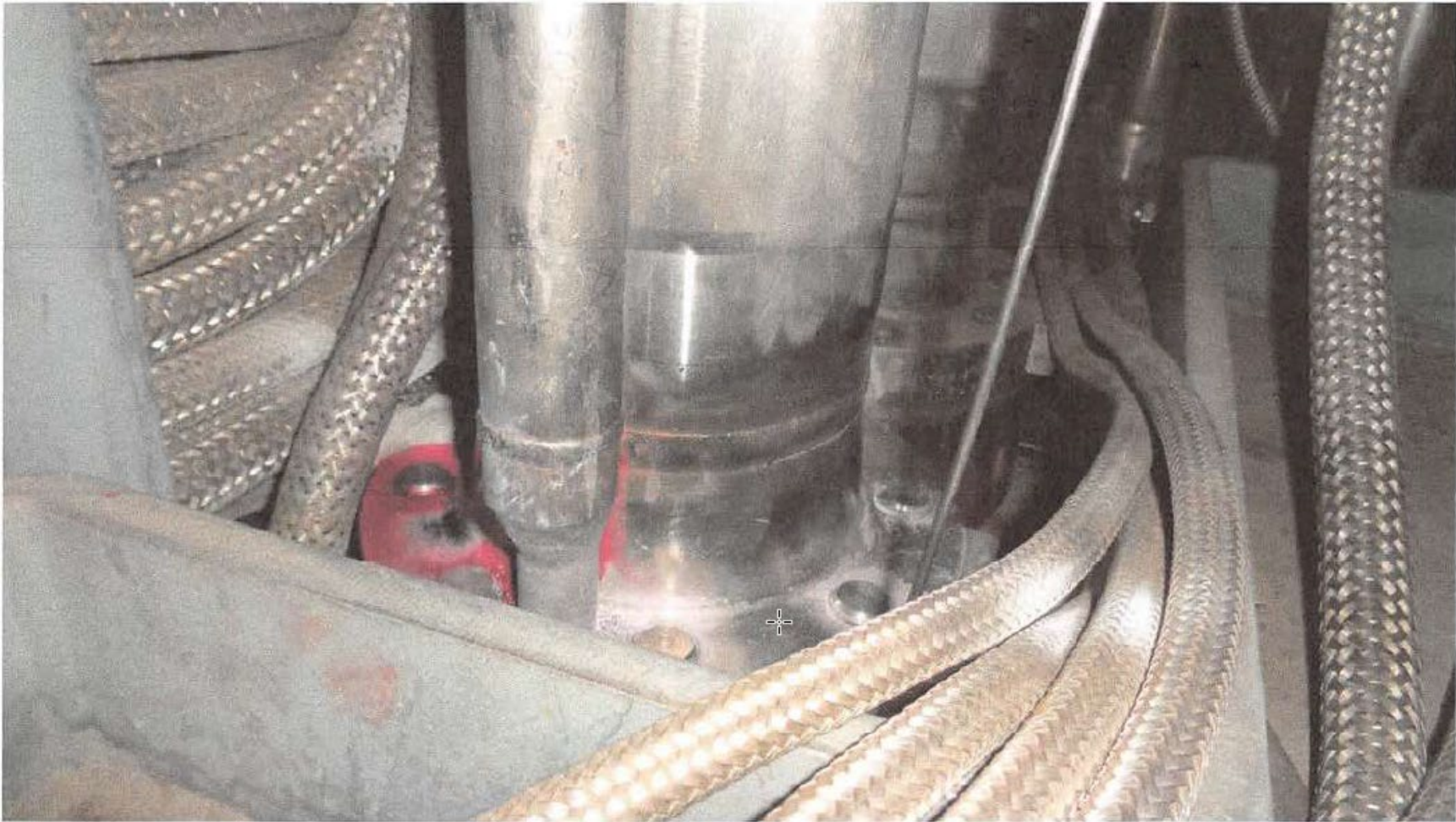


Figure 17  
Examination Category: R-A  
Item No. R2.11  
Component ID: 1B13-N4C-KB

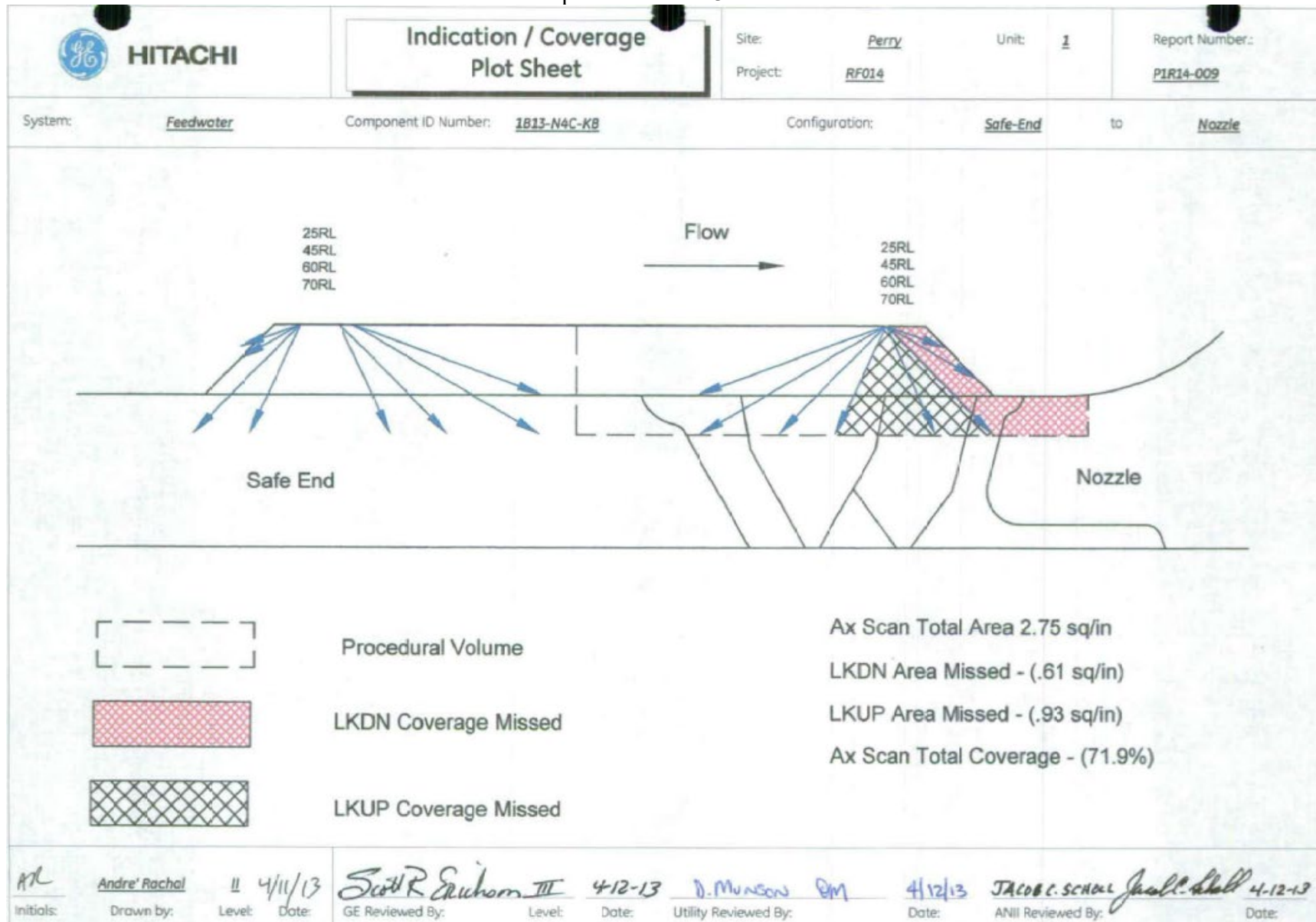
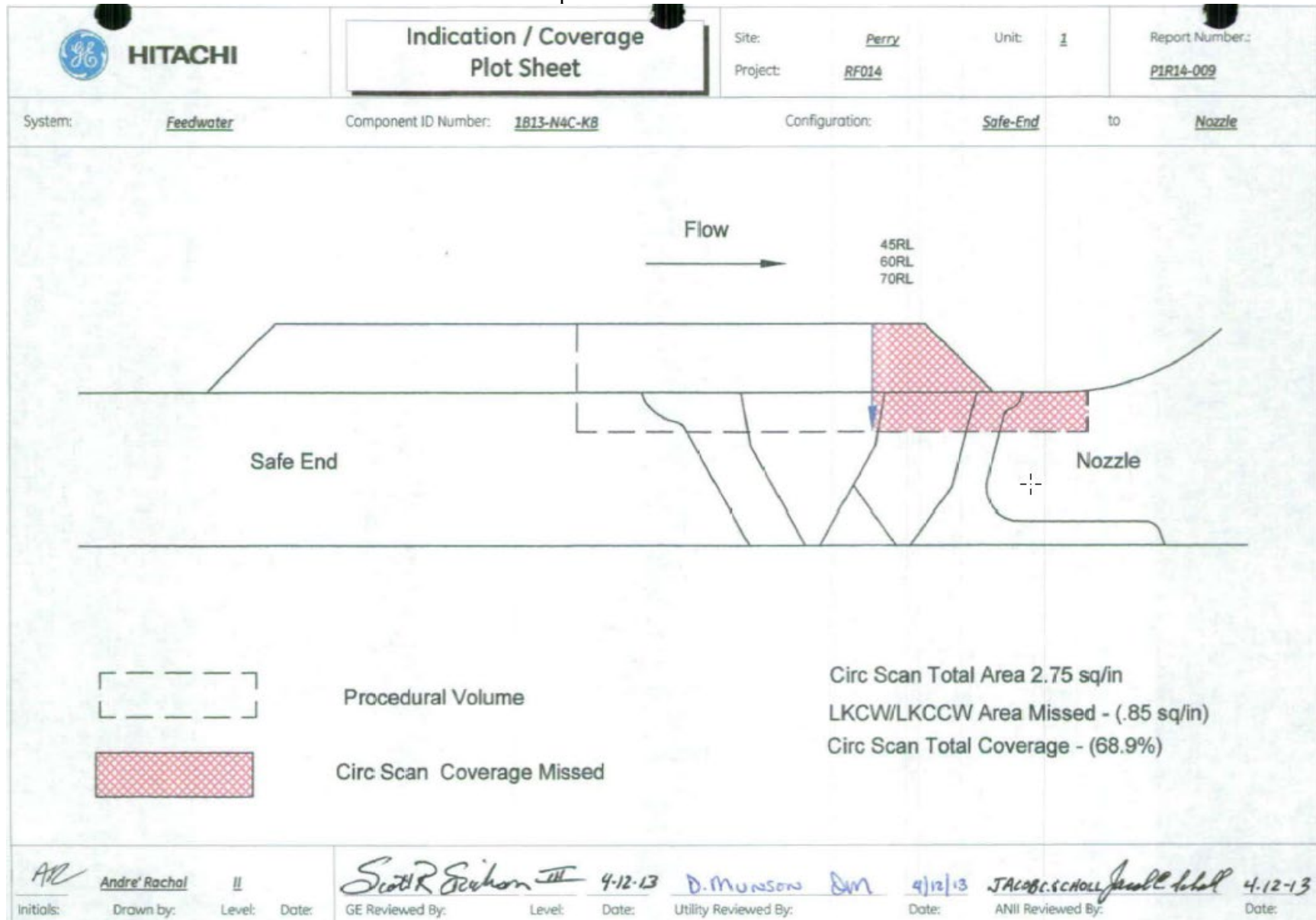




Figure 18  
Examination Category: R-A  
Item No. R2.11  
Component ID: 1B13-N4C-KB



Report H  
Examination Category: R-A  
Item No. R3.ND  
Component ID: 1B33-0028

### Determination of Percent Coverage for UT Examination – Pipe

|              |                  |                 |                  |             |                   |
|--------------|------------------|-----------------|------------------|-------------|-------------------|
| Site/Unit:   | <b>Perry / 1</b> | Procedure:      | <b>NQI-0957</b>  | Outage No.: | <b>RFO13</b>      |
| Summary No.: | <b>021540</b>    | Procedure Rev.: | <b>0</b>         | Report No.: | <b>UT-11-E024</b> |
| Workscope:   | <b>ISI</b>       | Work Order No.: | <b>200380083</b> | Page:       | <b>5 of 5</b>     |

|               |                |            |                |                            |                |                    |
|---------------|----------------|------------|----------------|----------------------------|----------------|--------------------|
| <b>45 deg</b> |                |            |                |                            |                |                    |
| Scan 1        | <b>100.000</b> | % Length x | <b>100.000</b> | % volume of length / 100 = | <b>100.000</b> | % total for Scan 1 |
| Scan 2        | <b>0.000</b>   | % Length x | <b>0.000</b>   | % volume of length / 100 = | <b>0.000</b>   | % total for Scan 2 |
| Scan 3        | <b>100.000</b> | % Length x | <b>100.000</b> | % volume of length / 100 = | <b>100.000</b> | % total for Scan 3 |
| Scan 4        | <b>0.000</b>   | % Length x | <b>0.000</b>   | % volume of length / 100 = | <b>0.000</b>   | % total for Scan 4 |
|               |                |            |                |                            |                |                    |

Add totals and divide by # of scans = **50.000 % total for 45 deg**

Other deg. - \_\_\_\_\_ (to be used for supplemental scans)

The data to be listed below is for coverage that was not obtained with the 45 deg scans.

|        |  |            |  |                            |  |                    |
|--------|--|------------|--|----------------------------|--|--------------------|
|        |  |            |  |                            |  |                    |
| Scan 1 |  | % Length x |  | % volume of length / 100 = |  | % total for Scan 1 |
| Scan 2 |  | % Length x |  | % volume of length / 100 = |  | % total for Scan 2 |
| Scan 3 |  | % Length x |  | % volume of length / 100 = |  | % total for Scan 3 |
| Scan 4 |  | % Length x |  | % volume of length / 100 = |  | % total for Scan 4 |
|        |  |            |  |                            |  |                    |

### Percent complete coverage

Add totals for each scan required and divide by # of scans to determine:

**50.000 % Total for complete exam**

Figure 19H  
Examination Category: R-A  
Item No. R2.ND  
Component ID: 1B33-0028

Component sketch from preservice examination records

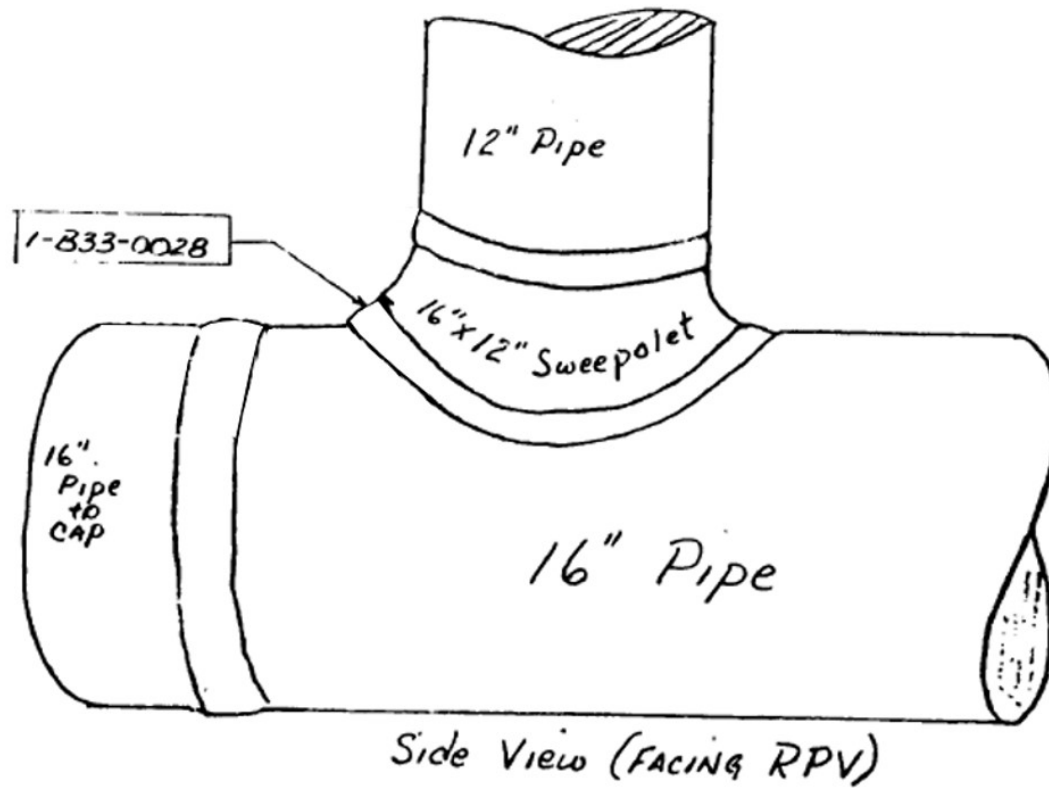


Figure 20H  
Examination Category: R-A  
Item No. R2.ND  
Component ID: 1B33-0028

Weld 1B33-0028 coverage plot

WELD ID 1B33-0028

