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MEMORANDUM

Vermont Yankee Design Engineering

To J.H.Callaghan **Date** November 29, 1999

From J.C. Fitzpatrick / S.D.Goodwin **Group #** VYM 99/148

Subject ASME Section XI Subsection IWE Report on Evaluation of 1998 Torus Inspections

REFERENCES

(a) ASME XI, Subsection IWE, Requirements for Class MC and Metallic Liners of Class CC Components of Light-Water Cooled Plants, 1992 Edition with 1992 Addenda.
(b) ASME Section III Nuclear Vessels, 1965 (with Winter 1965 Addenda) and ASME Section VIII, Unfired Pressure Vessels, 1965.
(c) Certified Stress Report, Vernon – II, Vermont Yankee Project Containment Vessel, No. 9-6202-II, October 29,1968, by Chicago Bridge & Iron –Oak Brook Engineering.
(d) VY Memo J.C.Fitzpatrick/S.D.Goodwin to D.Girroir/M.Dugan, subject: Summary of ASME Section XI IWE Torus Shell & Downcomer Inspections Performed During the 1998 Refueling Outage, VYM 98/132, dated July 21,1998.
(e) VY Calculation No. VYC-1032, Revision 1, "Torus & Vent System Thickness Requirements", dated November 23,1999.

IWE inspections were performed on the Torus bottom interior surface and the lower portions of the downcomers during the 1998 refueling outage. The inspection efforts were previously summarized in VYM 98/132. As stated in VYM 98/132 the report would be withheld until a revision to calculation VYC-1032, Revision 0 was complete.

Reference(e), VYC-1032, Revision 1, is complete. Revision 1 reflects the inclusion of the 56. Psi. ASME code design pressure on the Torus shell and vent system thickness requirements.

Please find attached: "ASME Section XI Subsection IWE Report on Evaluation of 1998 Torus Inspections" dated November 29, 1999. The conclusions are essentially the same as those presented in VYM 98/132. The report makes some generic recommendations on implementation and for pursuit of increased margin for future corrosion.

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cc DGirroir 2/6/00

ATTACHED: "ASME Section XI Subsection IWE Report on Evaluation of 1998 Torus Inspections" Dated November 29, 1999.

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VERMONT YANKEE

ASME SECTION XI SUBSECTION IWE

REPORT ON EVALUATION OF 1998 TORUS INSPECTIONS

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V.Y. 1998 ASME SECTION XI SUBSECTION IWE
REPORT ON EVALUATION OF TORUS INSPECTIONS

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V.Y. 1998 ASME SECTION XI SUBSECTION IWE
REPORT ON EVALUATION OF TORUS INSPECTIONS

1.0 INTRODUCTION / SCOPE

ASME Section XI Subsection IWE inspections were performed on the submerged surfaces of the Vermont Yankee primary containment during the 1998 refueling outage. The submerged surfaces comprise the lower half of the suppression chamber (Torus) and the lower portion of the downcomers. The Torus completely drained and inspections were performed in parallel with sand blasting, re-coating of the interior surface of the Torus below the water line, and installation of new Core Spray and RHR Suction Strainers, reference(15).

The following is a physical description of the suppression chamber components. A functional description along with its design bases can be found in Chapter 5 of the Vermont Yankee Final Safety Analysis Report.

The suppression chamber is a welded steel pressure vessel in the shape of a torus with a major diameter of 98 feet, and a minor diameter of 27 feet 8 inches. It is constructed of 16 straight segments formed from large rolled plates. The segments of the Torus are identified as Bays, see Figure 1.0 for the Torus Bay Layout.

Support is provided at the intersection of the segments by integral steel saddles and an internal ring header. The suppression chamber (Torus) is connected to the Drywell by a vent system. The vent system consists of eight large diameter (6'-9") vent pipes connecting to a ring header (4'-9") which is internal to the Torus. Extending down from the ring header are a total of 96, 24 inch diameter pipes denoted as downcomers. The downcomers extend from the ring header to below the water surface. The Torus is designed for a nominal water depth of 12 feet – 9 inches. Plate thickness varies at different locations on the Torus. All plates below water level are 0.584" with no allowance for corrosion. See Figure 1.1 for a typical section through the Torus.

To assure that the Torus shell remained within design specifications, wall thickness was verified as part of the re-coating effort.

The scope of the 1998 refueling outage inspections is limited to the Torus interior bottom surface up to 12 inches above the water line, and the interior and exterior of the bottom portion of the downcomers below the miter bends. These areas are normally submerged and access was provided during the draining of the Torus for installations of new RHR and Core Spray strainers.

2.0 1998 REFUELING OUTAGE INSPECTION PLAN

The Design Engineering Mechanical/Structural Group provided assistance in developing a scheme for UT inspections on the Torus to support the re-coating effort and to satisfy ASME Section XI, Subsection IWE requirements. Visual inspections of the submerged surfaces consisting of the lower portions of the downcomers, and portions of the Torus external shell were performed during the 1998 refueling outage.

The inspections were performed in parallel with sand blasting, re-coating of the interior surface of the Torus below the water line, and installation of new Core Spray and RHR Suction Strainers. To assure that the Torus shell remained within design specifications, wall thickness was verified as part of the re-coating effort.

Reference(7) outlined the NDE requirements for Torus work performed during the 1998 refueling outage. Reference(8) outlined the proposed strategy for disposition of ASME Section XI, Subsection IWE, findings in the Torus. The general plan was to perform a initial visual inspection, assess the findings, and then formulate a detailed plan to address both the possible wall loss at locations of degraded coating and for long term monitoring of the Torus external shell and vent header corrosion. The inspection efforts performed were as follows:

2.1 Torus Shell

Following the Torus drain-down and drying, visual inspections of the as-found interior surface were performed. Areas of flaking, blistering, peeling, discoloration, and previous coating repairs were identified and mapped out. The inspections focused on the bottom half of the Torus. Supplemental walkdowns of the as-found condition were performed by Design Engineering Mechanical/Structural (M/S) Group personnel. The supplemental walkdowns were performed to obtain a qualitative assessment of the condition of the Torus and to aid in evaluation of the inspection results. Reference(9) documents the M/S walkdowns.

The "as-found" visual inspection report, (Appendix A, Tab 1), was evaluated to determine areas requiring augmented examinations and/or further evaluation. A limited number of specific locations on the Torus interior bottom were identified with surface corrosion. These local areas were cataloged and mapped out. At these locations paint was removed on the exterior surface and grids were applied to allow for a detailed UT inspection. The Torus bottom plates were supplied as 0.584", reference(13), with no excess metal supplied for a corrosion allowance. As calculated in reference (5), this is the code required wall thickness for the containment maximum pressure of at the bottom center of the Torus shell. To address this lack of margin for past or future corrosion, a scheme to assess the existing plate thickness and to provide a mechanism for future monitoring was developed.

2.1 Torus Shell - continued

Three groups of UT data for the Torus bottom shell were taken:

Group 1	Bottom Test Strips	The first group consists of full coverage test strips on the bottom of two bays. Each test strip is an area approximately two feet wide by the entire length of the bay. The purpose of this is group was to assess variations in plate thickness in support of using a discrete grid for long term measurements, and to assess the amount of wall loss attributed to the sandblasting efforts.
Group 2	Permanent Locations	This second group is a set permanently marked discrete locations on the exterior of the Torus. These locations are intended for long term thickness measurements to monitor general corrosion of the bottom of the Torus shell.
Group 3	Local Areas	The third group are external UT inspections at local areas of coating degradation identified in the "as-found" visual inspections and a sample of the areas accessible from only one side (under the Torus baffle plates).

Group 1, Bottom Test Strips.

Visual inspections of the bottom half of the Torus interior surface identified a limited number of specific locations with surface corrosion. Areas of degraded coating and previous coating repairs were identified. In general the areas of surface corrosion and paint repairs were concentrated in the bottom quadrant and about all bays of the Torus.

To determine if there was any measurable wall loss under the previous coating repairs, a full coverage UT examination of an area containing coating repairs was proposed. Any detectable differences in the wall thickness between the general surface area and under the coating repair locations would indicate previous corrosion at the repair locations.

A full coverage UT examination of an area on the bottom of the two bays containing the largest number of surface repairs was proposed. Previous coating repairs were identified and tabulated on a per bay basis. The bottom of bays 8 & 16 had the highest number of coating repairs. Detailed maps of the coating repairs for these two bays were made (Appendix A, Tabs 2 & 3). In each bay, a strip centered on the bottom running the entire length of the bay covering an area 2 feet wide by 19.2 feet long, received a 100% UT scan. Thickness data was recorded as the minimum value found in a 2.0 inch square grid. This resulted in approximately 2800 individual data points on ten different Torus plates.

2.1 Torus Shell - continued

Group 1, Bottom Test Strips. - continued

In addition to using these two areas to assess possible wall loss under the coating repair locations, UT measurements were repeated at these locations after sandblasting to assess the amount of base metal removed during the sandblasting of the interior surface.

Group 2, Permanent Locations:

To establish a permanent method to monitor torus plate thickness below the water line, a uniform series of sixteen locations in the bottom quadrant of each bay was used. The grid layout of a typical bay is shown in Figure 2.0. The grid arrangement provides at least two measurement locations on each bottom plate. The nominal thickness of each bottom plate was established before sandblasting. Supplemental locations were added only on specific plates with thickness measurements at or near the minimum code thickness. This resulted in a total of 268 (16 x 16 + 12) discrete locations distributed about all 16 Torus bays. The locations of the supplemental locations are shown in Figures 2.1 to 2.4.

UT inspections were performed both before and after sandblasting to aid in assessing wall loss due to the sandblasting. Given the new coating will mitigate future corrosion, the 16 to 18 locations in each bay will allow for long term UT monitoring for general corrosion of the Torus shell without draining the Torus. These locations were permanently marked to insure repeatability of the measurements.

Group 3, Local Areas:

The "as-found" visual inspection report, (Appendix A, Tab 1), lists a limited number of specific locations on the Torus interior bottom which were identified with surface corrosion and/or degraded coating. These local areas were cataloged and mapped out. At these locations paint was removed on the exterior surface and grids were applied to allow for a detailed UT inspection.

Also included in this group are areas of the external shell under the pads for the original baffles within the Torus. The baffles were removed as part of the GE Mark 1 program modifications. The baffle support seats and reinforcing plates welded to the external shell were left in place as shown on drawing No. 6202-209. There are a total of 48 baffle support plates. The plate locations are shown on drawing 6202-200. The typical arrangement is 2 plates centered in a vent pipe bay and 4 plates in each non-vent pipe bay.

Each baffle support plate is 1/2" thick, 8 inches wide by 10'- 4" long and bears against the external shell for its entire area. Each plate is welded to the torus shell with 1/4" fillet welds on the long sides. The short 8 inch top and bottom edges have no weld. This open seam between the plates may allow for some water to get between the reinforcing plate and the external shell. The mated surfaces may or may not have some protective coating (primer).

2.1 Torus Shell - continued

Light corrosion and staining of the coating on the Torus shell at the bottom of the majority of baffle support plates was noted during the supplemental walkdowns performed by Design Engineering. The staining indicated that corrosion under the baffle support plates may have occurred. However, the amount of corrosion product found around the bottom of the baffle support plates is small relative to other localized areas, and would indicate no significant corrosion and/or wall loss under the baffle plates.

The shell under each baffle support plate is only accessible from one side. Per paragraph IWE-2500(a)(2) the surface areas were be examined for wall thinning using UT thickness measurement method. The Torus shell plates under six out of the 48 baffle support plates (representing a 12.5% sample) were UT inspected from the exterior of the Torus.

The six locations are limited to (2) locations in Bay 4 and (4) locations in Bay 15. See Figure 2.5 for the inspection locations. The sample UT locations were selected based on the lowest measured wall thickness of the exterior plates. If the results of the sample locations indicated wall loss, inspections at the remaining baffle plate locations were to be performed.

2.2. Downcomers

There are 96 downcomers. Construction details are shown on drawing No. 6202-214, reference(13). Each downcomer is a 24 inch diameter pipe extending from the vent header downward below the surface of the water. The top section is on a 30 degree angle to the vertical and is constructed of 0.375 inch thick plate. The bottom section is vertical and is constructed of 0.25 inch thick plate. The two sections are connected by a mitered pipe joint. The downcomers are internal to the primary containment and serve as a boundary between the drywell and suppression chamber portions of the primary containment. See Figure 1.1

Visual inspections were performed only on the bottom (vertical) section of each downcomer, below the miter bend. This section is normally partially submerged during normal operation and refueling outages and was only fully accessible during the 1998 refueling outage. Supplemental UT inspections were to be performed at discrete locations only if wall loss was indicated by the VT inspection.

3.0 DESIGN CRITERIA

The original construction code for the Torus and containment was for a type B vessel in accordance with ASME Section III, 1965 edition with Addenda to Winter of 1965. Paragraph N-1111 in this edition of Section III specifies the rules of Division 1 of Section VIII (with exceptions) shall apply to the design, fabrication, inspection, testing, and certification of Class B vessels. Also Paragraph N-1314(a) requires that the requirements of Paragraphs N-414.1 to N-414.4 be met for the stress values specified in Paragraph N-1314(b). The stress intensity values (S_m) used are the allowable stress values at design temperature as tabulated in Division I of Section VIII.

The Torus was subsequently modified under NUREG-0661 requirements with design in accordance with selected requirements of ASME Section III, Subsections NC, NE, and NF, 1977 Edition with the Summer Addenda.

3.1 TORUS Shell Thickness Requirements/Acceptance Criteria

Torus Shell

Per reference(13), the internal design pressure is 56. Psi., and the external design pressure is 2. Psi. The Torus bottom is constructed of SA516 Gr.70 (FBX to A300) steel plate. The plates have specified minimum tensile strength of 70,000 Psi. and a minimum yield strength of 38,000 Psi. The welds are 100% radiographed. The allowable stress value at design temperature (281F) is 17,500. Psi.

The Torus was modified under the Mark I Torus Containment Program for hydrodynamic forces associated with the design basis accident (DBA). The maximum DBA containment pressure is 44. Psi. which is less than the design pressure. The TES analyses of record for the Mark I program used full wall thickness properties. Reference(12) was developed by Teledyne Engineering Services (TES) to calculate margins in the Mark I analyses and to determine minimum shell and vent header piping thickness requirements for the Mark I program loads. TES demonstrated significant margin for corrosion exists on the Torus external shell for the Mark I Program Loads and accident pressures.

TES did not address containment design pressure. Unless a formal licensing change is made to the containment design pressure, the external shell required thickness shall be based on the original 56. Psi. design pressure and design code requirements. Reference(12) cannot be used to for external shell wall thickness requirements.

Reference (14) was developed to address the effects of using the 56 Psi. ASME code design pressure vs. using the maximum accident pressure of 44 Psi. on the Torus shell and vent system thickness requirements. Reference(14) addresses the differences in internal pressure, the ASME code design requirements, and acceptance criteria between the original design report, reference(5), and the TES Mark I program evaluations contained in Reference(12).

3.1 TORUS Shell Thickness Requirements/Acceptance Criteria –continued

The code minimum wall thickness of the Torus bottom plates was calculated by Chicago Bridge and Iron (CB&I) in reference(5). Calculations for the Torus bottom plate thickness include the hydrostatic head of approximately 12.9 Ft. of water. This results in a maximum internal pressure of 62. Psi. at the bottom centerline. From reference(5), the code minimum wall thickness is 0.584 inches at the bottom centerline, and 0.533 inches above the water surface.

These minimum wall thickness values are the thickness values shown on the design drawings, reference(13). No allowance for corrosion was included. The Torus bottom half plate thickness specified 0.584 inches with 0.00 inches for a corrosion allowance. From ASME VIII 1965 Paragraph UG-16(c), the permissible mill under-tolerance for the exterior shell plates to allow for use of the full design pressure is the smaller of 0.01 inch or 6 percent of the ordered thickness. This results in a minimum acceptable wall thickness at the bottom center of 0.574". Likewise for the top half plates, the specified thickness is 0.533 inches resulting in a minimum acceptable thickness of 0.523 inches above the water line.

Reference(14) used the same design equations as reference(5) and accounted for the variation in pressure with height of water on the code minimum wall thickness for locations on the shell between bottom dead center and the water surface. The results of this evaluation are tabulated in Table 3.1.

Reference(14) contains a generic evaluation of pitting/surface effects based on the original design pressure of 56. Psi. Small shallow pits and gouges are surface effects, and if there is sufficient space between them they will not effect the membrane stress in the shell at the pit location. Reference(14) also developed methods for evaluating local areas of thinning and/or pitting using the 56 Psi design pressure and the as-found geometry.

3.2 Downcomer Thickness Requirements/Acceptance Criteria

From reference (13) the bottom section downcomer wall thickness is 0.25 inch. On page 2C6 of the CB&I report, reference(5), the downcomers were evaluated for the full 56PSI pressure load. The resultant stress for an internal downcomer pressure of 56 Psi was 2,630 Psi vs. an allowable of 17,500 Psi. Using the same equations as CB&I and the 10 percent wall loss criteria from IWE 3512.3; a 0.225 inch wall would result in a stress of 2924. Psi. This is well below the allowable stress of 17,500 Psi. Therefore the 10 percent wall loss criteria from IWE 3512.3 would not violate the original design requirements for the downcomers.

The downcomers are internal to the primary containment and serve as a boundary between the drywell and suppression chamber portions of the primary containment. Differential pressure is maintained by the static head of water above the bottom of the downcomers. The maximum differential pressure between the vent system and the Torus will never approach the containment design pressure.

TES in reference(12), evaluated the vent system for all pressure and hydrodynamic effects from the DBA, and provided a basis for a detailed evaluation of wall loss in excess of 10 percent of the nominal wall thickness. Significant margin for corrosion exists for the majority of the vent header and downcomer surface area. The exceptions are at localized areas of higher stresses such as the vent header miter joints, and the vent header/downcomer intersections.

The 10 percent nominal wall loss from IWE 3512.3 was used as the acceptance criteria for the downcomers away from the miter joints. Any wall loss adjacent to the mitre joints and wall loss greater than 10 percent of nominal for the remainder of the downcomer required a detailed engineering evaluation. Any detailed engineering evaluation for the downcomers was to be based on the analysis performed by TES in reference(12) and documented in a Vermont Yankee Calculation.

4.0 EVALUATION OF INSPECTION RESULTS

The areas inspected and the methods used are described in Section 2. The evaluation criteria is described in Section 3.

4.1 Torus Shell

Group 1: Test Strips:

UT examination of a two foot wide strip centered on the bottom center line and running the entire length on each of Bays 8 & 16 was performed. Thickness data was recorded as the minimum value found in a 100% scan of a 2.0 inch by 2.0 inch square area. Approximately 1400 individual data points were taken in each bay for a total sample of size of approximately 2800 locations. Measurements were taken both before and after sandblasting. The inspection results are shown in Appendix A, Tabs 4 to 7.

The purpose of these test strips is to:

- Assess if significant wall loss from the sand blasting efforts has resulted.
- Determine the if there is measurable variation in the general plate thickness and whether a discrete set of inspection locations can be used to monitor general corrosion for the long term.
- Assess if there are any significant differences in the existing wall thickness between the general area and under the existing coating repair locations. (Note: The existing coating repairs were performed under water as a maintenance effort and they were removed as part of re-coating effort.)

UT measurements were taken using Panametrics' 26DL+, equipment which automatically records the lowest UT measurement in a full area scan of each grid. This set of UT inspections focused on recording the lowest measurement in each grid. Given the 2800 data points taken, no additional attempts to size or classify each low or high reading were made. The low readings may be small pits, local areas, or anomalies. Any conclusions made from this set of data were based on the statistics from the large number of measurements taken. UT measurements were repeated at these locations after sandblasting to assess the amount of base metal removed from the interior surface.

A statistical summary of the thickness measurements is shown in Table 4.1 for Bay 8 and Table 4.2 for Bay 16. From Tables 4.1 & 4.2, the average difference in wall loss based on approximately 2800 before and after sandblasting measurements is 0.003 inch.

Appendix B of this report contains plots and a statistical evaluation of the measurements for selected bottom plates included in the test strips. Plots of thickness measurements for individual plates show a gradual variation along the length of each plate. This variation in plate thickness can be attributed to the mill and fabrication rolling processes. Given the gradual variation in plate thickness and that the new coating will mitigate future corrosion, a smaller number of discrete locations can be used to monitor for general corrosion of the Torus exterior shell below the water line.

4.1 Torus Shell -continued

Isolated low and high thickness readings can be attributed to possible pitting, scrapes, inclusions, and/or anomalies. There are no concentrations of measurements significantly below 0.574" which would indicate wall loss has occurred. If significant corrosion had occurred under the previous coating repair locations, the data would show a large number data points or clusters readings with lower thickness readings.

There are numerous measurements below the average plate thickness. However there is significant margin to minimum wall thickness for the majority of these. A limited number of readings are below the 0.574" acceptance criteria. Most of these are isolated measurements which are acceptable per the criteria for pitting and/or localized thinning contained in reference(14). From Appendix A - Tab 5, there is a group of lower readings located in the bottom of Bay 8 adjacent to the bottom centerline weld and along the weld between the 201-8 and 201-7 plates as shown on drawing No. 6202-200. The visual inspections performed on the bottom of this Bay, Appendix A, Tabs 1 & 2, do not show significant corrosion or previous paint repairs that correlate with these lower readings.

From the lack of correlation with observed surface corrosion, the fact that the readings are the lowest measurement taken in a 2 inch square area, and that the low readings are adjacent to the welds between the plate sections. The low readings can be considered as the as constructed thickness. The thinner readings are parallel to the weld seams and may be due to the original surface preparation of the weld or due to local shrinkage at the welds. Due to unknowns, this area was specifically evaluated in reference(14) as a locally thinned area and found acceptable.

No significant correlation between paint repair locations shown in Attachment A – Tabs 1 and 2, and the lower thickness readings taken on the test strips could be made.

Group 2, Permanent Locations:

UT measurements were taken at the 268 permanently marked locations shown in Figures 2.0 to 2.4. Measurements were taken both before and after sandblasting. The UT inspection reports are shown in Appendix A, Tabs 8 and 9. An evaluation of the UT data is contained in Appendix C.

The after sandblasting UT data was evaluated using Microsoft Excel. All except 2 of the 268 locations have thickness measurements are larger than acceptance criteria shown in Table 3.1. The remaining two are located on separate Bays; Pt. 12 on Bay 4, and Pt. 5 on Bay 14. Thickness at both locations was measured at 0.573" which is lower than the acceptance criteria of 0.574" at the inspection locations. The difference is 0.001" which is within the error tolerance of the UT equipment and is only 0.2 percent of the acceptance criteria. A statistical summary of the inspection results is shown in Table 4.3.

4.1 Torus Shell -continued

Given that the lowest measured thickness values are 99.8 percent of the acceptance criteria, and that other thickness measurements taken on the same shell plate are greater than the acceptance criteria; the after sandblasting condition of the Torus shell can still be considered as meeting the original design requirements. However the thickness of specific plates was measured to be at the design minimum wall thickness. At the Torus bottom center, there is no margin to the original design criteria for general area corrosion.

Group 3, Local Areas:

The UT inspection data for the local areas of surface corrosion or degraded coating identified in the as-found visual inspection and the local areas and under the baffle support plates is contained in Appendix A, Tabs 10 to 21. An evaluation of the UT data is contained in Appendix D.

The local areas were selected based on the condition of the coating, which would infer possible wall loss at that location. Base metal wall loss may or may not have occurred. Therefore each location was first be screened against the acceptance criteria of the code minimum required thickness at that location less the manufacturing under-tolerance of the plate as defined in Section 3.1.

If the measured thickness is above the acceptance criteria at that location, then no further engineering evaluation is required. If the measured thickness is less than the acceptance criteria, then a detailed engineering evaluation treating the local area as a structural discontinuity would be performed. This evaluation would be documented as a Vermont Yankee Calculation.

As shown in Appendix D, all of the local area UT inspections passed the screening criteria. No detailed engineering evaluations were required.

4.2 Downcomers

Only the lower, vertical sections of the downcomers were inspected during the 1998 refueling outage. The as-found visual inspection report for both the interior and exterior surfaces is contained Attachment A, Tab 1. The post sandblast, prior to re-coating visual inspection report is contained in Attachment A, Tab 22.

The acceptance criteria for the downcomers is described in Section 3.2. From the as-found visual inspections, light to moderate corrosion with no apparent wall loss was noted on downcomers in most Bays. Moderate corrosion and exposed substrate was noted on downcomer No.5 in Bay 1. The corrosion was limited to the bottom portion of the downcomer which was removed as part of the Torus Strainer EDCR. Dents with

4.2 Downcomers -continued

moderate corrosion, and exposed substrate were noted the bottom portion of 5 downcomers, one in each of Bays 4,5,6,11, and 15. These dents were located in the bottom portion of the downcomer which was later removed under EDCR 97-423, reference(15).

The post sandblast visual inspections identified no areas of wall loss greater than the 10 percent of nominal wall acceptance criteria. Also no areas of wall loss were identified adjacent to the mitre joints. No supplemental UT inspections were required.

5.0 SUMMARY / CONCLUSIONS

There were no significant areas of general corrosion/metal loss identified during the 1998 refueling outage. Isolated small areas of surface corrosion and coating damage were observed, documented, and evaluated. No significant wall loss was identified.

The entire bottom half of the interior surface of the Torus was sandblasted and re-coated during the 1998 refueling outage. Application of the new coating will mitigate future corrosion. Visual inspections performed during future refueling outages under ASME Section XI Subsection IWE requirements will insure the condition of the coating is monitored and repaired as required.

A permanent set of UT locations has been established on the exterior bottom of the Torus shell to provide a means for monitoring general area wall thickness without draining the Torus.

The Torus shell thickness at bottom center is at the design thickness. There is no margin for general corrosion at the bottom center of each bay. The bottom plates were sized for the maximum 56. Psi design pressure plus the hydrostatic head of water above the bottom centerline. However, the hydrostatic head varies with depth and the plate thickness is constant. This provides some margin for general corrosion away from the bottom center up to the equator of the Torus. The required general area wall thickness for this area is shown in Table 5.

There is margin for localized corrosion on the exterior shell, the vent piping, and downcomers. It is dependent on the size and depth of the corroded area and the location of the corrosion. Calculation VYC-1032 Revision 1, reference(14), contains the methodology and acceptance criteria for evaluation of localized wall loss for the Torus shell and vent system.

Isolated small shallow pit or inclusion type UT readings were observed. These were evaluated on a generic basis and were enveloped by acceptance criteria for surface pitting contained in reference(14).

6.0 RECOMMENDATIONS

1. Continued monitoring of the Torus shell and vent system for future corrosion is required under ASME Section XI Subsection IWE. Investigate what other BWR plants with Mark 1 Primary Containments are doing with respect to; IWE inspections, corrosion mitigation, and repair of damaged coatings.

2. Given the lack of margin at the Torus bottom, it may be desirable to investigate alternatives to increase the margin for corrosion. It may be possible to change either the loading or the acceptance criteria without changes in hardware. Investigate the feasibility of the two options (2A) and (2B) below. Both options will require licensing approval.

   (2A) If the loading was reduced to the maximum accident pressure of 44 Psi vs. the 56 Psi design pressure significant increases in margin for corrosion as documented in reference (12) could be obtained.

   (2B) Later versions of the ASME code have higher values of allowable stresses for the same material as the VY Primary Containment. The allowable stress values used in the Mark 1 program are (19.3Ksi vs. 17.5Ksi) 10.3% greater than the original design allowables.

7.0 REFERENCES

1. ASME XI, Subsection IWE, Requirements for Class MC and Metallic Liners of Class CC Components of Light-Water Cooled Plants, 1992 Edition with 1992 Addenda.

2. ASME Section III Nuclear Vessels, 1965 (with Winter 1965 Addenda) and ASME Section III, Unfired Pressure Vessels, 1965.

3. Design Specification for Vermont Yankee Reactor Containment , No. 22A1265, Revision No. 1, by General Electric Nuclear Energy Division.

4. Purchase Specification for Vermont Yankee Drywell and Suppression Chamber Containment Vessels, No. 21A5837, Revision No. 3, by General Electric Nuclear Energy Division.

5. Certified Stress Report, Vernon – II, Vermont Yankee Project Containment Vessel, No. 9-6202-II, October 29,1968, by Chicago Bridge & Iron –Oak Brook Engineering.

6. NUREG-0661, Supplement 1, Mark I Containment Long Term Program, .August 1992.

7. DE&S -Bolton Memo, C.B.Larsen to E.J.Betti, subject: Nondestructive Examination Requirements for 1998 Torus Work, PSD 7/98 Rev.1, Dated January 16,1998.

8. DE&S -Bolton Memo, C.B.Larsen to J.A.Schaefer(VY), subject: Proposed Strategy for Disposition of ASME XI, IWE Findings in Torus, PSD 41/98 Dated February 6,1998.

9. VY Design Engineering Memo J.C.Fitzpatrick to D.Girroir/M.Dugan, subject: "External UT Locations on Torus Shell for ASME XI Subsection IWE Inspections", VYM 98/56 dated March 31,1998.

10. VY Design Engineering Memo J.C.Fitzpatrick to D.Girroir/M.Dugan, subject: "Locations of Additional UT Inspections of Torus Shell Under Baffle Support Plates, VYM 98/85 dated May 4,1998.

11. VY Design Engineering Memo J.C.Fitzpatrick to D.Girroir/M.Dugan, subject: "Visual Inspection Criteria for Vent Header and Torus Shell for IWE Inspections, VYM 98/92 dated May 8,1998.

12. YNSD Calculation for Vermont Yankee: VYC-1032: Torus & Vent System Thickness Requirements, Rev. 0. [Superceded by Rev.1, reference 14]

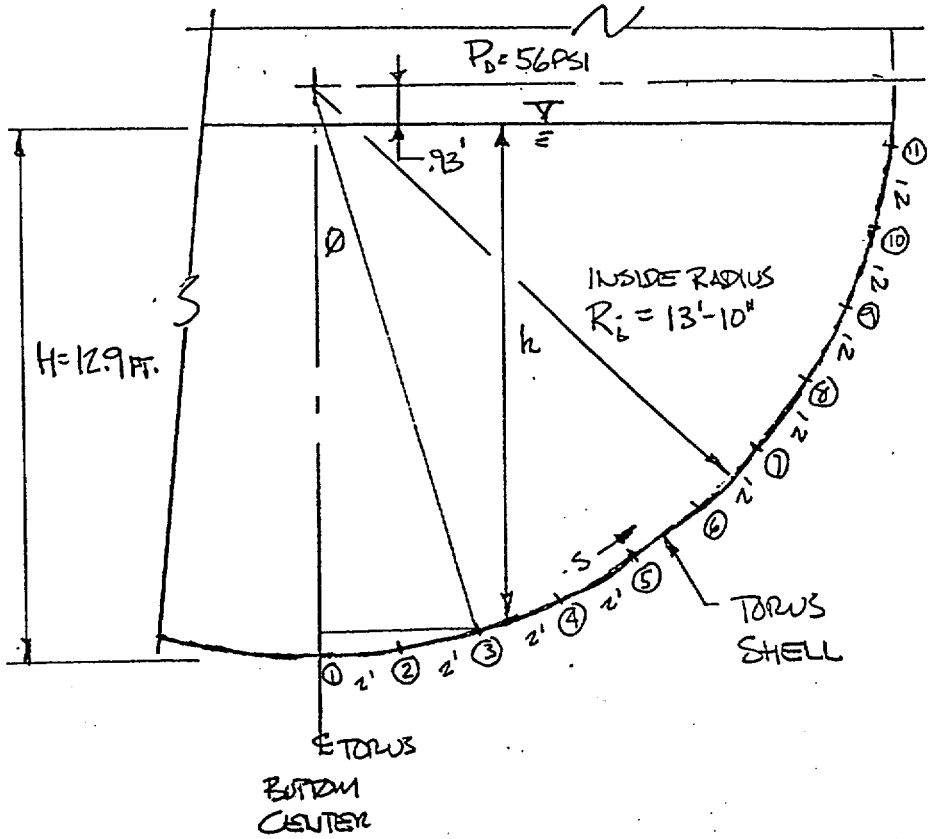
7.0 REFERENCES –continued

13. VY Drawings
No. 6202-200, Rev.1, Suppression Chamber - General Arrangement & Field Assembly.
No. 6202-209, Rev.0, Suppression Chamber -Baffle Assembly Details.
No. 6202-211, Rev.0, Suppression Chamber –Vent Header Assembly
No. 6202-214, Rev.0, Suppression Chamber –Shop Details Vent Headers & Downcomers

14. VY Calculation No. VYC-1032: Revision 1, :"Torus & Vent System Thickness Requirements", dated November 23,1999.

15. VY EDCR 97-423, Residual Heat Removal and Core Spray Strainer Replacement.

Table 3.1 Torus External Shell: General Area Code Minimum Wall Thickness and Acceptance Criteria



POINT	S (Ft.)	h (Ft.)	Pressure (Psi.)	CODE MIN. WALL (inch)	ACCEPTANCE CRITERIA (inch)
1	0	12.90	61.6	0.584	0.574
2	2	12.76	61.5	0.584	0.574
3	4	12.33	61.3	0.583	0.573
4	6	11.62	61.0	0.580	0.570
5	8	10.65	60.6	0.576	0.566
6	10	9.44	60.1	0.571	0.561
7	12	8.01	59.5	0.565	0.555
8	14	6.40	58.8	0.559	0.549
9	16	4.63	58.0	0.551	0.541
10	18	2.75	57.2	0.544	0.534
11	20	0.79	56.3	0.535	0.525

S = Arc Distance from Torus Bottom C.L.
Acceptance Criteria = Code Minimum Wall less plate mill undertolerance.

From Reference: 14

TABLE 4.1: GROUP 1 TEST STRIPS			
BAY 8 BOTTOM PLATES 2 FT WIDE STRIP (Approx. 1400 Measurements)			
Statistic	Thickness (inch) Before Sandblasting	Thickness (inch) After Sandblasting	Point to Point Difference
Minimum	0.546	0.528	-0.015
Maximum	0.640	0.626	0.051
Mode	0.609	0.606	0.002
Average	0.60294	0.59964	0.0033
Median	0.604	0.601	0.003
Standard Deviation	0.01261	0.012958	0.003404
Average Deviation	0.009494	0.009767	0.002216
Coefficient of Variation	0.020914	0.02161	1.031543

Instrument Accuracy Approx. +/- .004"

Average Wall Removed by Sand Blasting: .003 inch.

TABLE 4.2: GROUP 1 TEST STRIPS

BAY 16 BOTTOM PLATES 2 FT WIDE STRIP

(Approx. 1400 Measurements)

Statistic	Thickness (inch) Before Sandblasting	Thickness (inch) After Sandblasting	Point to Point Difference
Minimum	0.566	0.559	-0.088
Maximum	0.648	0.695	0.047
Mode	0.605	0.601	0.001
Average	0.605264	0.601852	0.003395
Median	0.607	0.603	0.003
Standard Deviation	0.01104	0.012465	0.007672
Average Deviation	0.00855	0.00977	0.004706
Coefficient of Variation	0.01824	0.020711	2.259931

Instrument Accuracy Approx. +/- .004"

Average Wall Removed By Sand Blasting: .003 inch

TABLE 4.3

Torus Bottom Plate UT Measurements (After Sandblasting) Permanent Inspection Points

SUMMARY OF MEASUREMENTS FROM APPENDIX C

Minimum Thickness	0.573	Two Locations Bay 4 (Pt.12) & Bay 14 (Pt.5) See Average thickness in Longit.& Hoop Directions
Maximum Thickness	0.642	
Average	0.602	
Std Dev	0.015	

Nominal Thickness = .584 inch
Plate Under Tolerance = 0.01 inch
Minimum Required Thickness =.574 inch

(at Torus bottom center, includes manufacturers under tolerance)

Minimum of Average Longitudinal Direction (across bay) = 0.591 inch

Minimum of Average Hoop Direction = 0.585 inch.

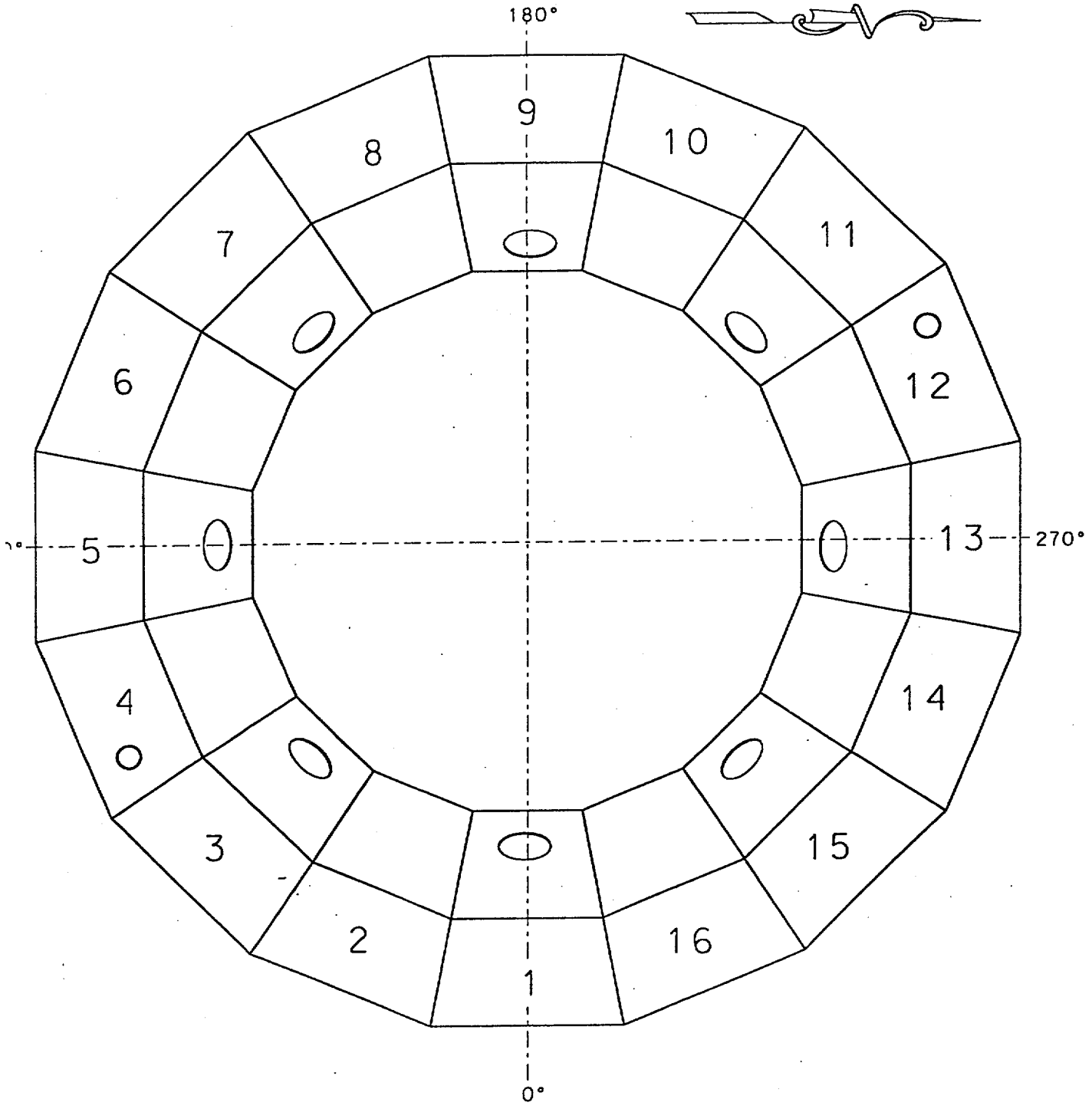


FIGURE 1 PLAN: TORUS BAY LAYOUT

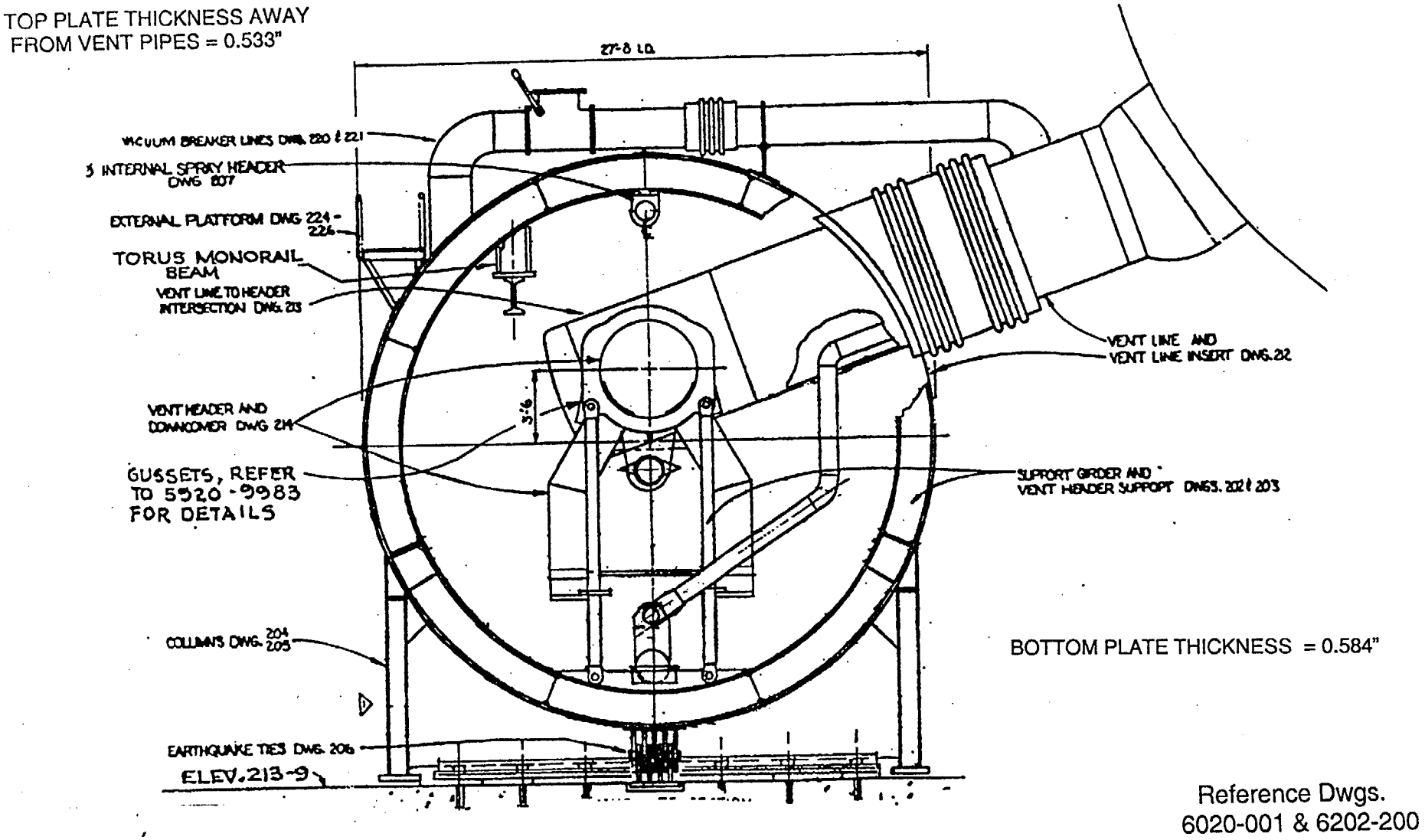


FIGURE 1.1 TYPICAL SECTION THROUGH TORUS

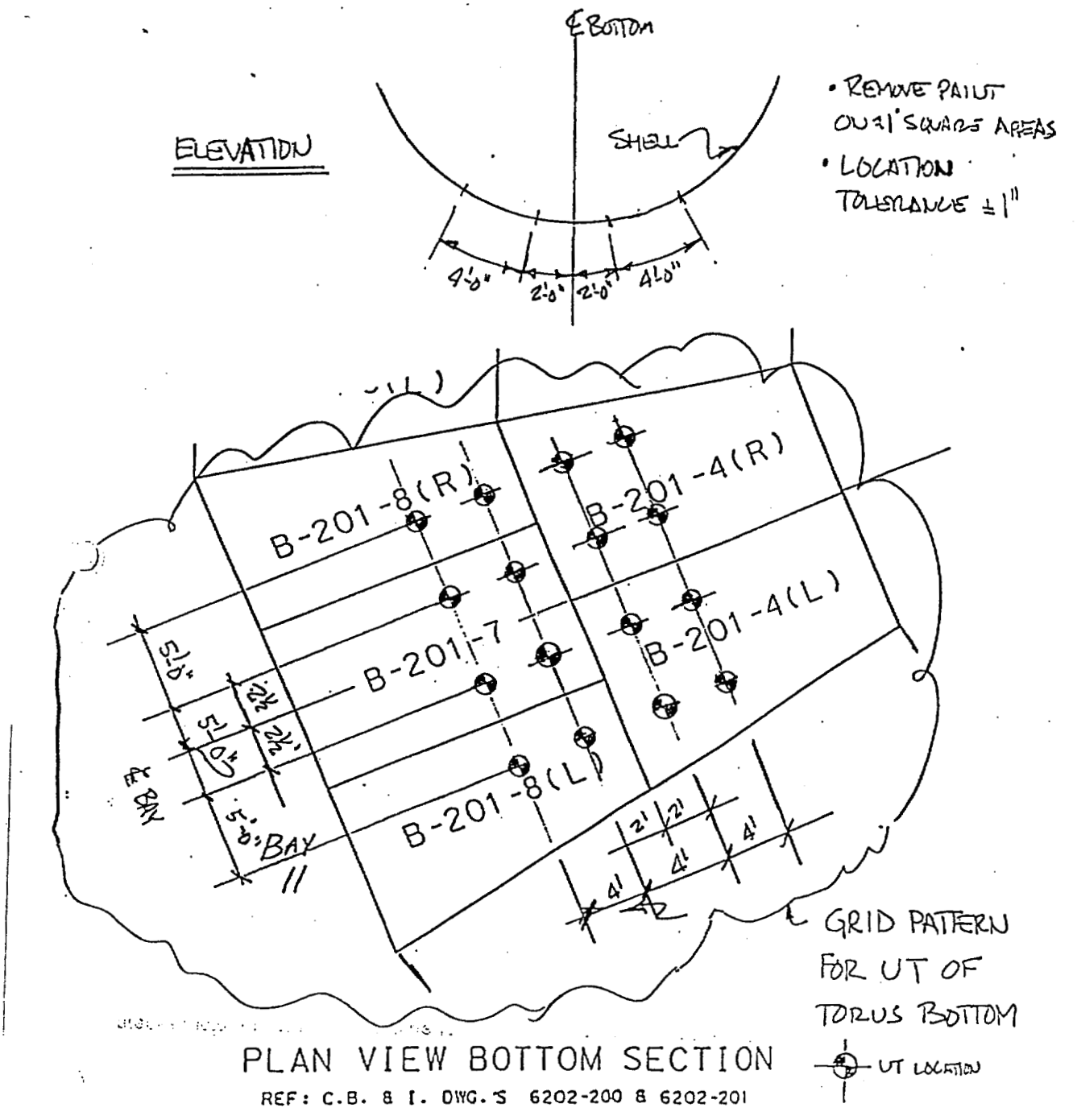


FIGURE 2.0 TORUS SHELL PERMANENT INSPECTION LOCATIONS
TYPICAL BAY

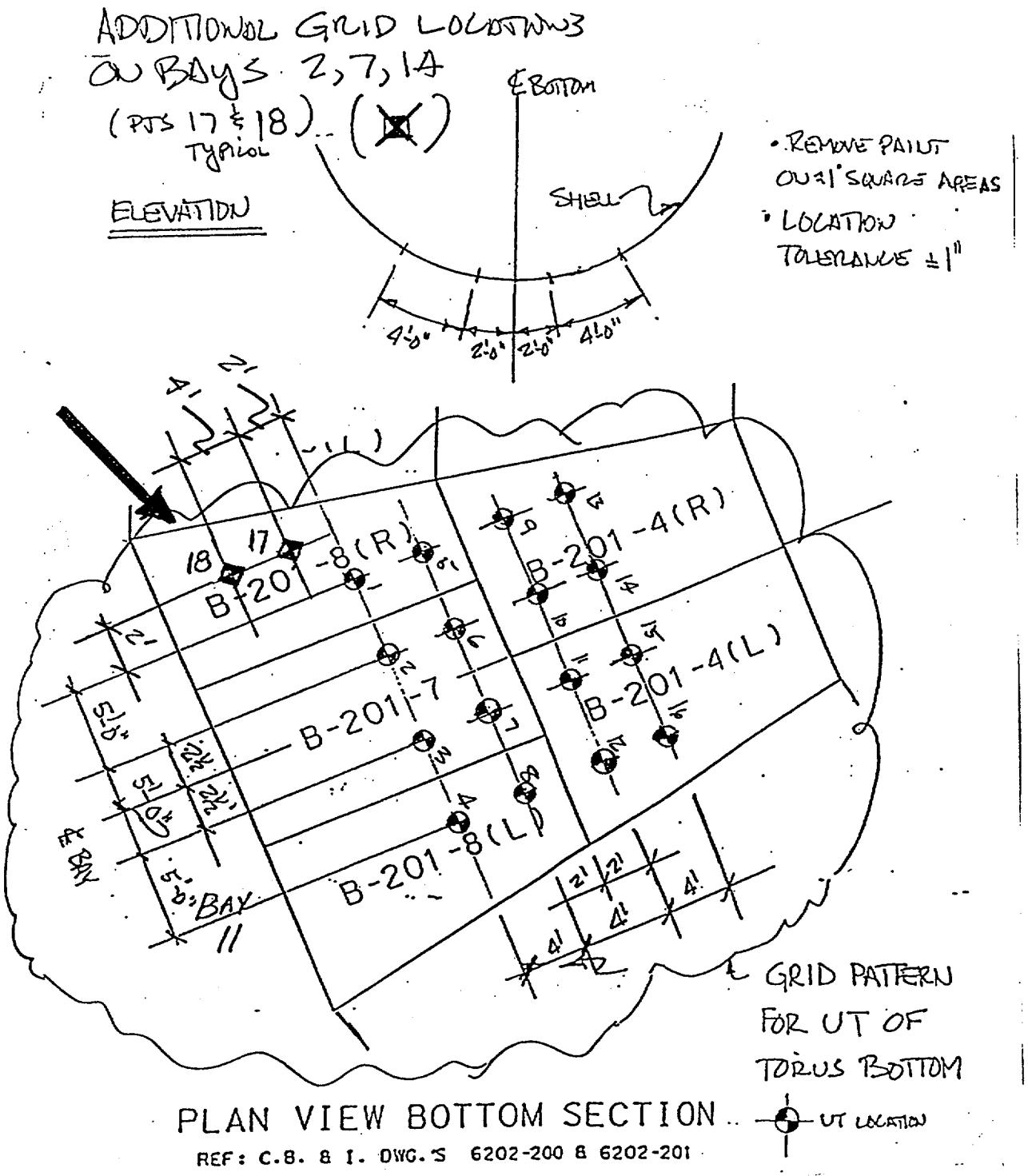


FIGURE 2.1 TORUS SHELL PERMANENT INSPECTION LOCATIONS
Supplemental Points Bays 2,7,14

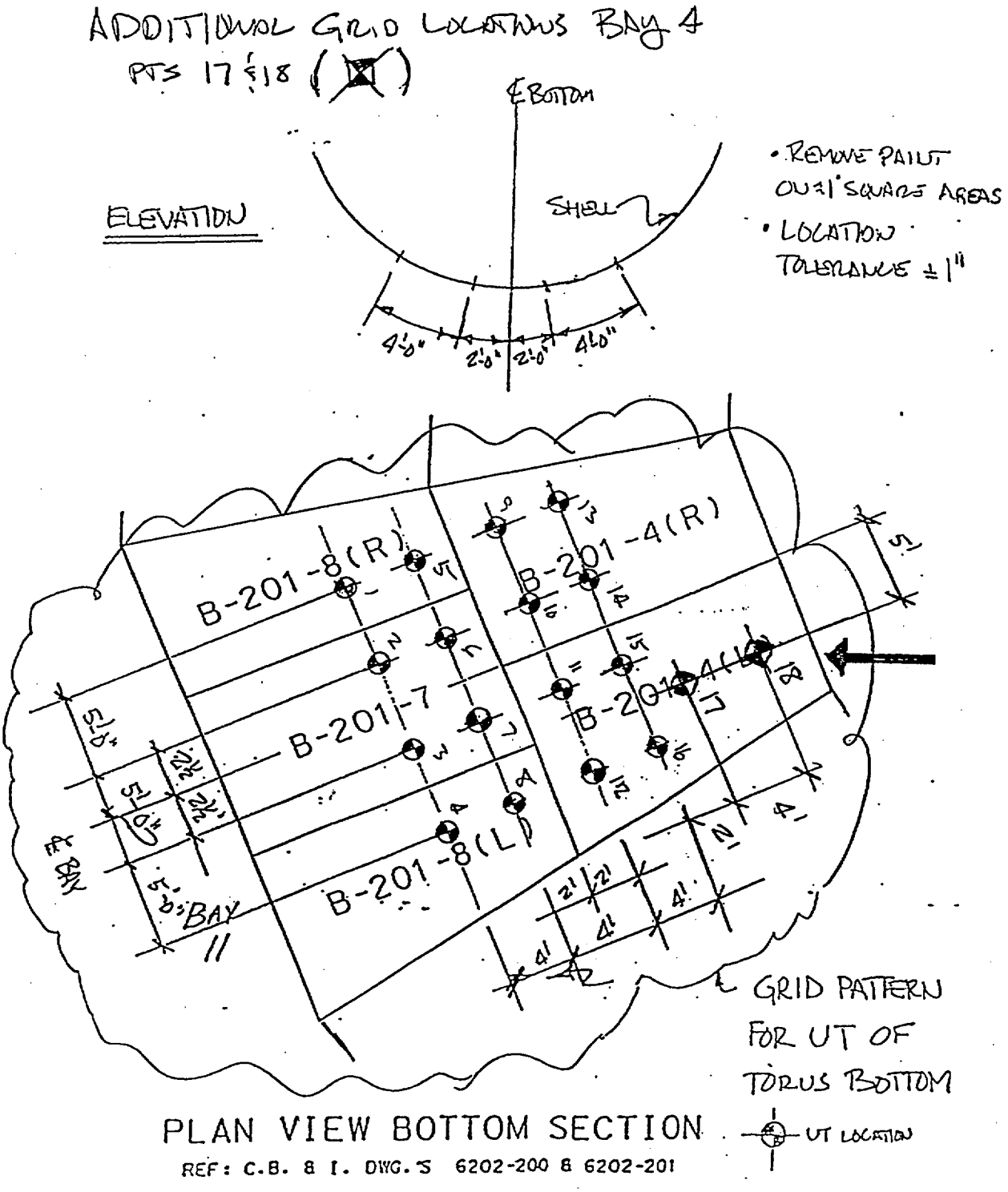


FIGURE 2.2 TORUS SHELL PERMANENT INSPECTION LOCATIONS – Supplemental Points Bay 4

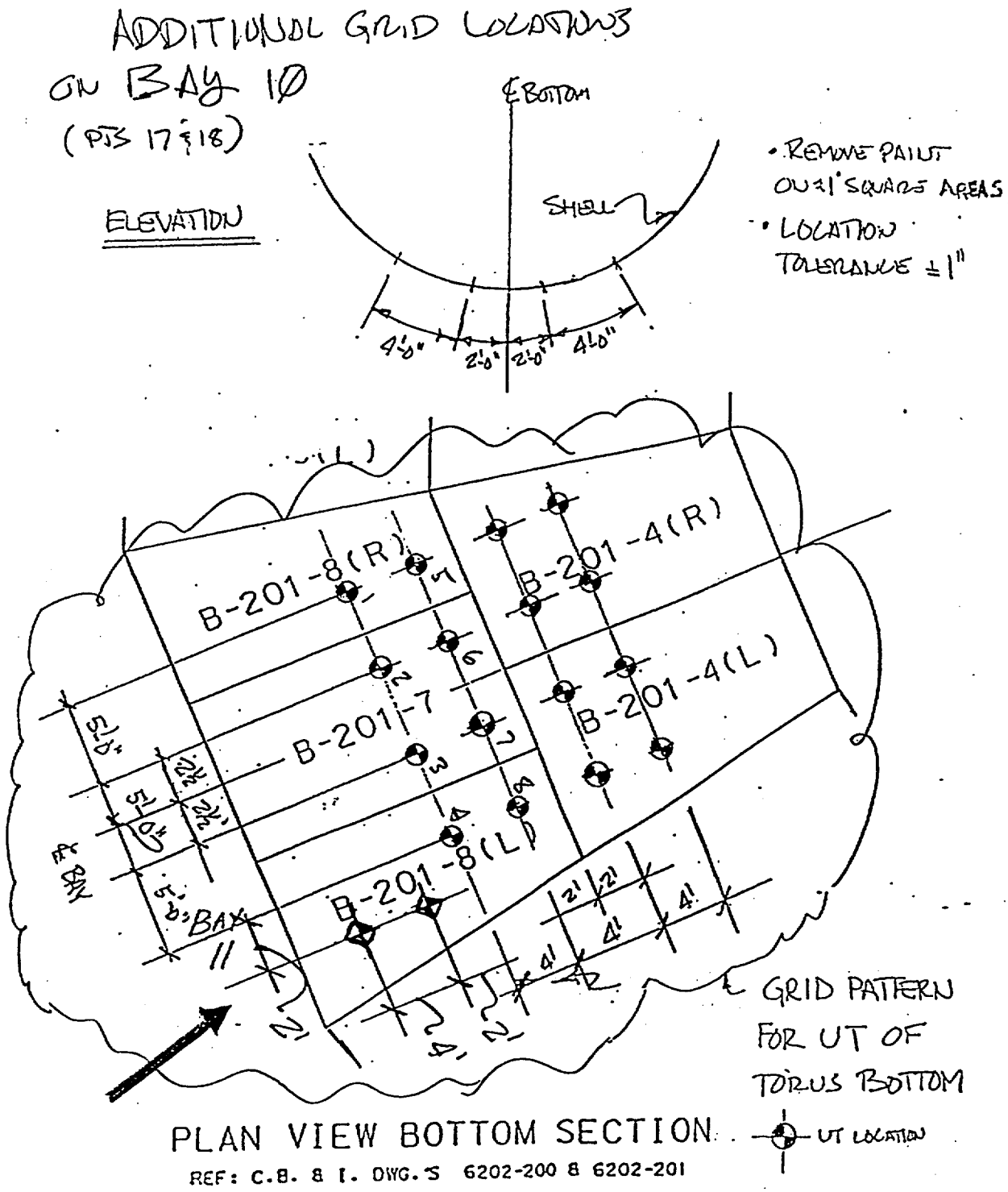


FIGURE 2.3 TORUS SHELL PERMANENT INSPECTION LOCATIONS
Supplemental Points Bay 10

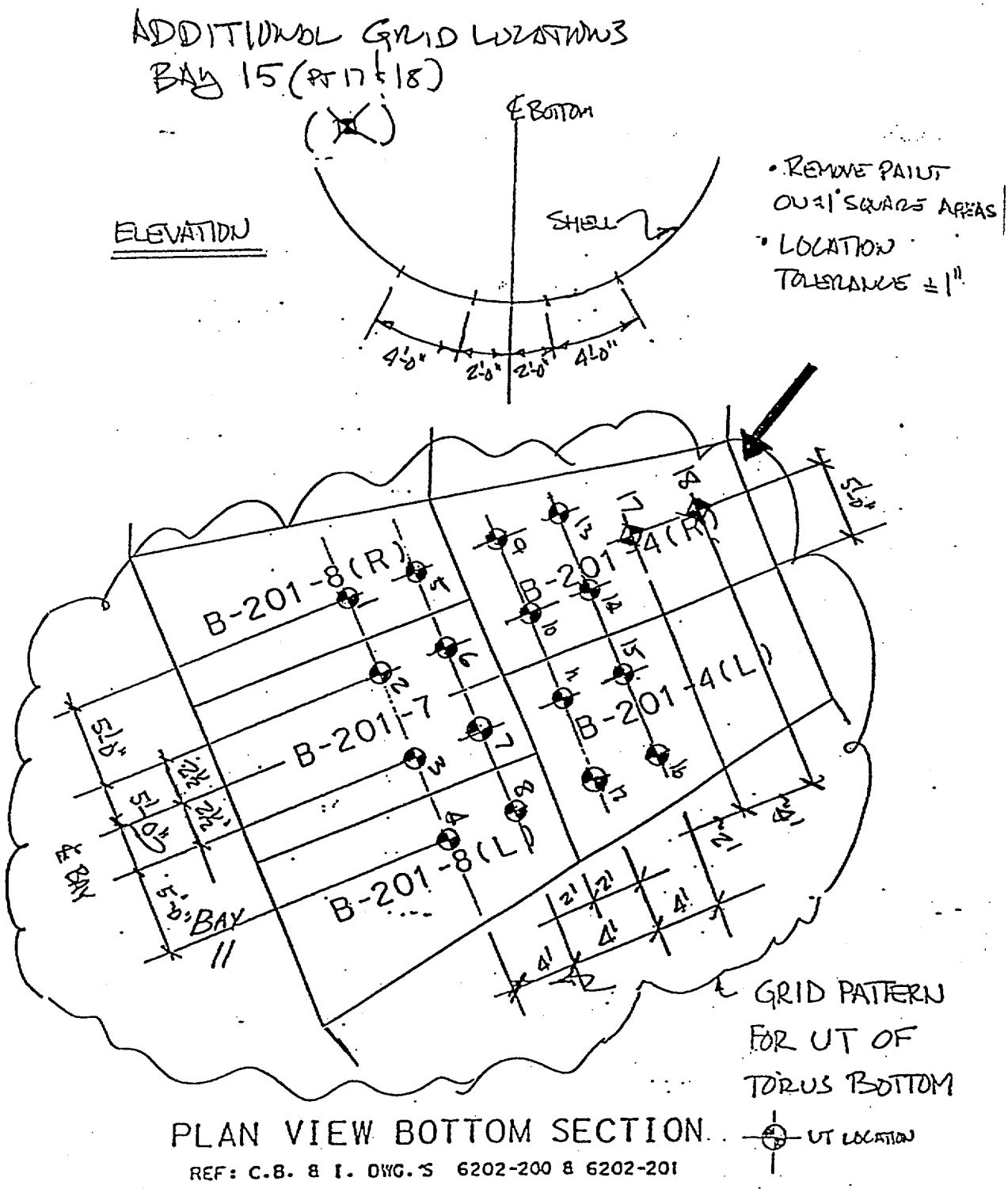


FIGURE 2.4 TORUS SHELL PERMANENT INSPECTION LOCATIONS
Supplemental Points Bay 15

SEE DWG 6202-2XX FOR LAYOUT OF BAFFLE PLATES

LOCATIONS BAY 4: VENT PIPE BAY (2) LOCATIONS @ MID BAY

BAY 15: NON-VENT PIPE BAY (4) LOCATIONS @ 4'-7" FROM MID BAY

USE 1" SQUARE AREAS (SIMILAR TO BOTTOM UT GRID)

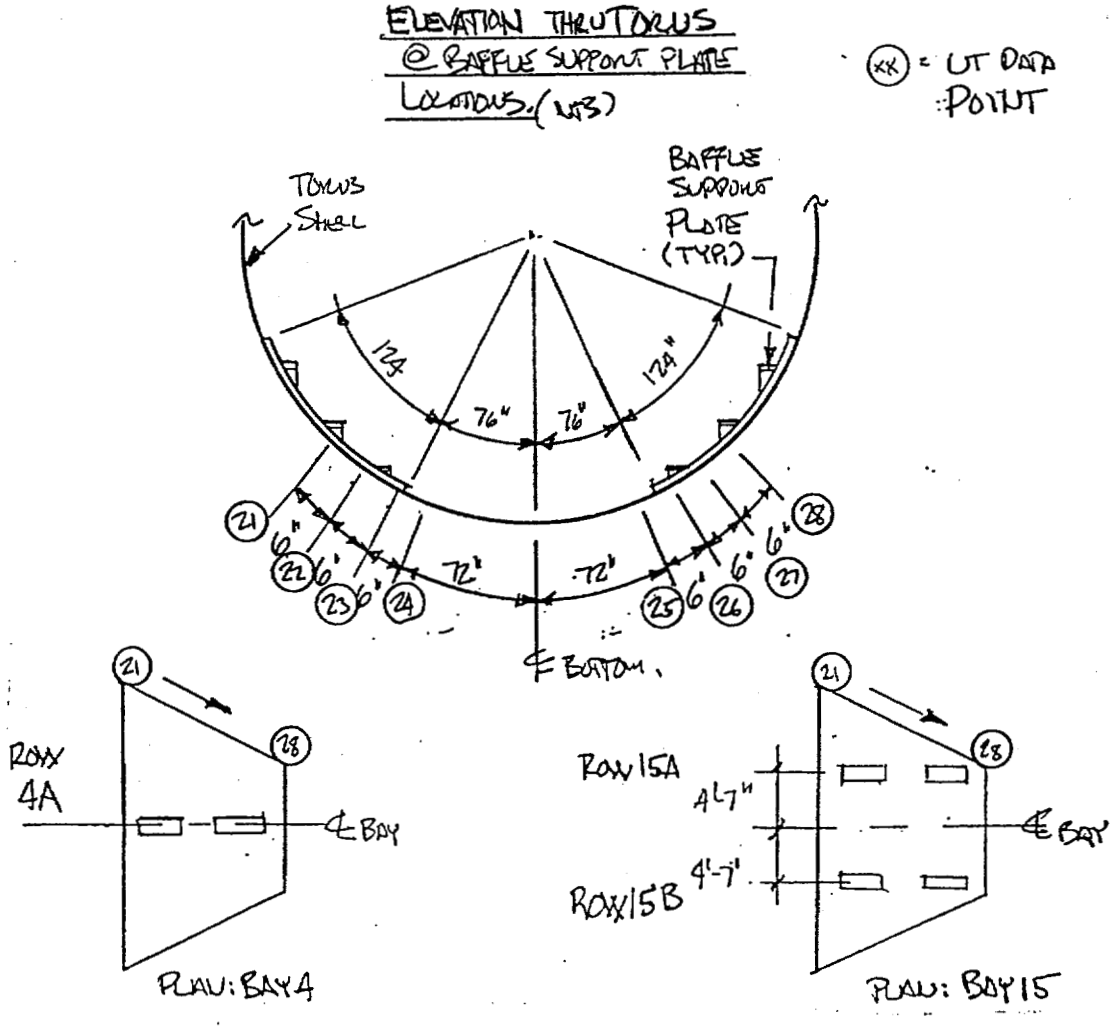


FIGURE 2.5
TORUS SHELL UT LOCATIONS UNDER TORUS BAFFLE PLATES

V.Y. 1998 ASME SECTION XI SUBSECTION IWE
REPORT ON EVALUATION OF TORUS INSPECTIONS
APPENDIX A: VISUAL and UT INSPECTION REPORTS

Tab	ISI Report No.	Date	Contents
1	YA-VT-11-10	3/24/98	As-found Visual Inspection of: a) Torus interior bottom (below water line). b) Downcomer bottom end, internal & external.
2	N/A	3/35/98	Location and Map of previous underwater coating repairs in bottom of Bay 8.
3	N/A	3/24/98	Location and map of previous underwater coating repairs in bottom of Bay 16.
4	YA-UT-112-104 YA-UT-112-105	4/4/98 4/4/98	Bay 8 Bottom – BEFORE – Sandblasting. (2ft. wide full bay length test strip with 2" grids to monitor effects of coating removal on plate thickness.)
5		4/10/98	Bay 8 Bottom – AFTER – Sandblasting.
6	YA-UT-112-84	4/4/98	Bay 16 Bottom – BEFORE – Sandblasting. (2ft. wide full bay length test strip with 2" grids to monitor effects of coating removal on plate thickness.)
7	YA-UT-112-85`	4/9//98	Bay 16 Bottom – AFTER – Sandblasting.
8			Torus Bottom Plate Long Term Monitoring Locations (16 to 18 per Bay) BEFORE SANDBLASTING
	YA-UT-112-29	3/28/98	Bay 1
	YA-UT-112-30	" "	Bay 2
	YA-UT-112-31	" "	Bay 3
	YA-UT-112-32	" "	Bay 4
	YA-UT-112-33	" "	Bay 5
	YA-UT-112-34	3/27/98	Bay 6
	YA-UT-112-35	" "	Bay 7
	YA-UT-112-36	" "	Bay 8
	YA-UT-112-37	" "	Bay 9
	YA-UT-112-38	" "	Bay 10
	YA-UT-112-39	" "	Bay 11
	YA-UT-112-40	" "	Bay 12
	YA-UT-112-41	3/28/98	Bay 13
	YA-UT-112-42	" "	Bay 14
	YA-UT-112-43	" "	Bay 15
	YA-UT-112-44	" "	Bay 16
	YA-UT-112-45	3/30/98	Bays 2,4,7,14,&15 Confirmatory Readings
	YA-UT-112-96	4/13/98	Bays 2,4,7,10,14, &15 Supplemental Locations (Pts. 17 & 18)
9			Torus Bottom Plate Long Term Monitoring Locations AFTER SANDBLASTING
	YA-UT-112-119	4/22/98	Bays 1 to 8 and 8 to 16
	YA-UT-112-128	5/9/98	Bay 7
10	YA-UT-112-125 YA-UT-112-126	5/8/98 5/8/98	Bay 4: Torus Bottom Plate Thickness Under Baffle Plates. Bay 15: Torus Bottom Plate Thickness Under Baffle Plates.

V.Y. 1998 ASME SECTION XI SUBSECTION IWE
REPORT ON EVALUATION OF TORUS INSPECTIONS
APPENDIX A: VISUAL and UT INSPECTION REPORTS

Tab	ISI Report No.	Date	Contents
11	YA-UT-112-127 YA-UT-112-129	5/9/98 5/9/98	Bay 7: Local indications at temporary opening. " " " " "
12		3/31/98	Bay 1 – Area 1: As-found Local Area UT Examination
13	YA-UT-112-27	3/29/98	Bay 2 – Area 1: As-found Local Area UT Examination
14	 YA-UT-112-131 YA-UT-112-133	 3/31/98 5/9/98 5/12/98	Bay 2 – Area 2: As-found Local Area UT Examination (6"x6" square area) Pre-Sandblast (6"x6" square area) Post-Sandblast (expanded 12"x12" area) Post-Sandblast.
15	YA-UT-112-26 YA-UT-112-46	3/29/98 3/30/98	Bay 5 – Area 1: As-found Local Area UT Examination. Bay 5 – Area 1: Confirmatory Readings
16	YA-UT-112-25 YA-UT-112-46	3/29/98 3/30/98	Bay 5 – Area 2: As-found Local Area UT Examination Bay 5 – Area 2: Confirmatory Readings
17	YA-UT-112-67 YA-UT-112-68	4/5/98 4/4/98	Bay 5 – Area 1 (Inside) : As-found Local Area UT Examination " " " " " "
18	YA-UT-112-48	3/31/98	Bay 12 – Area 1: As-found Local Area UT Examination.
19	YA-UT-112-24 YA-UT-112-46 YA-UT-112-47	3/29/98 3/30/98 3/30/98	Bay 12 – Area 2: As-found Local Area UT Examination. Bay 12 – Area 2: Confirmatory Readings (26DL+) Bay 12 – Area 2: Confirmatory Readings (A-Scan)
20		4/1/98	Bay 15 – Area 1: As-found Local Area UT Examination
21		4/1/98	Bay 15 – Area 2: As-found Local Area UT Examination
22	 YA-VT-11-25 YA-VT-11-27 YA-VT-11-28 YA-VT-11-48	 4/27/98 4/26/98 4/26/98 5/6/98	After sandblasting / prior to re-coating: Torus interior Visual Inspections. Torus Bottom Bays 1 to 6, 10 to 16. Torus Bottom Bays 7, 8, & 9 Downcomers in Bays 1 to 16. Bay 7 Plate from Torus temporary access.
23	YA-UT-112-123	4/30/98	Local UT Examinations at locations identified as roller lap marks and/or raised ridges in Bays 4,11,12,15, & 16.

YA-VT-11-10

VT-1/VT-3 CONTAINMENT EXAMINATION REPORT

PLANT Vermont Yankee OUTAGE 20 DRAWING 6202-1 REV. 1
SYSTEM TORUS COMPONENT NO. SEE PAGES 2, 3, 4 AND 5
LOCATION TORUS INTERNAL SURFACES BELOW WATER LINE.

EXAMINATION CONDITIONS

VT-1 Only: Resolution Check: ☑ YES ☐ NO Access <24": ☑ YES ☐ NO Angle >30°: ☑ YES ☐ NO
Exam Aids Description: LIGHT METER, PELICAN 8D SERIES 4000 LIGHTS, TAPE MEASURE, PROCEDURE DEMONSTRATION CARD.

EXAMINATION ATTRIBUTES

VT-1 OR VT-3 EXAMINATION OF COATED SURFACES

VT-1 ☑ VT-3 ☐

	Accept	Recordable	N/A
Cracks	☑	☐	☐
Physical Damage or Displacement	☐	☑	☐
Debris	☑	☐	☐
Paint Blistering	☐	☑	☐
Paint Flaking or Peeling	☐	☑	☐
Discoloration	☐	☑	☐
Corrosion	☐	☑	☐
Erosion	☑	☐	☐
Other	☐	☐	☑

REMARKS EXAM PERFORMED IN ACCORDANCE WITH YA-VT-11 APPENDIX B.

VT-1 OR VT-3 EXAMINATION OF NON-COATED SURFACES

VT-1 ☐ VT-3 ☐

	Accept	Recordable	N/A
Cracks	☐	☐	☑
Pitting	☐	☐	☑
Arc Strikes	☐	☐	☑
Gouges or Dents	☐	☐	☑
Other Surface Discontinuities	☐	☐	☑
Physical Damage or Displacement	☐	☐	☑
Debris	☐	☐	☑
Wear	☐	☐	☑
Discoloration	☐	☐	☑
Excessive Corrosion	☐	☐	☑
Erosion	☐	☐	☑
Other	☐	☐	☑

REMARKS

Seals Gaskets and Moisture Barriers

	Accept	Recordable	N/A
Wear	☐	☐	☑
Damage	☐	☐	☑
Erosion	☐	☐	☑
Tears	☐	☐	☑
Surface Cracks	☐	☐	☑
Other	☐	☐	☑

REMARKS

SUPPLEMENTAL DATA SHEET ATTACHED: ☑ YES ☐ NO

EXAMINER SEE PAGE 2 Level: N/A Date: N/A
Cog. Eng./Exam Agency Date:
ISI Coordinator ☐ Accept ☐ Reject Date:
NOTE: Accepted recordable attributes shall have evaluation data attached.
QA (Optional) N/A Date: N/A
ANII (Optional) Date:

VT 1 SUPPLEMENTAL DATA SHEET

PLANT YY OUTAGE 20 DRAWING 6202-1 REV. 1

SYSTEM TORUS COMPONENT/WELD NO. SEE PAGES 2, 3 AND 4, 5

LOCATION SEE PAGES 2, 3, 4

THE SIGNATURES BELOW RELATE TO THE CORRESPONDING DATES LISTED ON PAGES 2, 3 AND 4 OF THIS REPORT:

Janet L Miller L II

L A Sa[illegible] II

M A Shea[illegible] L II

[illegible] L II

Michael [illegible] L II

EXAMINER SEE ABOVE Level: N/A Date: N/A

Cog. Eng./Exam Agency [illegible] Date: 5/7/96

ISI Coordinator ☐ Accept ☐ Reject Date:

NOTE: Accepted recordable attributes shall have evaluation data attached.

QA (Optional) Date:

ANII (Optional) Date:

FORM 1

VT 1 SUPPLEMENTAL DATA SHEET

PLANT VY OUTAGE 20 DRAWING 6202-1 REV. 1

SYSTEM Torus COMPONENT/WELD NO. SEE BELOW

LOCATION The following examination teams performed Torus VT-3 examinations in the designated areas on 3/25/98:

DOWNCOMER EXTERIOR AND INTERIOR (FROM BOTTOM END TO ELBOW BEND ONLY)

Pat Cotton and Mike Gagnier – Bay 9, Bay 10, Bay 12 and Bay 15

George Dacier and Mike Gagnier – Bay 16

George Dacier and Nick Shearer – Bay 11, Bay 13 and Bay 14

EXAMINER SEE PAGE 2 Level: N/A Date: N/A

Cog. Eng./Exam Agency _____ Date: _____

ISI Coordinator _____ ☐ Accept ☐ Reject Date: _____

NOTE: Accepted recordable attributes shall have evaluation data attached.

QA (Optional) N/A Date: N/A

ANII (Optional) _____ Date: _____

VT 1 SUPPLEMENTAL DATA SHEET

PLANT VY OUTAGE 20 DRAWING 6202-1 REV. 1

SYSTEM TORUS COMPONENT/WELD NO. SEE BELOW

LOCATION The following examination teams performed Torus VT-3 examinations in the designated areas on 3/24/98:

LOWER PORTION OF INTERIOR SHELL*

Janet Miles and Marilyn Bachman - Bay 1, Bay 2, Bay 4 and Bay 16
Ron Sain and Dave Stogden – Bay 3, Bay 8, Bay 9, Bay 10, Bay 11, Bay 12, Bay 13, Bay 14 and Bay 15
Jerry Newgard and Luis Valenzuela - Bay 5, Bay 6 and Bay 7

UPPER PORTION OF INTERIOR SHELL*

Ron Sain and Dave Stogden – Bay 1, Bay 2, Bay 3, Bay 4, Bay 14, Bay 15 and 16
Jerry Newgard and Luis Valenzuela - Bay 5, Bay 6, Bay 7, Bay 8, Bay 9, Bay 10, Bay 11, Bay 12 and Bay 13

DOWNCOMER EXTERIOR AND INTERIOR (FROM BOTTOM END TO ELBOW BEND ONLY)

Nick Shearer and George Dacier – Bay 8 (this was the only Bay allowed to be inspected on the interior this day due to the exclusion by Radiation Protection posting the interior as a Permit Confined Space)

* ***Lower portion of interior shell:*** From the bottom center of each bay up to the cross bay scaffold line (this scaffold will be erected approximately 6' up from the torus floor).

Upper portion of interior shell: From 12" above the water line down to the cross bay scaffold line in each bay.

These examinations were overlapped at the cross bay scaffold line to ensure total coverage.

EXAMINER SEE PAGE 2 Level: N/A Date: N/A
Cog. Eng./Exam Agency _____ Date: ____
ISI Coordinator _____ ☐ Accept ☐ Reject Date: ____
NOTE: Accepted recordable attributes shall have evaluation data attached.
QA (Optional) N/A Date: N/A
ANII (Optional) _____ Date: ____

FORM 1

VT 1 SUPPLEMENTAL DATA SHEET

PLANT VY OUTAGE 20 DRAWING 6202-1 REV. 1

SYSTEM Torus COMPONENT/WELD NO. SEE BELOW

LOCATION The following examination teams performed Torus VT-3 examinations in the designated areas on 3/26/98:

DOWNCOMER EXTERIOR (FROM BOTTOM END TO ELBOW BEND ONLY)

Ron Sain and Dave Stogden – Bay 1, Bay 2, Bay 3, Bay 4, Bay 5, Bay 6 and Bay 7

DOWNCOMER INTERIOR (FROM BOTTOM END TO ELBOW BEND ONLY)

Ron Sain and Dave Stogden – Bay 1, Bay 3, Bay 4, Bay 5, Bay 6 and Bay 7

George Dacier and Mike Gagnier – Bay 2

EXAMINER SEE PAGE 2 Level: N/A Date: N/A
Cog. Eng./Exam Agency _____ Date: ____
ISI Coordinator _____ ☐ Accept ☐ Reject Date: ____
NOTE: Accepted recordable attributes shall have evaluation data attached.
QA (Optional) N/A Date: N/A
ANII (Optional) _____ Date: ____

VT 1 SUPPLEMENTAL DATA SHEET

PLANT VY OUTAGE 20 DRAWING 6202-1 REV. 1

SYSTEM Torus COMPONENT/WELD NO. SEE PAGES 2,3,4 & 5

LOCATION Locations as noted below

The Following areas were noted as having corrosion and/or coating degradation exceeding the general conditions in the associated bay:

Bay 1

1 - 3" x 8" strip of moderate corrosion, coating degradation and exposed substrate located 6" from bottom seam weld towards OD of torus and 10" from bay 16/1 ring girder.

2 - On the interior of downcomer #5 there is 5" x 14" area of moderate corrosion, coating degradation and exposed substrate located 2" from bottom edge. This area lies wholly within the section of the downcomer that is being removed.

Bay 2

1 - There is a single pit (physically identified on the torus shell as having an examination date of 9/96) located 11' 6" toward the torus ID from the bottom seam weld and 18" from the vertical center plate weld.

2 - There is a 4" x 5" area of moderate corrosion, coating degradation and exposed substrate located 20' 10" toward the torus OD from the bottom seam weld and 9" from bay 2/3 ring girder.

Bay 3

1 - Interior of downcomers 1, 2, 3, 6 and 7 have a moderate powdery corrosion, coating degradation and exposed substrate on the interior surface intrados at the conjunction of the upper and lower pieces.

EXAMINER SEE PAGE 2 Level: N/A Date: N/A

Cog. Eng./Exam Agency _____ Date: _____

ISI Coordinator _____ ☐ Accept ☐ Reject Date: _____

NOTE: Accepted recordable attributes shall have evaluation data attached.

QA (Optional) N/A Date: N/A

ANII (Optional) _____ Date: _____

VT 1 SUPPLEMENTAL DATA SHEET

PLANT VY OUTAGE 20 DRAWING 6202-1 REV. 1

SYSTEM Torus COMPONENT/WELD NO. SEE PAGES 2,3,4 & 5

LOCATION Locations as noted below

The Following areas were noted as having corrosion and/or coating degradation exceeding the general conditions in the associated bay:

Bay 5

1 - There is a 60" x 12" strip of moderate corrosion, coating degradation and exposed substrate extending from 56" from the bay 5/6 ring girder to 116" from bay 5/6 ring girder. This area follows the bottom seam weld (6" on either). The seam weld is on the centerline of the long axis of the strip.

2 - There is a 9" x 12" area of minimal pitting, moderate corrosion, coating degradation and exposed substrate 43" from Bay 5/6 ring girder and 56" toward reactor vessel from the bottom center seam weld.

3 - There is a 24" X 24" area of moderate corrosion, coating degradation and exposed substrate 145" from the bottom seam weld 26" from Bay 4/5 ring girder toward the torus OD.

4 – There is a 6" area of blistered coating on the interior, 12" from the bottom edge of downcomer #5, 2" CCW from the longseam.

5 – There is a 3" x 5" area of area of moderate corrosion, coating degradation and exposed substrate on the interior of downcomer #7, 3" from the bottom edge of the downcomer, starting at the longseam and extending 5"CCW.

Bay 11

1 - There is a 6" x 6" area of moderate corrosion, coating degradation and exposed substrate below the miter weld at the intrados of the interior of downcomer #5.

2 - There is a 6" x 6" area of moderate corrosion, coating degradation and exposed substrate below the miter weld at the intrados of the interior of downcomer #6.

EXAMINER SEE PAGE 2 Level: N/A Date: N/A

Cog. Eng./Exam Agency _____ Date: ____

ISI Coordinator _____ ☐ Accept ☐ Reject Date: ____

NOTE: Accepted recordable attributes shall have evaluation data attached.

QA (Optional) _____ Date: ____

ANII (Optional) _____ Date: ____

VT 1 SUPPLEMENTAL DATA SHEET

PLANT VY OUTAGE 20 DRAWING 6202-1 REV. 1

SYSTEM Torus COMPONENT/WELD NO. SEE PAGES 2,3,4 & 5

LOCATION Locations as noted below

The Following areas were noted as having corrosion and/or coating degradation exceeding the general conditions in the associated bay:

Bay 12

✓ 1 - There is a 6" x 6" strip of moderate corrosion, coating degradation and exposed substrate 21" from the bay 11/12 ring girder and 88" from the bottom seam weld away from the reactor vessel.

✓ 2 - There is a 24" x 12" area of moderate corrosion, coating degradation and exposed substrate extending from 90" from the bottom seam weld toward the torus OD, 6' from the bay 11/12 ring girder.

Bay 13

There is a single pit located 5" down from the miter weld and 6" ccw on the interior of downcomer #4.

Bay 15

1 - There is a 6" x 6" area of moderate corrosion, coating degradation and exposed substrate, 19' 10" toward the torus OD from the bottom seam weld, at the bay 14/15 ring girder.

Bay 16

There is light blistering on the interior of downcomer #3.

The following downcomers have dents with moderate corrosion, coating degradation and exposed substrate on the bottom edge within the 6" area that is to be removed.

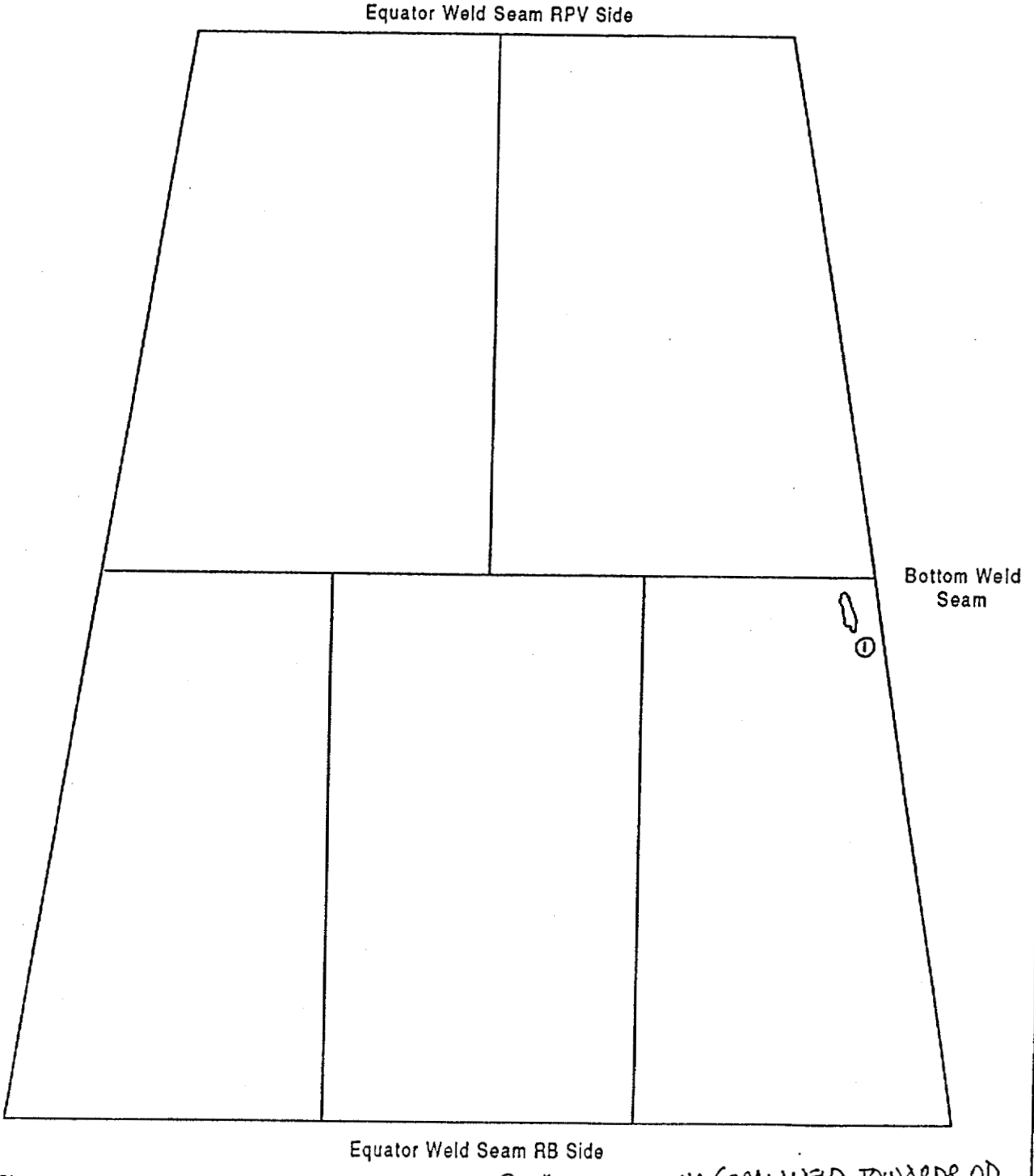
Bay 4 – Downcomer #1
Bay 5 – Downcomer #4
Bay 6 – Downcomer #3
Bay 11 –Downcomer #4
Bay 15 –Downcomer #6

EXAMINER SEE PAGE 2 Level: N/A Date: N/A
Cog. Eng./Exam Agency _____ Date: ____
ISI Coordinator _____ ☐ Accept ☐ Reject Date: ____
NOTE: Accepted recordable attributes shall have evaluation data attached.
QA (Optional) _____ Date: ____
ANII (Optional) _____ Date: ____

FORM 1

Torus Rollout - Bay 1

Bottom Half - Shell Interior

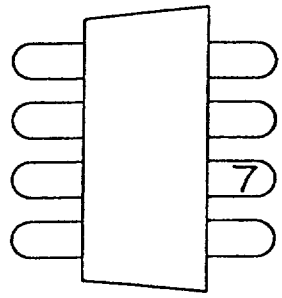


Notes: 1 3"x8" STRIP OF LIGHT (A-B) CORROSION @ 6" FROM BOTTOM SEAM WELD TOWARDS OD AND 10" FROM BAY 16/1 RING GIRDER. GENERAL COATING DEGRADATION NOTED. NO APPARENT DAMAGE TO SUBSTRATE.

3/24/98

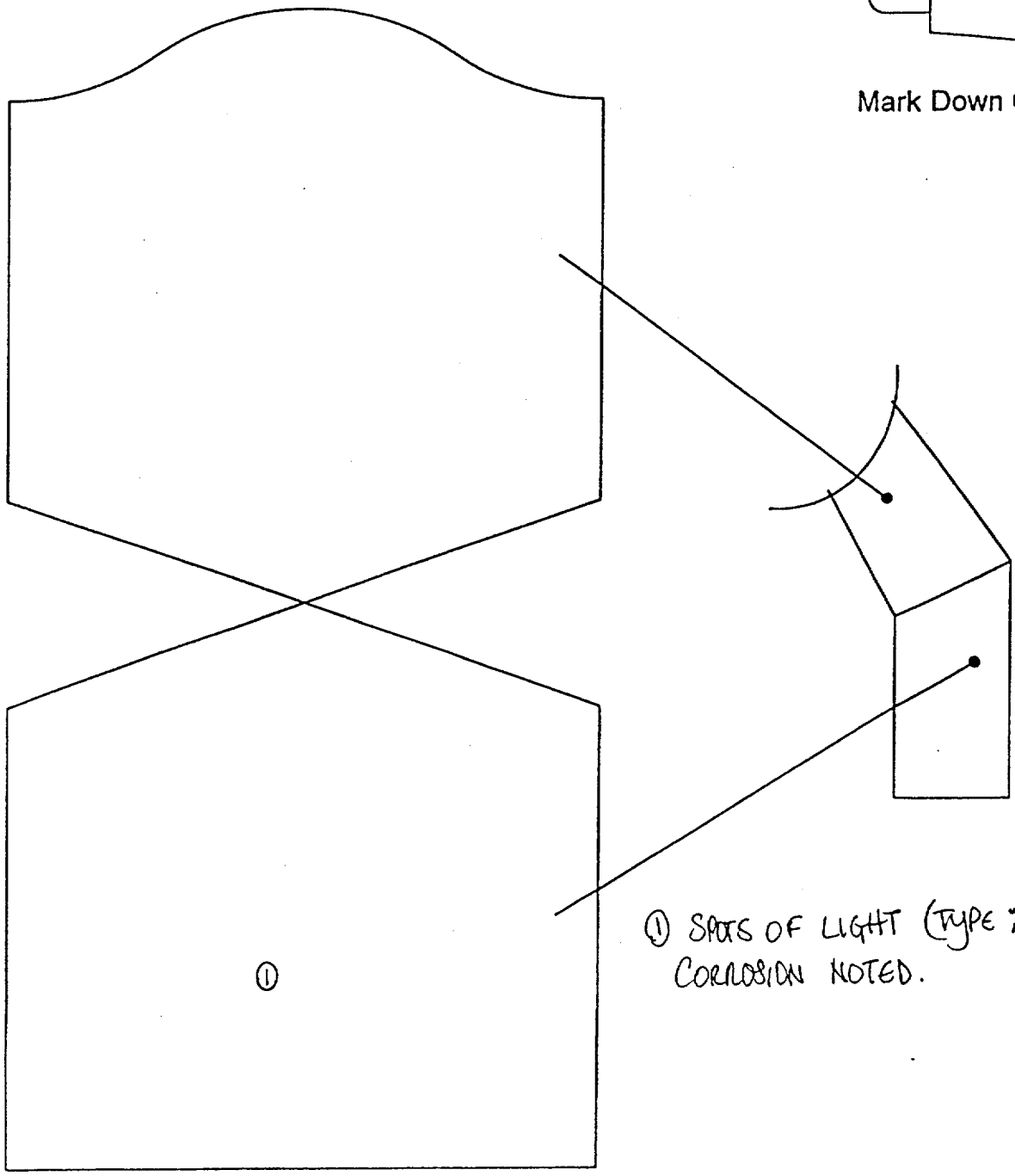
Downcomer Rollout - Bay 1

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

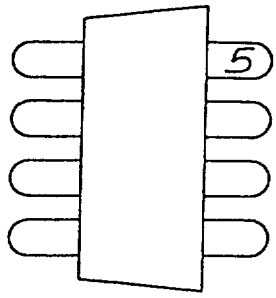


1 SPOTS OF LIGHT (TYPE "A")
CORROSION NOTED.

3/24/98

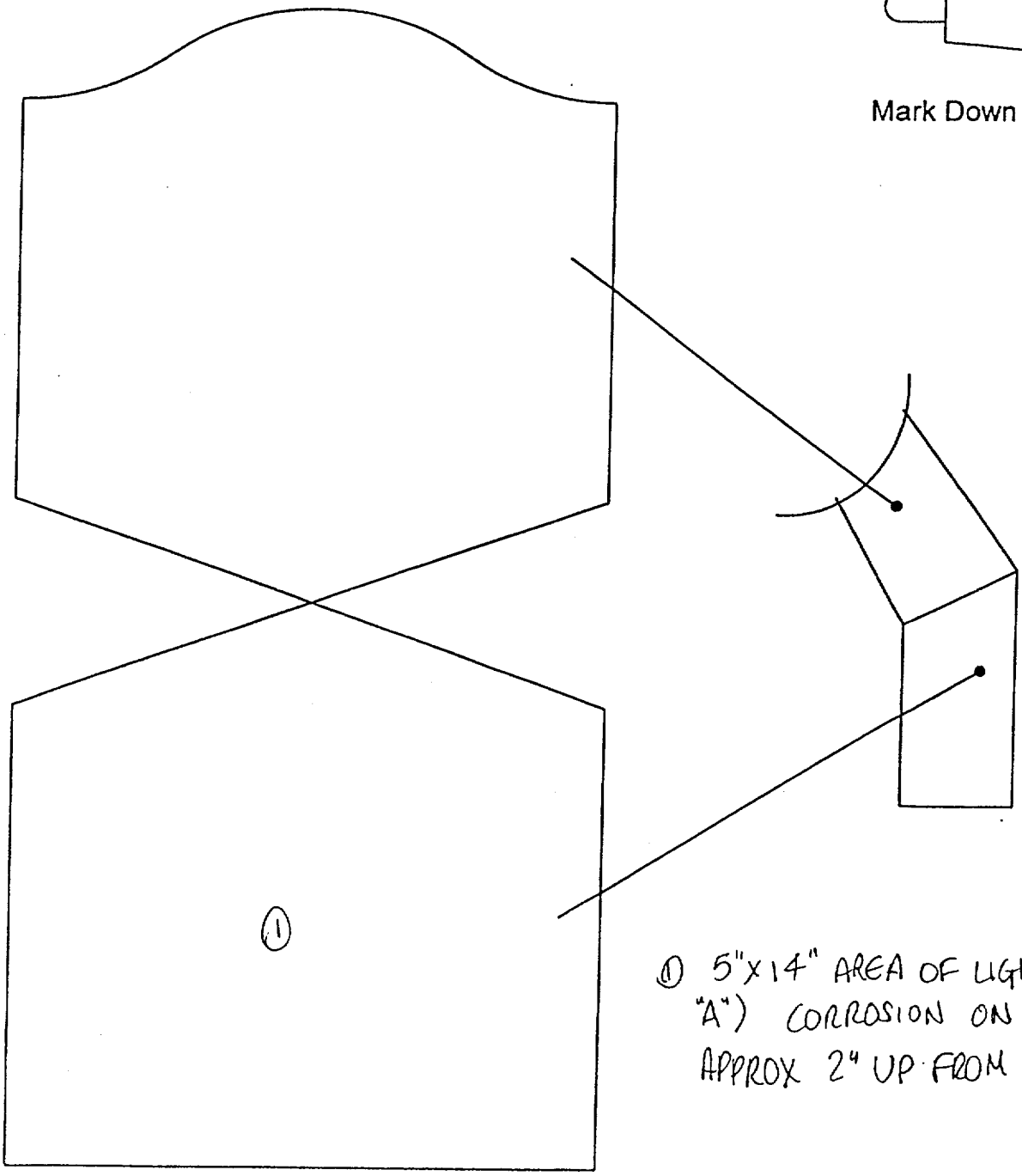
Downcomer Rollout - Bay 1

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

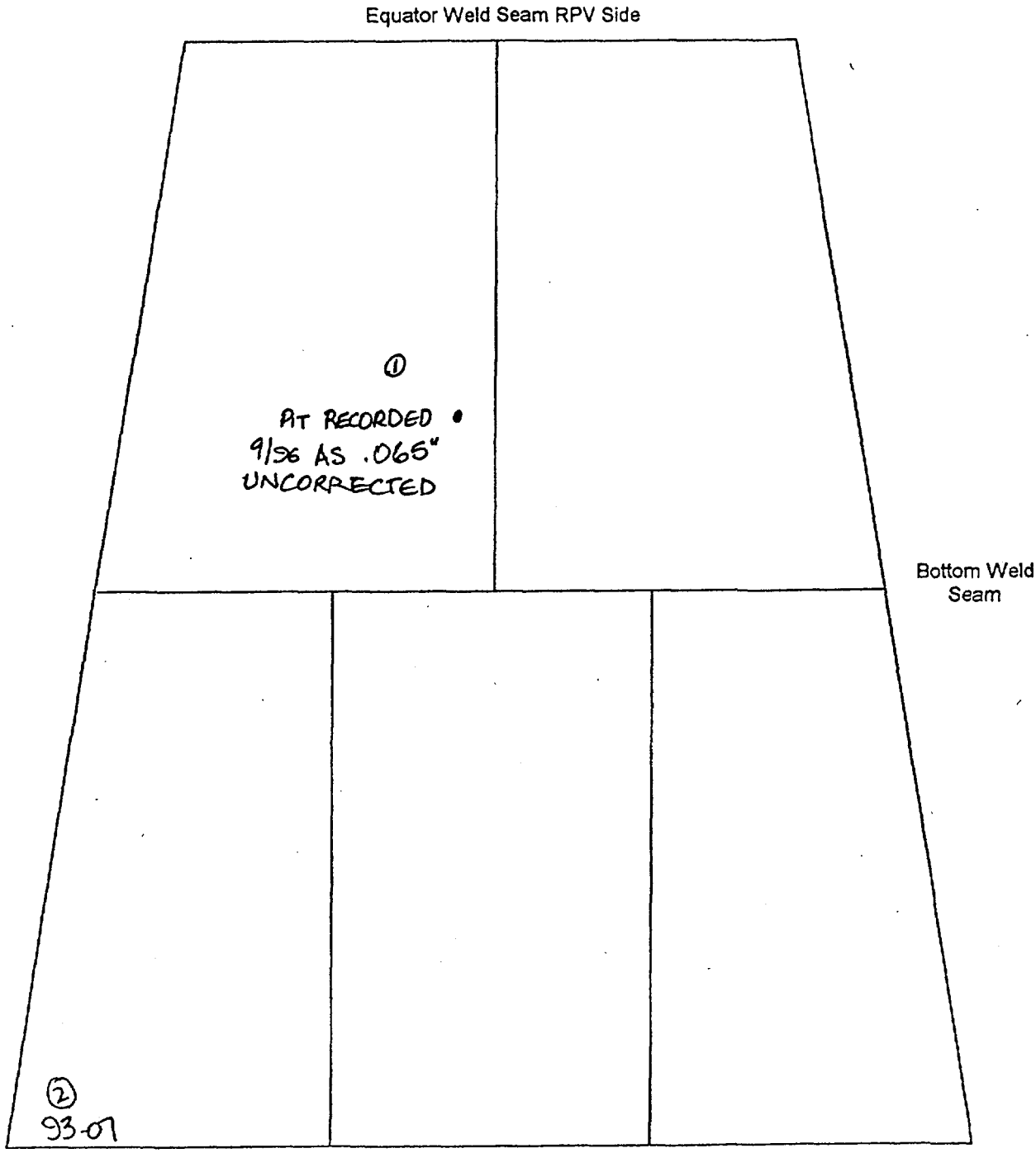


① 5"x14" AREA OF LIGHT (TYPE "A") CORROSION ON INTERIOR APPROX 2" UP FROM BOTTOM.

3/24/98

Torus Rollout - Bay 2

Bottom Half - Shell Interior

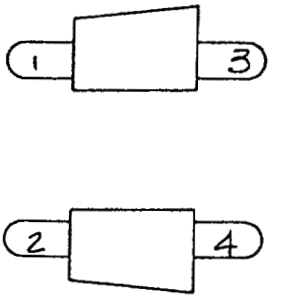


Notes: ① PIT LOCATED @ 11'1/2' FROM BOTTOM SEAM 18" FROM CENTER PLATE WELD. OVERALL LIGHT (TYPE "A") RUST ON SHELL ② AREA OF MILD CORROSION AND PITTING PREVIOUSLY MARKED 93-07. LOCATED 20'10" FROM BOTTOM WELD SEAM, 9" FROM BAY 2/3 RING GIRDER. ≈ 4"x5" AREA.

3/24/98

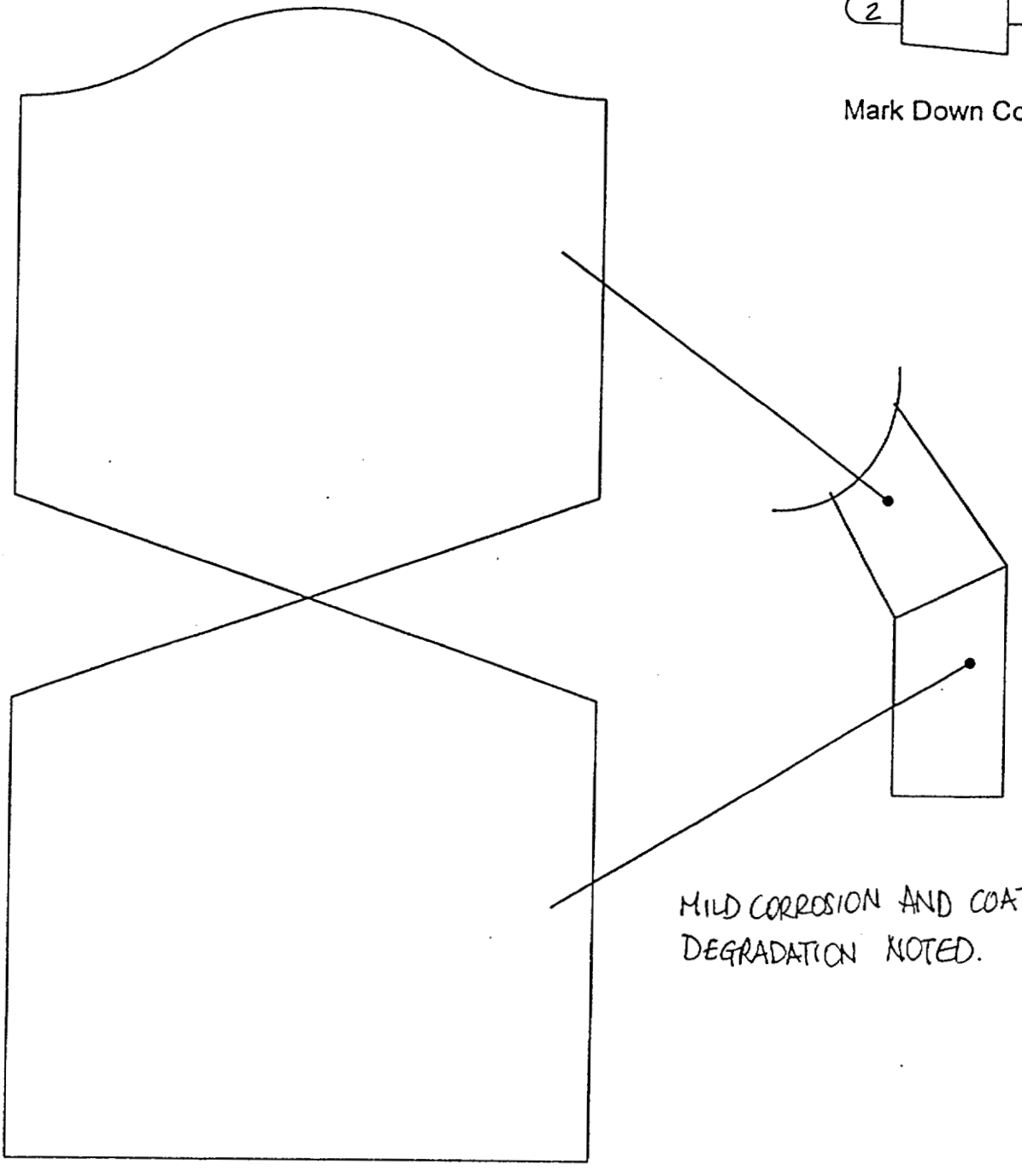
Downcomer Rollout - Bay 2

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

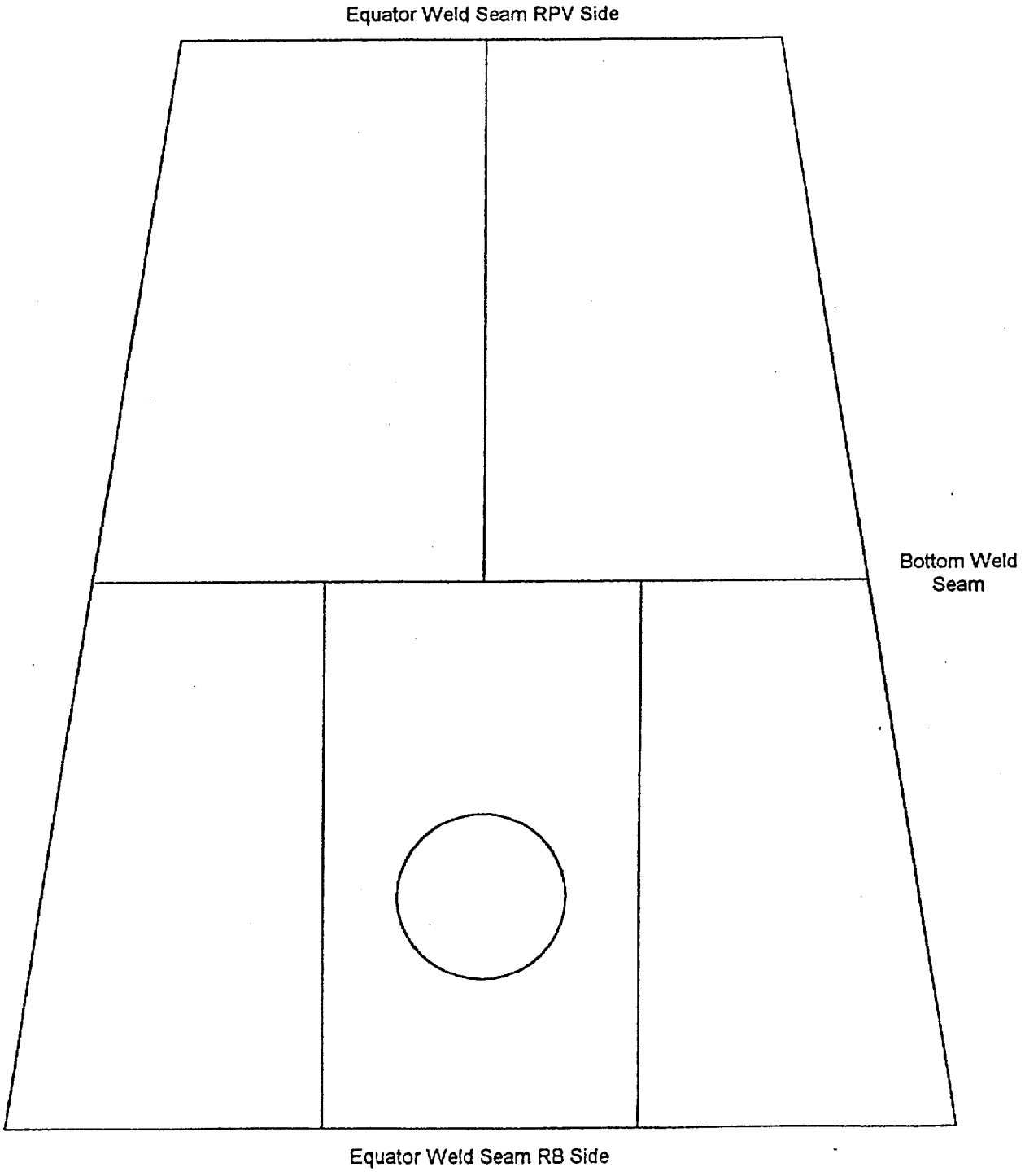


MILD CORROSION AND COATING DEGRADATION NOTED.

3/26/98

Torus Rollout - Bay 3

Bottom Half - Shell Interior

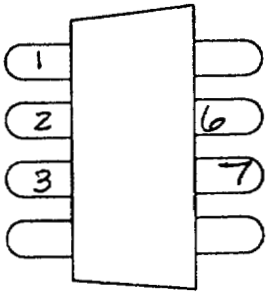


Notes: MINOR CORROSION AND DELAMINATION OF COATING NOTED. NO APPARENT DAMAGE TO SUBSTRATE

3/24/98

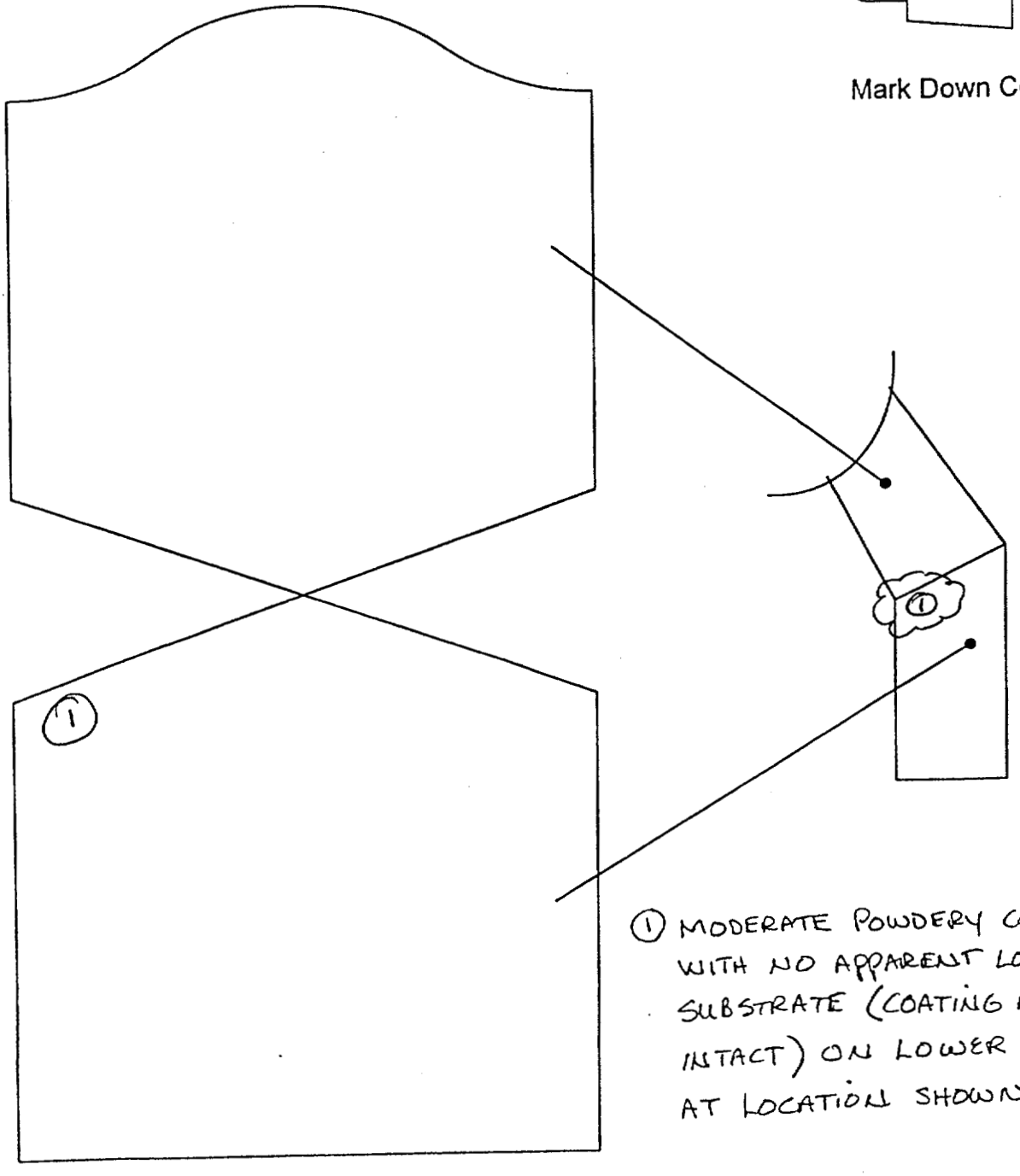
Downcomer Rollout - Bay 3

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

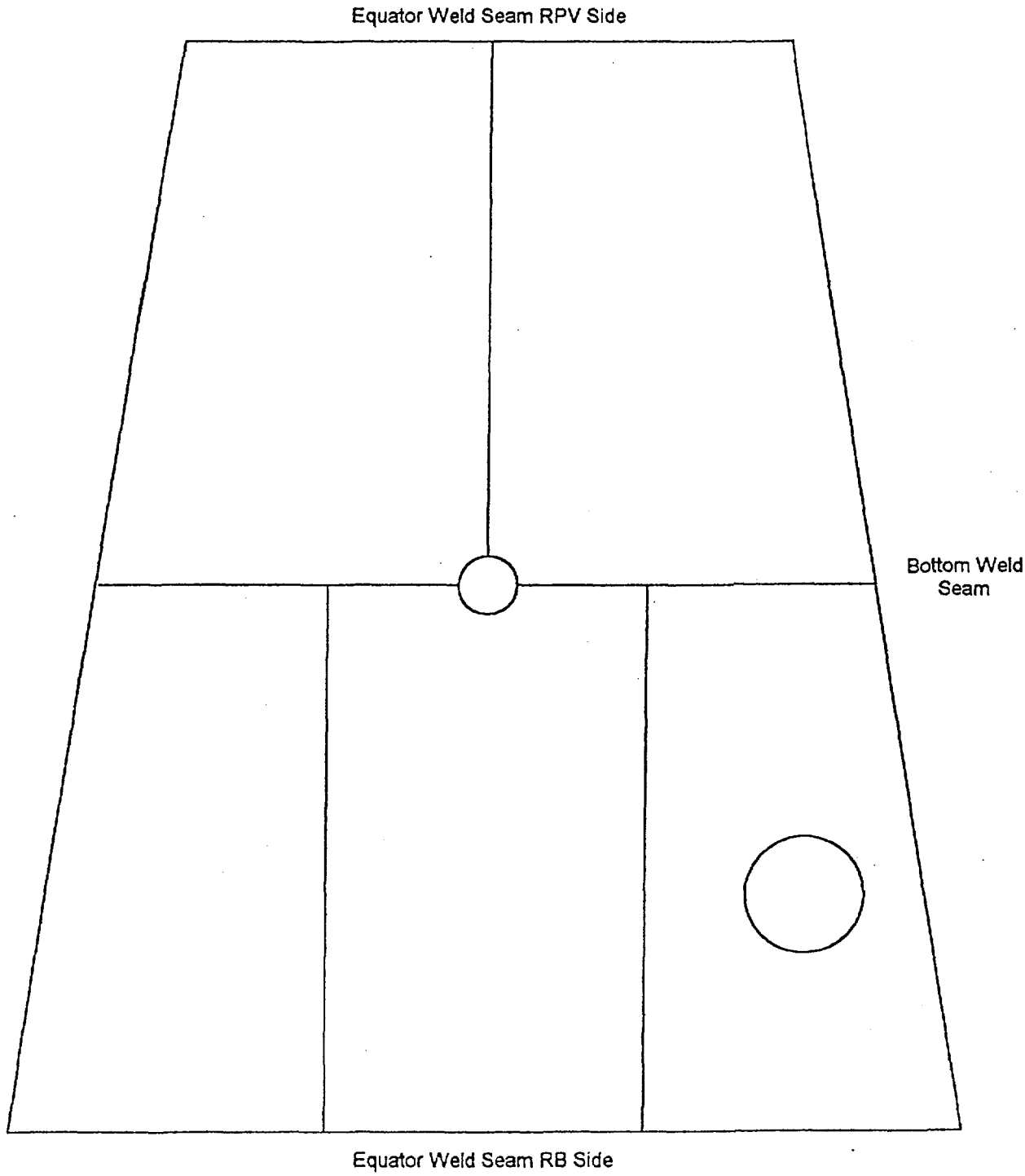


1 MODERATE POWDERY CORROSION WITH NO APPARENT LOSS OF SUBSTRATE (COATING NOT INTACT) ON LOWER SECTION AT LOCATION SHOWN ABOVE.

3/24/98

Torus Rollout - Bay 4

Bottom Half - Shell Interior

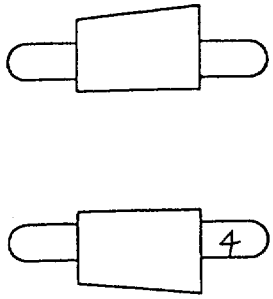


Notes: General Condition Light (Type A-B) corrosion noted. No apparent damage to substrate.

3/24/98

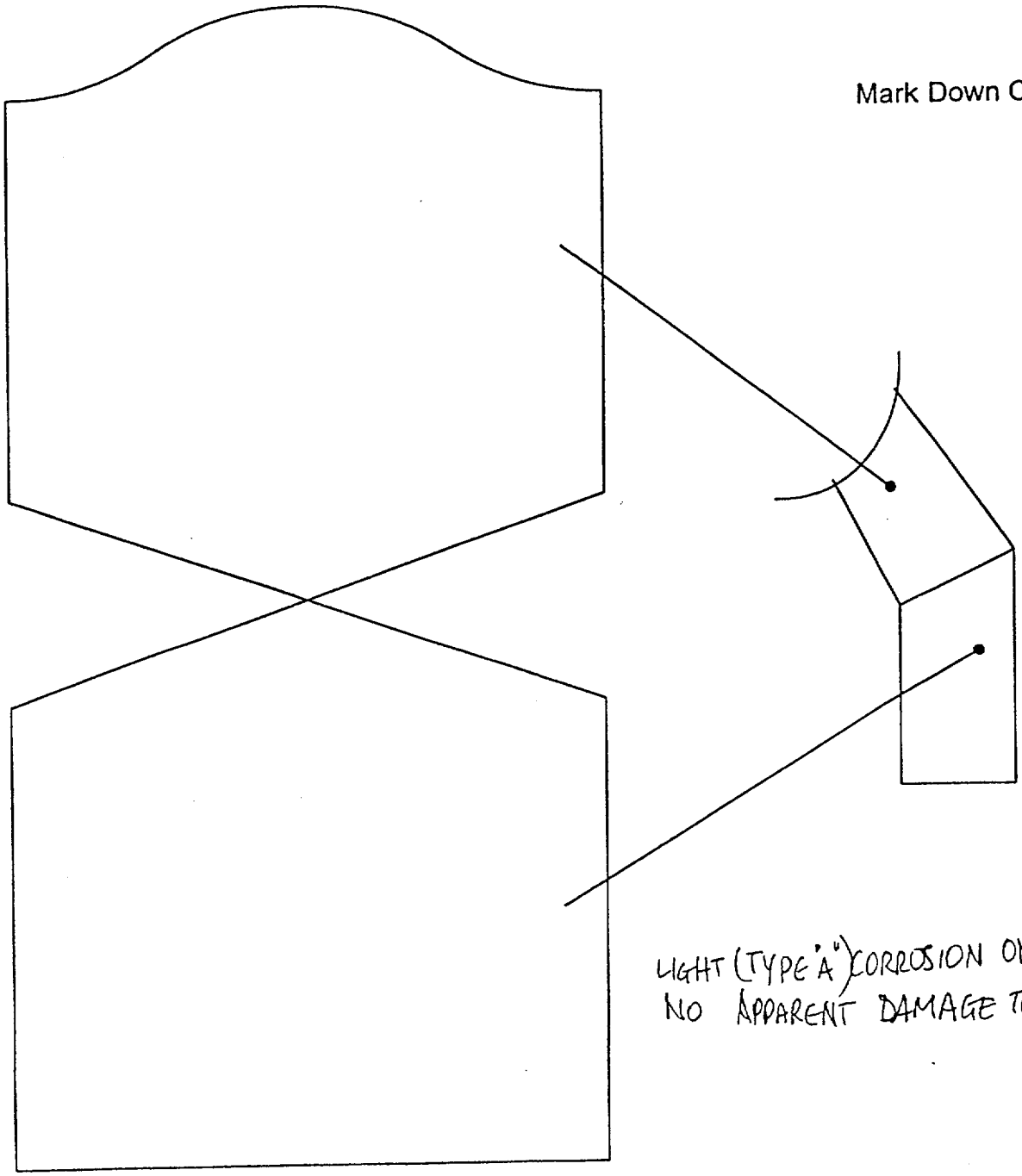
Downcomer Rollout - Bay 4

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

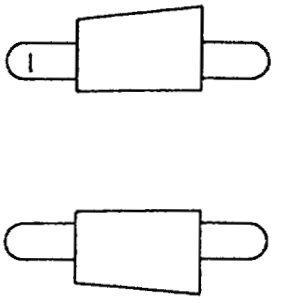


LIGHT (TYPE "A") CORROSION ON EXTERIOR.
NO APPARENT DAMAGE TO SUBSTRATE.

3/24/98

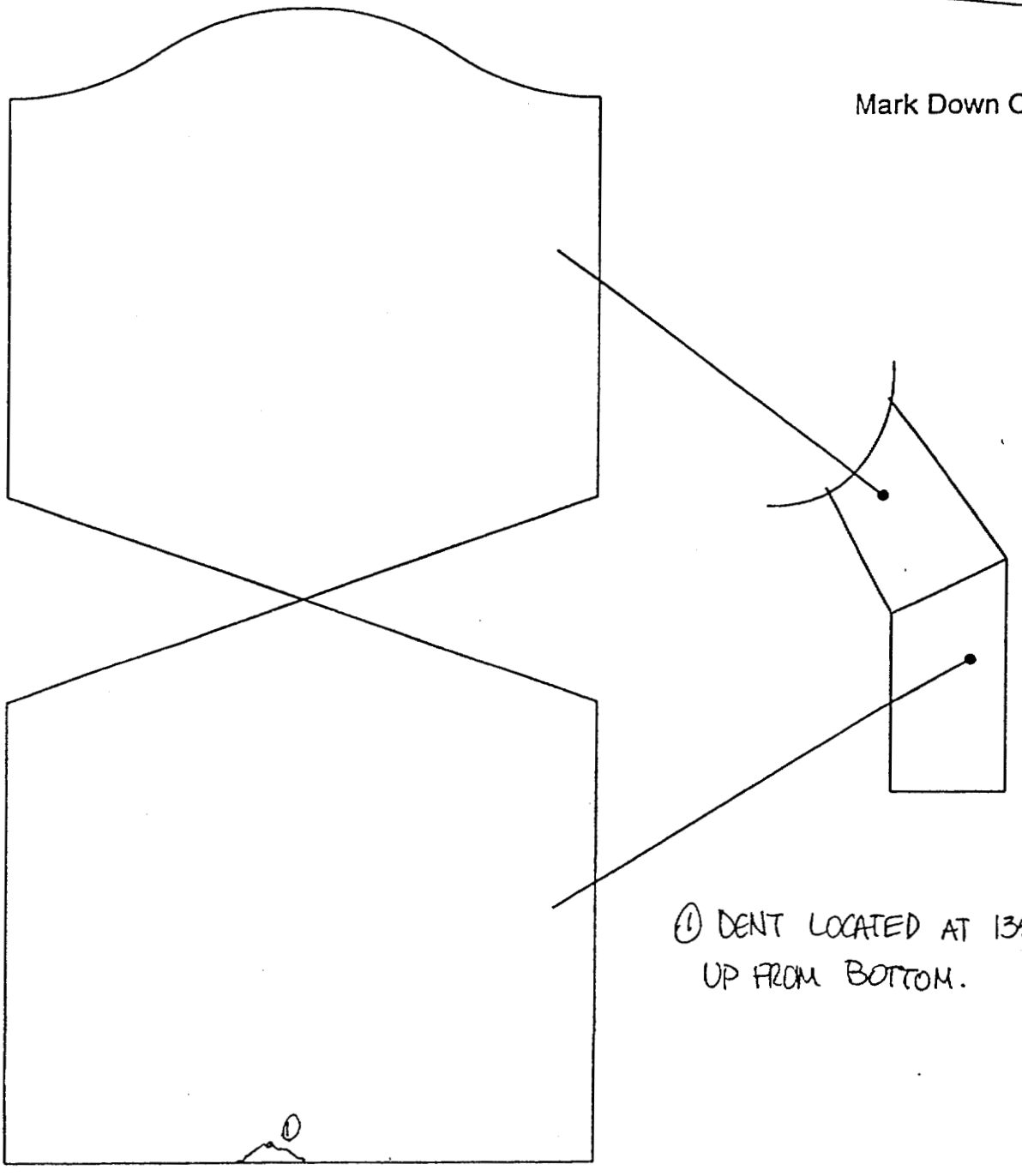
Downcomer Rollout - Bay 4

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

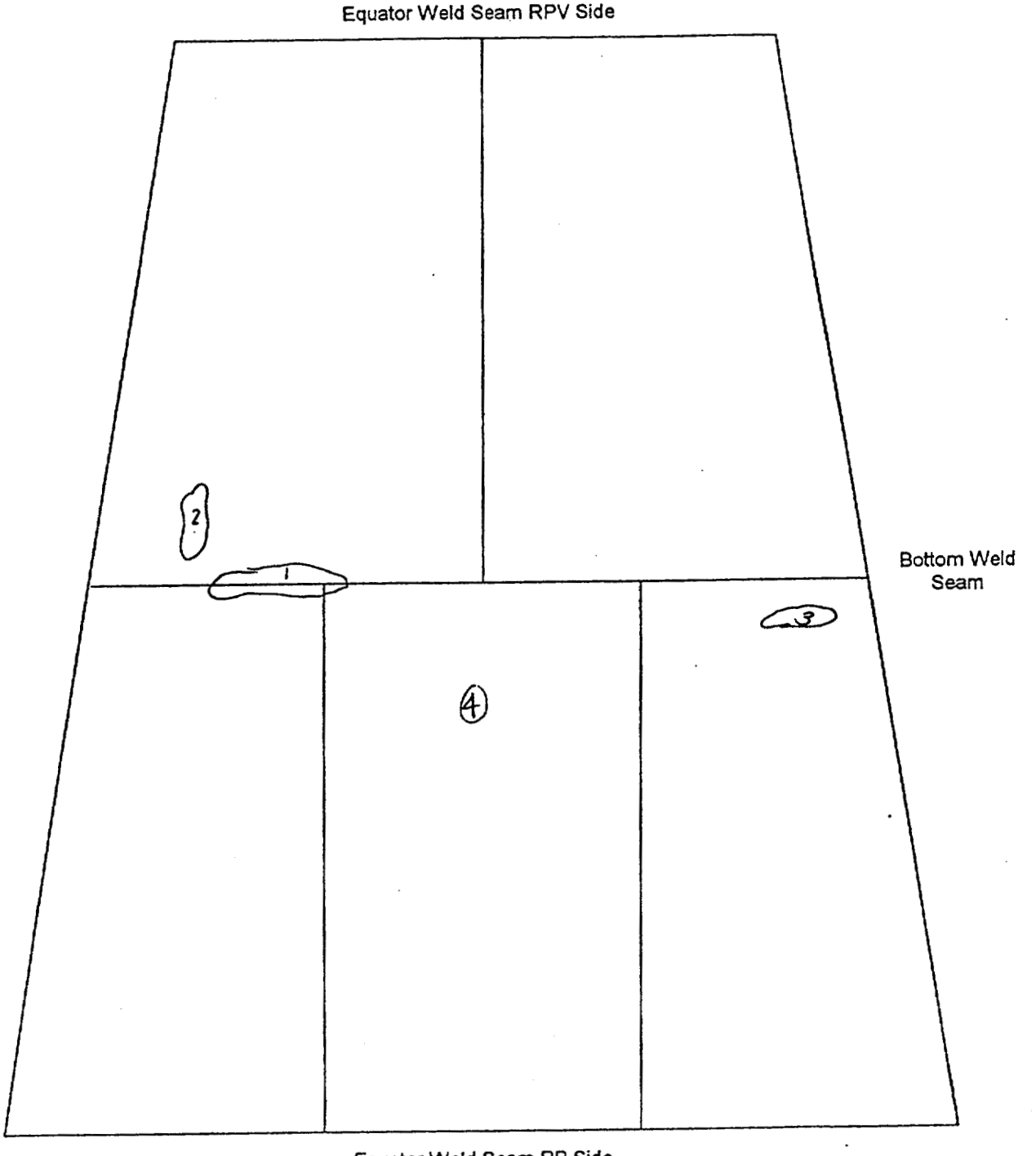


① DENT LOCATED AT 135°, 1" UP FROM BOTTOM.

3/24/98

Torus Rollout - Bay 5

Bottom Half - Shell Interior

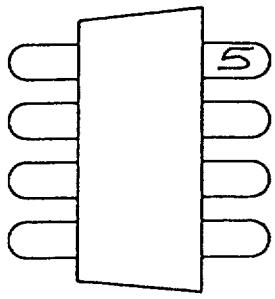


Notes: GENERAL AREA MINOR (TYPE "A") CORROSION & DEGRADATION OF COATING NOTED @60"X12" AREA OF MINOR OXIDATION AND COATING DEGRADATION LOCATED 56" FROM BAY 6/6 RING GIRDER ON BOTTOM SEAM WELD. ② 9"X12" AREA OF NUMEROUS SMALL PITS, MINOR CORROSION AND DEGRADATION OF COATING LOCATED 43" FROM BAY 5/6 RING GIRDER 56" FROM BOTTOM WELD SEAM. ③ THREE AREAS OF MINOR OXIDATION AND DEGRADED COATING LOCATED 26" FROM BAY 4/5 RING GIRDER, 22" FROM OPPOSITE PLATE WELD, 145" FROM BOTTOM SEAM. ④ DELAMINATION OF COATING ON STEPS.

2/24/98

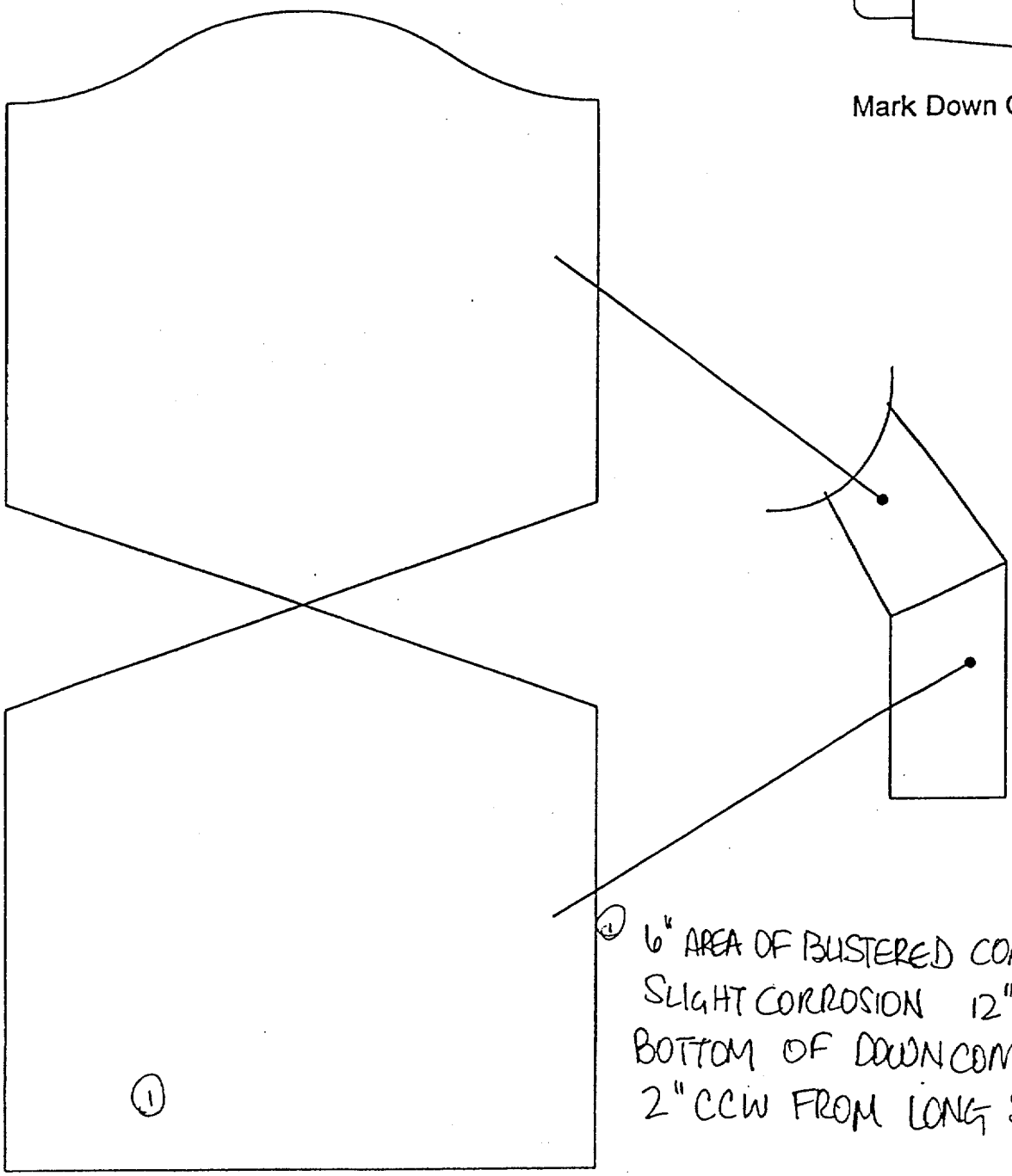
Downcomer Rollout - Bay 5

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

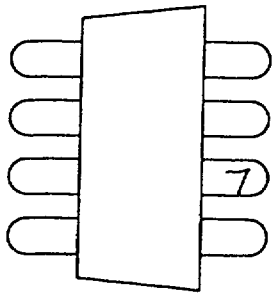


6" AREA OF BLISTERED COATING/ SLIGHT CORROSION 12" FROM BOTTOM OF DOWNCOMER, 2" CCW FROM LONG SEAM.

3/24/98

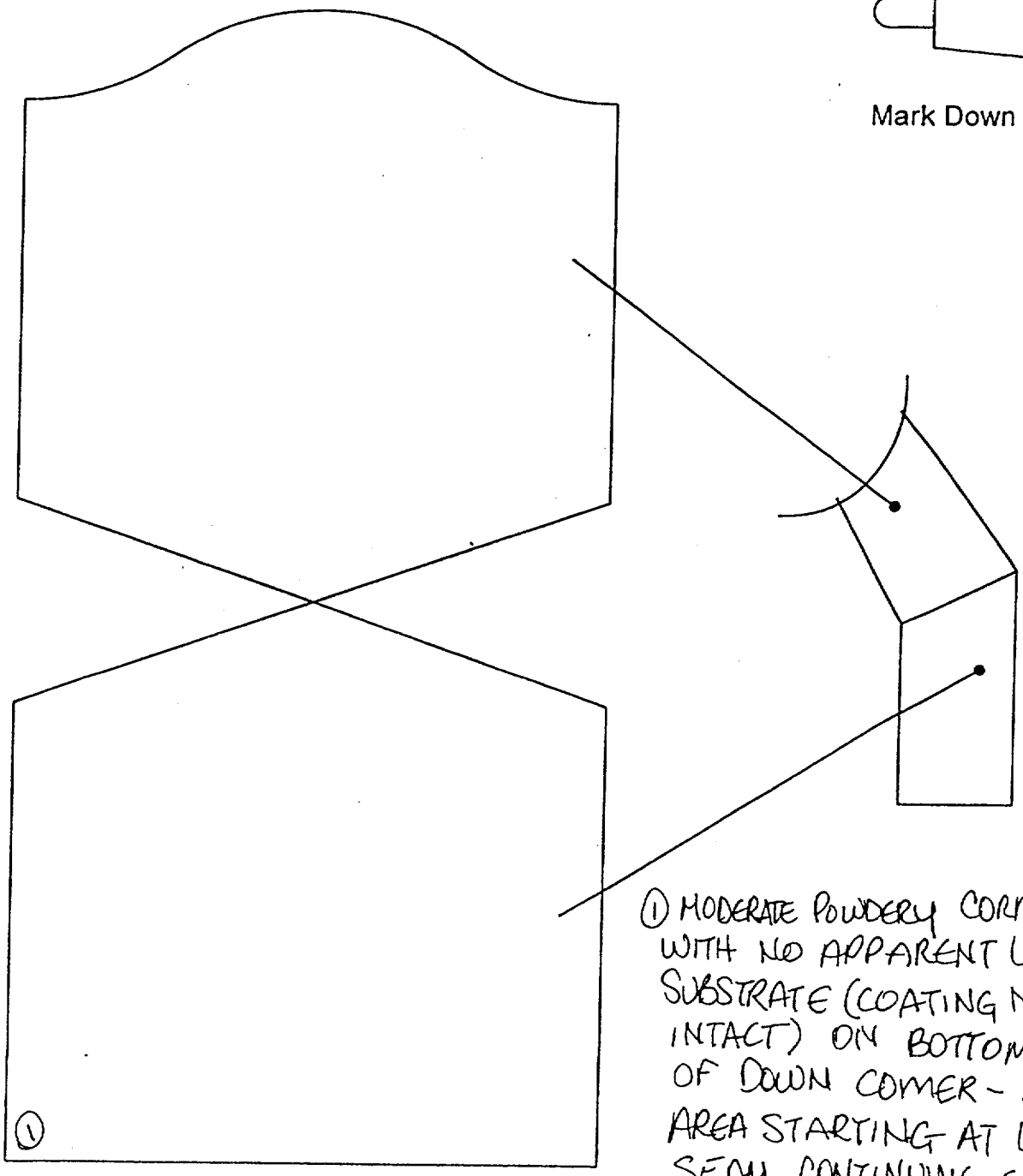
Downcomer Rollout - Bay 5

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

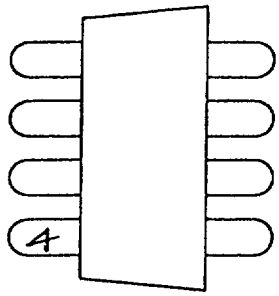


1 MODERATE POWDERY CORROSION WITH NO APPARENT LOSS OF SUBSTRATE (COATING NOT INTACT) ON BOTTOM EDGE OF DOWN COMER - 3"x5" AREA STARTING AT LONG SEAM CONTINUING 5.0" CCW.

3/24/98

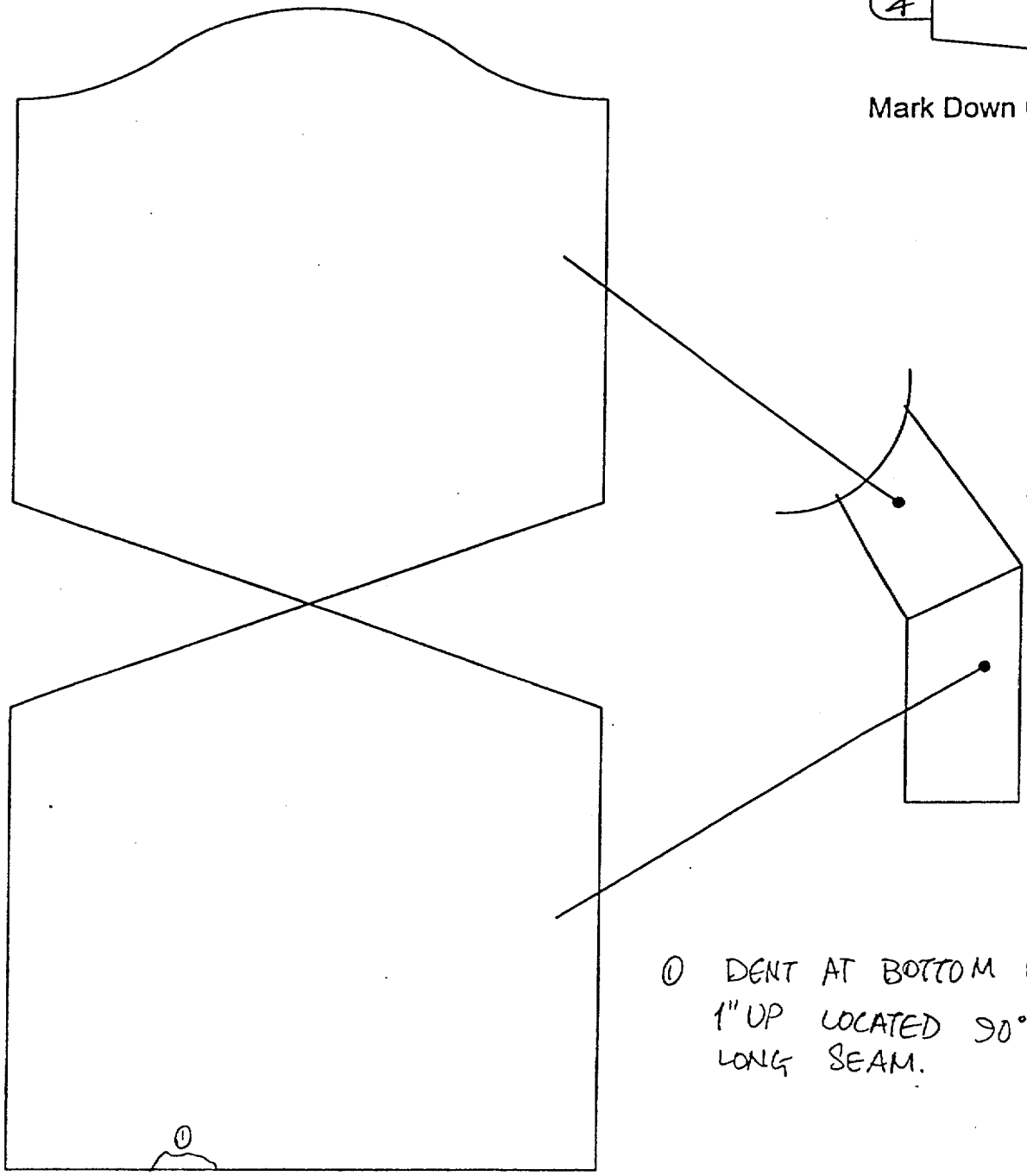
Downcomer Rollout - Bay 5

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

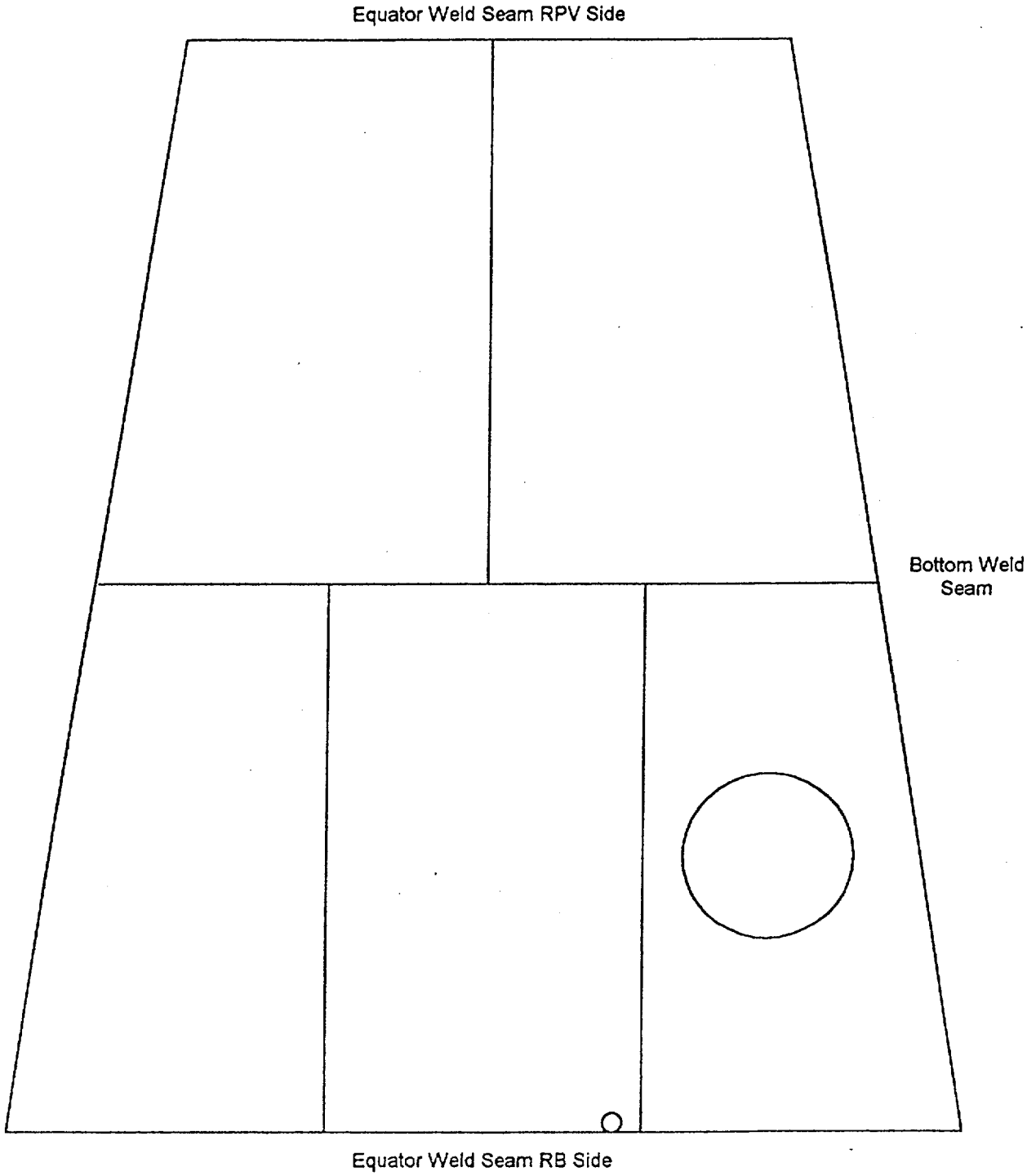


① DENT AT BOTTOM EDGE TO 1" UP LOCATED 90° FROM LONG SEAM.

3/24/98

Torus Rollout - Bay 6

Bottom Half - Shell Interior



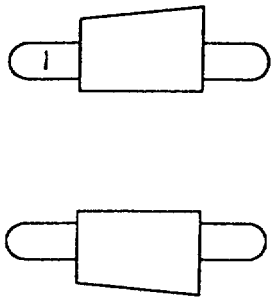
Notes: MINOR (TYPE "A") COATING DEGRADATION NOTED. NO APPARENT DAMAGE TO SUBSTRATE.

3/24/98

Downcomer Rollout - Bay 6

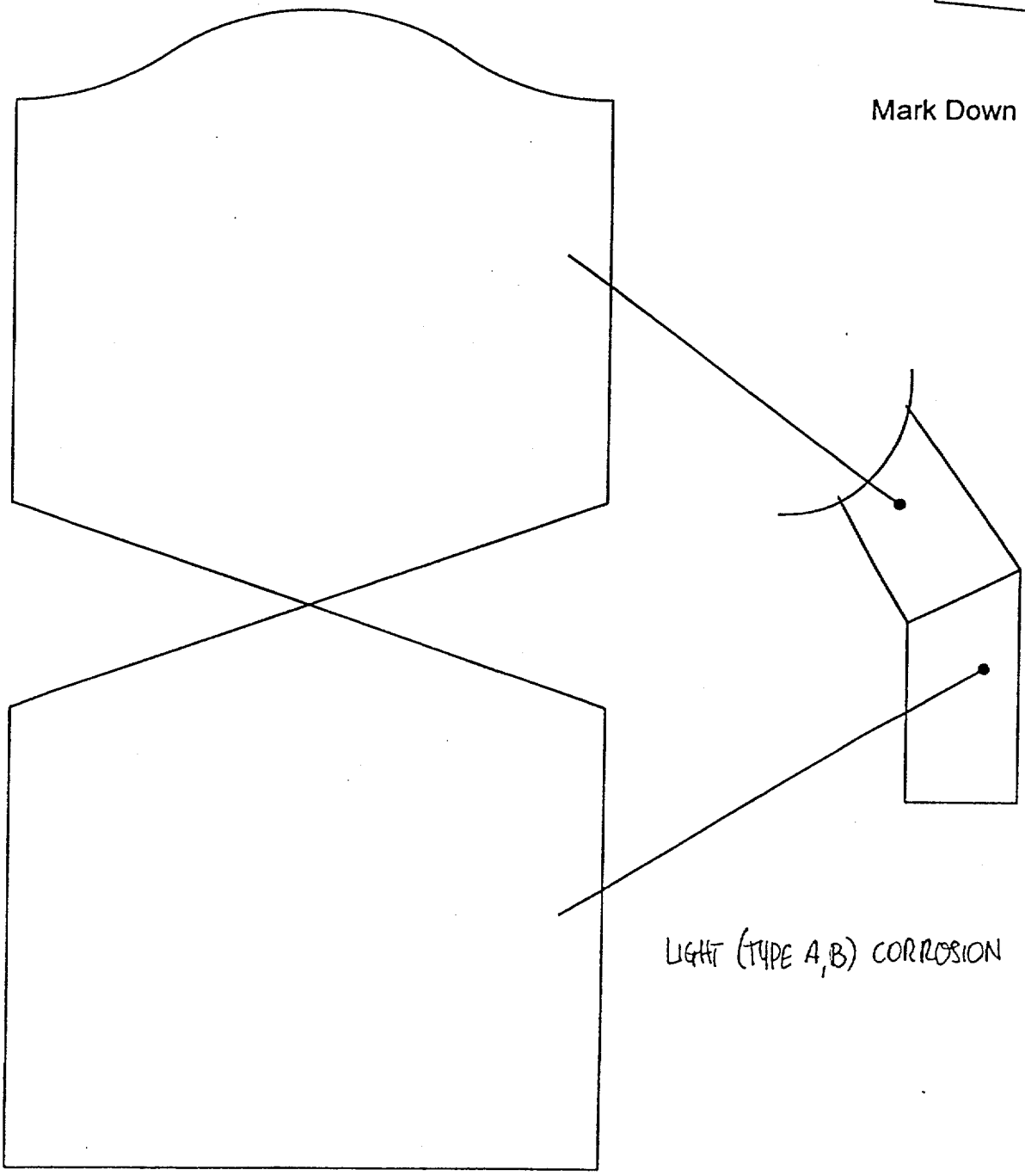
Interior/Exterior

(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

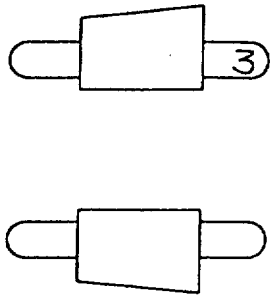


LIGHT (TYPE A,B) CORROSION NOTED.

3/24/98

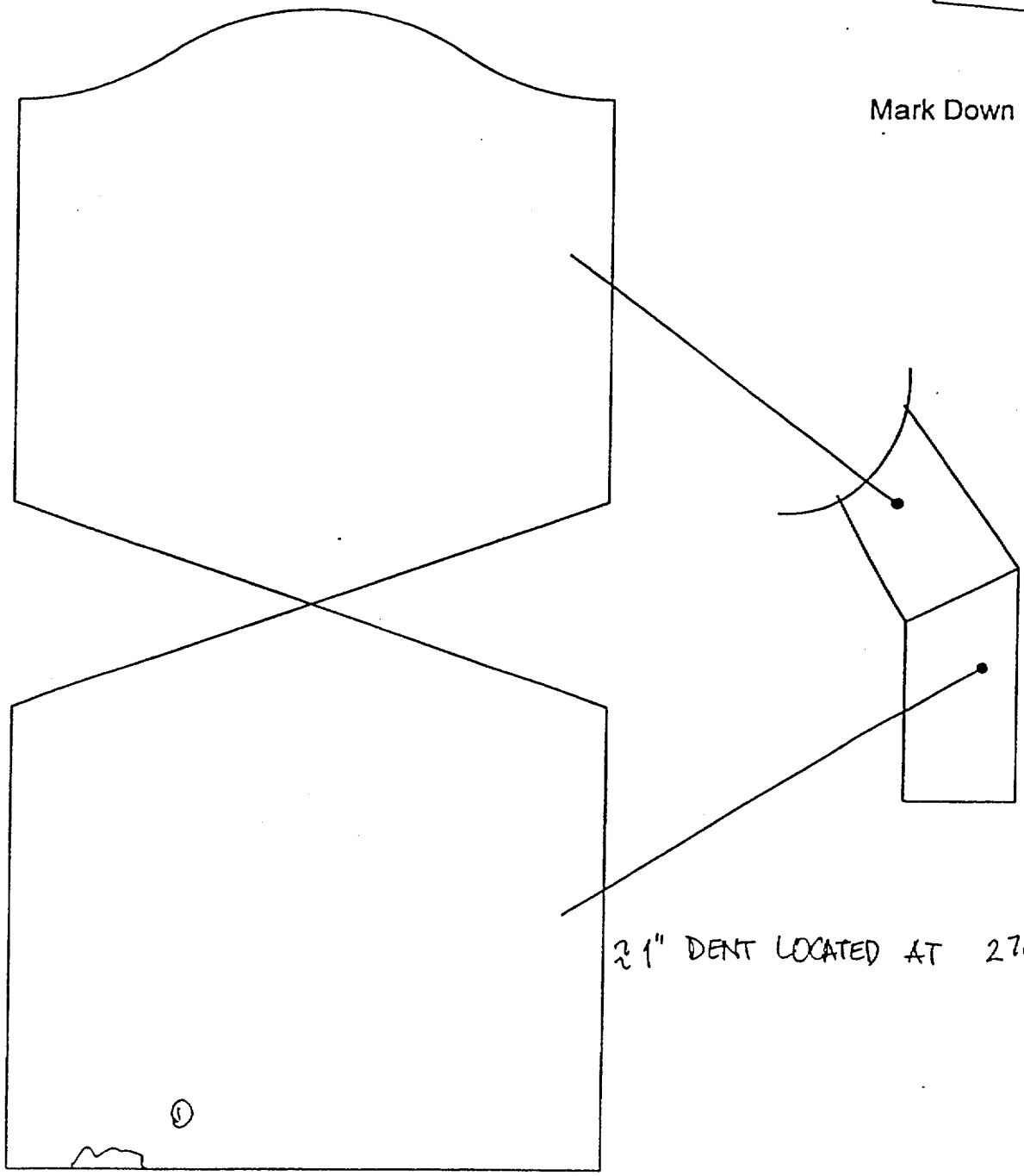
Downcomer Rollout - Bay 6

Interior/Exterior
(circle one)



Mark Down Comer

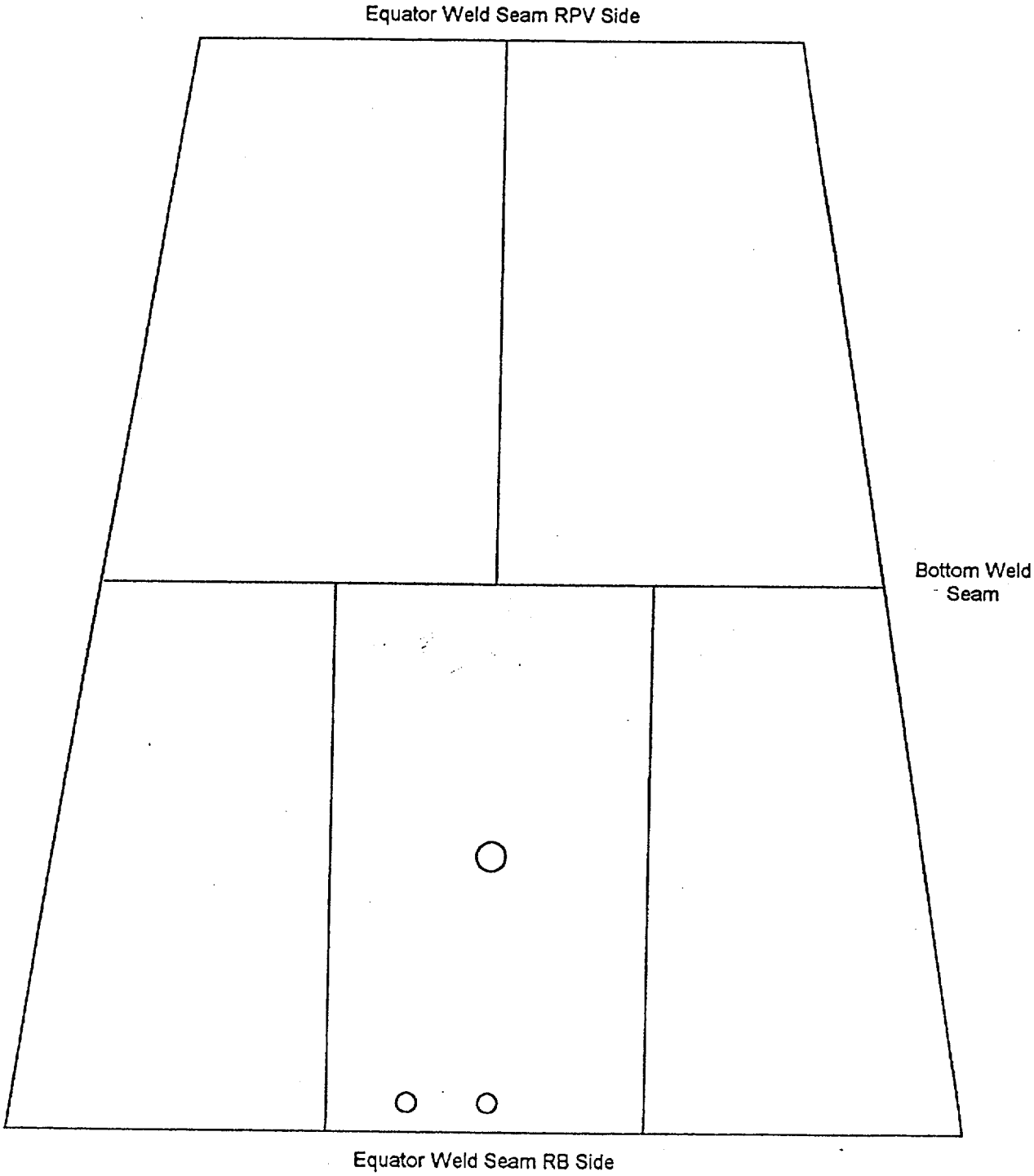
Down Comer to Vent Header Weld Seam



3/24/98

Torus Rollout - Bay 7

Bottom Half - Shell Interior

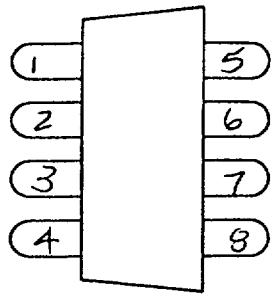


Notes: LIGHT (TYPE "A") CORROSION NOTED GENERAL AREA. NO APPARENT DAMAGE TO SUBSTRATE.

3/24/98

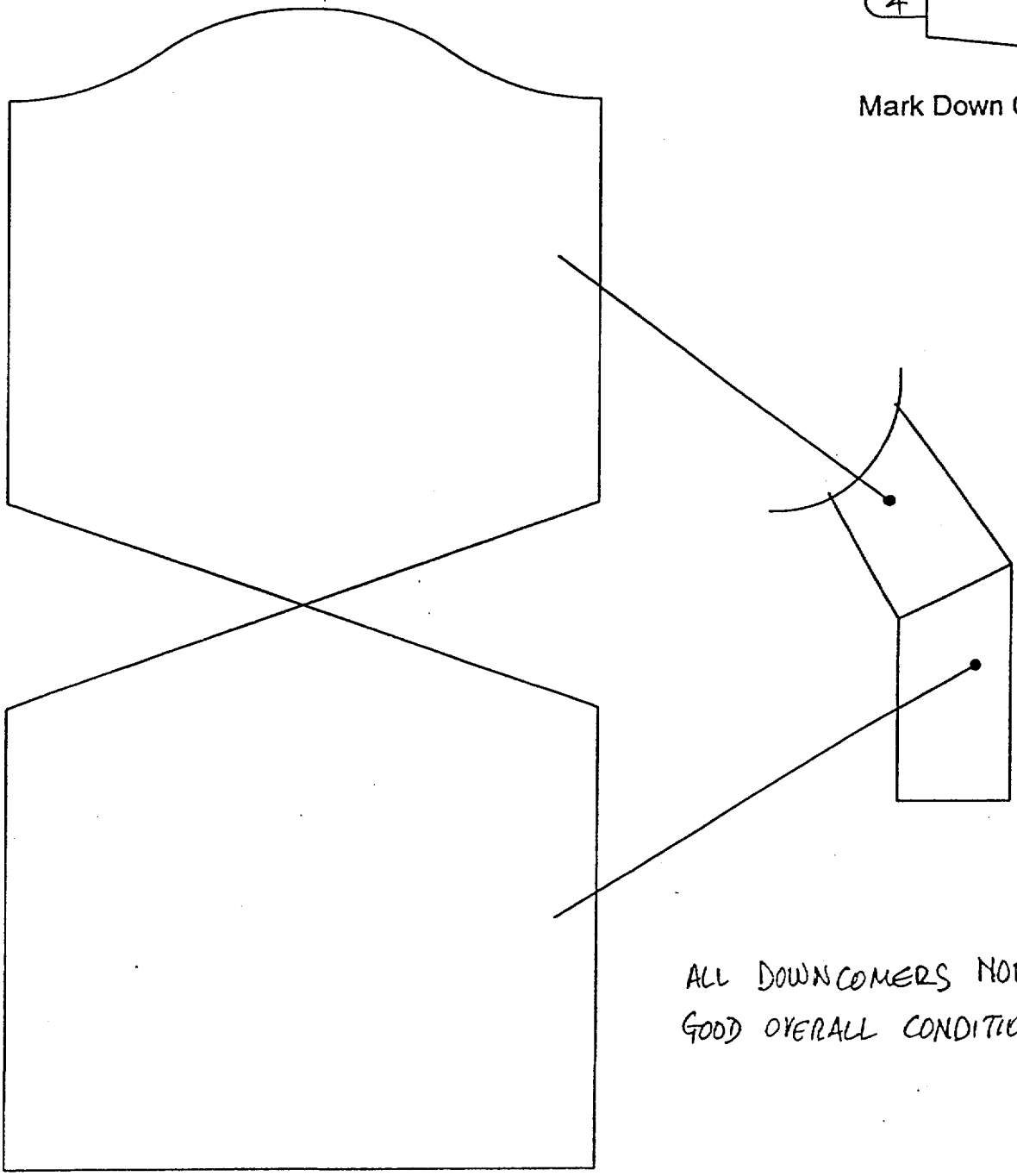
Downcomer Rollout - Bay 7

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

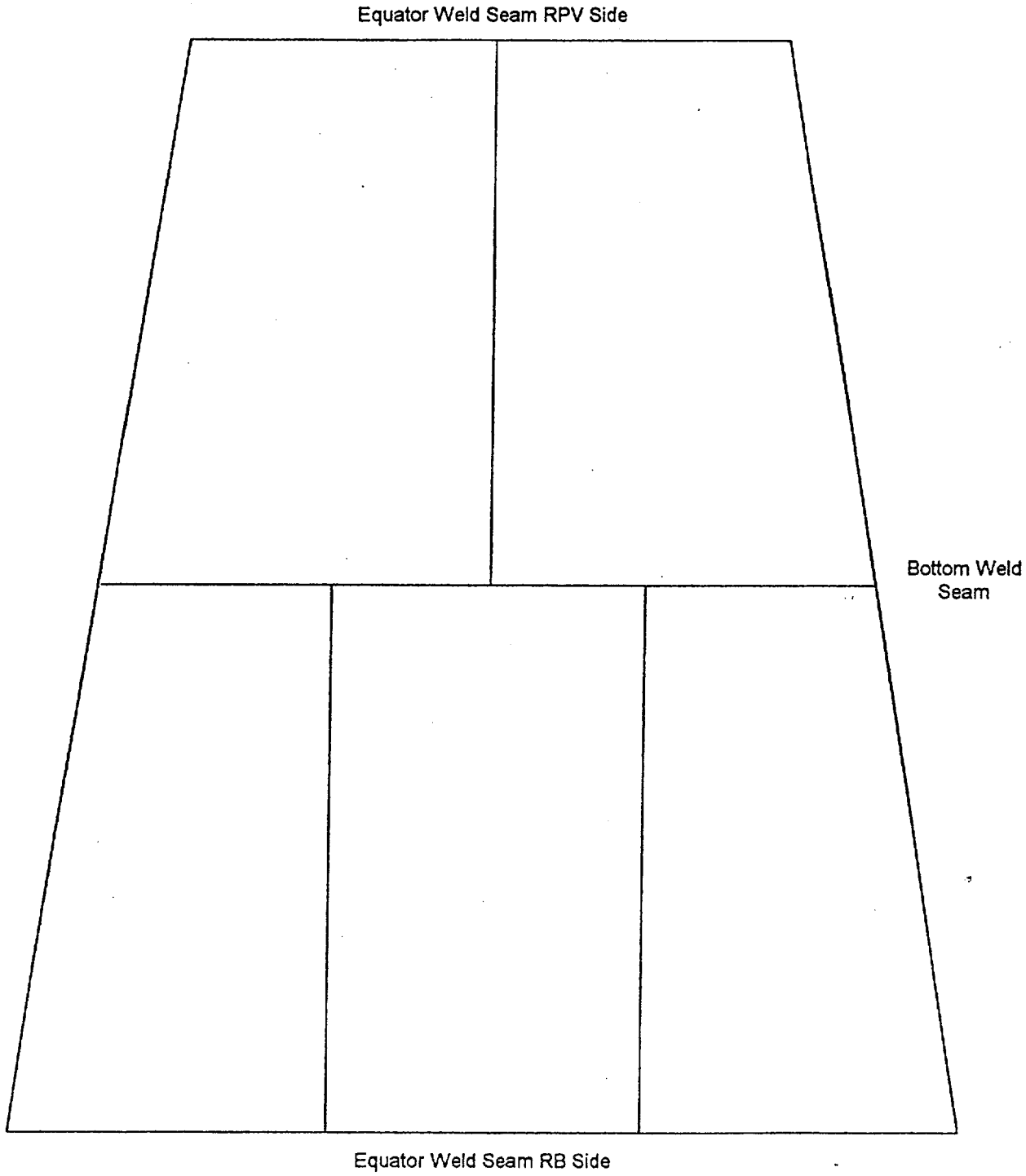


ALL DOWNCOMERS NOTED GOOD OVERALL CONDITION.

3/24/98

Torus Rollout - Bay 8

Bottom Half - Shell Interior



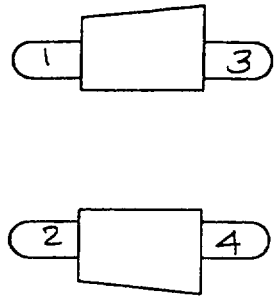
Notes: LIGHT (TYPE "A") CORROSION AND COATING DEGRADATION NOTED GENERAL CONDITION. NO APPARENT DAMAGE TO SUBSTRATE.

3/24/98

Downcomer Rollout - Bay 8

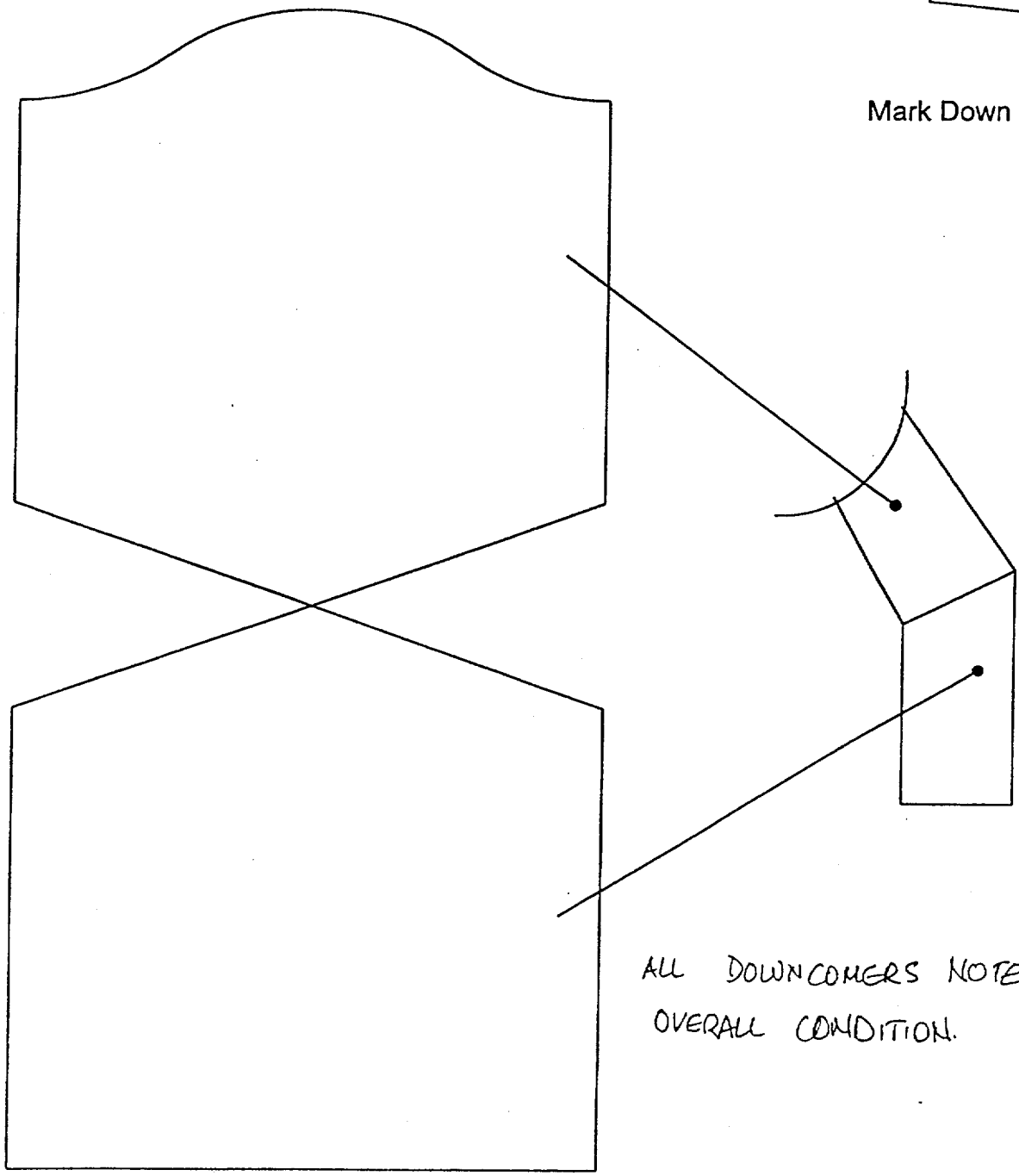
Interior/Exterior

(circle one)



Down Comer to Vent Header Weld Seam

Mark Down Comer

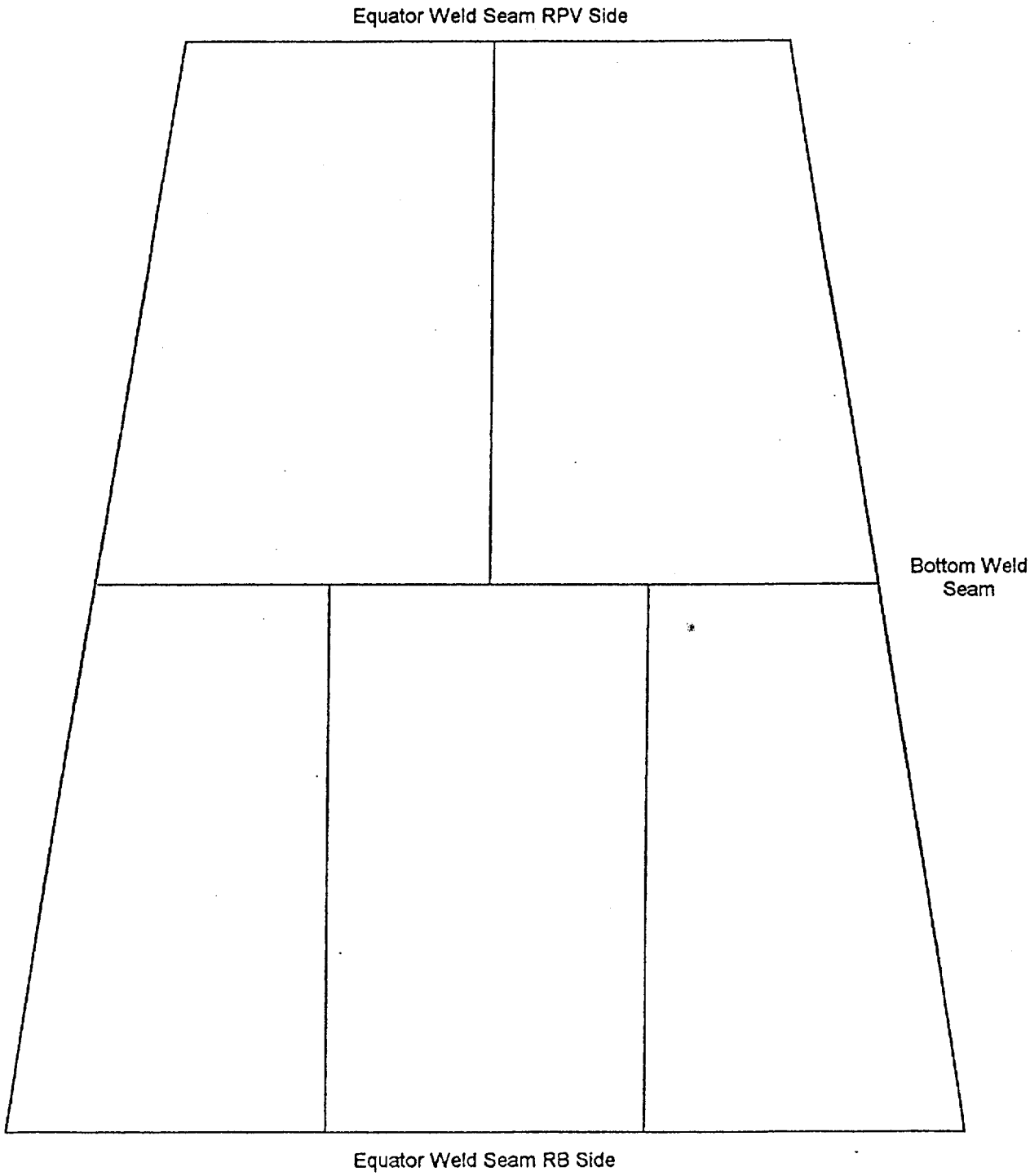


ALL DOWNCOMERS NOTED GOOD OVERALL CONDITION.

3/24/98

Torus Rollout - Bay 9

Bottom Half - Shell Interior

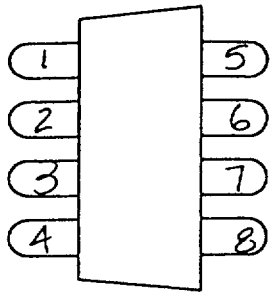


Notes: LIGHT (TYPE "A") CORROSION AND COATING DEGRADATION NOTED.
NO APPARENT DAMAGE TO SUBSTRATE.

3/24/98

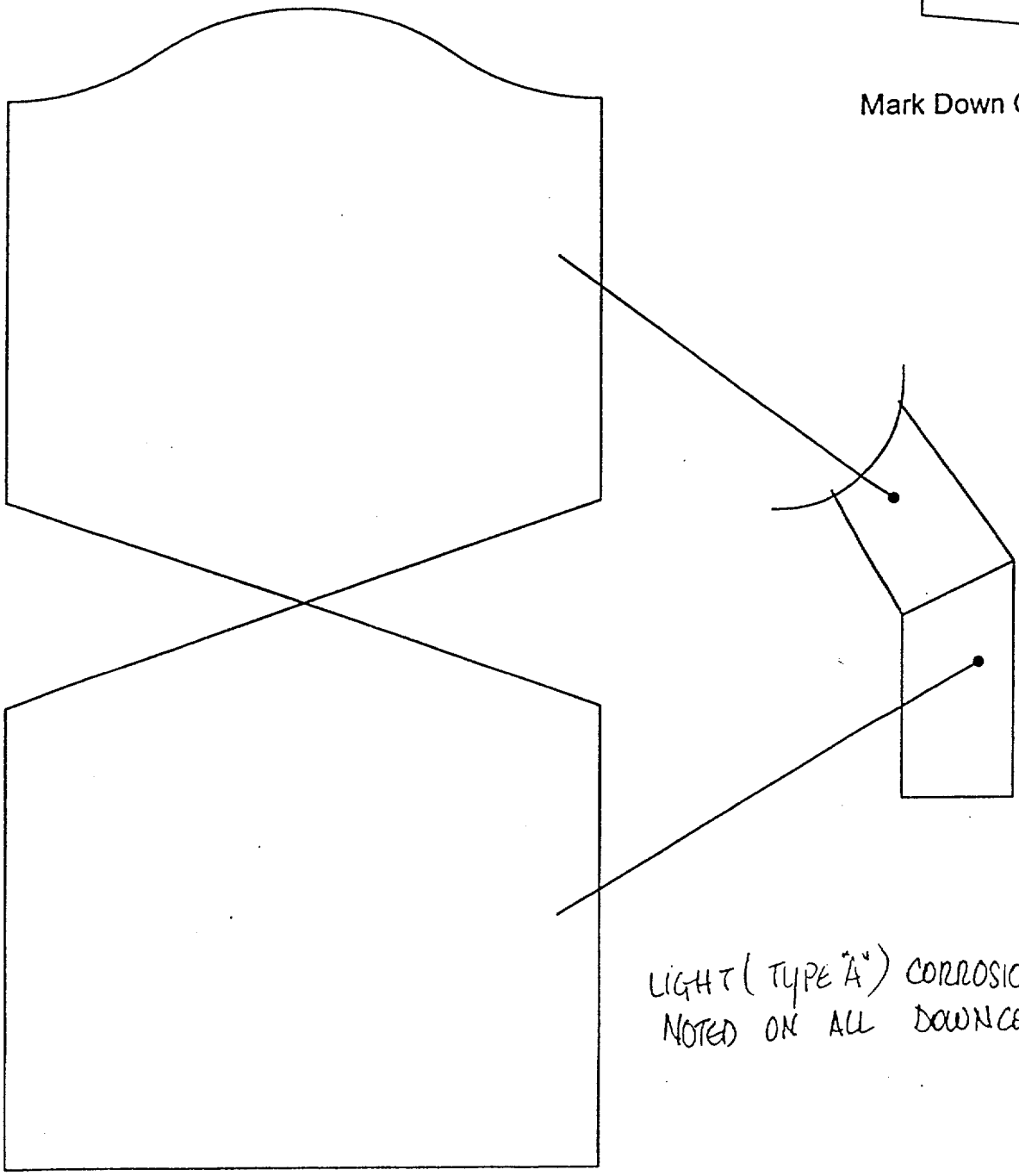
Downcomer Rollout - Bay 9

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

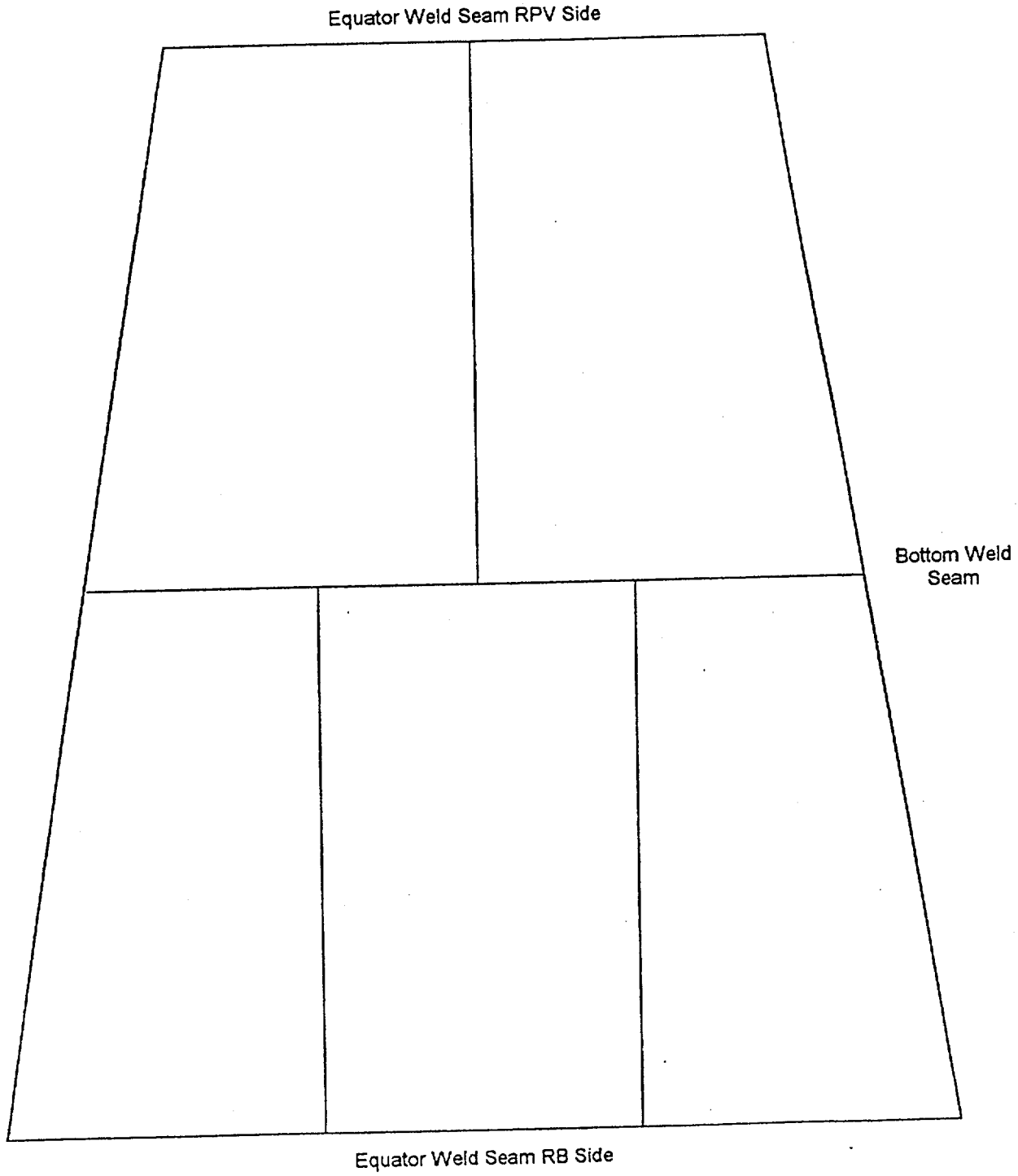


LIGHT (TYPE "A") CORROSION
NOTED ON ALL DOWNCOMERS.

3/24/98

Torus Rollout - Bay 10

Bottom Half - Shell Interior



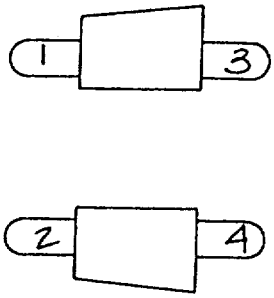
Notes: LIGHT (TYPE "A" TO "B") CORROSION AND COATING DEGRADATION NOTED. NO APPARENT DAMAGE TO SUBSTRATE.

3/24/98

Downcomer Rollout - Bay 10

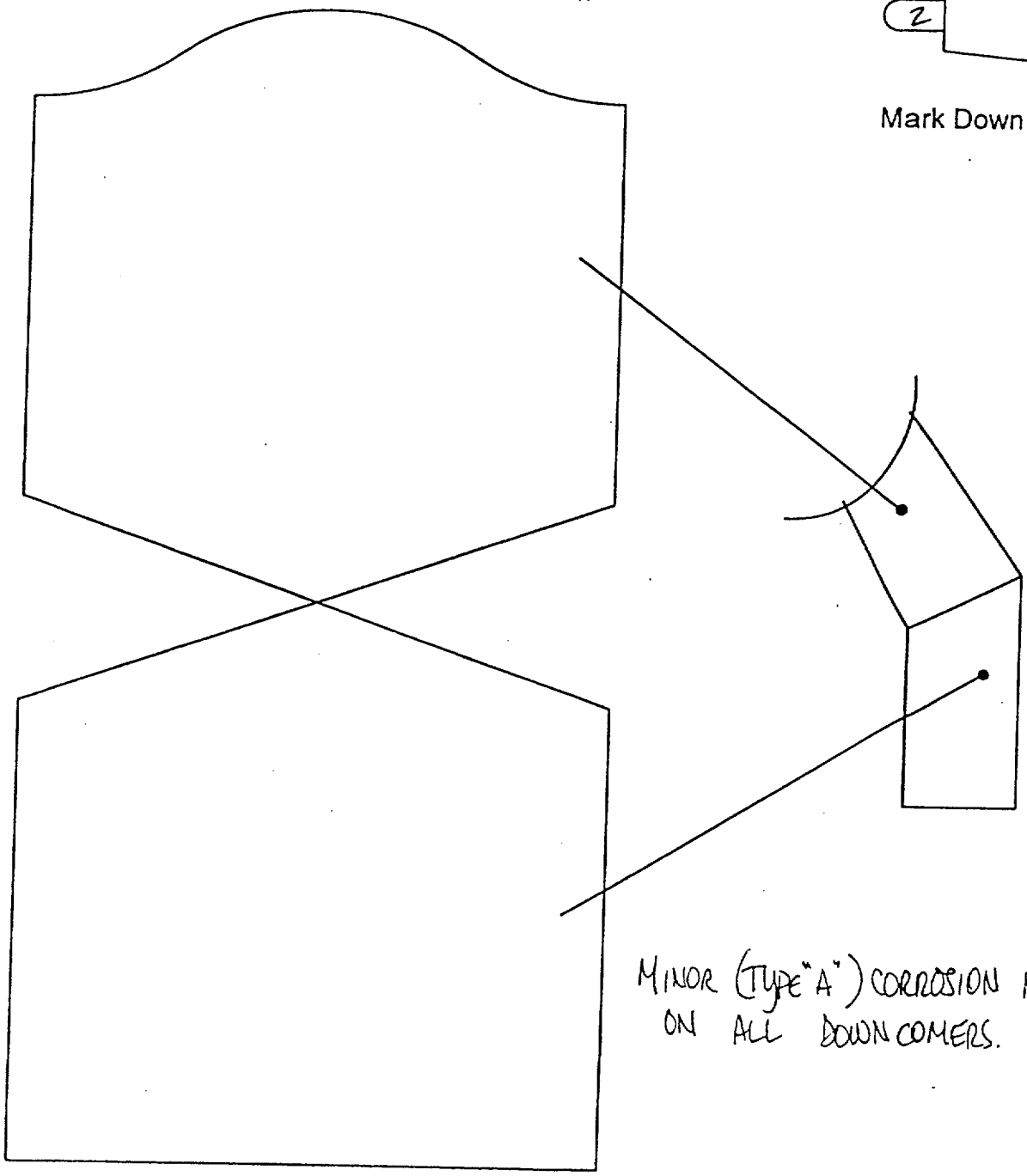
Interior/Exterior

(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

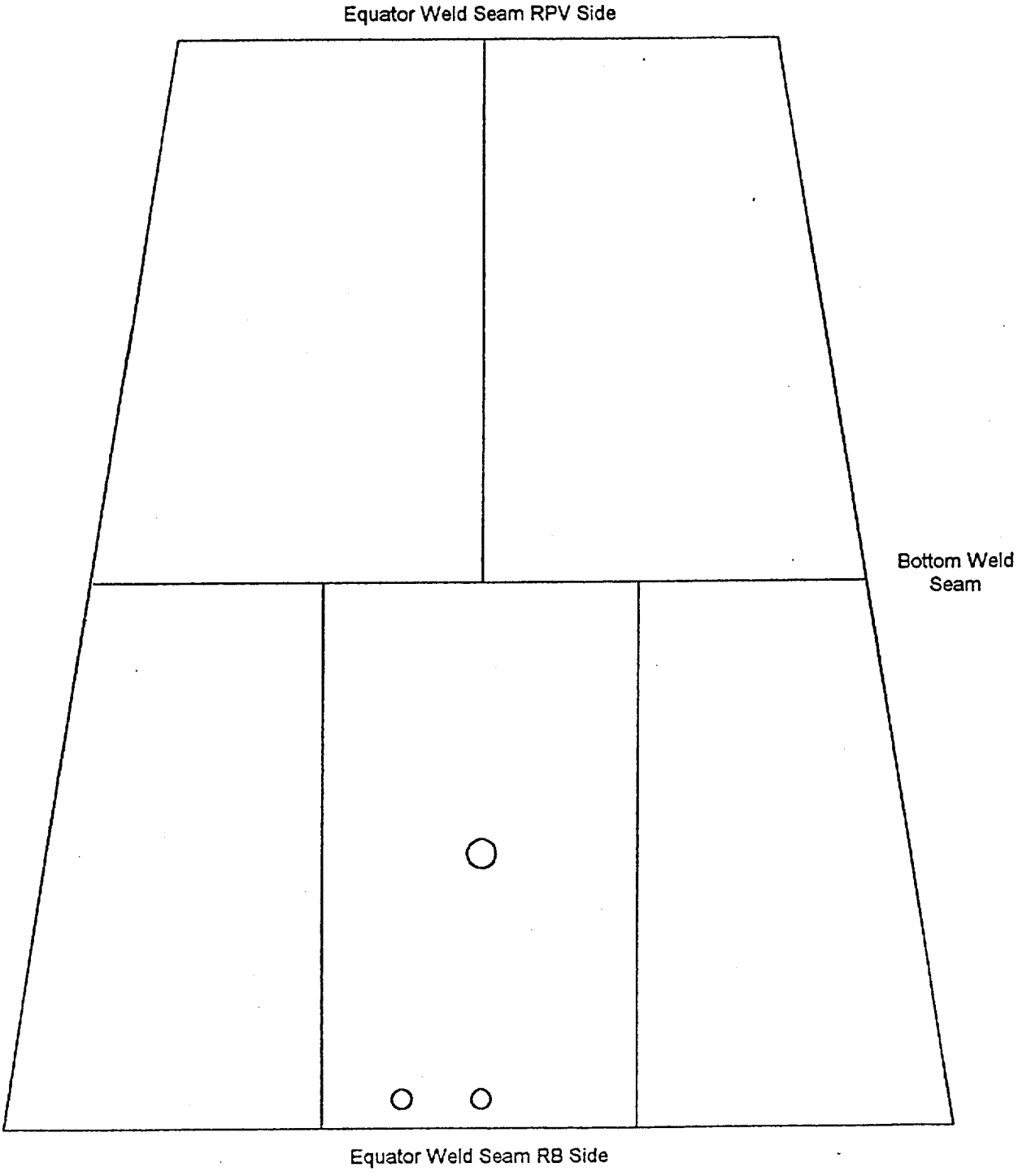


MINOR (TYPE "A") CORROSION NOTED ON ALL DOWNCOMERS.

3/24/98

Torus Rollout - Bay 11

Bottom Half - Shell Interior

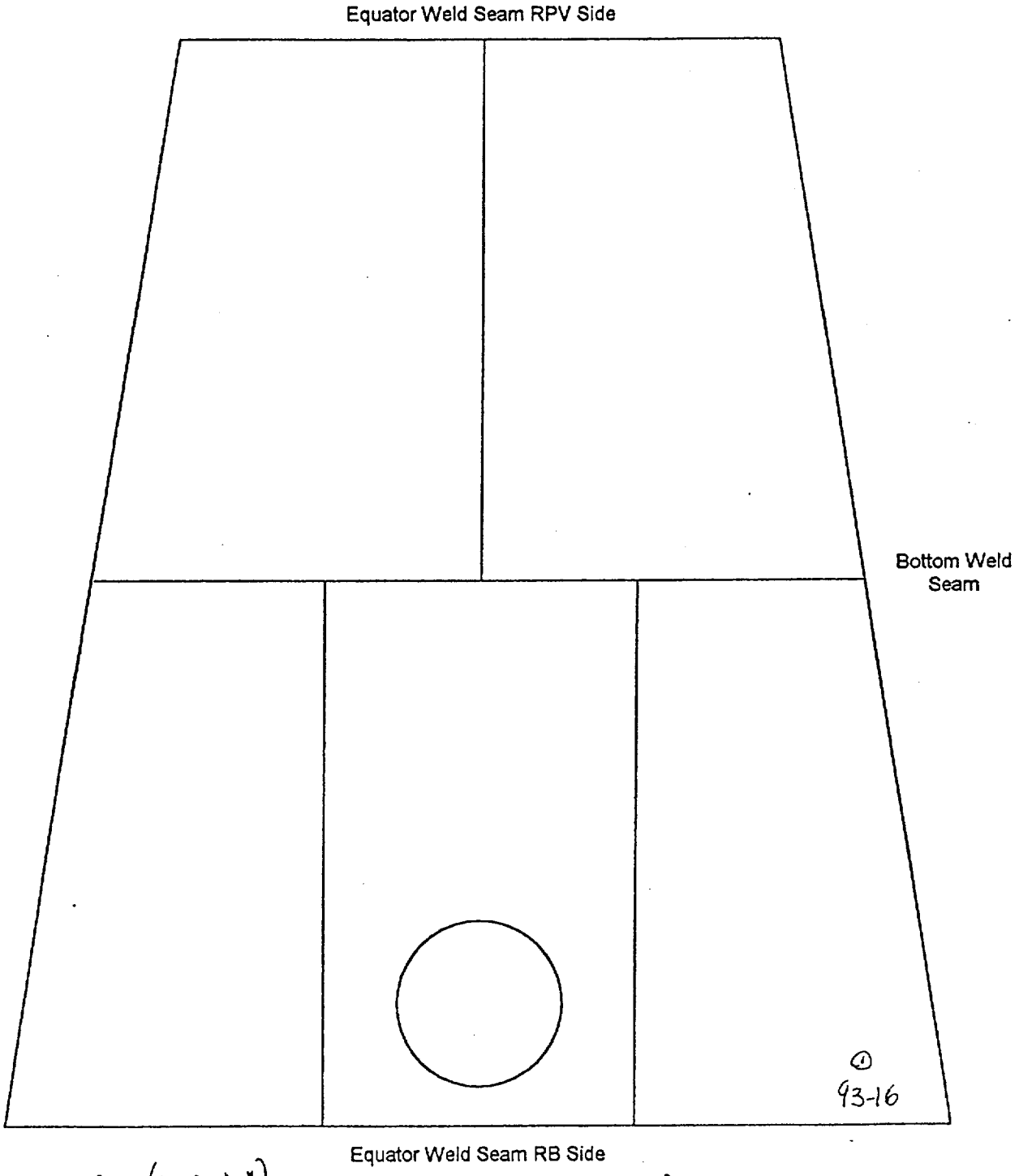


Notes: LIGHT (TYPE "A") CORROSION AND COATING DEGRADATION NOTED. NO APPARENT DAMAGE TO SUBSTRATE.

3/24/98

Torus Rollout - Bay 15

Bottom Half - Shell Interior

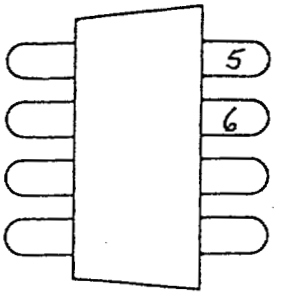


Notes: MINOR (TYPE "A") CORROSION AND COATING DEGRADATION NOTED
① AREA PREVIOUSLY MARKED 93-16. MILD CORROSION AND COATING DEGRADATION @ 19'10" FROM BOTTOM WELD SEAM AT BAY 14/15 RING GIRDER. APPROX 6" BY 6" AREA.

3/24/98

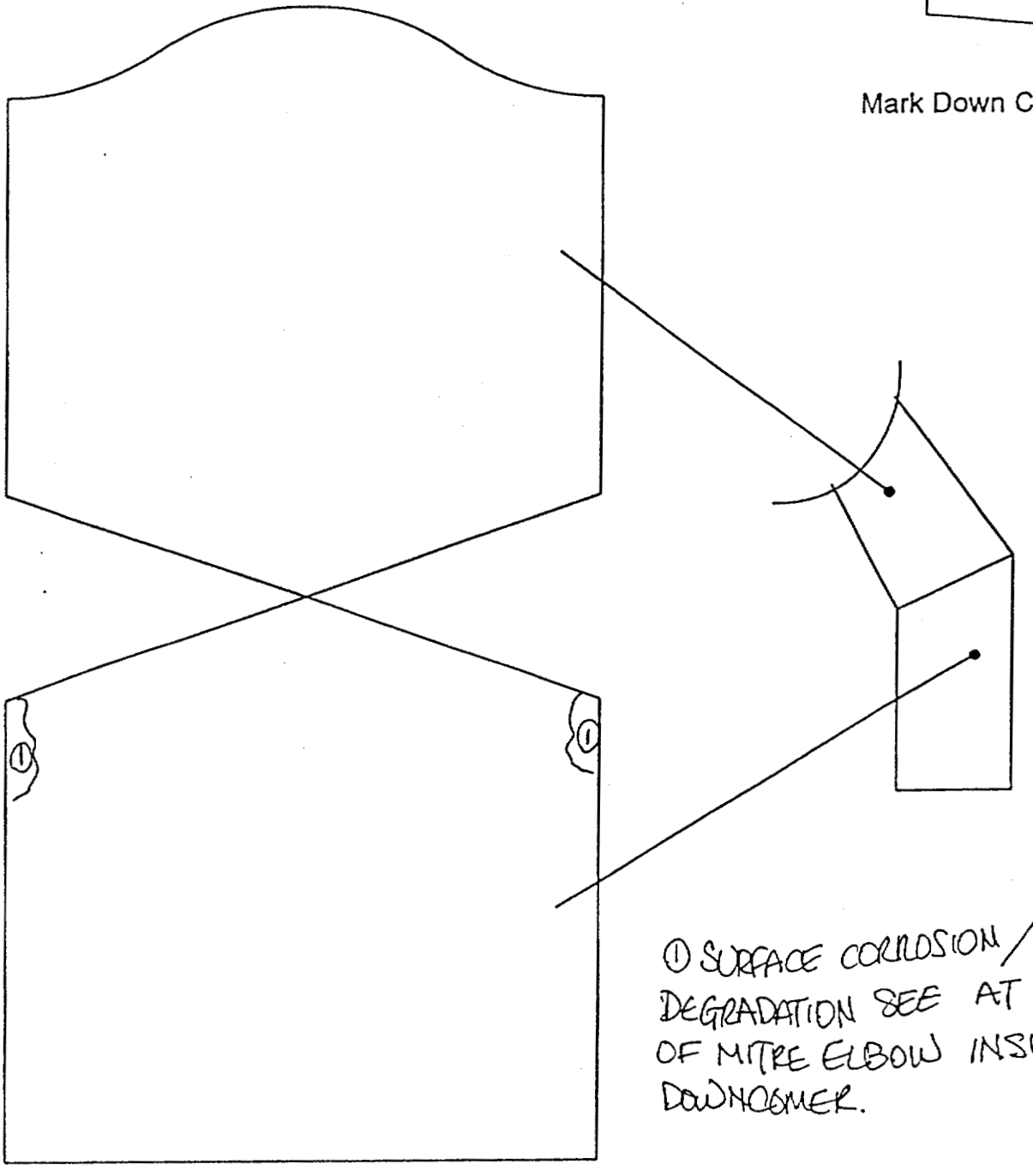
Downcomer Rollout - Bay 11

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

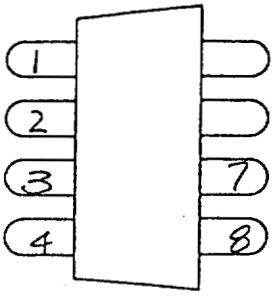


① SURFACE CORROSION / COATING DEGRADATION SEE AT INTRADOS OF MITRE ELBOW INSIDE DOWNCOMER.

3/24/98

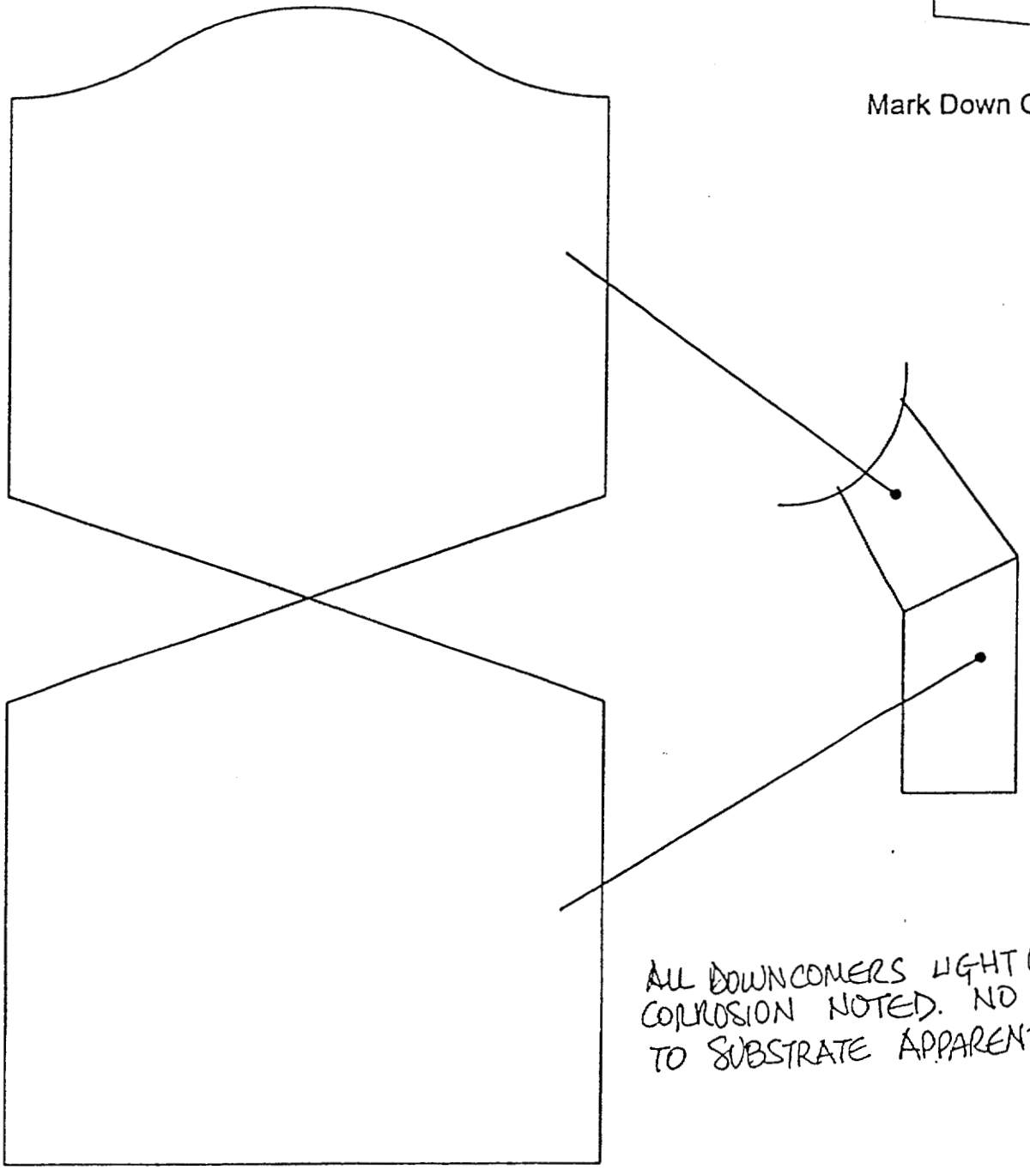
Downcomer Rollout - Bay 11

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

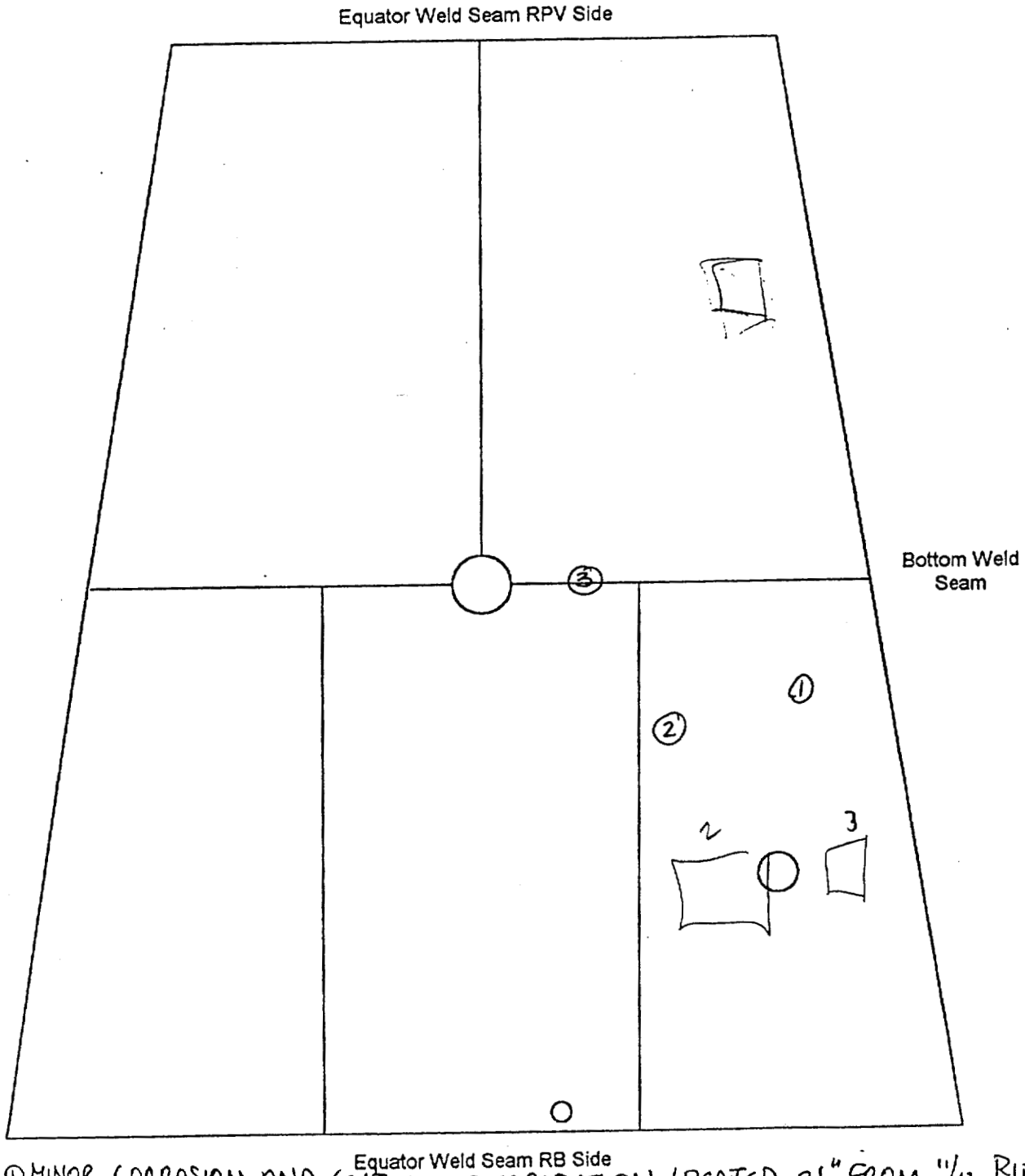


ALL DOWNCOMERS LIGHT (TYPE "A"-"B") CORROSION NOTED. NO DAMAGE TO SUBSTRATE APPARENT.

3/24/93

Torus Rollout - Bay 12

Bottom Half - Shell Interior

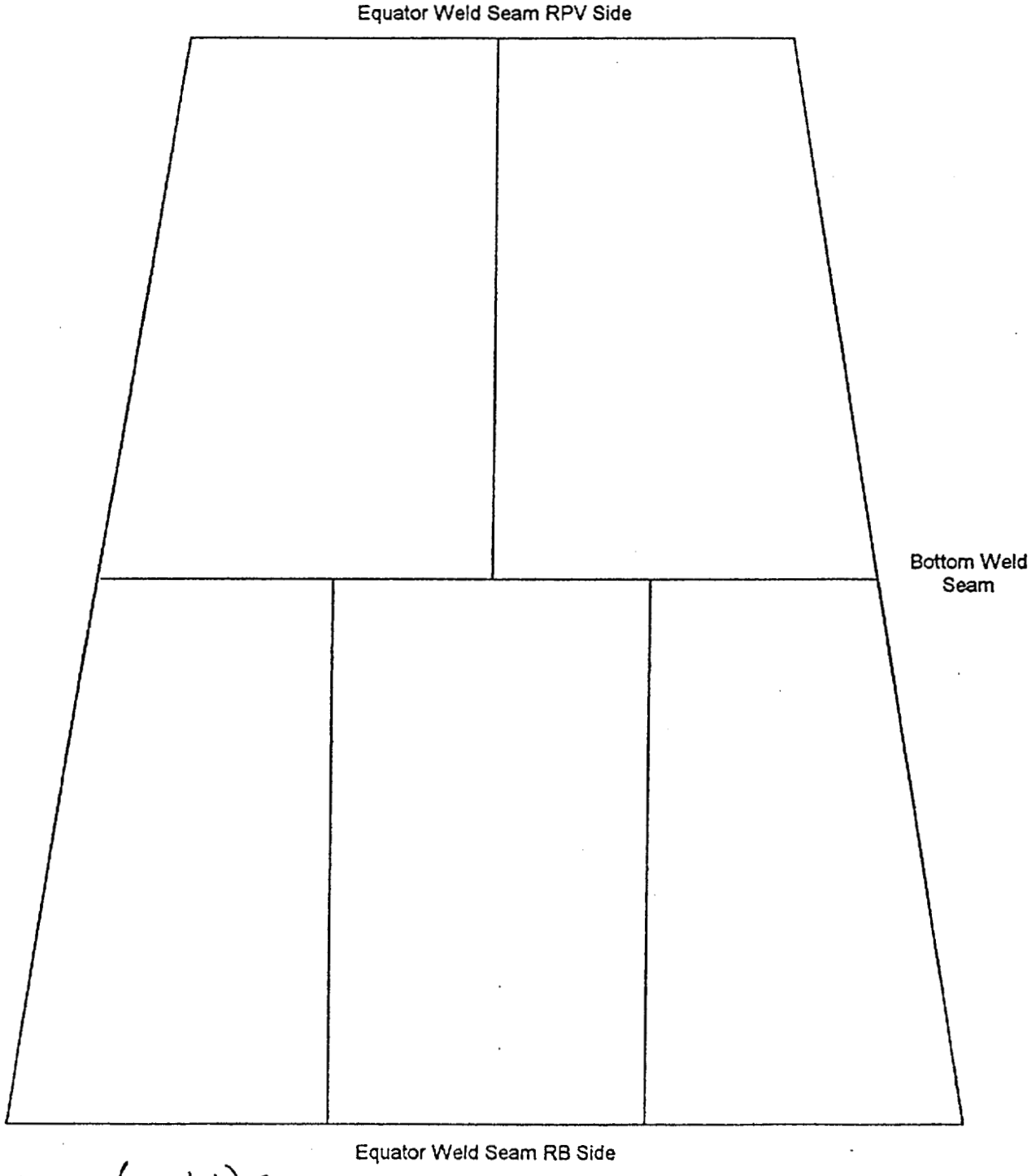


Notes: ① MINOR CORROSION AND COATING DEGRADATION LOCATED 21" FROM 1/12 RING GIRDER 81" FROM BOTTOM SEAM. ② 2'x1' AREA OF MINOR CORROSION AND COATING DEGRADATION LOCATED AT 90" FROM BOTTOM SEAM, 6' FROM 1/12 RING GIRDER. ③ MINOR CORROSION DEGRADATION ALONG BOTTOM SEAM WELD.

3/24/98

Torus Rollout - Bay 13

Bottom Half - Shell Interior

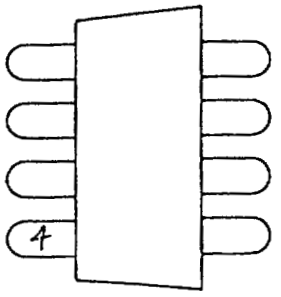


Notes: MINOR (TYPE 'A') CORROSION AND COATING DEGRADATION NOTED GENERAL CONDITION. NO APPARENT DAMAGE TO SUBSTRATE.

3/24/98

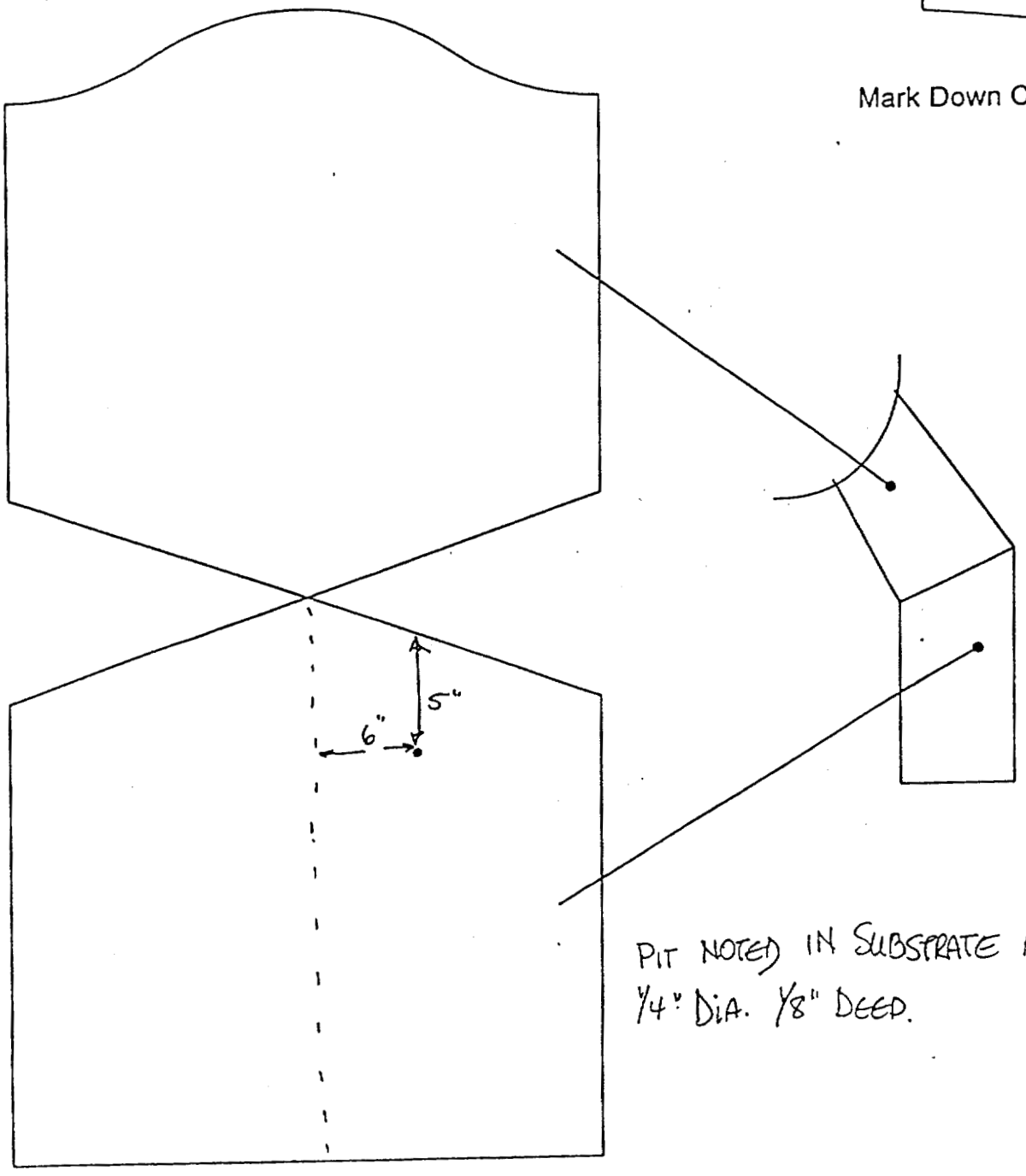
Downcomer Rollout - Bay 13

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

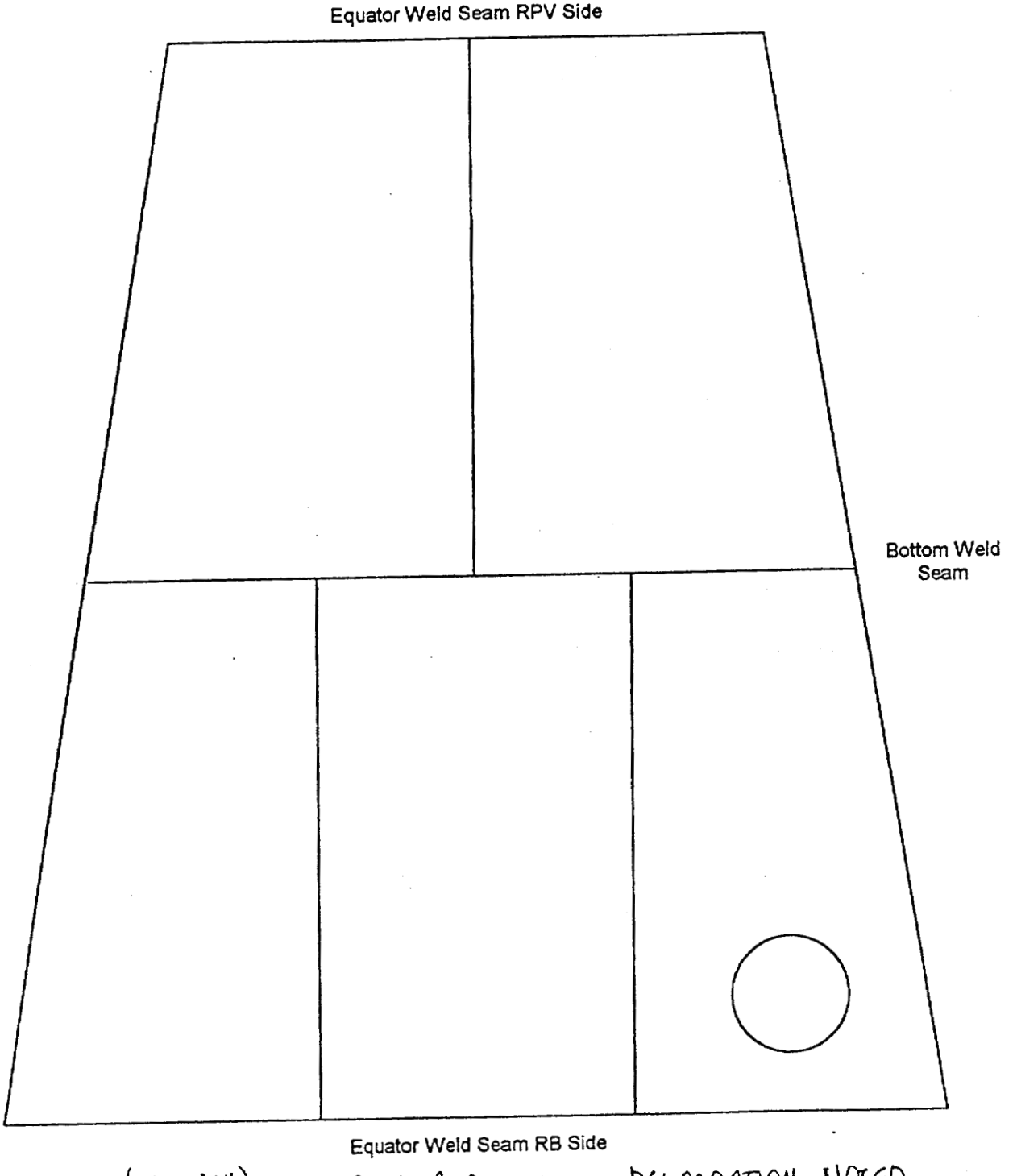


PIT NOTED IN SUBSTRATE APPROX
1/4" DIA. 1/8" DEEP.

3/24/98

Torus Rollout - Bay 14

Bottom Half - Shell Interior

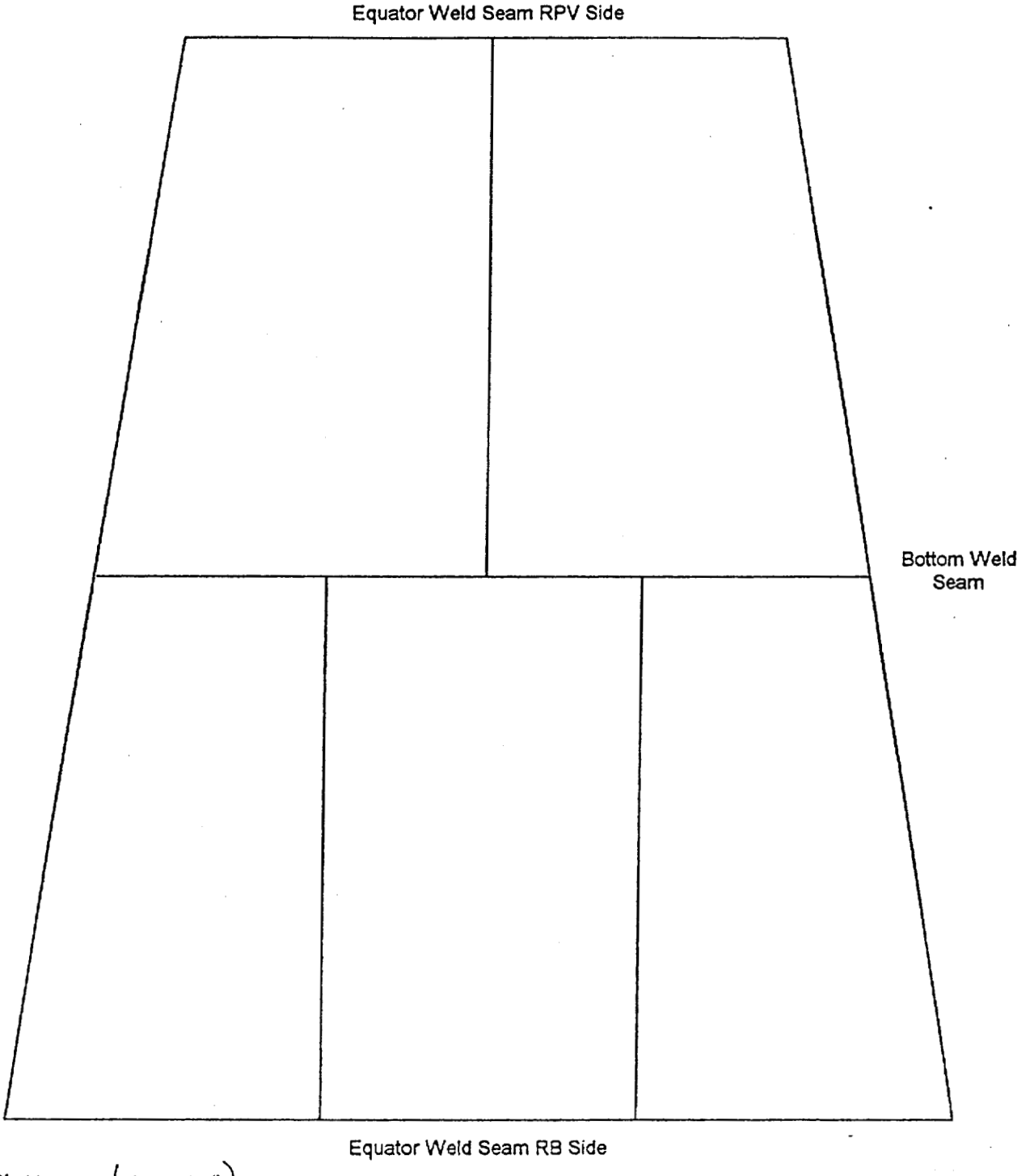


Notes: MINOR (TYPE "A") CORROSION AND COATING DEGRADATION NOTED.
NO APPARENT DAMAGE TO SUBSTRATE.

3/24/98

Torus Rollout - Bay 16

Bottom Half - Shell Interior

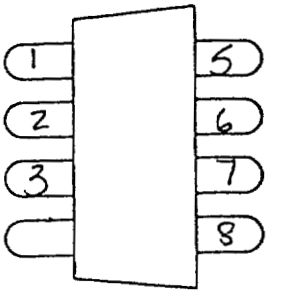


Notes: MINOR (TYPE "A") CORROSION ALONG BOTTOM WELD SEAM ENTIRE LENGTH. NO APPARENT DAMAGE TO SUBSTRATE. GOOD ADHESION OF COATING ON SIDE PLATES.

3/24/98

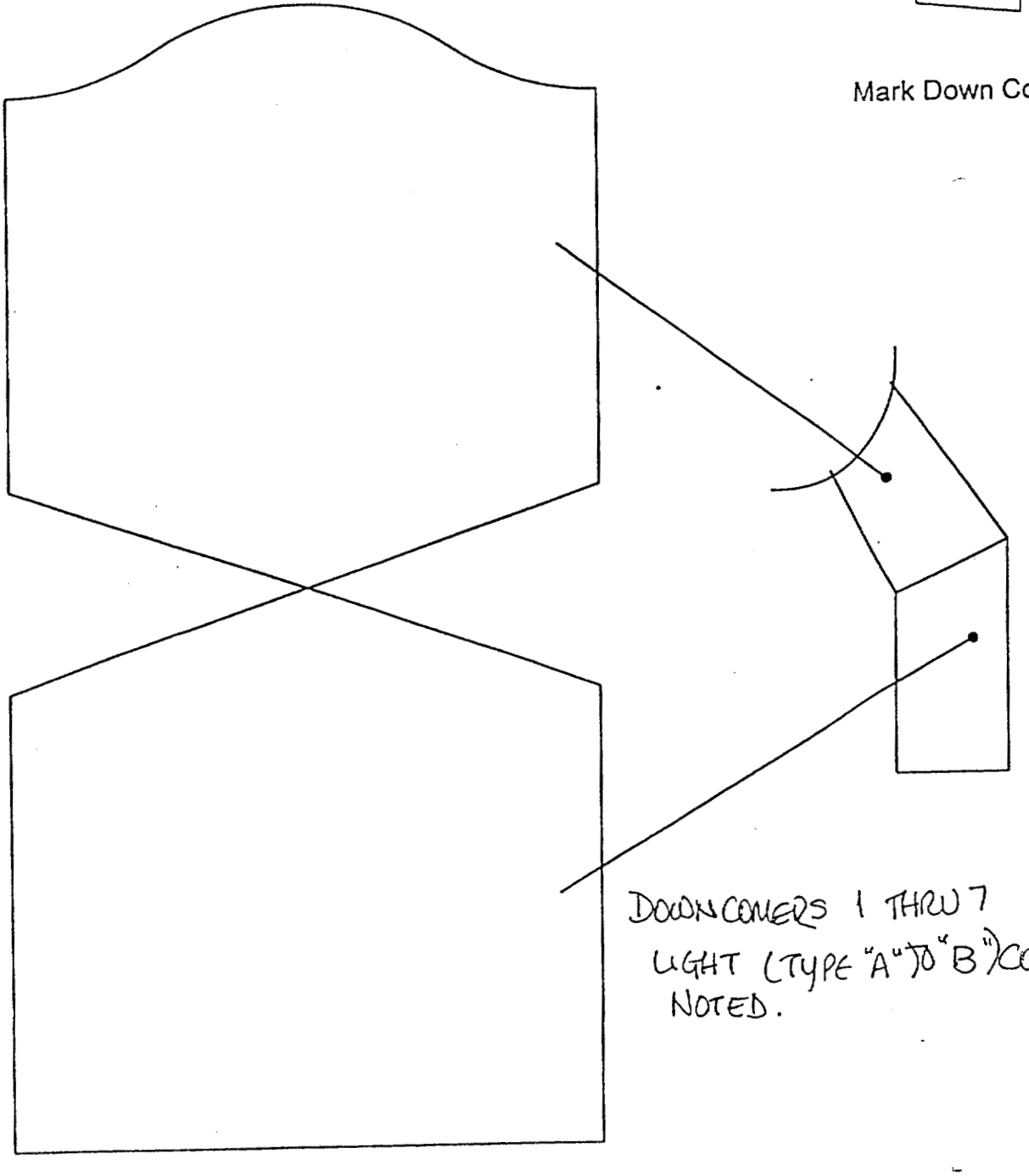
Downcomer Rollout - Bay 13

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

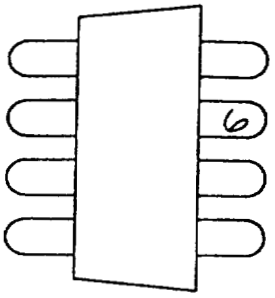


DOWNCOMERS 1 THRU 7
LIGHT (TYPE "A" TO "B") CORROSION
NOTED.

3/24/98

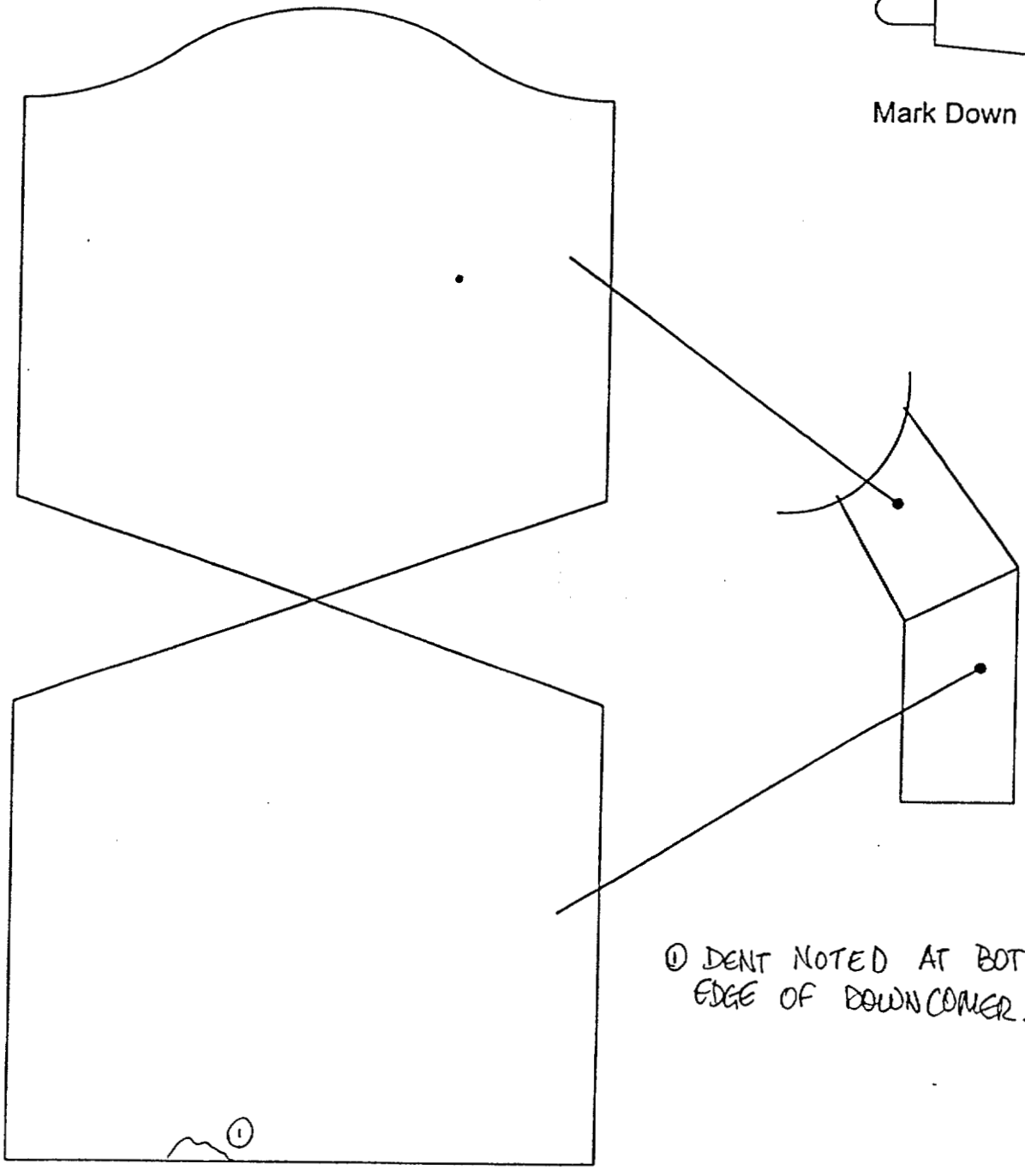
Downcomer Rollout - Bay 15

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam

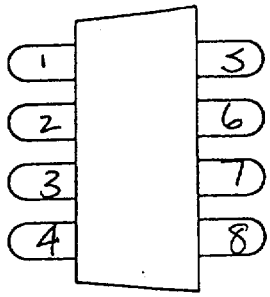


① DENT NOTED AT BOTTOM EDGE OF DOWNCOMER.

3/24/98

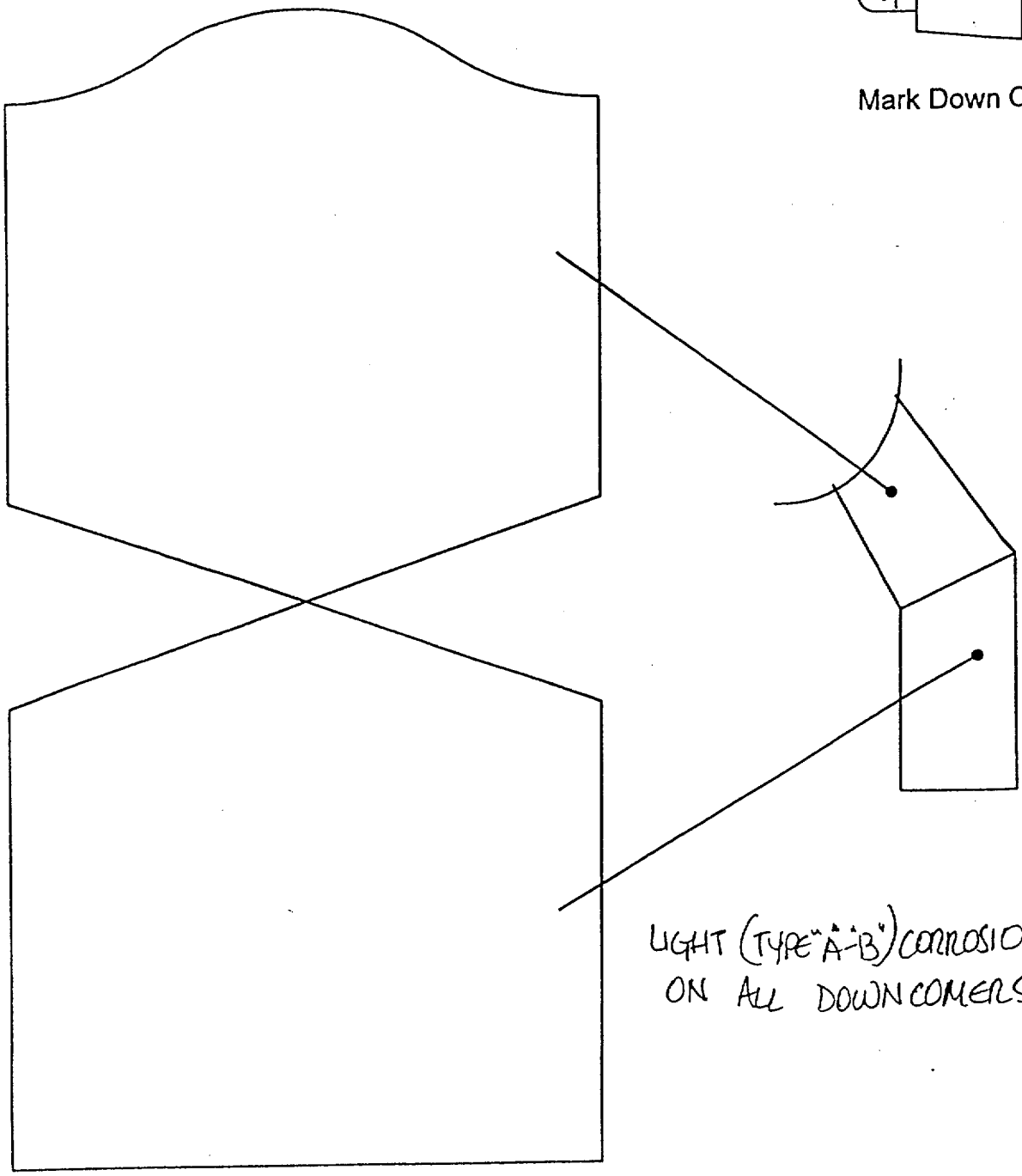
Downcomer Rollout - Bay 15

Interior/Exterior
(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam



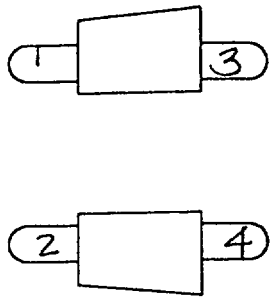
LIGHT (TYPE "A-B") CORROSION NOTED ON ALL DOWNCOMERS.

3/24/98

Downcomer Rollout - Bay 16

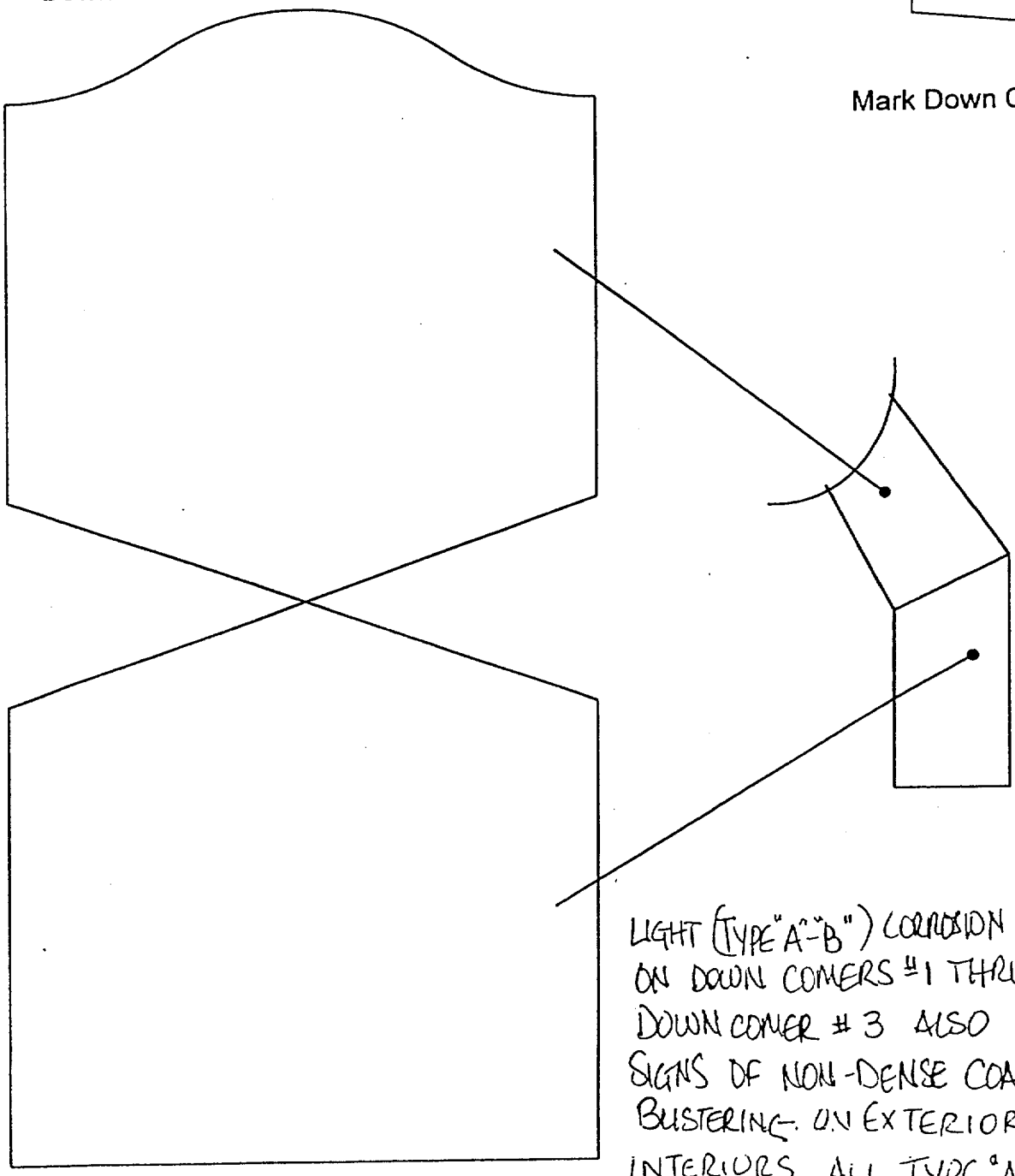
Interior/Exterior

(circle one)



Mark Down Comer

Down Comer to Vent Header Weld Seam



LIGHT (TYPE "A"-"B") CORROSION NOTED ON DOWN COMERS #1 THRU 4. DOWN COMER # 3 ALSO SHOWED SIGNS OF NON-DENSE COATING BLISTERING ON EXTERIOR. INTERIORS ALL TYPE "A" CORROSION

3/24/98

SUPPLEMENTAL DATA SHEET

PLANT: VERMONT YANKEE OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 8 @ REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch: NOTE: ALL DIMENSIONS TAKEN FROM WELD CENTERLINE

THE FOLLOWING COATING REPAIR AREAS WERE NOTED DURING A VISUAL INSPECTION. BAY 8 REPRESENTED ONE OF THE MOST POPULATED REGIONS OF REPAIR AREAS. SEE PAGES 16 THRU 17 FOR MAPPING LOCATIONS. REPAIR AREAS ARE APPROXIMATELY 1½" IN DIAMETER

PLATE "A"	FROM WELD # X	FROM WELD # 1
1	5"	34½"
2	9½"	17"
3	13½"	25"
4	13"	14½"
5	14½"	1"
6	18"	37"
7	20½"	19½"
8	21½"	40½"
9	21"	10"
10	27"	30"
11	27"	38½"
12	28½"	34½"
13	31"	41"
14	31½"	45½"
15	33½"	32"
16	33	9"

EXAMINER [signature] / [signature] LEVEL II / II DATE 3-25-98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: VERMONT YANKEE OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 8 @ REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch: PLATE "A" CONTINUED

PLATE "A"	FROM WELD # X	FROM WELD # 1
17	32"	17 1/2"
18	33"	10"
19	35 1/2"	11"
20	37 1/2"	10"
21	36"	42 1/2"
22	41"	36"
23	40 1/2"	9"
24	43 1/2"	17"
25	44"	32"
26	47 1/2"	43"
27	49 1/2	49"
28	48"	2"
29	53"	7"
30	60"	53"
31	60"	60 1/2"
32	68 1/2"	41 1/2"
33	66 1/2"	6 1/2"
34	73"	4 1/2"
35	84"	5"
36	82"	30"

EXAMINER Jerry Nyd / Jim Valmyuda LEVEL II / II DATE 3-25-98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: VERMONT YANKEE OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 8 @ REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch: PLATE "A" CONTINUED

PLATE A	FROM WELD # X	FROM WELD # 1
37	80"	46½"
38	83"	46"
39	83"	41"
40	86½"	19½"
41	87"	50"
42	91½"	23½"
43	95"	51½"
44	114½"	23½"
45	114"	2"

EXAMINER [signature] LEVEL II / II DATE 3-25-98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: VERMONT YANKEE OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 8 REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch:

PLATE B	FROM WELD # X	FROM WELD # 2
1	0"	8"
2	0"	35"
3	0"	38"
4	4"	108 1/2"
5	6"	118"
6	7"	117"
7	8"	118"
8	7 1/2"	57"
9	10"	64 1/2"
10	7"	19"
11	8 1/2"	33"
12	12"	29"
13	16"	4 1/2"
14	16 1/2"	33"
15	16 1/2"	34 1/2"
16	16"	57 1/2"
17	16 1/2"	88"
18	10 1/2"	109"
19	10 1/2"	111"
20	11"	113"
21	11 1/2"	115 1/2"

EXAMINER [signature] LEVEL II / II DATE 3-25-98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: VERMONT YANKEE OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 8 REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch: PLATE "B" CONTINUED

PLATE B	FROM WELD # X	FROM WELD # 2
22	13 1/2"	111"
23	15 1/2"	108"
24	17"	111 1/2"
25	17 1/2"	113"
26	18"	113 1/2"
27	19"	114 1/2"
28	19 1/2"	111"
29	22 1/2"	118"
30	19 1/2"	102"
31	21"	98"
32	22 1/2"	103 1/2"
33	20"	94"
34	24"	83"
35	26"	82"
36	23 1/2"	62"
37	22 1/2"	59 1/2"
38	20"	49 1/2"
39	20 1/2"	45"
40	20"	32 1/2"
41	22 1/2"	34 1/2"
42	22"	31 1/4"

EXAMINER [signature] / [signature] LEVEL II / II DATE 3-25-98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: VERMONT YANKEE OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 8 REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch: PLATE "B" CONTINUED

PLATE B	FROM WELD # X	FROM WELD # 2
43	19"	8"
44	24 1/2"	1/2"
45	24"	10"
46	24"	15"
47	26 1/2"	12"
48	26"	28 1/2"
49	39 1/2"	108"
50	34 1/2"	70 1/2"
51	33 1/2"	59"
52	36 1/2"	59 1/2"
53	34"	43"
54	29 1/2"	20"
55	29 1/2"	2"
56	34"	8"
57	35 1/2"	5 1/2"
58	34 1/2"	21 1/2"
59	39"	11"
60	42 1/2"	6 1/2"
61	41"	38"
62	39"	53"

EXAMINER [signature] LEVEL II/II DATE 3-25-98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
AHII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: VERMONT YANKEE OUTAGE: 20 DRAWING: N/A REV.: N/A

SYSTEM: TORUS COMPONENT/WELD NO.: BAY 8 REPAIR AREAS EN: N/A

LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch: PLATE "B" CONTINUED

PLATE B	FROM WELD # X	FROM WELD # 2
63	39"	80"
64	49"	99"
65	47"	103 1/2"
66	46"	110"
67	48"	116"
68	47"	122"
69	50"	118"
70	54 1/2"	119 1/2"
71	59"	104 1/2"
72	60 1/2"	99 1/2"
73	64"	100 1/2"
74	51 1/2"	76 1/2"
75	55 1/2"	74"
76	57 1/2"	62 1/2"
77	46"	62 1/2"
78	51"	59"
79	56 1/2"	51 1/2"
80	49 1/2"	3 1/2"
81	57"	14"
82	59 1/2"	17 1/2"

EXAMINER [signature] LEVEL II/ II DATE 3-25-98

COG. ENG./EXAM AGENCY _____ DATE _____

ISI COORDINATOR (If ASME XI Exam) _____ DATE _____

QA (Optional) _____ DATE _____

ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: VERMONT YANKEE OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 8 REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch: PLATE "B" CONTINUED

PLATE B	FROM WELD # X	FROM WELD #2
83	59"	22 1/2"
84	61 1/2"	17 1/2"
85	67"	26"
86	75 1/2"	16 1/2"
87	74"	35 1/2"
88	74 1/2"	44 1/2"
89	79"	35 1/2"
90	82 1/2"	29"
91	83"	33 1/2"
92	83"	36 1/2"
93	83"	44"
94	84 1/2"	38"
95	90"	28 1/2"
96	95"	29"
97	94"	12"
98	96"	20"
99	99 1/2"	20"
100	101 1/2"	13"
101	108"	12 1/2"
102	118"	6 1/2"

EXAMINER [signature] LEVEL II / II DATE 3-25-98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: VERMONT YANKEE OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 8 REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch: PLATE "B" CONTINUED

PLATE B	FROM WELD # X	FROM WELD # 2
103	119"	8 1/2"
104	118"	10 1/2"
105	117 1/2"	13 1/2"
106	119 1/2"	11"
107	121 1/2"	11 1/2"
108	121 1/2"	15"
109	123"	20"
110	82 1/2"	78"
111	86"	74"
112	86 1/2"	97"
113	87"	117 1/2"
114	96"	91 1/2"

EXAMINER [signature] LEVEL II / II DATE 3-25-98
COG. ENG./EXAM AGENCY DATE
ISI COORDINATOR (If ASME XI Exam) DATE
QA (Optional) DATE
ANII (Optional) DATE

SUPPLEMENTAL DATA SHEET

PLANT: VERMONT YANKEE OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 8 REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch:

PLATE "C"	FROM WELD # X	FROM WELD # 3
1	9"	24"
2	22½"	9½"
3	27½"	32"
4	31"	10½"
5	41"	10"
6	44"	58"
7	49"	49"
8	50"	54"
9	52"	6"
10	56"	54½"
11	58½"	59½"
12	59"	39"
13	60"	36½"
14	61"	54½"
15	85½"	1"
16	87"	3"
17	80½"	17"
18	83½"	19"
19	88"	35"
20	88½"	46½"
21	93"	55"
22	110"	42"

EXAMINER [signature] LEVEL II / II DATE 3-25-98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: VERMONT YANKEE OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 8 REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch:

PLATE "D"	FROM WELD # X	FROM WELD # 1
1	1"	14½"
2	1"	18"
3	2½"	19"
4	½"	23"
5	3"	26½"
6	3½"	30½"
7	7"	52½"
8	4"	112½"
9	3"	114"
10	11½"	112"
11	12½"	108"
12	18½"	105"
13	22"	110"
14	22½"	107½"
15	26"	112"
16	31½"	112"
17	12"	73½"
18	17½"	73"
19	18"	78"
20	20"	72½"

EXAMINER [signature] LEVEL II / II DATE 3-25-98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: VERMONT YANKEE OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 8 REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch: PLATE "D" CONTINUED

PLATE "D"	FROM WELD # X	FROM WELD # 1
21	12"	11 1/2"
22	7 1/2"	6"
23	9 1/2"	3"
24	34"	31 1/2"
25	35"	37"
26	33 1/2"	49 1/2"
27	31"	53"
28	28"	64"
29	36 1/2"	64"
30	79"	33 1/2"
31	91 1/2"	37"
32	96"	44 1/2"
33	106 1/2"	45"
34	58 1/2"	105 1/2"
35	64"	98 1/2"
36	54 1/2"	57"
37	57"	34"
38	67"	45"
39	82"	19 1/2"
40	88"	20 1/2"

EXAMINER Jerry Nyd / John Valenzuela LEVEL II / II DATE 3-25-98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: VERMONT YANKEE OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 8 REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch: PLATE "D" CONTINUED

PLATE "D"	FROM WELD # X	FROM WELD # 1
41	88"	31 ½"
42	86"	42 ½"
43	78"	89 ½"
44	80"	88"
45	84"	88"
46	88 ½"	87 ½"
47	81 ½"	64"
48	91"	50"
49	103"	15"
50	113"	12"

EXAMINER [signature] LEVEL II / II DATE 3-25-98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: VERMONT YANKEE OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 8 REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch:

PLATE "E"	FROM WELD # X	FROM WELD # 5
1	1/2"	15 1/2"
2	2"	16"
3	3 1/2"	32"
4	4"	34 1/2"
5	6 1/2"	32"
6	5 1/2"	21"
7	7 1/2"	22"
8	7 1/2"	14"
9	8"	11 1/2"
10	11 1/2"	15"
11	10 1/2"	3"
12	16"	13 1/2"
13	17"	15"
14	18"	13 1/2"
15	21"	24"
16	20"	35 1/2"
17	22 1/2	38"
18	25 1/2	40 1/2"
19	29 1/2	36 1/2"
20	26"	30"

EXAMINER [signature] LEVEL II / II DATE 3-25-98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

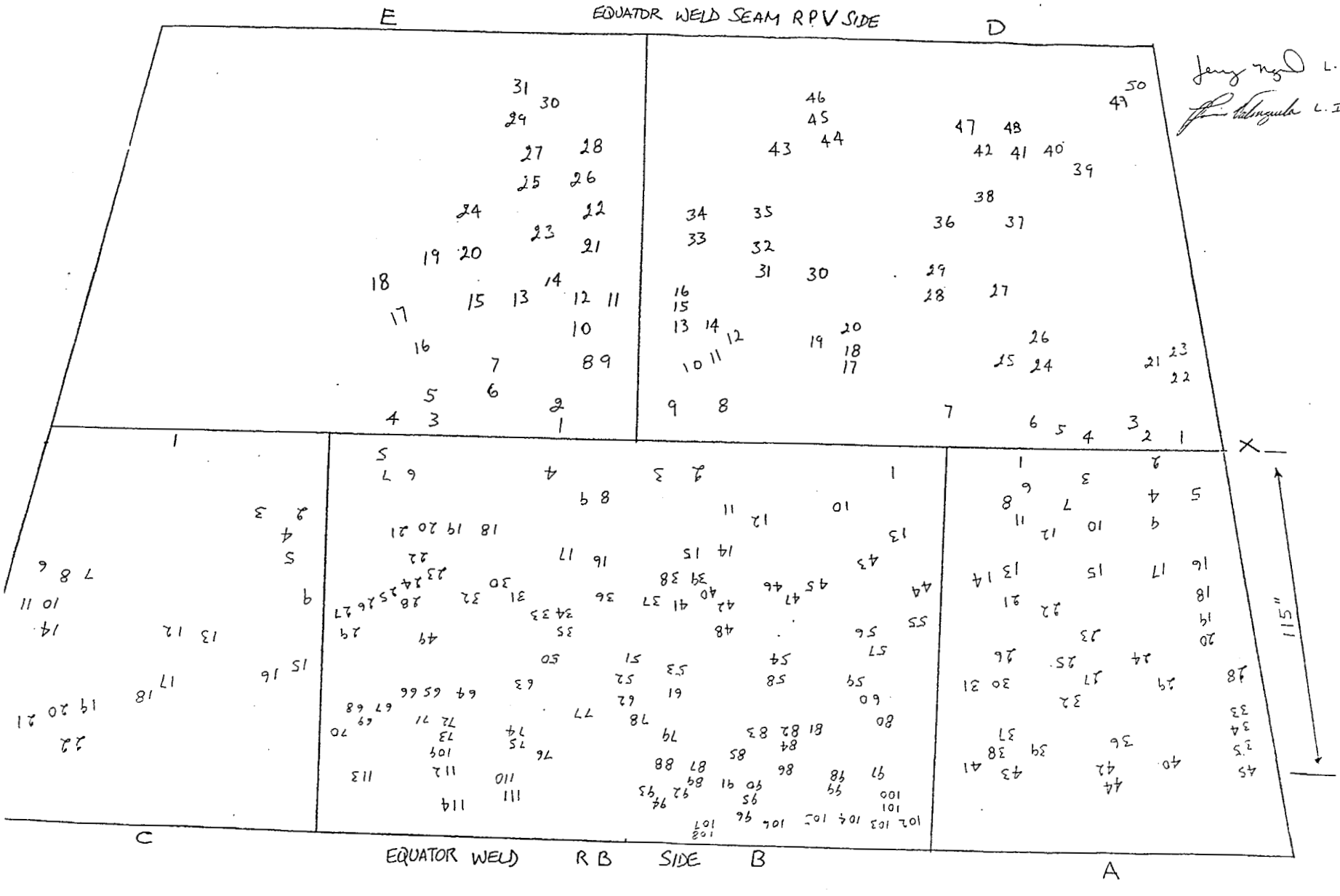
PLANT: VERMONT YANKEE OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 8 REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch: PLATE "E" CONTINUED

PLATE "E"	FROM WELD # X	FROM WELD # 5
21	27"	10 1/2"
22	33"	11"
23	33"	14"
24	38"	26"
25	41 1/2"	20 1/2"
26	37	11 1/2"
27	43	12"
28	44 1/2"	8 1/2"
29	80"	16 1/2"
30	86 1/2"	15 1/2"
31	94"	18"

EXAMINER [signature] / [signature] LEVEL II / II DATE 3-25-98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

ROLLOUT BAY 8

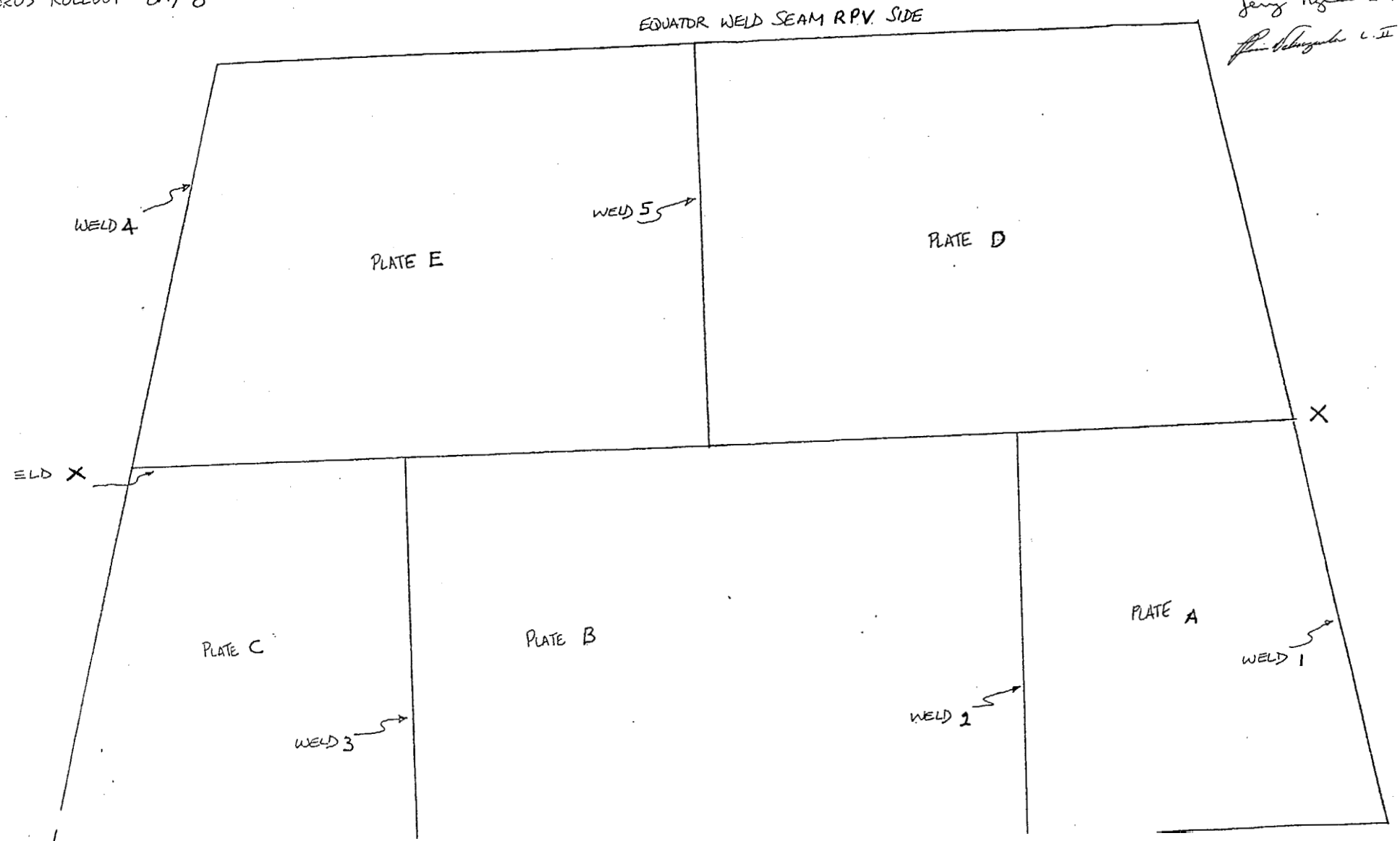


L.II 3-25-9

L.II 3-25-98

Jerry [illegible] L.II 3-25-
[illegible] L.II 3-25-98

ORUS ROLLOUT BAY 8



SUPPLEMENTAL DATA SHEET

PLANT: Vermont Yankee OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 16 @ REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch:

THE FOLLOWING COATING REPAIR AREAS WERE NOTED DURING A VISUAL INSPECTION. BAY 16 REPRESENTED ONE OF THE MOST POPULATED REGIONS OF REPAIR AREAS. SEE PAGES 9 THRU 10 FOR MAPPING LOCATIONS. REPAIR AREAS ARE APPROXIMATELY 1½" IN DIAMETER.

PLATE "A"	FROM WELD # 1	FROM WELD # 2
1	141"	8"
2	137"	8½"
3	133"	10½"
4	110"	5"
5	56"	7"
6	41"	30½"
7	36"	44"
8	32"	46"
9	26½"	51½"
10	44"	61½"
11	38"	68"
12	81"	35"
13	96"	49"

PREPARED BY:
EXAMINER Juliet L Miles M J Bachman LEVEL I DATE 3/24/98
COG. ENG./EXAM AGENCY DATE
ISI COORDINATOR (If ASME XI Exam) DATE
QA (Optional) DATE
ANII (Optional) DATE

SUPPLEMENTAL DATA SHEET

PLANT: Vermont Yankee OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 16 @ REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch:

PLATE "A" (CONT)	FROM WELD #1	FROM WELD # 2
14	108"	55 1/2"
15	126 1/2"	57"
16	134"	62"
17	112"	72"
18	110"	71"
19	108"	68"
20	104"	69"
		FROM WELD #3
21	124"	9 1/2"
22	122"	14 1/2"
23	115 1/2"	10 1/2"
24	105"	20"
25	99"	17 1/2"
26	98"	13 1/2"
27	92"	20"
28	90"	30"
29	87"	21"
30	75 1/2"	13"

PREPARED BY: ~~EXAMINER~~ Janet K Miles M. J. Bochan LEVEL II DATE 3/24/98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: Vermont Yankee OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 16 @ REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch:

PLATE "A" (CONT)	FROM WELD #1	FROM WELD #3
31	94"	27½"
32	68"	24½"
33	69"	19½"
34	69"	17"
35	149.5"	14"
36	139"	4½"
37	136"	6½"

PLATE "C"	FROM WELD #1	FROM WELD #4
1	5"	19½"
2	6"	22½"
3	3"	42"
4	13"	18"
5	17½"	16"
6	19"	20½"
7	22"	16"
8	27"	31½"

PREPARED BY: EXAMINER Janet K Miles M J Bachman LEVEL II DATE 3/24/98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: Vermont Yankee OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 16 @ REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch:

PLATE "C" (CONT)	FROM WELD #1	FROM WELD #4
9	27"	33 1/2"
10	30"	37 1/2"
11	36"	38"
12	42"	18 1/2"
13	44"	26"
14	48 1/2"	5"
15	60"	8"
16	58"	12"
17	64"	18"
18	57 1/2"	22"
19	69 1/2"	23"
20	52"	42"
21	57"	45"
22	59"	45"
23	69"	48"
24	73"	45"

PREPARED BY ~~EXAMINER~~ Jeffrey K Miles LEVEL II DATE 3/24/98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: Vermont Yankee OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 16 @ REPAIR AREA EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch:

PLATE "C" (CON'T)	FROM WELD #1	FROM WELD #4
25	78"	51"
26	78"	11"
27	89"	8"
28	85"	10"
29	84"	12"
30	80"	20 1/2"
31	90"	24 1/2"
32	82 1/2"	23 1/2"
33	87"	25"
34	83"	25"

PLATE "D"	FROM WELD #1	FROM WELD #5
1	0"	53"
2	10 1/2"	61"
3	29"	38"
4	24"	39"
5	44 1/2"	47"
6	46 1/2"	51 1/2"

PREPARED BY: ~~EXAMINER~~ Janet L Miles LEVEL II DATE 3/24/98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: Vermont Yankee OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 16 @ REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch:

PLATE "D" (CONT)	FROM WELD # 1	FROM WELD # 5
7	40"	47 1/2"
8	39 1/2"	54"
9	46 1/2"	19 1/2"
10	50"	14"
11	55"	9 1/2"

PLATE "E"	FROM WELD # 1	FROM WELD # 6
1	7 1/2"	48"
2	42"	46 1/2"
3	44"	46 1/2"
4	50 1/2"	44"
5	49 1/2"	16 1/2"
6	62"	4 1/2"
7	60"	18 1/2"
8	63 1/2"	54"
9	67"	55"

PREPARED BY: ~~EXAMINER~~ Janet K Miles M J Beckman LEVEL II DATE 3/24/98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: Vermont Yankee OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 16 @ REPAIR AREAS EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch:

PLATE F	FROM WELD #1	FROM WELD #7
1	2"	4 1/2"
2	3"	11"
3	7"	17 1/2"
4	12"	1 1/2"
5	19 1/2"	6 1/2"
6	4"	29"
7	4"	31"
8	9 1/2"	29 1/2"
9	8 1/2"	31 1/2"
10	13"	28"
11	13"	50"
12	27 1/2"	18 1/2"
13	30"	20 1/2"
14	35 1/2"	28"

PREPARED BY: ~~EXAMINER~~ Janet K Miles M J Brakman LEVEL II DATE 3/24/98
JM
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
AHII (Optional) _____ DATE _____

SUPPLEMENTAL DATA SHEET

PLANT: VERMONT YANKEE OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BA/16 (REPAIR AREAS) EN: N/A
LOCATION: TORUS FLOOR INTERIOR

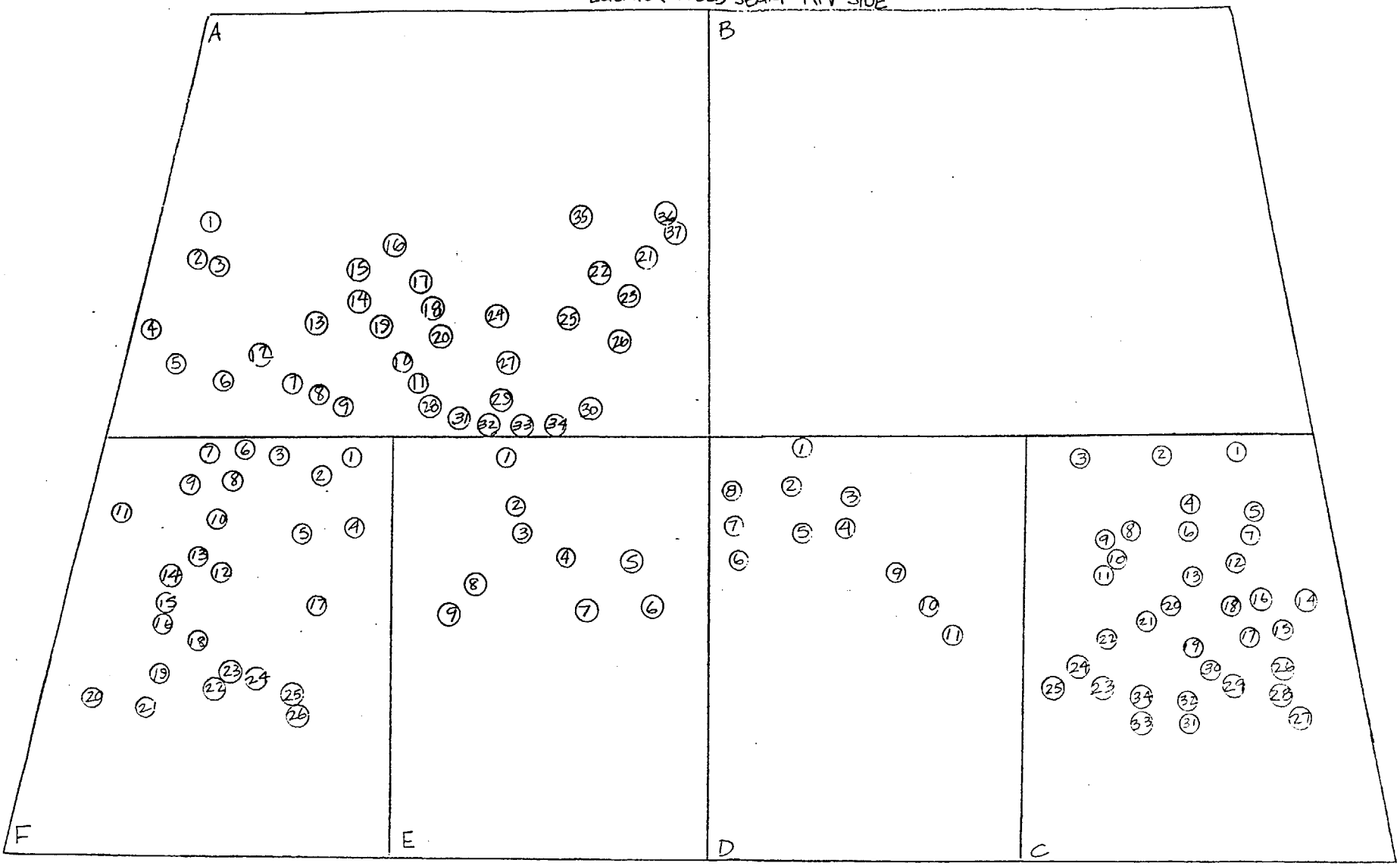
Examination Details/Sketch:

PLATE "F" (CON'T)	FROM WELD #1	FROM WELD #7
15	42"	27 1/2"
16	45"	32"
17	47"	3"
18	53 1/2"	38 1/2"
19	54 1/2"	45"
20	67"	58"
21	67"	46"
22	67 1/2"	33 1/2"
23	62"	26"
24	62"	24"
25	67"	20"
26	77"	21 1/2"

PREPARED BY:
~~EXAMINER~~ Janet L Miles M J Bochman LEVEL II DATE 3/24/98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

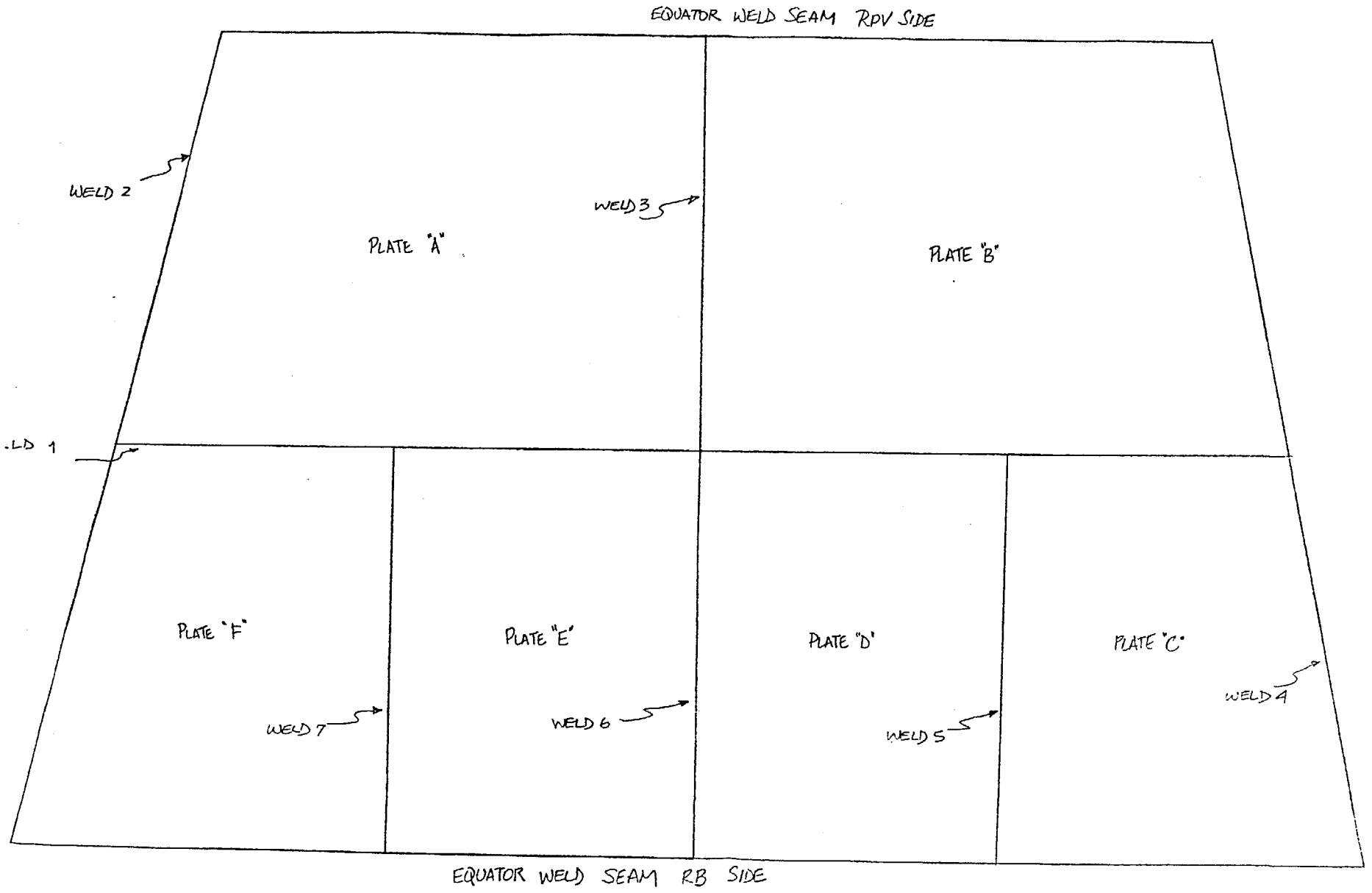
TORUS ROLLOUT BAY 16

EQUATOR WELD SEAM RPV SIDE



EQUATOR WELD SEAM RB SIDE

PREPARED BY: Janet K Miles DATE: 3/24/98



'ARED BY: Janet L Miller DATE: 3/24/98

YANKEE	NUCLEAR SERVICES DIVISION INSERVICE INSPECTION	PROCEDURE REVISION PAGE PAGE	YA-UT-1 9 11 of 12 OF

SUPPLEMENTAL DATA SHEET

PLANT: Vermont Yankee OUTAGE: 20 DRAWING: N/A REV.: N/A
SYSTEM: TORUS COMPONENT/WELD NO.: BAY2 + BAY3 EN: N/A
LOCATION: TORUS FLOOR INTERIOR

Examination Details/Sketch:

THE FOLLOWING FLOOR AREAS WERE NOTED DURING A VISUAL INSPECTION AS HAVING MORE SIGNIFICANT COATING DEGREDATION AND/OR LIGHT RUST THAN TYPICAL.

BAY 2 -

① FLOOR AREA AT 2' TO 6½' FROM BAY 2/3 RING GIRDER 6" EITHER DIRECTION FROM BOTTOM WELD SEAM.

BAY 3 -

① FLOOR AREA AT 4' TO 6' FROM BAY 3/4 RING GIRDER 0" TO 18" FROM BOTTOM WELD SEAM TOWARDS RPV (INNER)

② FLOOR AREA AT 6½' TO 7½' FROM BAY 3/4 RING GIRDER 6" TO 20" FROM BOTTOM WELD SEAM TOWARDS REACTOR BLDG WALL (OUTER).

PREPARED BY:
~~EXAMINER~~ Scott Z Miles M J Berkowitz II DATE 3/24/98
COG. ENG./EXAM AGENCY _____ DATE _____
ISI COORDINATOR (If ASME XI Exam) _____ DATE _____
QA (Optional) _____ DATE _____
ANII (Optional) _____ DATE _____

R65\9

FORM 3

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-104

PLANT VY OUTAGE RF 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 8 EN N/A

LOCATION BOTTOM OF TORUS, EXAMINED A66 THRU L118.

MATERIAL: CS PRODUCT FORM: WROUGHT APPROX. THICK.: 0.6"

INSTRUMENT: MAKE: PANAMETRICS MODEL: 26 DL+ SERIAL NO.:

CRT ☐ DIGITAL ☒ HORIZONTAL LINEARITY PERFORMED ☐

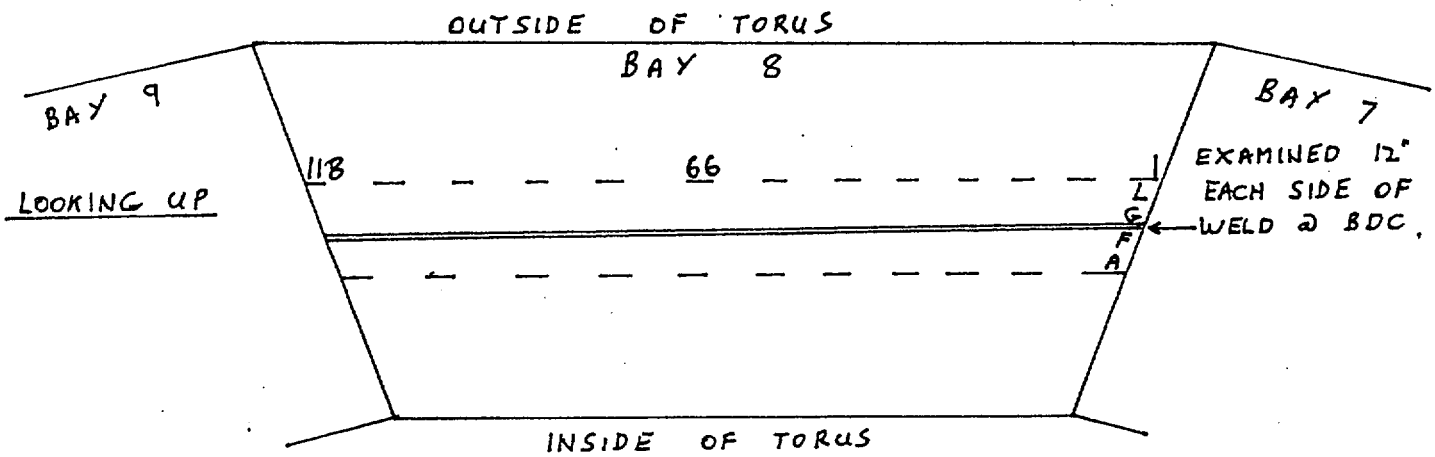
TRANSDUCER MAKE/MODEL: PANAMETRICS D791 RM SN: 69318 MODE: ☒ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS PRODUCT FORM: 4-STEP THICKNESSES: .25"/.5"/.75"/1.0"

CALIBRATION TIMES: INITIAL: 0900 CHECK: 1015 CHECK: N/A CHECK: N/A FINAL: 1120

SKETCH WITH RESULTS:

- OBSTRUCTIONS DUE TO BAY CONFIGURATION



Evaluation Required: (YES) NO (2" SQUARE GRIDS)

EXAMINER Simon Gothers LEVEL II DATE 4-4-98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 4-15-98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-105

PLANT V.Y. OUTAGE RF 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 8 EN N/A

LOCATION BOTTOM OF TORUS, EXAMINED A-1 THRU L-65

MATERIAL: CS PRODUCT FORM: WROUGHT APPROX. THICK.: .60"

INSTRUMENT:
MAKE: PANAMETRICS MODEL: 26 DL + SERIAL NO.: 93129307

CRT ☐ DIGITAL ☒ HORIZONTAL LINEARITY PERFORMED ☐

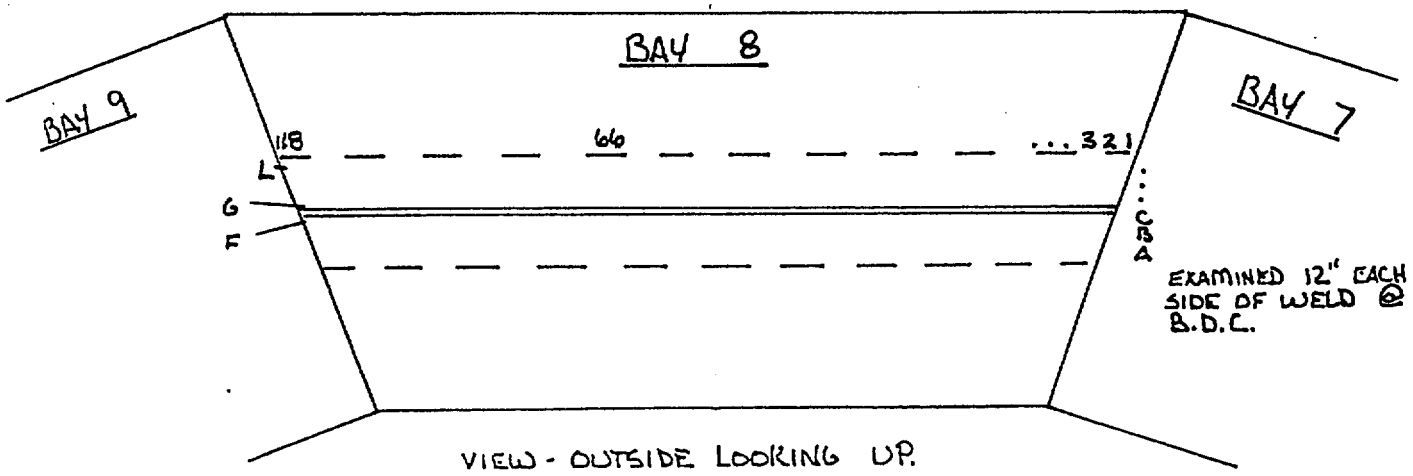
TRANSDUCER MAKE/MODEL: PANAMETRICS/D791 RM SN # 69315 MODE: ☒ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHZ SIZE: .312"

CAL. BLOCK MATERIAL: C S PRODUCT FORM: 4-STEP THICKNESSES: .250"/.500"/.750"

CALIBRATION TIMES:
INITIAL: 0820 CHECK: 1005 CHECK: N/A CHECK: N/A FINAL: 1050

SKETCH WITH RESULTS:

- OBSTRUCTIONS DUE TO BAY CONFIGURATION.



Evaluation Required: (YES) NO

2" SQUARE GRIDS.

EXAMINER [signature] LEVEL II DATE 4-4-98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 4.15-98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Bay 8 Bottom Prior to Blasting

Bay 8												
	A	B	C	D	E	F	G	H	I	J	K	L
1	0	0	0	0	0	0	0.589	0.59	0.598	0.602	0.594	0.591
2	0.591	0.595	0.599	0.599	0.587	0.586	0.595	0.594	0.609	0.609	0.603	0.606
3	0.577	0.601	0.602	0.601	0.597	0.597	0.607	0.604	0.607	0.609	0.609	0.609
4	0.597	0.601	0.591	0.601	0.599	0.59	0.607	0.606	0.609	0.609	0.608	0.609
5	0.602	0.603	0.602	0.601	0.596	0.581	0.608	0.607	0.61	0.61	0.609	0.608
6	0.603	0.604	0.603	0.602	0.601	0.594	0.606	0.599	0.611	0.591	0.61	0.609
7	0.604	0.602	0.604	0.604	0.601	0.603	0.605	0.605	0.611	0.609	0.609	0.608
8	0.603	0.604	0.604	0.604	0.601	0.598	0.606	0.597	0.609	0.609	0.608	0.608
9	0.606	0.606	0.604	0.604	0.606	0.602	0.606	0.608	0.609	0.609	0.597	0.608
10	0.606	0.606	0.606	0.607	0.604	0.604	0.594	0.604	0.61	0.608	0.608	0.609
11	0.607	0.606	0.606	0.606	0.607	0.603	0.602	0.601	0.611	0.607	0.608	0.609
12	0.606	0.606	0.606	0.606	0.603	0.603	0.602	0.605	0.609	0.608	0.607	0.608
13	0.606	0.59	0.606	0.606	0.598	0.599	0.591	0.599	0.607	0.607	0.608	0.608
14	0.599	0.597	0.594	0.605	0.604	0.606	0.601	0.606	0.606	0.605	0.605	0.607
15	0.604	0.604	0.608	0.607	0.603	0.607	0.604	0.606	0.607	0.605	0.605	0.606
16	0.607	0.608	0.608	0.607	0.606	0.601	0.606	0.606	0.602	0.606	0.606	0.606
17	0.609	0.601	0.602	0.584	0.584	0.598	0.597	0.59	0.585	0.604	0.604	0.604
18	0.608	0.606	0.601	0.601	0.602	0.606	0.592	0.597	0.573	0.598	0.605	0.605
19	0.609	0.607	0.608	0.608	0.608	0.604	0.595	0.592	0.598	0.604	0.605	0.603
20	0.608	0.608	0.589	0.61	0.605	0.585	0.593	0.588	0.603	0.603	0.601	0.601
21	0.608	0.608	0.608	0.609	0.601	0.6	0.592	0.6	0.604	0.602	0.603	0.603
22	0.609	0.609	0.607	0.609	0.601	0.599	0.599	0.6	0.599	0.601	0.6	0.601
23	0.609	0.609	0.609	0.609	0.592	0.605	0.602	0.599	0.601	0.601	0.6	0.593
24	0.608	0.609	0.608	0.597	0.599	0.591	0.597	0.597	0.585	0.598	0.597	0.589
25	0.611	0.611	0.609	0.606	0.598	0.594	0.596	0.598	0.598	0.597	0.596	0.594
26	0.611	0.611	0.609	0.605	0.598	0.596	0.593	0.591	0.591	0.596	0.594	0.591
27	0.61	0.61	0.611	0.611	0.609	0.606	0.586	0.579	0.579	0.574	0.581	0.585
28	0.608	0.609	0.609	0.608	0.608	0.604	0.586	0.592	0.594	0.594	0.592	0.594
29	0.61	0.61	0.609	0.61	0.607	0.606	0.599	0.597	0.598	0.596	0.598	0.598
30	0.609	0.609	0.609	0.609	0.596	0.598	0.588	0.596	0.599	0.598	0.599	0.594
31	0.608	0.609	0.61	0.611	0.606	0.6	0.602	0.6	0.601	0.601	0.601	0.6
32	0.61	0.608	0.607	0.609	0.602	0.601	0.602	0.603	0.604	0.604	0.602	0.602
33	0.609	0.609	0.612	0.609	0.602	0.606	0.591	0.596	0.607	0.605	0.604	0.604
34	0.609	0.607	0.608	0.609	0.603	0.595	0.596	0.602	0.61	0.607	0.605	0.609
35	0.608	0.609	0.608	0.609	0.609	0.594	0.59	0.609	0.609	0.609	0.608	0.608
36	0.607	0.607	0.609	0.604	0.607	0.589	0.609	0.597	0.609	0.608	0.608	0.607
37	0.609	0.608	0.607	0.608	0.599	0.593	0.609	0.612	0.611	0.608	0.608	0.611
38	0.608	0.609	0.609	0.609	0.598	0.6	0.611	0.613	0.615	0.612	0.614	0.612
39	0.592	0.609	0.607	0.608	0.607	0.592	0.605	0.614	0.614	0.615	0.615	0.614
40	0.607	0.607	0.607	0.606	0.603	0.582	0.601	0.605	0.614	0.614	0.614	0.613
41	0.608	0.606	0.608	0.607	0.603	0.579	0.599	0.609	0.617	0.614	0.614	0.614
42	0.607	0.607	0.607	0.607	0.606	0.601	0.6	0.605	0.619	0.618	0.618	0.615
43	0.606	0.606	0.606	0.605	0.604	0.599	0.596	0.599	0.616	0.619	0.618	0.617
44	0.605	0.606	0.602	0.602	0.604	0.604	0.609	0.612	0.622	0.618	0.618	0.619
45	0.604	0.604	0.599	0.604	0.603	0.601	0.619	0.618	0.613	0.621	0.618	0.62
46	0.602	0.603	0.597	0.604	0.603	0.601	0.618	0.614	0.614	0.621	0.621	0.621
47	0.602	0.604	0.604	0.604	0.604	0.601	0.62	0.616	0.618	0.617	0.618	0.621
48	0.603	0.603	0.602	0.603	0.606	0.602	0.612	0.623	0.62	0.61	0.62	0.623
49	0.602	0.602	0.605	0.602	0.602	0.597	0.612	0.608	0.61	0.623	0.624	0.624

Bay 8 Bottom Prior to Blasting

50	0.602	0.603	0.604	0.601	0.592	0.587	0.62	0.623	0.624	0.624	0.623	0.626
51	0.599	0.601	0.599	0.601	0.593	0.591	0.613	0.618	0.618	0.624	0.626	0.625
52	0.599	0.601	0.598	0.601	0.598	0.591	0.613	0.624	0.624	0.625	0.626	0.627
53	0.6	0.6	0.597	0.603	0.596	0.594	0.625	0.626	0.623	0.621	0.624	0.627
54	0.599	0.595	0.596	0.597	0.596	0.596	0.62	0.623	0.621	0.623	0.624	0.626
55	0.595	0.595	0.596	0.596	0.594	0.595	0.625	0.619	0.623	0.609	0.624	0.624
56	0.591	0.593	0.594	0.594	0.592	0.591	0.614	0.621	0.62	0.61	0.622	0.623
57	0.592	0.594	0.594	0.59	0.581	0.586	0.61	0.612	0.624	0.625	0.622	0.626
58	0.591	0.593	0.592	0.592	0.587	0.586	0.615	0.622	0.626	0.621	0.625	0.625
59	0.594	0.594	0.595	0.594	0.593	0.596	0.627	0.632	0.626	0.626	0.625	0.627
60	0.594	0.594	0.595	0.592	0.593	0.593	0.625	0.63	0.626	0.625	0.626	0.627
61	0.597	0.595	0.596	0.596	0.579	0.546	0.619	0.626	0.627	0.624	0.624	0.626
62	0.593	0.599	0.597	0.599	0.566	0.571	0.624	0.624	0.628	0.626	0.626	0.627
63	0.599	0.599	0.599	0.598	0.594	0.592	0.618	0.625	0.627	0.624	0.627	0.628
64	0.599	0.599	0.6	0.599	0.589	0.578	0.618	0.626	0.625	0.625	0.626	0.628
65	0.602	0.602	0.602	0.601	0.596	0.593	0.63	0.624	0.624	0.628	0.629	0.626
66	0.598	0.596	0.597	0.599	0.591	0.601	0.627	0.623	0.62	0.627	0.626	0.62
67	0.595	0.593	0.602	0.603	0.601	0.586	0.625	0.623	0.622	0.623	0.594	0.626
68	0.602	0.603	0.601	0.6	0.596	0.588	0.624	0.623	0.622	0.621	0.624	0.626
69	0.594	0.602	0.601	0.601	0.596	0.598	0.624	0.625	0.625	0.622	0.628	0.64
70	0.6	0.604	0.598	0.602	0.601	0.592	0.623	0.623	0.622	0.625	0.623	0.626
71	0.604	0.604	0.606	0.604	0.602	0.603	0.625	0.622	0.623	0.621	0.625	0.627
72	0.603	0.606	0.606	0.605	0.602	0.6	0.623	0.623	0.625	0.622	0.624	0.627
73	0.604	0.601	0.602	0.601	0.598	0.6	0.62	0.617	0.623	0.621	0.623	0.625
74	0.602	0.602	0.6	0.586	0.597	0.603	0.613	0.62	0.608	0.62	0.621	0.624
75	0.609	0.604	0.6	0.604	0.601	0.601	0.616	0.611	0.606	0.603	0.62	0.619
76	0.606	0.604	0.607	0.607	0.604	0.605	0.611	0.618	0.622	0.621	0.619	0.62
77	0.606	0.606	0.607	0.605	0.599	0.606	0.618	0.618	0.618	0.616	0.618	0.618
78	0.605	0.605	0.606	0.605	0.605	0.601	0.612	0.618	0.618	0.615	0.618	0.615
79	0.608	0.607	0.608	0.606	0.606	0.605	0.615	0.609	0.614	0.62	0.615	0.617
80	0.605	0.605	0.605	0.606	0.605	0.603	0.606	0.61	0.615	0.613	0.615	0.617
81	0.61	0.607	0.609	0.609	0.601	0.578	0.617	0.614	0.617	0.615	0.615	0.614
82	0.611	0.608	0.608	0.609	0.599	0.583	0.593	0.613	0.613	0.613	0.612	0.616
83	0.61	0.607	0.61	0.608	0.6	0.586	0.594	0.613	0.613	0.612	0.613	0.616
84	0.608	0.609	0.609	0.605	0.598	0.584	0.603	0.608	0.609	0.609	0.612	0.61
85	0.606	0.609	0.605	0.608	0.591	0.589	0.574	0.609	0.61	0.608	0.609	0.61
86	0.611	0.61	0.607	0.607	0.599	0.6	0.589	0.604	0.606	0.609	0.608	0.608
87	0.61	0.611	0.608	0.606	0.591	0.597	0.607	0.608	0.604	0.606	0.607	0.602
88	0.608	0.608	0.61	0.608	0.604	0.596	0.603	0.608	0.607	0.606	0.606	0.598
89	0.609	0.609	0.607	0.606	0.604	0.592	0.602	0.606	0.607	0.602	0.604	0.603
90	0.61	0.607	0.61	0.606	0.609	0.589	0.575	0.598	0.589	0.587	0.602	0.596
91	0.606	0.609	0.608	0.607	0.603	0.594	0.571	0.575	0.574	0.567	0.562	0.588
92	0.611	0.61	0.609	0.61	0.609	0.595	0.561	0.558	0.575	0.566	0.579	0.569
93	0.61	0.608	0.609	0.609	0.603	0.576	0.578	0.581	0.576	0.579	0.582	0.581
94	0.61	0.605	0.609	0.609	0.606	0.591	0.582	0.582	0.579	0.585	0.582	0.578
95	0.609	0.61	0.604	0.608	0.608	0.606	0.581	0.584	0.581	0.581	0.583	0.584
96	0.61	0.613	0.61	0.609	0.596	0.605	0.57	0.572	0.582	0.581	0.567	0.582
97	0.615	0.609	0.608	0.608	0.576	0.592	0.561	0.563	0.583	0.582	0.585	0.582
98	0.61	0.609	0.608	0.607	0.607	0.606	0.573	0.568	0.588	0.583	0.585	0.585
99	0.608	0.61	0.61	0.593	0.606	0.604	0.582	0.584	0.583	0.585	0.583	0.583
100	0.609	0.608	0.606	0.587	0.598	0.598	0.578	0.588	0.584	0.586	0.588	0.587

Bay 8 Bottom Prior to Blasting

101	0.608	0.609	0.586	0.609	0.605	0.6	0.577	0.587	0.584	0.586	0.584	0.588
102	0.609	0.609	0.607	0.606	0.608	0.584	0.584	0.581	0.585	0.585	0.587	0.588
103	0.605	0.608	0.606	0.606	0.604	0.59	0.556	0.587	0.587	0.588	0.585	0.588
104	0.606	0.608	0.609	0.607	0.605	0.578	0.571	0.578	0.583	0.587	0.583	0.586
105	0.602	0.607	0.606	0.605	0.589	0.588	0.585	0.576	0.586	0.589	0.587	0.586
106	0.603	0.606	0.607	0.605	0.605	0.601	0.584	0.587	0.57	0.585	0.584	0.586
107	0.607	0.604	0.607	0.603	0.593	0.595	0.584	0.588	0.586	0.586	0.587	0.588
108	0.606	0.606	0.604	0.603	0.602	0.604	0.588	0.586	0.589	0.587	0.587	0.585
109	0.605	0.607	0.59	0.575	0.602	0.607	0.587	0.589	0.56	0.572	0.587	0.587
110	0.605	0.604	0.6	0.592	0.599	0.605	0.586	0.584	0.567	0.573	0.585	0.583
111	0.607	0.605	0.605	0.607	0.606	0.6	0.585	0.585	0.585	0.588	0.586	0.588
112	0.609	0.606	0.603	0.602	0.598	0.604	0.584	0.587	0.588	0.587	0.586	0.589
113	0.605	0.607	0.604	0.602	0.594	0.593	0.561	0.564	0.589	0.587	0.587	0.587
114	0.604	0.604	0.601	0.605	0.6	0.603	0.573	0.564	0.588	0.586	0.591	0.586
115	0.6	0.601	0.596	0.602	0.602	0.594	0.582	0.585	0.588	0.589	0.589	0.59
116	0.609	0.602	0.59	0.602	0.601	0.6	0.569	0.584	0.586	0.586	0.59	0.589
117	0	0	0	0.602	0.598	0.602	0.584	0.579	0.586	0.59	0.587	0.587
118	0	0	0	0	0	0	0	0	0.599	0.598	0.592	0.596

THICKNESS DATA SHEET

DATA SHEET NO. _____

PLANT VY OUTAGE 20 DRAWING NA REV. NA

SYSTEM TORUS COMPONENT/WELD NO. TORUS BOTTOM BAY 8 EN NA

LOCATION RB 213'

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .6"

INSTRUMENT:
MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93134807

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 89303 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS E/C 1-1 PRODUCT FORM: STEPWEDGE THICKNESSES: .4, .5, .6, .7, .8"

CALIBRATION TIMES:
INITIAL: 2055 CHECK: 2145 CHECK: 2305 CHECK: 0045 FINAL: 0230

SKETCH WITH RESULTS:

THERMO S/N 162579
CAL BLK TEMP 70°
COMP TEMP 71°

min .528"
MAX. .626"
AVERAGE .600"

Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 4/10/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 4-10-98

COGNIZANT ENGINEER [signature] DATE 5/6/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

BAY 8 AFTER BLASTING

B8BOT-	A	B	C	D	E	F	G	H	I	J	K	L
1	NA	NA	NA	NA	NA	NA	0.577	0.585	0.603	0.604	0.586	0.588
2	0.586	0.588	0.594	0.594	0.582	0.583	0.593	0.590	0.606	0.606	0.601	0.603
3	0.573	0.586	0.597	0.596	0.594	0.592	0.603	0.599	0.605	0.607	0.606	0.608
4	0.595	0.600	0.597	0.599	0.597	0.585	0.603	0.602	0.605	0.606	0.608	0.606
5	0.600	0.599	0.600	0.600	0.578	0.574	0.604	0.603	0.607	0.606	0.606	0.606
6	0.600	0.601	0.600	0.601	0.588	0.585	0.599	0.597	0.607	0.606	0.607	0.607
7	0.600	0.601	0.600	0.602	0.599	0.594	0.597	0.598	0.606	0.604	0.604	0.605
8	0.600	0.600	0.600	0.604	0.597	0.594	0.601	0.597	0.604	0.606	0.607	0.606
9	0.603	0.602	0.603	0.603	0.600	0.597	0.599	0.600	0.607	0.608	0.596	0.606
10	0.602	0.602	0.602	0.602	0.599	0.597	0.591	0.601	0.607	0.607	0.605	0.606
11	0.602	0.601	0.603	0.602	0.601	0.599	0.599	0.600	0.605	0.605	0.604	0.605
12	0.602	0.599	0.603	0.603	0.601	0.596	0.596	0.600	0.603	0.606	0.605	0.605
13	0.599	0.591	0.594	0.603	0.584	0.588	0.593	0.589	0.604	0.605	0.605	0.605
14	0.597	0.597	0.591	0.603	0.601	0.602	0.602	0.602	0.601	0.603	0.604	0.605
15	0.603	0.603	0.601	0.602	0.600	0.598	0.599	0.602	0.605	0.604	0.603	0.603
16	0.607	0.606	0.602	0.583	0.598	0.602	0.603	0.606	0.601	0.606	0.606	0.604
17	0.609	0.602	0.596	0.581	0.579	0.598	0.593	0.592	0.586	0.591	0.600	0.601
18	0.606	0.605	0.598	0.591	0.600	0.602	0.588	0.597	0.571	0.593	0.603	0.603
19	0.607	0.606	0.605	0.600	0.605	0.602	0.590	0.589	0.595	0.601	0.602	0.602
20	0.606	0.605	0.603	0.603	0.588	0.584	0.588	0.594	0.596	0.600	0.601	0.599
21	0.607	0.605	0.607	0.604	0.601	0.594	0.587	0.597	0.599	0.600	0.601	0.601
22	0.607	0.606	0.605	0.604	0.599	0.595	0.596	0.596	0.598	0.598	0.597	0.600
23	0.606	0.606	0.606	0.606	0.598	0.594	0.594	0.597	0.598	0.599	0.598	0.589
24	0.607	0.608	0.605	0.606	0.599	0.598	0.595	0.597	0.596	0.597	0.596	0.587
25	0.608	0.608	0.608	0.604	0.595	0.589	0.594	0.596	0.597	0.596	0.595	0.594
26	0.610	0.610	0.605	0.603	0.595	0.584	0.588	0.582	0.591	0.592	0.590	0.591
27	0.607	0.607	0.605	0.605	0.605	0.601	0.580	0.580	0.574	0.574	0.580	0.586
28	0.607	0.607	0.606	0.606	0.606	0.601	0.580	0.587	0.592	0.589	0.592	0.594
29	0.607	0.607	0.608	0.607	0.603	0.603	0.594	0.595	0.596	0.594	0.595	0.597
30	0.607	0.606	0.606	0.607	0.590	0.597	0.584	0.592	0.597	0.598	0.597	0.595
31	0.605	0.606	0.605	0.605	0.599	0.594	0.596	0.598	0.599	0.598	0.598	0.599
32	0.609	0.607	0.606	0.606	0.598	0.599	0.598	0.602	0.602	0.603	0.601	0.599
33	0.607	0.606	0.609	0.608	0.601	0.604	0.587	0.595	0.602	0.602	0.602	0.603
34	0.606	0.607	0.607	0.605	0.594	0.591	0.598	0.598	0.599	0.606	0.605	0.605
35	0.608	0.607	0.606	0.604	0.607	0.590	0.589	0.593	0.607	0.604	0.605	0.606
36	0.606	0.606	0.604	0.604	0.602	0.588	0.605	0.595	0.605	0.605	0.606	0.607

LII 4/10/98

BAY 8 AFT LR BLASTING

B8BOT-	A	B	C	D	E	F	G	H	I	J	K	L
37	0.607	0.607	0.607	0.606	0.600	0.591	0.599	0.608	0.608	0.608	0.606	0.610
38	0.606	0.606	0.607	0.608	0.599	0.587	0.602	0.612	0.611	0.612	0.613	0.610
39	0.604	0.603	0.603	0.605	0.605	0.591	0.606	0.614	0.613	0.611	0.611	0.612
40	0.605	0.605	0.604	0.604	0.601	0.592	0.597	0.602	0.611	0.611	0.612	0.613
41	0.607	0.605	0.604	0.605	0.599	0.578	0.600	0.610	0.614	0.614	0.615	0.614
42	0.606	0.606	0.605	0.603	0.601	0.594	0.599	0.603	0.615	0.617	0.618	0.613
43	0.602	0.603	0.604	0.604	0.603	0.596	0.595	0.597	0.615	0.616	0.616	0.618
44	0.603	0.603	0.598	0.599	0.597	0.598	0.604	0.609	0.616	0.616	0.617	0.617
45	0.603	0.601	0.589	0.589	0.598	0.601	0.600	0.600	0.592	0.619	0.618	0.619
46	0.601	0.600	0.598	0.602	0.602	0.600	0.617	0.616	0.614	0.616	0.618	0.617
47	0.600	0.600	0.601	0.600	0.601	0.597	0.617	0.614	0.618	0.616	0.616	0.619
48	0.599	0.601	0.599	0.600	0.600	0.600	0.611	0.621	0.617	0.607	0.619	0.621
49	0.600	0.599	0.601	0.599	0.602	0.596	0.606	0.608	0.607	0.621	0.623	0.621
50	0.597	0.597	0.599	0.596	0.591	0.585	0.619	0.621	0.621	0.623	0.622	0.625
51	0.597	0.596	0.596	0.598	0.590	0.589	0.611	0.616	0.616	0.623	0.621	0.623
52	0.596	0.594	0.596	0.596	0.593	0.593	0.603	0.619	0.624	0.622	0.621	0.624
53	0.595	0.593	0.595	0.596	0.595	0.585	0.617	0.622	0.619	0.620	0.621	0.623
54	0.595	0.594	0.595	0.593	0.594	0.591	0.619	0.620	0.619	0.621	0.624	0.625
55	0.593	0.591	0.593	0.593	0.591	0.591	0.619	0.615	0.620	0.610	0.622	0.624
56	0.590	0.592	0.587	0.591	0.591	0.585	0.608	0.619	0.620	0.604	0.621	0.624
57	0.587	0.588	0.589	0.588	0.573	0.580	0.600	0.608	0.624	0.621	0.623	0.624
58	0.587	0.588	0.588	0.588	0.574	0.582	0.611	0.622	0.623	0.621	0.623	0.620
59	0.593	0.595	0.595	0.592	0.586	0.582	0.621	0.625	0.623	0.621	0.624	0.625
60	0.591	0.590	0.590	0.587	0.587	0.589	0.623	0.622	0.625	0.624	0.623	0.624
61	0.594	0.592	0.593	0.590	0.528	0.535	0.615	0.621	0.626	0.622	0.623	0.624
62	0.589	0.592	0.592	0.593	0.565	0.566	0.615	0.622	0.624	0.623	0.624	0.625
63	0.594	0.592	0.591	0.593	0.589	0.578	0.614	0.623	0.623	0.622	0.622	0.626
64	0.597	0.593	0.596	0.594	0.574	0.573	0.616	0.622	0.624	0.623	0.625	0.625
65	0.598	0.594	0.594	0.592	0.594	0.593	0.623	0.623	0.619	0.622	0.624	0.623
66	0.598	0.594	0.596	0.593	0.593	0.595	0.620	0.621	0.617	0.620	0.621	0.620
67	0.591	0.591	0.600	0.598	0.598	0.582	0.618	0.621	0.621	0.624	0.589	0.626
68	0.599	0.598	0.596	0.596	0.592	0.580	0.623	0.619	0.620	0.623	0.624	0.626
69	0.590	0.598	0.601	0.594	0.595	0.585	0.624	0.622	0.621	0.621	0.624	0.625
70	0.600	0.601	0.598	0.600	0.600	0.591	0.623	0.620	0.619	0.624	0.623	0.620
71	0.602	0.600	0.600	0.594	0.596	0.598	0.617	0.618	0.617	0.621	0.622	0.622
72	0.603	0.602	0.602	0.599	0.600	0.598	0.617	0.619	0.620	0.619	0.621	0.622

LII 4/10/98

BAY 8 AFTER BLASTING

B8BOT-	A	B	C	D	E	F	G	H	I	J	K	L
73	0.601	0.601	0.598	0.598	0.597	0.599	0.613	0.616	0.619	0.619	0.621	0.620
74	0.602	0.602	0.592	0.581	0.599	0.597	0.613	0.613	0.603	0.618	0.618	0.617
75	0.605	0.604	0.600	0.597	0.592	0.599	0.615	0.606	0.605	0.597	0.618	0.617
76	0.602	0.603	0.602	0.602	0.604	0.602	0.609	0.608	0.617	0.619	0.618	0.619
77	0.605	0.604	0.604	0.602	0.599	0.599	0.609	0.614	0.617	0.616	0.617	0.617
78	0.605	0.603	0.603	0.602	0.602	0.595	0.611	0.614	0.615	0.612	0.612	0.614
79	0.606	0.606	0.604	0.604	0.601	0.600	0.608	0.605	0.610	0.615	0.612	0.614
80	0.604	0.603	0.605	0.603	0.588	0.586	0.601	0.606	0.611	0.610	0.612	0.612
81	0.604	0.605	0.606	0.605	0.589	0.575	0.609	0.609	0.611	0.613	0.613	0.612
82	0.607	0.607	0.606	0.606	0.599	0.581	0.588	0.607	0.608	0.611	0.610	0.612
83	0.607	0.607	0.606	0.604	0.596	0.585	0.590	0.609	0.611	0.609	0.609	0.610
84	0.606	0.604	0.606	0.608	0.598	0.582	0.598	0.608	0.608	0.607	0.610	0.608
85	0.605	0.607	0.604	0.605	0.590	0.591	0.574	0.600	0.606	0.606	0.604	0.605
86	0.604	0.604	0.604	0.604	0.589	0.585	0.587	0.597	0.605	0.604	0.603	0.604
87	0.606	0.604	0.606	0.605	0.589	0.595	0.600	0.603	0.603	0.602	0.603	0.597
88	0.605	0.607	0.605	0.603	0.603	0.592	0.593	0.602	0.601	0.600	0.600	0.580
89	0.607	0.604	0.605	0.601	0.603	0.585	0.592	0.601	0.602	0.600	0.599	0.601
90	0.609	0.607	0.604	0.605	0.603	0.581	0.569	0.587	0.587	0.586	0.593	0.594
91	0.606	0.605	0.608	0.606	0.602	0.593	0.562	0.567	0.574	0.568	0.559	0.584
92	0.608	0.606	0.609	0.606	0.606	0.590	0.558	0.558	0.571	0.563	0.575	0.567
93	0.608	0.607	0.607	0.607	0.601	0.576	0.578	0.577	0.575	0.578	0.579	0.579
94	0.606	0.604	0.604	0.606	0.602	0.586	0.573	0.579	0.574	0.583	0.581	0.573
95	0.605	0.604	0.604	0.603	0.603	0.601	0.577	0.581	0.580	0.579	0.581	0.578
96	0.606	0.605	0.605	0.604	0.584	0.604	0.560	0.569	0.582	0.581	0.565	0.580
97	0.607	0.605	0.604	0.594	0.577	0.590	0.559	0.557	0.582	0.582	0.584	0.578
98	0.607	0.604	0.604	0.603	0.602	0.603	0.566	0.563	0.582	0.580	0.581	0.580
99	0.605	0.604	0.603	0.594	0.598	0.599	0.580	0.583	0.581	0.584	0.584	0.581
100	0.606	0.605	0.604	0.590	0.595	0.593	0.572	0.586	0.584	0.585	0.584	0.583
101	0.604	0.602	0.586	0.604	0.602	0.595	0.573	0.580	0.582	0.584	0.583	0.583
102	0.603	0.605	0.603	0.589	0.602	0.578	0.578	0.576	0.584	0.580	0.583	0.586
103	0.603	0.605	0.605	0.603	0.602	0.586	0.555	0.585	0.586	0.585	0.584	0.585
104	0.606	0.604	0.604	0.602	0.596	0.572	0.569	0.575	0.582	0.583	0.584	0.585
105	0.603	0.603	0.604	0.602	0.581	0.581	0.575	0.573	0.584	0.586	0.586	0.585
106	0.603	0.604	0.603	0.600	0.599	0.595	0.580	0.587	0.566	0.585	0.585	0.584
107	0.605	0.603	0.603	0.598	0.588	0.589	0.583	0.586	0.586	0.586	0.586	0.587
108	0.605	0.606	0.603	0.598	0.601	0.601	0.587	0.586	0.585	0.584	0.587	0.585

[illegible] LII 4/10/98

BAY 8 AFTER BLASTING

B8BOT-	A	B	C	D	E	F	G	H	I	J	K	L
109	0.601	0.601	0.588	0.571	0.599	0.597	0.584	0.586	0.558	0.567	0.585	0.586
110	0.603	0.600	0.593	0.588	0.597	0.601	0.584	0.583	0.565	0.570	0.585	0.584
111	0.603	0.601	0.602	0.601	0.601	0.601	0.582	0.583	0.582	0.585	0.586	0.584
112	0.603	0.602	0.594	0.601	0.596	0.600	0.581	0.583	0.585	0.585	0.582	0.583
113	0.602	0.599	0.601	0.602	0.589	0.587	0.558	0.563	0.585	0.585	0.585	0.585
114	0.601	0.599	0.597	0.599	0.595	0.597	0.572	0.559	0.584	0.586	0.586	0.584
115	0.597	0.601	0.595	0.600	0.600	0.598	0.581	0.580	0.584	0.587	0.586	0.587
116	0.601	0.592	0.589	0.598	0.593	0.599	0.562	0.584	0.585	0.584	0.587	0.588
117	NA	NA	NA	0.598	0.596	0.600	0.575	0.581	0.578	0.588	0.586	0.584
118	NA	NA	NA	NA	NA	NA	NA	NA	0.594	0.594	0.589	0.589

TAHerr LII 4/10/98

Prior to Blasting

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-84

PLANT V. Y. OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 16 EN N/A

LOCATION BOTTOM OF TORUS, BAY 16

MATERIAL: C/S PRODUCT FORM: WROUGHT APPROX. THICK.: 0.60"

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL+ SERIAL NO.: 93134807

CRT ☐ DIGITAL ☒ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: S/N 69311 PANAMETRICS D791 RM MODE: ☒ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHZ SIZE: .312"

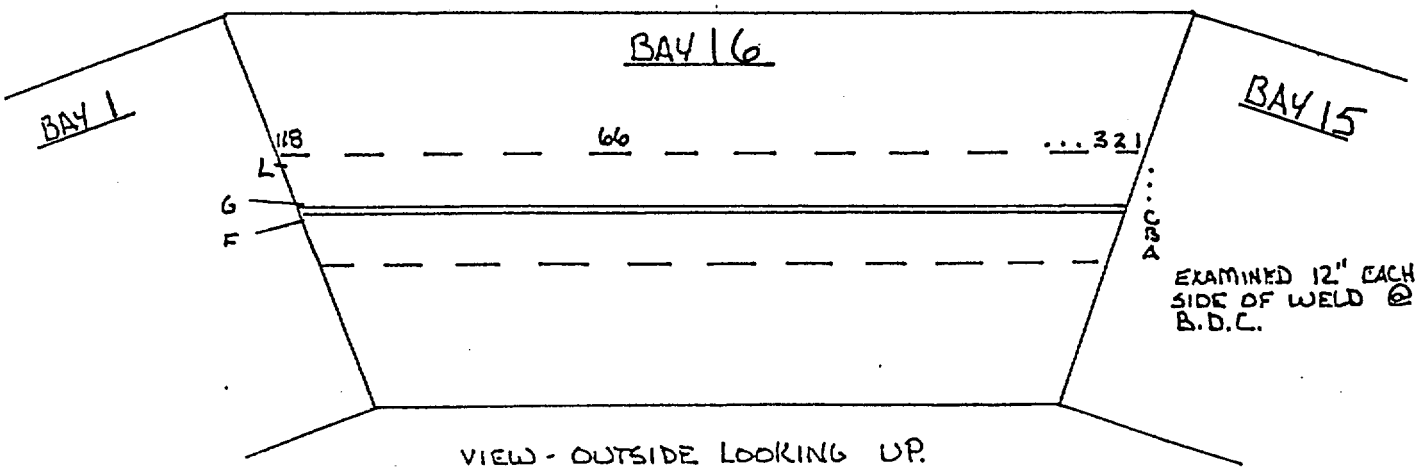
CAL. BLOCK MATERIAL: C/S PRODUCT FORM: STEPWEDGE THICKNESSES: .25", .50", .75"

CALIBRATION TIMES: INITIAL: 0848 CHECK: 1026 CHECK: 1210 CHECK: 1340 FINAL: 1456

THERMOMETER S/N - 162556 CAL BLOCK - 73°F COMP. - 70°F

SKETCH WITH RESULTS:

OBSTRUCTIONS DUE TO BAY CONFIGURATION.



Evaluation Required: (YES) NO

EXAMINER [signature] Janet K Miller LEVEL II DATE 4-4-98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 4.4.98

COGNIZANT ENGINEER [signature] DATE 5/7/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

BAY16BOT

BAY16-	A	B	C	D	E	F	G	H	I	J	K	L
1	0	0	0	0	0	0	0.634	0.598	0.605	0.608	0.604	0.602
2	0.595	0.593	0.59	0.595	0.596	0.599	0.601	0.604	0.596	0.589	0.603	0.61
3	0.599	0.601	0.601	0.602	0.578	0.598	0.597	0.603	0.604	0.594	0.605	0.613
4	0.601	0.601	0.604	0.591	0.595	0.596	0.609	0.612	0.611	0.606	0.607	0.612
5	0.601	0.602	0.603	0.589	0.581	0.592	0.606	0.61	0.609	0.607	0.611	0.613
6	0.602	0.603	0.594	0.595	0.595	0.6	0.615	0.605	0.612	0.611	0.614	0.611
7	0.603	0.604	0.605	0.597	0.605	0.604	0.603	0.603	0.615	0.609	0.612	0.612
8	0.604	0.607	0.592	0.606	0.603	0.599	0.611	0.612	0.601	0.609	0.612	0.614
9	0.607	0.607	0.607	0.608	0.603	0.602	0.606	0.622	0.605	0.605	0.614	0.611
10	0.606	0.607	0.593	0.603	0.608	0.6	0.614	0.597	0.607	0.609	0.612	0.612
11	0.61	0.601	0.604	0.61	0.605	0.613	0.609	0.605	0.615	0.614	0.615	0.61
12	0.607	0.611	0.61	0.611	0.609	0.597	0.608	0.618	0.615	0.608	0.609	0.614
13	0.611	0.61	0.609	0.611	0.612	0.606	0.605	0.612	0.612	0.607	0.613	0.614
14	0.611	0.61	0.607	0.606	0.612	0.605	0.601	0.62	0.612	0.615	0.615	0.613
15	0.61	0.612	0.614	0.6	0.613	0.614	0.61	0.608	0.611	0.612	0.611	0.61
16	0.611	0.612	0.61	0.611	0.615	0.615	0.612	0.613	0.612	0.613	0.613	0.611
17	0.612	0.614	0.609	0.607	0.613	0.614	0.612	0.611	0.614	0.606	0.608	0.612
18	0.615	0.612	0.614	0.613	0.613	0.607	0.611	0.616	0.617	0.612	0.611	0.612
19	0.614	0.615	0.614	0.617	0.614	0.615	0.609	0.61	0.617	0.61	0.611	0.61
20	0.613	0.614	0.613	0.614	0.61	0.603	0.606	0.606	0.608	0.616	0.615	0.61
21	0.613	0.614	0.614	0.613	0.613	0.611	0.592	0.606	0.609	0.609	0.608	0.601
22	0.612	0.614	0.612	0.617	0.613	0.604	0.602	0.61	0.606	0.609	0.606	0.606
23	0.615	0.616	0.613	0.614	0.616	0.632	0.598	0.634	0.607	0.61	0.608	0.608
24	0.611	0.616	0.614	0.613	0.614	0.609	0.599	0.605	0.605	0.606	0.604	0.618
25	0.612	0.613	0.613	0.613	0.612	0.605	0.605	0.601	0.604	0.605	0.606	0.605
26	0.613	0.611	0.614	0.614	0.617	0.601	0.628	0.602	0.603	0.605	0.603	0.608
27	0.615	0.612	0.614	0.615	0.605	0.604	0.597	0.596	0.601	0.598	0.606	0.586
28	0.614	0.615	0.615	0.618	0.613	0.606	0.605	0.598	0.599	0.599	0.589	0.621
29	0.59	0.614	0.617	0.614	0.602	0.606	0.604	0.595	0.6	0.598	0.597	0.592
30	0.613	0.614	0.614	0.63	0.603	0.602	0.591	0.59	0.6	0.599	0.597	0.599
31	0.614	0.616	0.614	0.614	0.606	0.613	0.605	0.601	0.602	0.6	0.599	0.599
32	0.611	0.613	0.615	0.611	0.615	0.615	0.606	0.602	0.602	0.601	0.6	0.599
33	0.614	0.613	0.613	0.615	0.617	0.608	0.604	0.608	0.604	0.603	0.602	0.617
34	0.614	0.611	0.613	0.614	0.609	0.604	0.602	0.605	0.607	0.607	0.609	0.607
35	0.614	0.613	0.616	0.61	0.61	0.61	0.598	0.61	0.609	0.605	0.609	0.607
36	0.613	0.613	0.617	0.617	0.614	0.614	0.612	0.611	0.611	0.611	0.61	0.611

BAY16BOT

BAY16-	A	B	C	D	E	F	G	H	I	J	K	L
37	0.613	0.615	0.614	0.614	0.616	0.605	0.604	0.613	0.618	0.61	0.611	0.613
38	0.614	0.615	0.614	0.644	0.612	0.603	0.611	0.615	0.615	0.613	0.609	0.614
39	0.614	0.616	0.616	0.621	0.612	0.598	0.611	0.611	0.612	0.614	0.617	0.613
40	0.612	0.614	0.613	0.614	0.61	0.604	0.603	0.613	0.617	0.613	0.614	0.613
41	0.616	0.613	0.612	0.613	0.609	0.61	0.612	0.617	0.611	0.615	0.619	0.615
42	0.613	0.613	0.629	0.612	0.609	0.61	0.616	0.616	0.616	0.615	0.614	0.614
43	0.611	0.611	0.611	0.612	0.609	0.606	0.617	0.616	0.617	0.617	0.616	0.615
44	0.611	0.611	0.611	0.613	0.611	0.6	0.613	0.62	0.618	0.618	0.617	0.618
45	0.612	0.613	0.613	0.613	0.608	0.618	0.611	0.619	0.62	0.622	0.619	0.619
46	0.611	0.615	0.613	0.611	0.612	0.595	0.615	0.619	0.621	0.619	0.617	0.618
47	0.61	0.61	0.611	0.612	0.608	0.594	0.611	0.619	0.62	0.619	0.621	0.621
48	0.609	0.61	0.61	0.605	0.608	0.599	0.616	0.648	0.62	0.62	0.621	0.622
49	0.608	0.608	0.606	0.604	0.607	0.603	0.615	0.61	0.62	0.619	0.619	0.619
50	0.607	0.609	0.611	0.605	0.605	0.602	0.614	0.622	0.621	0.647	0.616	0.618
51	0.607	0.611	0.611	0.609	0.609	0.603	0.611	0.622	0.62	0.617	0.621	0.618
52	0.609	0.609	0.597	0.594	0.607	0.604	0.618	0.626	0.625	0.608	0.62	0.619
53	0.608	0.608	0.596	0.597	0.607	0.589	0.619	0.622	0.613	0.607	0.621	0.619
54	0.61	0.606	0.606	0.606	0.597	0.592	0.616	0.624	0.622	0.622	0.621	0.618
55	0.611	0.606	0.605	0.607	0.604	0.594	0.619	0.623	0.622	0.62	0.62	0.62
56	0.606	0.603	0.6	0.599	0.606	0.6	0.624	0.618	0.624	0.621	0.62	0.621
57	0.604	0.606	0.596	0.604	0.597	0.606	0.613	0.612	0.622	0.622	0.622	0.621
58	0.593	0.601	0.595	0.597	0.596	0.598	0.614	0.622	0.622	0.625	0.621	0.621
59	0.603	0.587	0.622	0.595	0.59	0.596	0.618	0.622	0.623	0.621	0.622	0.62
60	0.599	0.584	0.592	0.585	0.593	0.611	0.622	0.624	0.625	0.621	0.62	0.621
61	0.601	0.601	0.593	0.598	0.599	0.601	0.607	0.619	0.62	0.62	0.619	0.618
62	0.601	0.604	0.605	0.596	0.605	0.604	0.616	0.622	0.622	0.619	0.619	0.62
63	0.603	0.601	0.603	0.602	0.602	0.597	0.621	0.621	0.622	0.621	0.622	0.62
64	0.601	0.581	0.604	0.601	0.597	0.601	0.614	0.621	0.624	0.619	0.619	0.621
65	0.605	0.579	0.601	0.604	0.609	0.608	0.619	0.622	0.62	0.619	0.619	0.617
66	0.605	0.603	0.603	0.604	0.607	0.605	0.621	0.621	0.621	0.619	0.619	0.617
67	0.602	0.603	0.604	0.604	0.608	0.606	0.622	0.622	0.621	0.619	0.617	0.618
68	0.602	0.58	0.603	0.605	0.608	0.607	0.611	0.62	0.617	0.62	0.612	0.617
69	0.603	0.603	0.605	0.609	0.611	0.599	0.615	0.611	0.613	0.618	0.618	0.617
70	0.62	0.589	0.597	0.6	0.608	0.604	0.61	0.612	0.566	0.614	0.617	0.616
71	0.6	0.623	0.594	0.609	0.612	0.605	0.608	0.606	0.614	0.587	0.613	0.614
72	0.601	0.606	0.605	0.605	0.612	0.602	0.612	0.614	0.617	0.617	0.614	0.616

BAY16BOT

BAY16-	A	B	C	D	E	F	G	H	I	J	K	L
73	0.604	0.604	0.606	0.608	0.609	0.611	0.605	0.617	0.617	0.615	0.616	0.618
74	0.604	0.603	0.604	0.602	0.61	0.606	0.607	0.616	0.617	0.616	0.614	0.614
75	0.605	0.606	0.601	0.6	0.606	0.603	0.615	0.613	0.615	0.613	0.613	0.613
76	0.605	0.604	0.605	0.608	0.61	0.6	0.612	0.616	0.614	0.616	0.614	0.613
77	0.607	0.606	0.608	0.61	0.614	0.61	0.601	0.608	0.614	0.616	0.609	0.611
78	0.605	0.605	0.608	0.609	0.61	0.604	0.604	0.606	0.611	0.61	0.607	0.609
79	0.609	0.603	0.607	0.609	0.61	0.602	0.601	0.605	0.61	0.61	0.606	0.609
80	0.604	0.608	0.608	0.609	0.605	0.611	0.597	0.611	0.606	0.608	0.605	0.607
81	0.607	0.608	0.608	0.602	0.61	0.612	0.597	0.609	0.603	0.608	0.607	0.605
82	0.607	0.608	0.608	0.609	0.611	0.606	0.604	0.608	0.594	0.605	0.606	0.605
83	0.606	0.607	0.603	0.607	0.609	0.612	0.603	0.606	0.612	0.606	0.602	0.603
84	0.607	0.606	0.608	0.61	0.589	0.603	0.597	0.605	0.607	0.604	0.603	0.603
85	0.606	0.608	0.607	0.604	0.611	0.611	0.603	0.602	0.603	0.601	0.602	0.603
86	0.606	0.611	0.607	0.611	0.61	0.615	0.605	0.602	0.601	0.607	0.6	0.602
87	0.607	0.608	0.608	0.61	0.612	0.615	0.596	0.598	0.601	0.605	0.609	0.6
88	0.607	0.608	0.608	0.61	0.612	0.605	0.591	0.59	0.597	0.598	0.597	0.597
89	0.605	0.607	0.608	0.61	0.604	0.6	0.587	0.588	0.597	0.596	0.594	0.593
90	0.608	0.605	0.607	0.613	0.614	0.598	0.585	0.592	0.593	0.594	0.593	0.591
91	0.608	0.604	0.606	0.607	0.608	0.606	0.583	0.582	0.588	0.594	0.595	0.584
92	0.605	0.606	0.606	0.609	0.611	0.603	0.574	0.584	0.572	0.574	0.582	0.589
93	0.605	0.604	0.607	0.597	0.612	0.629	0.58	0.586	0.585	0.584	0.583	0.583
94	0.605	0.606	0.608	0.612	0.61	0.611	0.577	0.571	0.586	0.584	0.584	0.585
95	0.605	0.604	0.607	0.608	0.607	0.614	0.573	0.58	0.585	0.584	0.585	0.582
96	0.604	0.605	0.605	0.61	0.609	0.599	0.584	0.587	0.585	0.584	0.583	0.584
97	0.605	0.605	0.605	0.606	0.609	0.601	0.585	0.583	0.579	0.577	0.585	0.584
98	0.6	0.604	0.605	0.605	0.605	0.598	0.587	0.586	0.629	0.584	0.585	0.586
99	0.604	0.606	0.596	0.607	0.598	0.604	0.588	0.587	0.585	0.585	0.586	0.586
100	0.588	0.589	0.595	0.592	0.604	0.605	0.592	0.583	0.583	0.588	0.585	0.584
101	0.602	0.603	0.601	0.603	0.601	0.599	0.586	0.579	0.574	0.571	0.587	0.586
102	0.602	0.601	0.604	0.604	0.597	0.596	0.577	0.583	0.578	0.586	0.585	0.589
103	0.601	0.601	0.602	0.604	0.605	0.597	0.566	0.573	0.573	0.586	0.586	0.586
104	0.601	0.601	0.603	0.606	0.601	0.595	0.598	0.582	0.589	0.586	0.586	0.586
105	0.601	0.6	0.601	0.603	0.603	0.599	0.587	0.583	0.587	0.587	0.589	0.588
106	0.6	0.6	0.601	0.603	0.602	0.603	0.578	0.58	0.589	0.598	0.588	0.588
107	0.602	0.601	0.602	0.605	0.619	0.608	0.585	0.587	0.58	0.587	0.59	0
108	0.603	0.602	0.602	0.603	0.606	0.596	0.588	0.588	0.588	0.588	0.588	0.589

BAY16-	A	B	C	D	E	F	G	H	I	J	K	L
109	0.6	0.599	0.601	0.603	0.604	0.601	0.588	0.588	0.587	0.588	0.589	0.586
110	0.599	0.599	0.6	0.589	0.605	0.602	0.571	0.589	0.589	0.587	0.586	0.589
111	0.598	0.6	0.599	0.596	0.593	0.587	0.576	0.58	0.587	0.587	0.588	0.586
112	0.599	0.598	0.599	0.6	0.606	0.596	0.577	0.579	0.587	0.588	0.584	0.588
113	0.598	0.598	0.598	0.594	0.597	0.606	0.589	0.585	0.587	0.588	0.587	0.587
114	0.596	0.597	0.597	0.612	0.603	0.602	0.591	0.588	0.586	0.581	0.587	0.585
115	0.591	0.589	0.597	0.598	0.6	0.598	0.583	0.587	0.588	0.591	0.588	0.592
116	0.573	0.595	0.588	0.59	0.583	0.598	0.583	0.589	0.589	0.587	0.587	0.59
117	0	0	0.592	0.588	0.59	0.59	0.578	0.581	0.596	0.592	0.591	0.59
118	0	0	0	0	0	0	0	0.599	0.589	0.585	0.584	0.591

1 of 2

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-85

PLANT V. Y. OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 16 A-1 THRU L-69 EN N/A

LOCATION BOTTOM OF TORUS, RB 232'

MATERIAL: C/S PRODUCT FORM: WROUGHT APPROX. THICK.: 0.6"

INSTRUMENT:
MAKE: PANAMETRICS MODEL: 26 DL+ SERIAL NO.: 93134807

CRT ☐ DIGITAL ☒ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER
MAKE/MODEL: PANAMETRICS D791-RM S/N 69315 MODE: ☒ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312

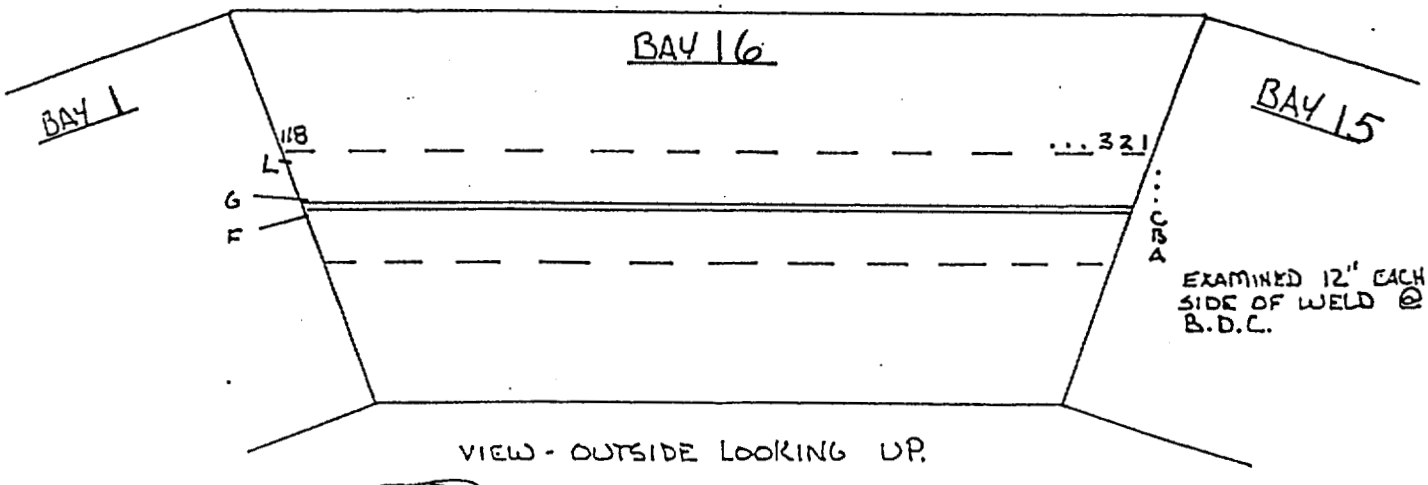
CAL. BLOCK
MATERIAL: C/S PRODUCT FORM: STEPWEDGE THICKNESSES: .25", .50", .75", 1.0"

CALIBRATION TIMES:
INITIAL: 0918 CHECK: 1115 CHECK: 1229 CHECK: 1310 FINAL: 1426

THERMOMETER - 162579 COMP - 73°F CAL BLOCK - 75°F

SKETCH WITH RESULTS:

OBSTRUCTIONS DUE TO BAY CONFIGURATION.



Evaluation Required: (YES) NO

* EXAM AFTER SAND BLAST

EXAMINER [signature] LEVEL II DATE 4-9-98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 4-10-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

292

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-85

PLANT Vermont Yankee OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 16 A-70 thru L-118 EN N/A

LOCATION TORUS Room RB 232'

MATERIAL: CS PRODUCT FORM: WROUGHT APPROX. THICK.: .584"

INSTRUMENT MAKE: Panametrics MODEL: 26 DL+ SERIAL NO.: 93129207

CRT ☐ DIGITAL ☒ S/N 69318 HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: Panametrics D791 MODE: ☒ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 SIZE: .312"

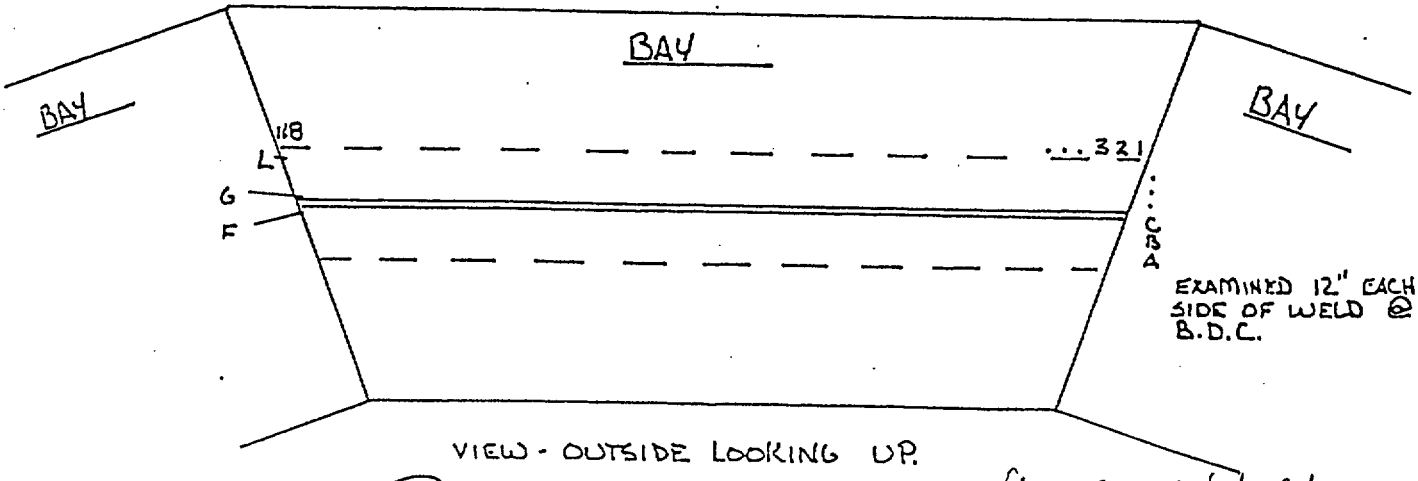
CAL. BLOCK MATERIAL: CS EC 1-1 PRODUCT FORM: STEPWEDGE THICKNESSES: .401", .501", .601", .701"

CALIBRATION TIMES: INITIAL: 0934 CHECK: 1113 CHECK: 1226 CHECK: N/A FINAL: 1357

Thermo S/N 162579 Cal Blk 72° Comp 73°

SKETCH WITH RESULTS:

OBSTRUCTIONS DUE TO BAY CONFIGURATION.



VIEW - OUTSIDE LOOKING UP.

Evaluation Required: (YES) NO * exams after sand blast

EXAMINER Janet L Miller LEVEL II DATE 4/9/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 4.10.98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

TORUS BAY 16 AFTER BLASTING

BAY16												
	A	B	C	D	E	F	G	H	I	J	K	L
1	0	0	0	0	0	0	0.602	0.601	0.603	0.605	0.604	0.599
2	0.6	0.599	0.586	0.588	0.589	0.597	0.591	0.594	0.601	0.605	0.61	0.607
3	0.598	0.6	0.6	0.585	0.591	0.591	0.606	0.613	0.611	0.605	0.609	0.611
4	0.6	0.6	0.601	0.587	0.587	0.592	0.603	0.603	0.607	0.602	0.606	0.607
5	0.6	0.601	0.586	0.585	0.587	0.589	0.608	0.606	0.613	0.606	0.612	0.614
6	0.602	0.603	0.601	0.599	0.581	0.589	0.604	0.605	0.607	0.609	0.612	0.612
7	0.604	0.604	0.602	0.592	0.598	0.6	0.602	0.602	0.6	0.607	0.612	0.61
8	0.604	0.606	0.605	0.604	0.6	0.603	0.609	0.608	0.601	0.607	0.61	0.61
9	0.604	0.605	0.6	0.604	0.605	0.591	0.603	0.612	0.584	0.609	0.61	0.612
10	0.605	0.605	0.598	0.607	0.607	0.597	0.605	0.596	0.606	0.592	0.611	0.611
11	0.606	0.606	0.599	0.602	0.606	0.599	0.601	0.598	0.605	0.603	0.605	0.611
12	0.609	0.607	0.608	0.605	0.603	0.597	0.599	0.6	0.606	0.602	0.607	0.608
13	0.608	0.61	0.609	0.608	0.611	0.6	0.604	0.607	0.609	0.604	0.61	0.61
14	0.611	0.611	0.597	0.606	0.611	0.6	0.6	0.605	0.605	0.608	0.609	0.608
15	0.61	0.61	0.611	0.604	0.612	0.605	0.598	0.61	0.608	0.609	0.61	0.61
16	0.61	0.611	0.609	0.607	0.612	0.604	0.609	0.61	0.61	0.608	0.61	0.61
17	0.611	0.612	0.607	0.604	0.612	0.606	0.609	0.609	0.607	0.605	0.607	0.609
18	0.611	0.612	0.611	0.611	0.607	0.607	0.611	0.611	0.609	0.607	0.61	0.611
19	0.613	0.613	0.613	0.612	0.612	0.609	0.606	0.609	0.609	0.609	0.608	0.609
20	0.603	0.613	0.614	0.612	0.609	0.601	0.605	0.606	0.61	0.61	0.607	0.608
21	0.613	0.614	0.612	0.614	0.609	0.603	0.591	0.601	0.609	0.607	0.608	0.608
22	0.613	0.615	0.614	0.612	0.613	0.599	0.588	0.605	0.607	0.606	0.607	0.606
23	0.613	0.615	0.613	0.613	0.612	0.591	0.588	0.601	0.607	0.607	0.606	0.607
24	0.614	0.614	0.613	0.612	0.61	0.592	0.603	0.603	0.603	0.605	0.605	0.603
25	0.614	0.614	0.612	0.612	0.605	0.608	0.596	0.603	0.604	0.604	0.603	0.602
26	0.614	0.615	0.614	0.612	0.604	0.595	0.597	0.596	0.604	0.603	0.602	0.581
27	0.613	0.613	0.614	0.614	0.604	0.599	0.589	0.59	0.595	0.591	0.595	0.576
28	0.613	0.615	0.616	0.613	0.603	0.6	0.583	0.593	0.596	0.591	0.595	0.574
29	0.614	0.614	0.615	0.611	0.603	0.599	0.59	0.589	0.598	0.597	0.596	0.583
30	0.614	0.615	0.614	0.613	0.605	0.598	0.59	0.589	0.601	0.599	0.601	0.598
31	0.615	0.616	0.613	0.606	0.608	0.596	0.601	0.603	0.594	0.6	0.602	0.6
32	0.616	0.615	0.616	0.611	0.613	0.608	0.604	0.604	0.603	0.602	0.604	0.603
33	0.616	0.615	0.616	0.615	0.603	0.601	0.601	0.607	0.604	0.605	0.606	0.604
34	0.618	0.615	0.613	0.615	0.603	0.601	0.594	0.605	0.608	0.606	0.608	0.607
35	0.616	0.617	0.616	0.611	0.608	0.598	0.607	0.609	0.608	0.608	0.607	0.609
36	0.616	0.615	0.615	0.604	0.605	0.61	0.598	0.606	0.608	0.609	0.609	0.608
37	0.613	0.614	0.616	0.614	0.611	0.602	0.6	0.608	0.608	0.608	0.607	0.607
38	0.614	0.612	0.613	0.612	0.611	0.597	0.604	0.61	0.612	0.612	0.611	0.612
39	0.615	0.614	0.613	0.611	0.603	0.594	0.606	0.605	0.612	0.611	0.612	0.612
40	0.614	0.613	0.613	0.612	0.605	0.606	0.6	0.603	0.603	0.614	0.612	0.613
41	0.612	0.613	0.609	0.608	0.607	0.602	0.607	0.613	0.614	0.614	0.614	0.615
42	0.611	0.613	0.612	0.61	0.609	0.609	0.614	0.615	0.617	0.616	0.615	0.616
43	0.612	0.613	0.612	0.615	0.611	0.604	0.608	0.615	0.617	0.616	0.617	0.615
44	0.613	0.613	0.614	0.612	0.607	0.595	0.609	0.614	0.614	0.616	0.616	0.615
45	0.612	0.614	0.614	0.613	0.606	0.581	0.611	0.616	0.617	0.618	0.616	0.615
46	0.611	0.612	0.612	0.611	0.605	0.59	0.611	0.619	0.618	0.62	0.619	0.618
47	0.612	0.612	0.613	0.609	0.6	0.596	0.609	0.62	0.616	0.617	0.619	0.619
48	0.61	0.609	0.612	0.607	0.604	0.596	0.61	0.613	0.613	0.617	0.618	0.619
49	0.609	0.61	0.605	0.604	0.603	0.603	0.607	0.613	0.619	0.618	0.619	0.619

TORUS BAY 16 AFTER BLASTING

1	A	B	C	D	E	F	G	H	I	J	K	L
50	0.61	0.61	0.601	0.601	0.602	0.6	0.615	0.619	0.619	0.62	0.619	0.617
51	0.608	0.607	0.605	0.605	0.601	0.595	0.609	0.613	0.619	0.619	0.618	0.617
52	0.608	0.609	0.597	0.594	0.601	0.594	0.615	0.615	0.608	0.608	0.617	0.619
53	0.607	0.601	0.589	0.595	0.599	0.597	0.616	0.613	0.594	0.609	0.619	0.619
54	0.605	0.604	0.603	0.598	0.588	0.588	0.616	0.621	0.622	0.62	0.62	0.62
55	0.604	0.604	0.603	0.599	0.601	0.594	0.618	0.621	0.622	0.62	0.621	0.622
56	0.604	0.603	0.592	0.595	0.595	0.614	0.619	0.621	0.621	0.622	0.619	0.619
57	0.602	0.6	0.596	0.594	0.594	0.611	0.609	0.621	0.619	0.62	0.619	0.618
58	0.59	0.595	0.593	0.596	0.596	0.596	0.611	0.619	0.621	0.62	0.621	0.62
59	0.593	0.591	0.576	0.587	0.595	0.593	0.612	0.621	0.621	0.62	0.621	0.62
60	0.594	0.585	0.585	0.571	0.584	0.586	0.61	0.613	0.623	0.618	0.62	0.62
61	0.599	0.598	0.588	0.588	0.598	0.603	0.617	0.619	0.621	0.619	0.619	0.62
62	0.602	0.601	0.602	0.588	0.6	0.604	0.613	0.622	0.62	0.62	0.619	0.62
63	0.601	0.601	0.603	0.604	0.596	0.6	0.619	0.62	0.62	0.621	0.621	0.618
64	0.602	0.601	0.59	0.598	0.593	0.589	0.614	0.618	0.62	0.618	0.623	0.621
65	0.599	0.594	0.6	0.604	0.606	0.605	0.612	0.62	0.62	0.618	0.619	0.618
66	0.604	0.601	0.603	0.602	0.606	0.6	0.617	0.623	0.618	0.618	0.618	0.619
67	0.602	0.604	0.602	0.605	0.605	0.606	0.607	0.619	0.619	0.618	0.617	0.617
68	0.602	0.602	0.603	0.585	0.607	0.601	0.608	0.62	0.619	0.617	0.618	0.618
69	0.601	0.598	0.601	0.604	0.606	0.603	0.61	0.617	0.612	0.618	0.618	0.616
70	0.595	0.591	0.588	0.591	0.599	0.599	0.607	0.603	0.604	0.607	0.611	0.616
71	0.589	0.594	0.582	0.582	0.597	0.591	0.603	0.607	0.582	0.604	0.608	0.609
72	0.595	0.598	0.597	0.598	0.588	0.597	0.613	0.609	0.607	0.601	0.607	0.609
73	0.606	0.602	0.607	0.603	0.602	0.601	0.604	0.612	0.611	0.607	0.609	0.606
74	0.612	0.601	0.598	0.616	0.602	0.597	0.605	0.606	0.663	0.608	0.606	0.606
75	0.605	0.607	0.606	0.599	0.601	0.6	0.608	0.631	0.627	0.604	0.622	0.606
76	0.619	0.607	0.601	0.6	0.601	0.596	0.307	0.606	0.606	0.607	0.605	0.608
77	0.607	0.597	0.599	0.601	0.602	0.589	0.596	0.632	0.59	0.639	0.606	0.605
78	0.599	0.598	0.601	0.6	0.596	0.598	0.605	0.598	0.602	0.607	0.695	0.612
79	0.599	0.601	0.6	0.606	0.597	0.599	0.594	0.596	0.606	0.621	0.618	0.604
80	0.608	0.596	0.603	0.598	0.596	0.607	0.598	0.614	0.606	0.614	0.569	0.597
81	0.6	0.609	0.615	0.6	0.628	0.608	0.594	0.617	0.601	0.611	0.652	0.586
82	0.603	0.604	0.618	0.602	0.604	0.62	0.6	0.627	0.598	0.597	0.599	0.6
83	0.599	0.597	0.605	0.603	0.59	0.599	0.6	0.597	0.6	0.596	0.596	0.598
84	0.599	0.599	0.6	0.608	0.584	0.598	0.607	0.596	0.606	0.604	0.595	0.602
85	0.601	0.606	0.604	0.601	0.601	0.612	0.622	0.596	0.594	0.593	0.595	0.596
86	0.605	0.601	0.602	0.602	0.604	0.604	0.595	0.592	0.594	0.592	0.592	0.593
87	0.616	0.601	0.6	0.602	0.622	0.612	0.585	0.587	0.597	0.596	0.593	0.594
88	0.6	0.599	0.613	0.601	0.591	0.6	0.584	0.596	0.593	0.59	0.589	0.587
89	0.599	0.601	0.602	0.606	0.6	0.597	0.58	0.578	0.594	0.591	0.589	0.587
90	0.603	0.612	0.617	0.613	0.605	0.596	0.606	0.591	0.592	0.589	0.592	0.584
91	0.593	0.615	0.608	0.604	0.61	0.604	0.586	0.579	0.58	0.572	0.586	0.582
92	0.601	0.601	0.602	0.606	0.608	0.597	0.577	0.584	0.578	0.577	0.578	0.575
93	0.601	0.603	0.606	0.599	0.605	0.608	0.576	0.577	0.58	0.58	0.581	0.581
94	0.597	0.598	0.602	0.601	0.603	0.606	0.573	0.573	0.577	0.577	0.578	0.579
95	0.598	0.597	0.6	0.603	0.597	0.588	0.569	0.573	0.579	0.577	0.579	0.581
96	0.6	0.63	0.594	0.6	0.601	0.584	0.582	0.578	0.577	0.579	0.581	0.577
97	0.6	0.599	0.599	0.601	0.601	0.597	0.593	0.575	0.574	0.574	0.582	0.583
98	0.594	0.594	0.585	0.6	0.6	0.592	0.577	0.579	0.582	0.578	0.579	0.578
99	0.595	0.594	0.595	0.599	0.588	0.588	0.578	0.579	0.579	0.577	0.58	0.582

TORUS BAY 16 AFTER BLASTING

1	A	B	C	D	E	F	G	H	I	J	K	L
100	0.593	0.595	0.587	0.588	0.597	0.603	0.578	0.577	0.581	0.579	0.581	0.577
101	0.599	0.592	0.592	0.589	0.6	0.597	0.581	0.576	0.57	0.571	0.582	0.581
102	0.595	0.596	0.595	0.597	0.594	0.595	0.577	0.581	0.579	0.582	0.579	0.579
103	0.594	0.595	0.598	0.595	0.595	0.587	0.559	0.579	0.576	0.58	0.585	0.586
104	0.6	0.596	0.594	0.603	0.603	0.601	0.574	0.578	0.584	0.584	0.581	0.583
105	0.592	0.597	0.601	0.597	0.597	0.595	0.581	0.577	0.584	0.583	0.581	0.582
106	0.598	0.596	0.594	0.598	0.599	0.592	0.571	0.579	0.578	0.571	0.582	0.576
107	0.595	0.598	0.598	0.598	0.587	0.599	0.574	0.579	0.581	0.585	0.578	0.581
108	0.596	0.595	0.595	0.595	0.6	0.595	0.587	0.581	0.584	0.586	0.584	0.582
109	0.591	0.593	0.597	0.602	0.596	0.602	0.582	0.582	0.588	0.581	0.584	0.583
110	0.604	0.641	0.592	0.588	0.597	0.594	0.571	0.584	0.581	0.584	0.588	0.586
111	0.594	0.596	0.593	0.588	0.597	0.587	0.58	0.58	0.579	0.58	0.582	0.584
112	0.595	0.595	0.591	0.594	0.59	0.586	0.576	0.584	0.589	0.581	0.582	0.587
113	0.593	0.592	0.603	0.594	0.597	0.595	0.582	0.59	0.58	0.584	0.588	0.584
114	0.597	0.597	0.586	0.585	0.595	0.589	0.6	0.583	0.584	0.579	0.591	0.606
115	0.6	0.591	0.592	0.597	0.593	0.591	0.574	0.583	0.583	0.577	0.584	0.582
116	0.583	0.587	0.583	0.586	0.575	0.582	0.582	0.581	0.584	0.585	0.583	0.579
117	0	0	0.592	0.584	0.581	0.585	0.579	0.614	0.587	0.59	0.588	0.584
118	0	0	0	0	0	0	0	0.595	0.582	0.578	0.581	0.586

THICKNESS DATA SHEET

DATA SHEET NO. ~~01~~-YA-UT-112-29 (WAS 2/30/98)

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. TORUS BAY 1 EN N/A

LOCATION 213' REACTOR BLDG EXTERIOR OF TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93129407

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

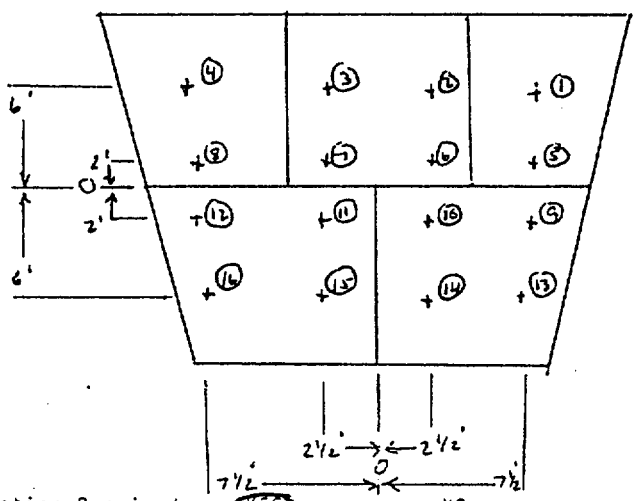
TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 89303 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS EC1-1 PRODUCT FORM: STEP WEDGE THICKNESSES: .200, .401, .601, .701

CALIBRATION TIMES: INITIAL: 0400 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 0515

SKETCH WITH RESULTS:

THERMO S/N 162731
CAL BLK TEMP 66°
COMP TEMP 73°



Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 3/28/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: BAY1
Datafile(s): BAY1

	A	Max	Min	Del_T	Ave
00001	0.602	0.602	0.602	0.000	0.602
00002	0.615	0.615	0.615	0.000	0.615
00003	0.612	0.612	0.612	0.000	0.612
00004	0.594	0.594	0.594	0.000	0.594
00005	0.597	0.597	0.597	0.000	0.597
00006	0.605	0.605	0.605	0.000	0.605
00007	0.608	0.608	0.608	0.000	0.608
00008	0.603	0.603	0.603	0.000	0.603
00009	0.592	0.592	0.592	0.000	0.592
00010	0.594	0.594	0.594	0.000	0.594
00011	0.593	0.593	0.593	0.000	0.593
00012	0.597	0.597	0.597	0.000	0.597
00013	0.598	0.598	0.598	0.000	0.598
00014	0.599	0.599	0.599	0.000	0.599
00015	0.591	0.591	0.591	0.000	0.591
00016	0.593	0.593	0.593	0.000	0.593

Max	0.615
Min	0.591
Del_T	0.024
Ave	0.600

LII 3/28/98

3.30.98

STATISTICS

Component ID: BAY1

Datafile(s): BAY1

COLUMN:

Lowest Value: 0.591 A

Highest Value: 0.615 A

Lowest Del_T: 0.024 A

Highest Del_T: 0.024 A

ROW:

Lowest Value: 0.591 00015

Highest Value: 0.615 00002

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.600

LH 3/28/98

3.30.98

THICKNESS DATA SHEET

DATA SHEET NO. 01-YA-UT-112-30 (1164 3/30/98)

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. TORUS BAY 2 EN N/A

LOCATION 213' REACTOR BLDG EXTERIOR OF TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93129407

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

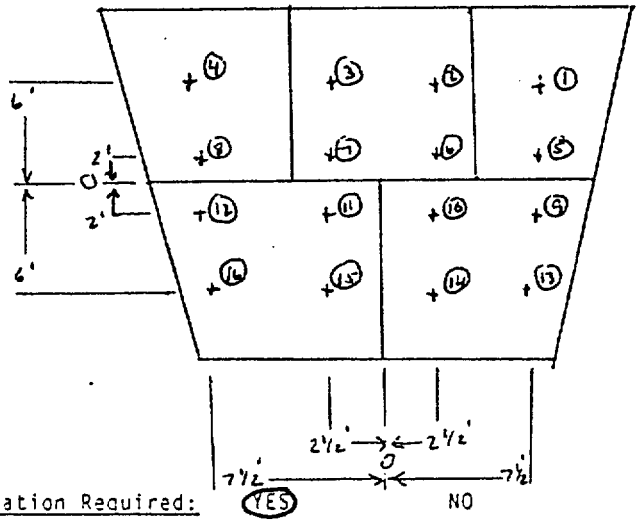
TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 89303 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS EC1-1 PRODUCT FORM: STEPWEDGE THICKNESSES: .200, .401, .601, .701

CALIBRATION TIMES: INITIAL: 0005 CHECK: 0100 CHECK: NA CHECK: NA FINAL: 0140

SKETCH WITH RESULTS:

THERMO S/N 162731
CAL BLK TEMP 70°
COMP TEMP 73°



Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 3/28/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: BAY2
Datafile(s): BAY2

98TORUS

	A	Max	Min	Del_T	Ave
00001	0.578	0.578	0.578	0.000	0.578
00002	0.622	0.622	0.622	0.000	0.622
00003	0.622	0.622	0.622	0.000	0.622
00004	0.595	0.595	0.595	0.000	0.595
00005	0.581	0.581	0.581	0.000	0.581
00006	0.623	0.623	0.623	0.000	0.623
00007	0.625	0.625	0.625	0.000	0.625
00008	0.593	0.593	0.593	0.000	0.593
00009	0.612	0.612	0.612	0.000	0.612
00010	0.612	0.612	0.612	0.000	0.612
00011	0.596	0.596	0.596	0.000	0.596
00012	0.597	0.597	0.597	0.000	0.597
00013	0.615	0.615	0.615	0.000	0.615
00014	0.615	0.615	0.615	0.000	0.615
00015	0.595	0.595	0.595	0.000	0.595
00016	0.596	0.596	0.596	0.000	0.596

Max	0.625
Min	0.578
Del_T	0.047
Ave	0.605

M A Shaw CWI 3/28/98

SLP Sugg 3.30.98

* LOCATIONS A-1 & A-5 WERE RECHECKED AND FOUND TO BE:

A-1 = .577"

A-5 = .581"

SEE DATA SHEET # YA-UT-112-45

SLP Sugg 3.30.98

STATISTICS

Component ID: BAY2

Datafile(s): BAY2

COLUMN:

Lowest Value: 0.578 A

Highest Value: 0.625 A

Lowest Del_T: 0.047 A

Highest Del_T: 0.047 A

[illegible] 3/28/98

ROW:

Lowest Value: 0.578 00001

Highest Value: 0.625 00007

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

[illegible] 3.30.98

Overall Average Value: 0.605

THICKNESS DATA SHEET

DATA SHEET NO. ~~01~~-YA-UT-112-31 3/30/98

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. TORUS BAY 3 EN N/A

LOCATION 213' REACTOR BLDG EXTERIOR OF TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93129407

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

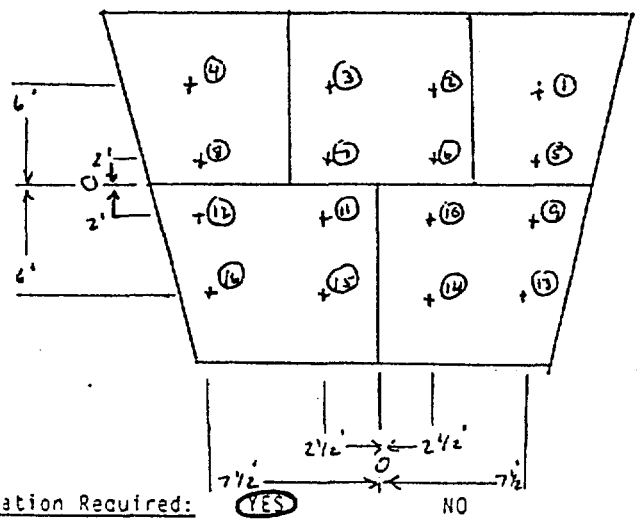
TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 89303 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS EC1-1 PRODUCT FORM: STEPWEDGE THICKNESSES: .200, .401, .601, .701

CALIBRATION TIMES: INITIAL: 0400 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 0515

SKETCH WITH RESULTS:

THERMO S/N 162731
CAL BLK TEMP 66°
COMP TEMP 73°



Evaluation Required: YES NO

EXAMINER M Shea LEVEL II DATE 3/23/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) S W Sugg DATE 3-30-98

COGNIZANT ENGINEER J C Ft DATE 5/4/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: BAY3
Datafile(s): BAY3

	A	Max	Min	Del_T	Ave
00001	0.597	0.597	0.597	0.000	0.597
00002	0.616	0.616	0.616	0.000	0.616
00003	0.615	0.615	0.615	0.000	0.615
00004	0.605	0.605	0.605	0.000	0.605
00005	0.601	0.601	0.601	0.000	0.601
00006	0.626	0.626	0.626	0.000	0.626
00007	0.623	0.623	0.623	0.000	0.623
00008	0.608	0.608	0.608	0.000	0.608
00009	0.613	0.613	0.613	0.000	0.613
00010	0.618	0.618	0.618	0.000	0.618
00011	0.602	0.602	0.602	0.000	0.602
00012	0.604	0.604	0.604	0.000	0.604
00013	0.609	0.609	0.609	0.000	0.609
00014	0.615	0.615	0.615	0.000	0.615
00015	0.602	0.602	0.602	0.000	0.602
00016	0.599	0.599	0.599	0.000	0.599

Max	0.626
Min	0.597
Del_T	0.029
Ave	0.610

LII 3/28/98

3.30.98

STATISTICS

Component ID: BAY3

Datafile(s): BAY3

COLUMN:

Lowest Value: 0.597 A

Highest Value: 0.626 A

Lowest Del_T: 0.029 A

Highest Del_T: 0.029 A

ROW:

Lowest Value: 0.597 00001

Highest Value: 0.626 00006

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.610

LEI 3/28/98

3-30-98

THICKNESS DATA SHEET

DATA SHEET NO. ~~01~~-YA-UT-112-32 1/38+ 3/30/98

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. TORUS BAY 4 EN N/A

LOCATION 213' REACTOR BLDG EXTERIOR OF TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580

INSTRUMENT: MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93129407

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

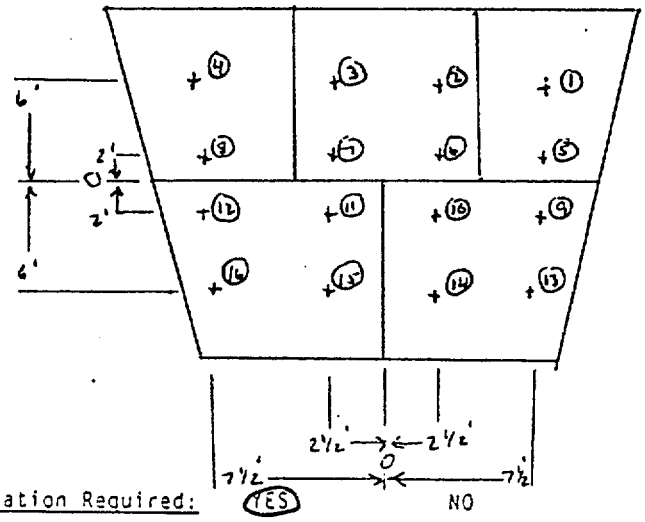
TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 89303 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS EC1-1 PRODUCT FORM: STEP WEDGE THICKNESSES: .200, .401, .601, .701

CALIBRATION TIMES: INITIAL: 0005 CHECK: 0100 CHECK: NA CHECK: NA FINAL: 0140

SKETCH WITH RESULTS:

THERMO S/N 162731
CAL BLK TEMP 70°
COMP TEMP 73°



Evaluation Required: YES NO

EXAMINER [signature] LEVEL II DATE 3/28/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: BAY4
Datafile(s): BAY4

	A	Max	Min	Del_T	Ave
00001	0.598	0.598	0.598	0.000	0.598
00002	0.631	0.631	0.631	0.000	0.631
00003	0.634	0.634	0.634	0.000	0.634
00004	0.602	0.602	0.602	0.000	0.602
00005	0.604	0.604	0.604	0.000	0.604
00006	0.633	0.633	0.633	0.000	0.633
00007	0.638	0.638	0.638	0.000	0.638
00008	0.603	0.603	0.603	0.000	0.603
00009	0.608	0.608	0.608	0.000	0.608
00010	0.607	0.607	0.607	0.000	0.607
00011	0.573	0.573	0.573	0.000	0.573
00012	0.574	0.574	0.574	0.000	0.574
00013	0.610	0.610	0.610	0.000	0.610
00014	0.613	0.613	0.613	0.000	0.613
00015	0.577	0.577	0.577	0.000	0.577
00016	0.576	0.576	0.576	0.000	0.576

Max	0.638
Min	0.573
Del_T	0.065
Ave	0.605

THE FOLLOWING LOCATIONS WERE RECHECKED:

A-11 = .573"
A-12 = .574"
A-15 = .577"
A-16 = .576"

SEE DATA SHEET # YA-UT-112-45

3-30-98

TMA Shearer LII 3/28/98

Component ID: BAY4

Datafile(s): BAY4

COLUMN:

Lowest Value: 0.573 A

Highest Value: 0.638 A

Lowest Del_T: 0.065 A

Highest Del_T: 0.065 A

ROW:

Lowest Value: 0.573 00011

Highest Value: 0.638 00007

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.605

3/28/98

3.30.98

THICKNESS DATA SHEET

DATA SHEET NO. ~~01~~-YA-UT-112-33 WRA 3/30/98

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. TORUS BAY 5 EN N/A

LOCATION 213' REACTOR BLDG EXTERIOR OF TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93129407

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

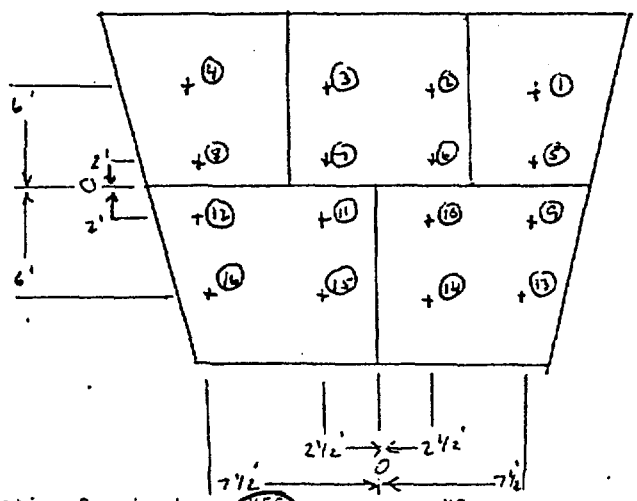
TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 89303 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS EC1-1 PRODUCT FORM: STEP WEDGE THICKNESSES: .200, .401, .601, .701

CALIBRATION TIMES: INITIAL: 0400 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 0515

SKETCH WITH RESULTS:

THERMO S/N 162731
CAL BLK TEMP 66°
COMP TEMP 73°



Evaluation Required: (YES) NO

EXAMINER TM Shearer LEVEL II DATE 3/28/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) SMP Sugg DATE 3-30-98

COGNIZANT ENGINEER [illegible] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: BAY5
Datafile(s): BAY5

	A	Max	Min	Del_T	Ave
00001	0.593	0.593	0.593	0.000	0.593
00002	0.628	0.628	0.628	0.000	0.628
00003	0.633	0.633	0.633	0.000	0.633
00004	0.593	0.593	0.593	0.000	0.593
00005	0.593	0.593	0.593	0.000	0.593
00006	0.628	0.628	0.628	0.000	0.628
00007	0.630	0.630	0.630	0.000	0.630
00008	0.590	0.590	0.590	0.000	0.590
00009	0.595	0.595	0.595	0.000	0.595
00010	0.597	0.597	0.597	0.000	0.597
00011	0.600	0.600	0.600	0.000	0.600
00012	0.597	0.597	0.597	0.000	0.597
00013	0.596	0.596	0.596	0.000	0.596
00014	0.597	0.597	0.597	0.000	0.597
00015	0.599	0.599	0.599	0.000	0.599
00016	0.596	0.596	0.596	0.000	0.596

Max	0.633
Min	0.590
Del_T	0.043
Ave	0.604

LII 3/28/98

3-30-98

Component ID: BAY5

Datafile(s): BAY5

COLUMN:

Lowest Value: 0.590 A

Highest Value: 0.633 A

Lowest Del_T: 0.043 A

Highest Del_T: 0.043 A

ROW:

Lowest Value: 0.590 00008

Highest Value: 0.633 00003

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.604

M Sheerin LTI 3/28/98

3-30-98

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-34

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 6 SEE BELOW EN N/A

LOCATION 213' REACTOR BLDG EXTERIOR OF TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580"

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL+ SERIAL NO.: 93129407

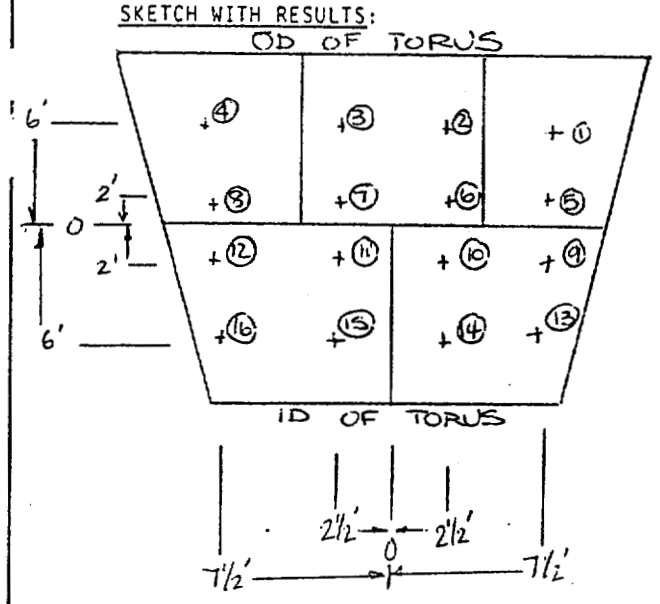
CRT ☐ DIGITAL ☒ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS S/N 69311 D791-RM MODE: ☒ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS S/N 93-6689 PRODUCT FORM: STEPWEDGE THICKNESSES: .25", .50", .75", 1.0"

CALIBRATION TIMES: INITIAL: 0743 CHECK: 0824 CHECK: N/A CHECK: N/A FINAL: 0920

SKETCH WITH RESULTS:



CAL BLK TEMP 72°F
COMPONENT TEMP 74°F
THERMO. S/N 162556

Evaluation Required: YES NO

EXAMINER Janet K Miles LEVEL II DATE 3/27/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

3/27/98 YA-07 2-

3/27/98

Component ID: BAY6
Datafile(s): BAY6

	A	Max	Min	Del_T	Ave
00001	0.589	0.589	0.589	0.000	0.589
00002	0.614	0.614	0.614	0.000	0.614
00003	0.613	0.613	0.613	0.000	0.613
00004	0.593	0.593	0.593	0.000	0.593
00005	0.587	0.587	0.587	0.000	0.587
00006	0.618	0.618	0.618	0.000	0.618
00007	0.619	0.619	0.619	0.000	0.619
00008	0.597	0.597	0.597	0.000	0.597
00009	0.607	0.607	0.607	0.000	0.607
00010	0.605	0.605	0.605	0.000	0.605
00011	0.615	0.615	0.615	0.000	0.615
00012	0.610	0.610	0.610	0.000	0.610
00013	0.604	0.604	0.604	0.000	0.604
00014	0.602	0.602	0.602	0.000	0.602
00015	0.620	0.620	0.620	0.000	0.620
00016	0.615	0.615	0.615	0.000	0.615

Max	0.620
Min	0.587
Del_T	0.033
Ave	0.607

Janet Killes II 3/27/98

3.30.98

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-35

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 7 SEE BELOW EN N/A

LOCATION 213' TORUS EXTERIOR REACTOR BLDG.

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580"

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL+ SERIAL NO.: 93129407

CRT ☐ DIGITAL ☒ HORIZONTAL LINEARITY PERFORMED ☐

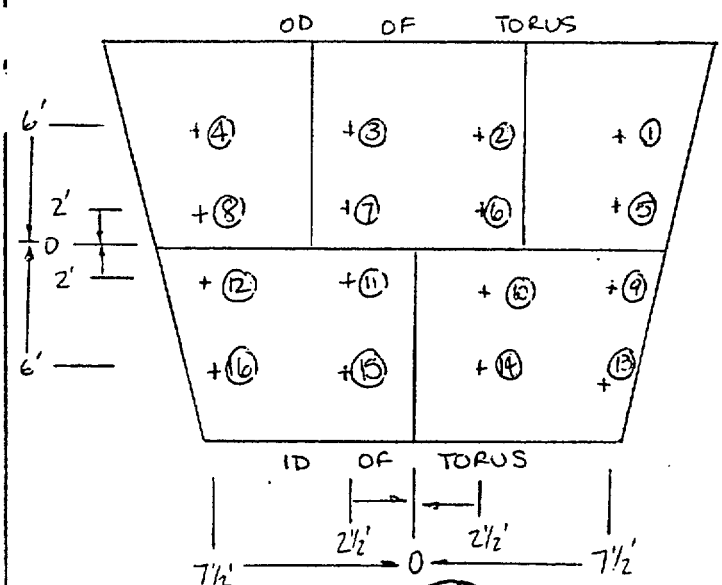
TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 69311 MODE: ☒ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS S/N 93-6689 PRODUCT FORM: STEPWEDGE THICKNESSES: .25", .50", .75", 1.0"

CALIBRATION TIMES: INITIAL: 1525 CHECK: 1551 CHECK: N/A CHECK: N/A FINAL: 1610

SKETCH WITH RESULTS:

CAL BLK TEMP - 80°F
COMPONENT TEMP - 78°F
THERMO. S/N - 162556



Evaluation Required: (YES) NO

EXAMINER Janet A Miles LEVEL II DATE 3/27/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

YA-UT-112-

3/25/98

Component ID: BAY7
Datafile(s): BAY7

	A	Max	Min	Del_T	Ave
00001	0.579	0.579	0.579	0.000	0.579
00002	0.623	0.623	0.623	0.000	0.623
00003	0.628	0.628	0.628	0.000	0.628
00004	0.597	0.597	0.597	0.000	0.597
00005	0.578	0.578	0.578	0.000	0.578
00006	0.620	0.620	0.620	0.000	0.620
00007	0.624	0.624	0.624	0.000	0.624
00008	0.598	0.598	0.598	0.000	0.598
00009	0.600	0.600	0.600	0.000	0.600
00010	0.602	0.602	0.602	0.000	0.602
00011	0.592	0.592	0.592	0.000	0.592
00012	0.592	0.592	0.592	0.000	0.592
00013	0.600	0.600	0.600	0.000	0.600
00014	0.592	0.592	0.592	0.000	0.592
00015	0.598	0.598	0.598	0.000	0.598
00016	0.598	0.598	0.598	0.000	0.598

Max	0.628
Min	0.578
Del_T	0.050
Ave	0.601

Janet K Miles II 3/27/98

LOCATIONS A-1 AND A-5 WERE RECHECKED:

A-1 = .579"

A-5 = .577"

SEE DATA SHEET # YA-UT-112-45

3.30.98

page 1 of 2

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-36

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 8 SEE BELOW EN N/A

LOCATION 213' REACTOR BLDG EXTERIOR OF TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580"

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL+ SERIAL NO.: 93129407

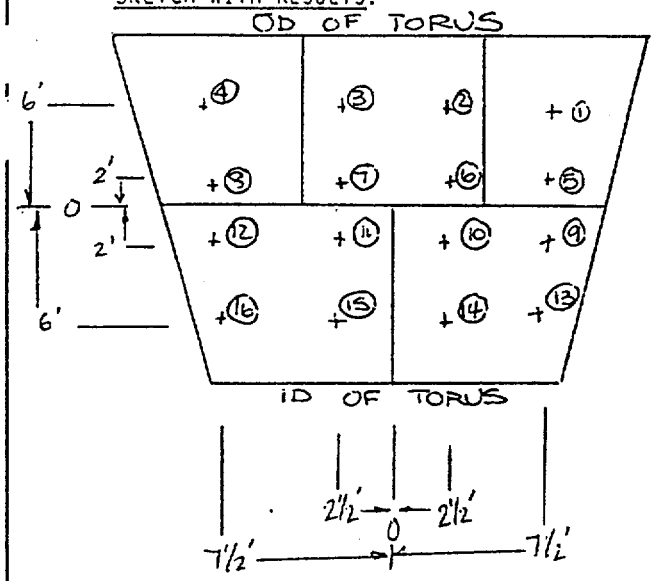
CRT ☐ DIGITAL ☒ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 69311 MODE: ☒ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS S/N 93-6689 PRODUCT FORM: STEPWEDGE THICKNESSES: .25", .50", .75", 1.0"

CALIBRATION TIMES: INITIAL: 0743 CHECK: 0824 CHECK: N/A CHECK: N/A FINAL: 0920

SKETCH WITH RESULTS:



CAL BLK TEMP 72°F
COMPONENT TEMP 74°F
THERMO. S/N 162556

Evaluation Required: (YES) NO

EXAMINER Janet L Miles LEVEL II DATE 3/27/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/7/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

YA-112-

3/27/98

Component ID: BAY8
Datafile(s): BAY8

	A	Max	Min	Del_T	Ave
00001	0.587	0.587	0.587	0.000	0.587
00002	0.621	0.621	0.621	0.000	0.621
00003	0.616	0.616	0.616	0.000	0.616
00004	0.610	0.610	0.610	0.000	0.610
00005	0.588	0.588	0.588	0.000	0.588
00006	0.609	0.609	0.609	0.000	0.609
00007	0.615	0.615	0.615	0.000	0.615
00008	0.609	0.609	0.609	0.000	0.609
00009	0.611	0.611	0.611	0.000	0.611
00010	0.607	0.607	0.607	0.000	0.607
00011	0.606	0.606	0.606	0.000	0.606
00012	0.600	0.600	0.600	0.000	0.600
00013	0.612	0.612	0.612	0.000	0.612
00014	0.609	0.609	0.609	0.000	0.609
00015	0.602	0.602	0.602	0.000	0.602
00016	0.604	0.604	0.604	0.000	0.604

Max	0.621
Min	0.587
Del_T	0.034
Ave	0.607

Janet K Miles II 3/27/98

3-30-98

page 1 of 2

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-37

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 9 SEE BELOW EN N/A

LOCATION 213' REACTOR BLDG EXTERIOR OF TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580"

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL+ SERIAL NO.: 93129407

CRT ☐ DIGITAL ☒ HORIZONTAL LINEARITY PERFORMED ☐

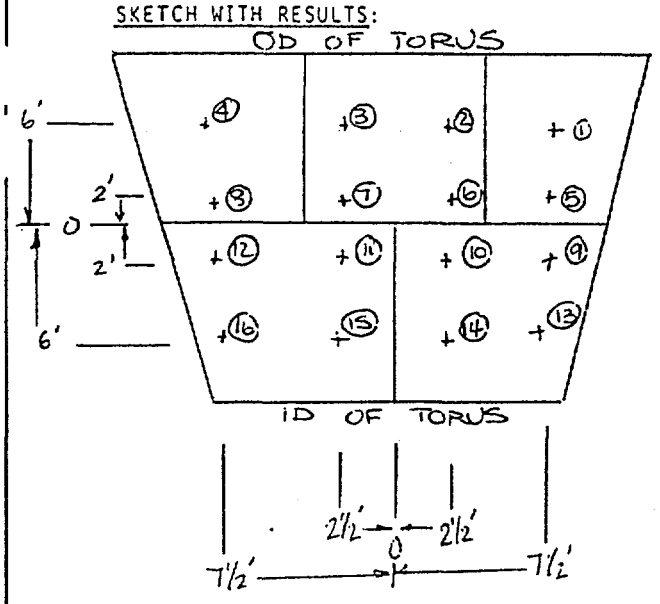
TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 69311 MODE: ☒ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS S/N 93-6689 PRODUCT FORM: STEPWEDGE THICKNESSES: .25", .50", .75", 1.0"

CALIBRATION TIMES: INITIAL: 0743 CHECK: 0824 CHECK: N/A CHECK: N/A FINAL: 0920

SKETCH WITH RESULTS:

CAL BLK TEMP 72°F
COMPONENT TEMP 74°F
THERMO. S/N 162556



Evaluation Required: (YES) NO

EXAMINER Janet K Miles LEVEL II DATE 3/27/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

YA- 112

GMM 3/28-98

Component ID: BAY9
Datafile(s): BAY9

	A	Max	Min	Del_T	Ave
00001	0.598	0.598	0.598	0.000	0.598
00002	0.614	0.614	0.614	0.000	0.614
00003	0.612	0.612	0.612	0.000	0.612
00004	0.600	0.600	0.600	0.000	0.600
00005	0.595	0.595	0.595	0.000	0.595
00006	0.611	0.611	0.611	0.000	0.611
00007	0.609	0.609	0.609	0.000	0.609
00008	0.599	0.599	0.599	0.000	0.599
00009	0.605	0.605	0.605	0.000	0.605
00010	0.605	0.605	0.605	0.000	0.605
00011	0.590	0.590	0.590	0.000	0.590
00012	0.597	0.597	0.597	0.000	0.597
00013	0.604	0.604	0.604	0.000	0.604
00014	0.603	0.603	0.603	0.000	0.603
00015	0.597	0.597	0.597	0.000	0.597
00016	0.595	0.595	0.595	0.000	0.595

Max	0.614
Min	0.590
Del_T	0.024
Ave	0.602

Janet K Miller II 3/27/98

3-30-98

page 1 of 2

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-38

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 10 SEE BELOW EN N/A

LOCATION 213' REACTOR BLDG EXTERIOR OF TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580"

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL+ SERIAL NO.: 93129407

CRT ☐ DIGITAL ☒ HORIZONTAL LINEARITY PERFORMED ☐

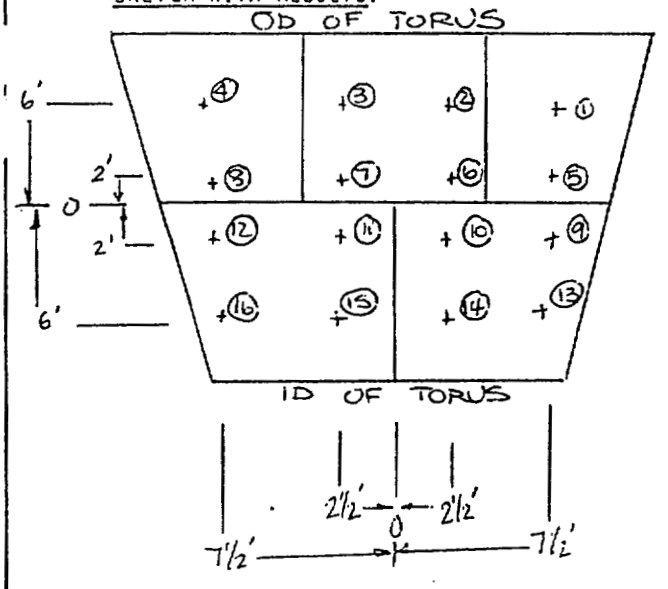
TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 69311 MODE: ☒ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS S/N 93-6689 PRODUCT FORM: STEPWEDGE THICKNESSES: .25", .50", .75", 1.0"

CALIBRATION TIMES: INITIAL: 0743 CHECK: 0824 CHECK: N/A CHECK: N/A FINAL: 0920

SKETCH WITH RESULTS:

CAL BLK TEMP 72°F
COMPONENT TEMP 74°F
THERMO. S/N 162556



Evaluation Required: (YES) NO

EXAMINER Janet K Miles LEVEL II DATE 3/27/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

JT-112-2

JMC 3/27/98

Component ID: BAY10
Datafile(s): BAY10

	A	Max	Min	Del_T	Ave
00001	0.587	0.587	0.587	0.000	0.587
00002	0.629	0.629	0.629	0.000	0.629
00003	0.632	0.632	0.632	0.000	0.632
00004	0.585	0.585	0.585	0.000	0.585
00005	0.588	0.588	0.588	0.000	0.588
00006	0.631	0.631	0.631	0.000	0.631
00007	0.630	0.630	0.630	0.000	0.630
00008	0.585	0.585	0.585	0.000	0.585
00009	0.599	0.599	0.599	0.000	0.599
00010	0.597	0.597	0.597	0.000	0.597
00011	0.601	0.601	0.601	0.000	0.601
00012	0.599	0.599	0.599	0.000	0.599
00013	0.595	0.595	0.595	0.000	0.595
00014	0.594	0.594	0.594	0.000	0.594
00015	0.595	0.595	0.595	0.000	0.595
00016	0.597	0.597	0.597	0.000	0.597

Max	0.632
Min	0.585
Del_T	0.047
Ave	0.603

Janet K Miles II 3/27/98

3.30.98

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THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-39

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 11 SEE BELOW EN N/A

LOCATION 213' REACTOR BLDG EXTERIOR OF TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580"

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL+ SERIAL NO.: 93129407

CRT ☐ DIGITAL ☒ HORIZONTAL LINEARITY PERFORMED ☐

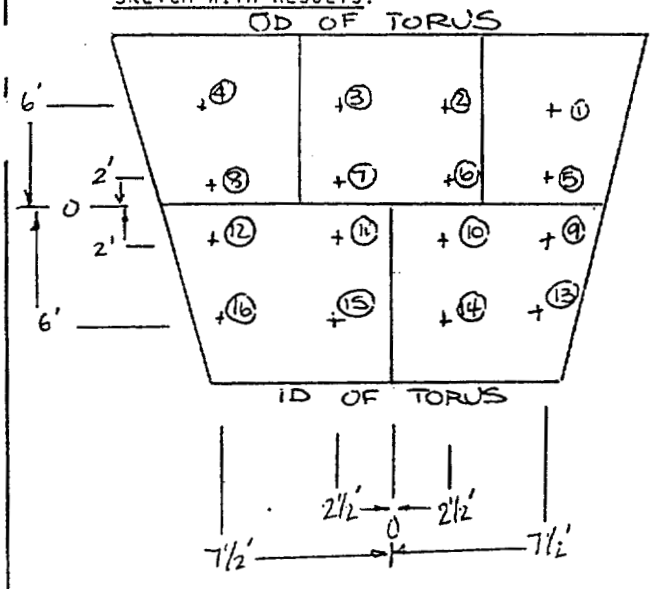
TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 69311 MODE: ☒ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS S/N 93-6689 PRODUCT FORM: STEPWEDGE THICKNESSES: .25", .50", .75", 1.0"

CALIBRATION TIMES: INITIAL: 0743 CHECK: 0824 CHECK: N/A CHECK: N/A FINAL: 0920

SKETCH WITH RESULTS:

CAL BLK TEMP 72°F
COMPONENT TEMP 74°F
THERMO. S/N 162556



Evaluation Required: (YES) NO

EXAMINER Janet R Miles LEVEL II DATE 3/27/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

YA-1 : 112

2

Jm 3/27/98

Component ID: BAY11
Datafile(s): BAY11

	A	Max	Min	Del_T	Ave
00001	0.587	0.587	0.587	0.000	0.587
00002	0.618	0.618	0.618	0.000	0.618
00003	0.617	0.617	0.617	0.000	0.617
00004	0.597	0.597	0.597	0.000	0.597
00005	0.589	0.589	0.589	0.000	0.589
00006	0.621	0.621	0.621	0.000	0.621
00007	0.619	0.619	0.619	0.000	0.619
00008	0.596	0.596	0.596	0.000	0.596
00009	0.588	0.588	0.588	0.000	0.588
00010	0.590	0.590	0.590	0.000	0.590
00011	0.603	0.603	0.603	0.000	0.603
00012	0.604	0.604	0.604	0.000	0.604
00013	0.599	0.599	0.599	0.000	0.599
00014	0.594	0.594	0.594	0.000	0.594
00015	0.602	0.602	0.602	0.000	0.602
00016	0.600	0.600	0.600	0.000	0.600

Max	0.621
Min	0.587
Del_T	0.034
Ave	0.602

Janet L Miles II 3/27/98

3.30.98

THICKNESS DATA SHEET

DATA SHEET NO: ~~OC~~-YA-UT-112-40 (WRA 3/30/98)

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. TORUS BAY 12 EN N/A

LOCATION 213' REACTOR BLDG EXTERIOR OF TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93129407

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

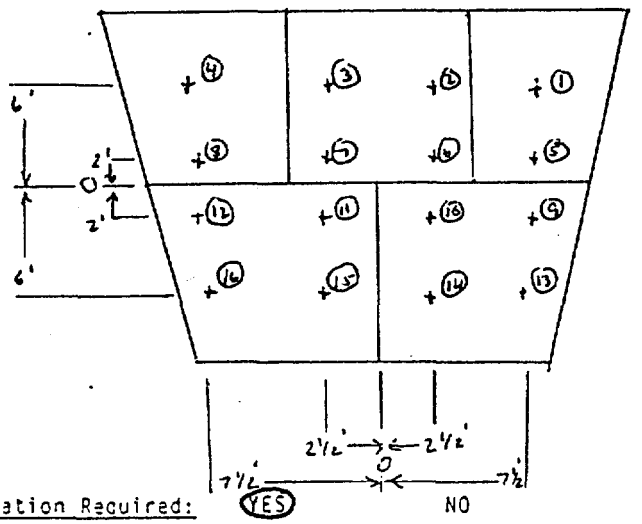
TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 89303 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS EC1-1 PRODUCT FORM: STEPWEDGE THICKNESSES: .200, .401, .601, .701

CALIBRATION TIMES: INITIAL: 0005 CHECK: 0100 CHECK: NA CHECK: NA FINAL: 0140

SKETCH WITH RESULTS:

THERMO S/N 162731
CAL BLK TEMP 70°
COMP TEMP 73°



Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 3/28/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: BAY12
Datafile(s): BAY12

	A	Max	Min	Del_T	Ave
00001	0.609	0.609	0.609	0.000	0.609
00002	0.642	0.642	0.642	0.000	0.642
00003	0.641	0.641	0.641	0.000	0.641
00004	0.595	0.595	0.595	0.000	0.595
00005	0.612	0.612	0.612	0.000	0.612
00006	0.637	0.637	0.637	0.000	0.637
00007	0.633	0.633	0.633	0.000	0.633
00008	0.588	0.588	0.588	0.000	0.588
00009	0.597	0.597	0.597	0.000	0.597
00010	0.597	0.597	0.597	0.000	0.597
00011	0.616	0.616	0.616	0.000	0.616
00012	0.609	0.609	0.609	0.000	0.609
00013	0.596	0.596	0.596	0.000	0.596
00014	0.597	0.597	0.597	0.000	0.597
00015	0.609	0.609	0.609	0.000	0.609
00016	0.607	0.607	0.607	0.000	0.607

Max	0.642
Min	0.588
Del_T	0.054
Ave	0.612

3/28/98

3-30-98

STATISTICS

Component ID: BAY12

Datafile(s): BAY12

COLUMN:

Lowest Value: 0.588 A

Highest Value: 0.642 A

Lowest Del_T: 0.054 A

Highest Del_T: 0.054 A

ROW:

Lowest Value: 0.588 00008

Highest Value: 0.642 00002

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.612

WA Shearer LTI 3/28/98

SLP Sanger 3.30.98

WRB 3/30/98

THICKNESS DATA SHEET

DATA SHEET NO. ~~01~~-YA-UT-112-41

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. TORUS BAY 13 EN N/A

LOCATION 213' REACTOR BLDG EXTERIOR OF TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93129407

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

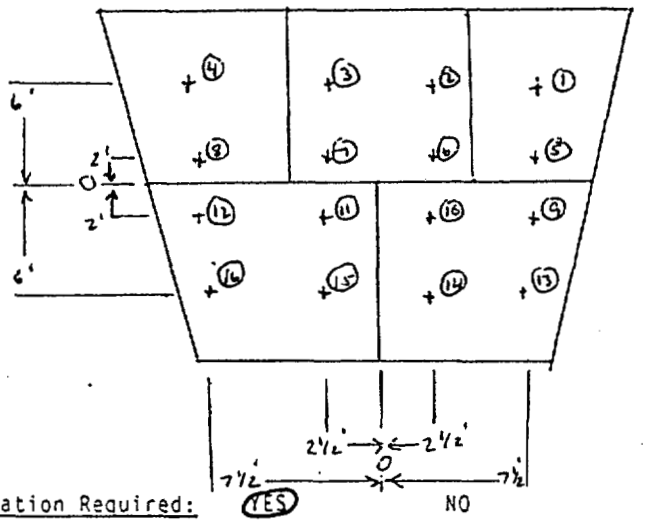
TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 89303 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS EC1-1 PRODUCT FORM: STEP WEDGE THICKNESSES: .200, .401, .601, .701

CALIBRATION TIMES: INITIAL: 0005 CHECK: 0100 CHECK: NA CHECK: NA FINAL: 0140

SKETCH WITH RESULTS:

THERMO S/N 162731
CAL BLK TEMP 70°
COMP TEMP 73°



Evaluation Required: YES NO

EXAMINER TMSLean LEVEL II DATE 3/28/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) SWBsing DATE 3-30-98

COGNIZANT ENGINEER [illegible] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: BAY13
Datafile(s): BAY13

	A	Max	Min	Del_T	Ave
00001	0.597	0.597	0.597	0.000	0.597
00002	0.634	0.634	0.634	0.000	0.634
00003	0.632	0.632	0.632	0.000	0.632
00004	0.602	0.602	0.602	0.000	0.602
00005	0.599	0.599	0.599	0.000	0.599
00006	0.641	0.641	0.641	0.000	0.641
00007	0.642	0.642	0.642	0.000	0.642
00008	0.606	0.606	0.606	0.000	0.606
00009	0.602	0.602	0.602	0.000	0.602
00010	0.594	0.594	0.594	0.000	0.594
00011	0.586	0.586	0.586	0.000	0.586
00012	0.585	0.585	0.585	0.000	0.585
00013	0.599	0.599	0.599	0.000	0.599
00014	0.595	0.595	0.595	0.000	0.595
00015	0.585	0.585	0.585	0.000	0.585
00016	0.585	0.585	0.585	0.000	0.585

Max	0.642
Min	0.585
Del_T	0.057
Ave	0.605

TMSheam LII 3/28/98

SWPSuge 3.30.98

STATISTICS

Component ID: BAY13

Datafile(s): BAY13

COLUMN:

Lowest Value: 0.585 A

Highest Value: 0.642 A

Lowest Del_T: 0.057 A

Highest Del_T: 0.057 A

ROW:

Lowest Value: 0.585 00016

Highest Value: 0.642 00007

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.605

T/A Shearer LII 3/28/98

SWP Dugan 3-30-98

THICKNESS DATA SHEET

DATA SHEET NO. 1 Mar 3/30/98 EL-YA-UT-112-42

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. TORUS BAY 14 EN N/A

LOCATION 213' REACTOR BLDG EXTERIOR OF TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93129407

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

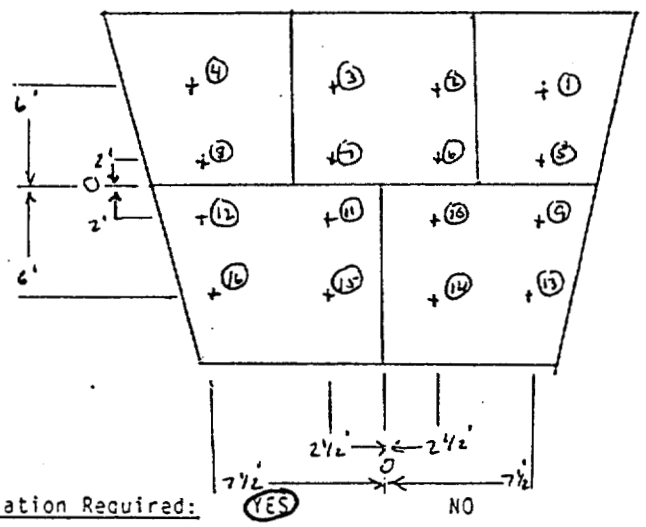
TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 89303 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS EC1-1 PRODUCT FORM: STEPWEDGE THICKNESSES: .200, .401, .601, .701

CALIBRATION TIMES: INITIAL: 0005 CHECK: 0100 CHECK: NA CHECK: NA FINAL: 0140

SKETCH WITH RESULTS:

THERMO S/N 162731
CAL BLK TEMP 70°
COMP TEMP 73°



Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 3/28/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: BAY14
Datafile(s): BAY14

	A	Max	Min	Del_T	Ave
00001	0.592	0.592	0.592	0.000	0.592
00002	0.629	0.629	0.629	0.000	0.629
00003	0.626	0.626	0.626	0.000	0.626
00004	0.590	0.590	0.590	0.000	0.590
00005	0.576	0.576	0.576	0.000	0.576
00006	0.620	0.620	0.620	0.000	0.620
00007	0.615	0.615	0.615	0.000	0.615
00008	0.597	0.597	0.597	0.000	0.597
00009	0.598	0.598	0.598	0.000	0.598
00010	0.599	0.599	0.599	0.000	0.599
00011	0.593	0.593	0.593	0.000	0.593
00012	0.597	0.597	0.597	0.000	0.597
00013	0.595	0.595	0.595	0.000	0.595
00014	0.597	0.597	0.597	0.000	0.597
00015	0.591	0.591	0.591	0.000	0.591
00016	0.594	0.594	0.594	0.000	0.594

Max	0.629
Min	0.576
Del_T	0.053
Ave	0.601

LCII 3/28/98

LOCATION A-5 WAS VERIFIED TO BE .576". SEE DATA SHEET #YA-UT-112-45

3-30-98

Component ID: BAY14

Datafile(s): BAY14

COLUMN:

Lowest Value: 0.576 A

Highest Value: 0.629 A

Lowest Del_T: 0.053 A

Highest Del_T: 0.053 A

ROW:

Lowest Value: 0.576 00005

Highest Value: 0.629 00002

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.601

LEI 3/28/98

3.30.98

THICKNESS DATA SHEET

DATA SHEET NO. ~~BC~~-YA-UT-112-43 (IRS 3/31/98)

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. TORUS BAY 15 EN N/A

LOCATION 213' REACTOR BLDG EXTERIOR OF TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93129407

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

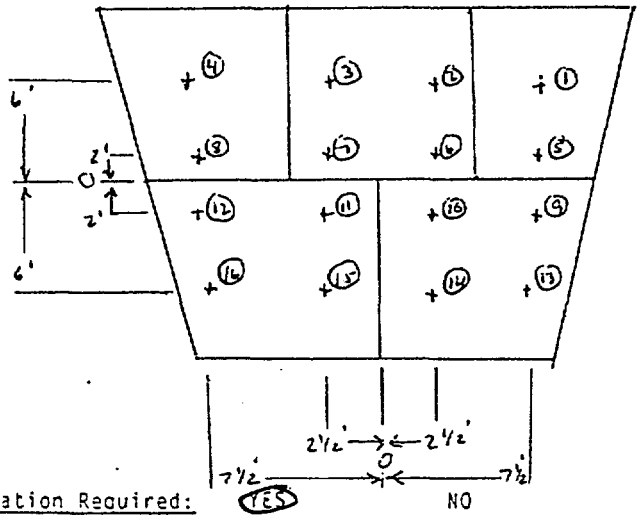
TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 89303 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS EC1-1 PRODUCT FORM: STEPWEDGE THICKNESSES: .200, .401, .601, .701

CALIBRATION TIMES: INITIAL: 0005 CHECK: 0100 CHECK: NA CHECK: NA FINAL: 0140

SKETCH WITH RESULTS:

THERMO S/N 162731
CAL BLK TEMP 70°
COMP TEMP 73°



Evaluation Required: YES NO

EXAMINER [signature] LEVEL II DATE 3/28/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/1/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: BAY15
Datafile(s): BAY15

	A	Max	Min	Del_T	Ave
00001	0.586	0.586	0.586	0.000	0.586
00002	0.606	0.606	0.606	0.000	0.606
00003	0.605	0.605	0.605	0.000	0.605
00004	0.598	0.598	0.598	0.000	0.598
00005	0.591	0.591	0.591	0.000	0.591
00006	0.604	0.604	0.604	0.000	0.604
00007	0.611	0.611	0.611	0.000	0.611
00008	0.602	0.602	0.602	0.000	0.602
00009	0.585	0.585	0.585	0.000	0.585
00010	0.582	0.582	0.582	0.000	0.582
00011	0.607	0.607	0.607	0.000	0.607
00012	0.607	0.607	0.607	0.000	0.607
00013	0.584	0.584	0.584	0.000	0.584
00014	0.580	0.580	0.580	0.000	0.580
00015	0.607	0.607	0.607	0.000	0.607
00016	0.605	0.605	0.605	0.000	0.605

Max	0.611
Min	0.580
Del_T	0.031
Ave	0.597

LET 3/28/98

LOCATIONS A-10 AND A-14 WERE RECHECKED:

A-10 = .582"

A-14 = .580"

SEE DATA SHEET # YA-UT-112-45

3.30.98

STATISTICS

Component ID: BAY15

Datafile(s): BAY15

COLUMN:

Lowest Value: 0.580 A

Highest Value: 0.611 A

Lowest Del_T: 0.031 A

Highest Del_T: 0.031 A

ROW:

Lowest Value: 0.580 00014

Highest Value: 0.611 00007

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.597

LII 3/28/98.

3-30-98

THICKNESS DATA SHEET

DATA SHEET NO. ~~01~~-YA-UT-112-44 (INIT 3/30/98)

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. TORUS BAY 16 EN N/A

LOCATION 213' REACTOR BLDG EXTERIOR OF TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93129407

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

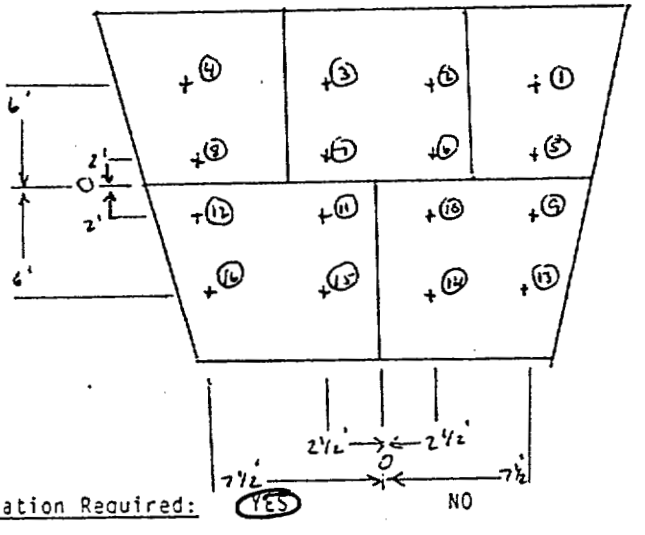
TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 89303 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS EC1-1 PRODUCT FORM: STEPWEDGE THICKNESSES: .200, .401, .601, .701

CALIBRATION TIMES: INITIAL: 0400 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 0515

SKETCH WITH RESULTS:

THERMO S/N 162731
CAL BLK TEMP 66°
COMP TEMP 73°



Evaluation Required: (YES) NO

EXAMINER M Shearer LEVEL II DATE 3/28/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/7/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: BAY16
Datafile(s): BAY16

	A	Max	Min	Del_T	Ave
00001	0.589	0.589	0.589	0.000	0.589
00002	0.610	0.610	0.610	0.000	0.610
00003	0.618	0.618	0.618	0.000	0.618
00004	0.602	0.602	0.602	0.000	0.602
00005	0.588	0.588	0.588	0.000	0.588
00006	0.617	0.617	0.617	0.000	0.617
00007	0.620	0.620	0.620	0.000	0.620
00008	0.610	0.610	0.610	0.000	0.610
00009	0.603	0.603	0.603	0.000	0.603
00010	0.608	0.608	0.608	0.000	0.608
00011	0.613	0.613	0.613	0.000	0.613
00012	0.613	0.613	0.613	0.000	0.613
00013	0.596	0.596	0.596	0.000	0.596
00014	0.605	0.605	0.605	0.000	0.605
00015	0.608	0.608	0.608	0.000	0.608
00016	0.608	0.608	0.608	0.000	0.608

Max	0.620
Min	0.588
Del_T	0.032
Ave	0.607

LII 3/28/98

3.30.98

STATISTICS

Component ID: BAY16

Datafile(s): BAY16

COLUMN:

Lowest Value: 0.588 A

Highest Value: 0.620 A

Lowest Del_T: 0.032 A

Highest Del_T: 0.032 A

ROW:

Lowest Value: 0.588 00005

Highest Value: 0.620 00007

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.607

LH 3/28/98

3.30-98

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-45

PLANT VY OUTAGE RF 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. TORUS THICKNESS RELOOKS EN N/A

LOCATION 213 RB EXTERIOR OF TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL + SERIAL NO.: 93129407

CRT ☐ DIGITAL ☒ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS SN 89303 D791-RM MODE: ☒ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5 MHZ SIZE: .312"

CAL. BLOCK MATERIAL: CS ECI-1 PRODUCT FORM: STEP WEDGE THICKNESSES: .401"/.601"/.701"

CALIBRATION TIMES: INITIAL: 0940 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 1120

SKETCH WITH RESULTS:

BAY	LOCATION	READING.
2	1	.577
2	5	.581
4	11	.573
4	12	.574
4	15	.577
4	16	.576
7	1	.579
7	5	.577
14	5	.576
15	10	.582
15	14	.580

Evaluation Required: (YES) NO

EXAMINER Simon Crothers LEVEL II DATE 3-30-98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Pg 1 of 1

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-96

PLANT V.Y. OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 2, 4, 7, 10, 14 + 15 EN N/A

LOCATION R.B. 213' OUTSIDE TORUS

MATERIAL: C/S PRODUCT FORM: WROUGHT APPROX. THICK.: 0.6"

INSTRUMENT: MAKE: PANAMETRICS MODEL: 26 DL + SERIAL NO.: 93129307

CRT ☐ DIGITAL ☒ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 69318 MODE: ☒ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0MHz SIZE: .312

CAL. BLOCK MATERIAL: C/S PRODUCT FORM: STEPWEDGE THICKNESSES: .25", .50", .75", 1.0"

CALIBRATION TIMES: INITIAL: 1250 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 1320

SKETCH WITH RESULTS:

BAY	AREA #17	AREA #18
#2	0.578"	0.578"
#4	0.575"	0.586"
#7	0.583"	0.584"
#10	0.587"	0.589"
#14	0.591"	0.592"
#15	0.587"	0.581"

SUPPLEMENTAL LOCATIONS

Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 4-13-98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 4-13-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112.119

PLANT VY CUTAGE 20 DRAWING NA REV. NA

SYSTEM TORUS COMPONENT/WELD NO. BAYS 1-6 AND 8-16 EN NA

LOCATION RB 213'

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .6"

INSTRUMENT:
MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93134807

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS S/N D791-RM MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 SIZE: .312"

CAL. BLOCK MATERIAL: CS 93-6689 PRODUCT FORM: STEP WEDGE THICKNESSES: .25, .5, .75, 1.0

CALIBRATION TIMES:
INITIAL: 2110 CHECK: NA CHECK: NA CHECK: NA FINAL: 2228

THERM. S/N 122927 CAL BLK TEMP 69° COMP TEMP 73°

SKETCH WITH RESULTS: SEE ATTACHED SHEETS

Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 4/22/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 4.23.98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: BAY1
Datafile(s): BAY1

	A	Max	Min	Del_T	Ave
00001	0.601	0.601	0.601	0.000	0.601
00002	0.615	0.615	0.615	0.000	0.615
00003	0.614	0.614	0.614	0.000	0.614
00004	0.593	0.593	0.593	0.000	0.593
00005	0.595	0.595	0.595	0.000	0.595
00006	0.604	0.604	0.604	0.000	0.604
00007	0.607	0.607	0.607	0.000	0.607
00008	0.602	0.602	0.602	0.000	0.602
00009	0.591	0.591	0.591	0.000	0.591
00010	0.594	0.594	0.594	0.000	0.594
00011	0.595	0.595	0.595	0.000	0.595
00012	0.597	0.597	0.597	0.000	0.597
00013	0.597	0.597	0.597	0.000	0.597
00014	0.598	0.598	0.598	0.000	0.598
00015	0.590	0.590	0.590	0.000	0.590
00016	0.594	0.594	0.594	0.000	0.594

Max	0.615
Min	0.590
Del_T	0.025
Ave	0.599

LCII 4/22/98

STATISTICS

Component ID: BAY1

Datafile(s): BAY1

COLUMN:

Lowest Value: 0.590 A

Highest Value: 0.615 A

Lowest Del_T: 0.025 A

Highest Del_T: 0.025 A

ROW:

Lowest Value: 0.590 00015

Highest Value: 0.615 00002

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.599

LII 4/22/98

Component ID: BAY2
Datafile(s): BAY2

	A	Max	Min	Del_T	Ave
00001	0.577	0.577	0.577	0.000	0.577
00002	0.622	0.622	0.622	0.000	0.622
00003	0.623	0.623	0.623	0.000	0.623
00004	0.595	0.595	0.595	0.000	0.595
00005	0.583	0.583	0.583	0.000	0.583
00006	0.625	0.625	0.625	0.000	0.625
00007	0.627	0.627	0.627	0.000	0.627
00008	0.594	0.594	0.594	0.000	0.594
00009	0.610	0.610	0.610	0.000	0.610
00010	0.611	0.611	0.611	0.000	0.611
00011	0.596	0.596	0.596	0.000	0.596
00012	0.599	0.599	0.599	0.000	0.599
00013	0.614	0.614	0.614	0.000	0.614
00014	0.613	0.613	0.613	0.000	0.613
00015	0.594	0.594	0.594	0.000	0.594
00016	0.597	0.597	0.597	0.000	0.597
00017	0.575	0.575	0.575	0.000	0.575
00018	0.577	0.577	0.577	0.000	0.577

Max	0.627
Min	0.575
Del_T	0.052
Ave	0.602

LTI 4/22/98

Component ID: BAY2

Datafile(s): BAY2

COLUMN:

Lowest Value: 0.575 A

Highest Value: 0.627 A

Lowest Del_T: 0.052 A

Highest Del_T: 0.052 A

ROW:

Lowest Value: 0.575 00017

Highest Value: 0.627 00007

Lowest Del_T: 0.000 00018

Highest Del_T: 0.000 00018

Overall Average Value: 0.602

4/22/98

Component ID: BAY3
Datafile(s): BAY3

	A	Max	Min	Del_T	Ave
00001	0.594	0.594	0.594	0.000	0.594
00002	0.616	0.616	0.616	0.000	0.616
00003	0.613	0.613	0.613	0.000	0.613
00004	0.604	0.604	0.604	0.000	0.604
00005	0.600	0.600	0.600	0.000	0.600
00006	0.625	0.625	0.625	0.000	0.625
00007	0.621	0.621	0.621	0.000	0.621
00008	0.608	0.608	0.608	0.000	0.608
00009	0.612	0.612	0.612	0.000	0.612
00010	0.618	0.618	0.618	0.000	0.618
00011	0.600	0.600	0.600	0.000	0.600
00012	0.604	0.604	0.604	0.000	0.604
00013	0.608	0.608	0.608	0.000	0.608
00014	0.614	0.614	0.614	0.000	0.614
00015	0.600	0.600	0.600	0.000	0.600
00016	0.599	0.599	0.599	0.000	0.599

Max	0.625
Min	0.594
Del_T	0.031
Ave	0.608

TMSheam LII 4/22/98

STATISTICS

Component ID: BAY3

Datafile(s): BAY3

COLUMN:

Lowest Value: 0.594 A

Highest Value: 0.625 A

Lowest Del_T: 0.031 A

Highest Del_T: 0.031 A

ROW:

Lowest Value: 0.594 00001

Highest Value: 0.625 00006

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.608

MA Shen III 4/22/98

Component ID: BAY4
Datafile(s): BAY4

	A	Max	Min	Del_T	Ave
00001	0.601	0.601	0.601	0.000	0.601
00002	0.631	0.631	0.631	0.000	0.631
00003	0.634	0.634	0.634	0.000	0.634
00004	0.603	0.603	0.603	0.000	0.603
00005	0.607	0.607	0.607	0.000	0.607
00006	0.630	0.630	0.630	0.000	0.630
00007	0.636	0.636	0.636	0.000	0.636
00008	0.601	0.601	0.601	0.000	0.601
00009	0.606	0.606	0.606	0.000	0.606
00010	0.609	0.609	0.609	0.000	0.609
00011	0.574	0.574	0.574	0.000	0.574
00012	0.573	0.573	0.573	0.000	0.573
00013	0.610	0.610	0.610	0.000	0.610
00014	0.613	0.613	0.613	0.000	0.613
00015	0.576	0.576	0.576	0.000	0.576
00016	0.576	0.576	0.576	0.000	0.576
00017	0.576	0.576	0.576	0.000	0.576
00018	0.581	0.581	0.581	0.000	0.581

Max	0.636
Min	0.573
Del_T	0.063
Ave	0.602

[illegible] WI 4/22/98

Component ID: BAY4

Datafile(s): BAY4

COLUMN:

Lowest Value: 0.573 A

Highest Value: 0.636 A

Lowest Del_T: 0.063 A

Highest Del_T: 0.063 A

ROW:

Lowest Value: 0.573 00012

Highest Value: 0.636 00007

Lowest Del_T: 0.000 00018

Highest Del_T: 0.000 00018

Overall Average Value: 0.602

LII 4/22/98

Component ID: BAY5
Datafile(s): BAY5

	A	Max	Min	Del_T	Ave
00001	0.594	0.594	0.594	0.000	0.594
00002	0.629	0.629	0.629	0.000	0.629
00003	0.634	0.634	0.634	0.000	0.634
00004	0.592	0.592	0.592	0.000	0.592
00005	0.592	0.592	0.592	0.000	0.592
00006	0.631	0.631	0.631	0.000	0.631
00007	0.632	0.632	0.632	0.000	0.632
00008	0.588	0.588	0.588	0.000	0.588
00009	0.596	0.596	0.596	0.000	0.596
00010	0.597	0.597	0.597	0.000	0.597
00011	0.599	0.599	0.599	0.000	0.599
00012	0.597	0.597	0.597	0.000	0.597
00013	0.595	0.595	0.595	0.000	0.595
00014	0.597	0.597	0.597	0.000	0.597
00015	0.596	0.596	0.596	0.000	0.596
00016	0.596	0.596	0.596	0.000	0.596

Max	0.634
Min	0.588
Del_T	0.046
Ave	0.604

JWASlea LII 4/22/98

STATISTICS

Component ID: BAY5

Datafile(s): BAY5

COLUMN:

Lowest Value: 0.588 A

Highest Value: 0.634 A

Lowest Del_T: 0.046 A

Highest Del_T: 0.046 A

ROW:

Lowest Value: 0.588 00008

Highest Value: 0.634 00003

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.604

LII 4/22/98

Component ID: BAY6
Datafile(s): BAY6

	A	Max	Min	Del_T	Ave
00001	0.588	0.588	0.588	0.000	0.588
00002	0.612	0.612	0.612	0.000	0.612
00003	0.611	0.611	0.611	0.000	0.611
00004	0.594	0.594	0.594	0.000	0.594
00005	0.584	0.584	0.584	0.000	0.584
00006	0.617	0.617	0.617	0.000	0.617
00007	0.617	0.617	0.617	0.000	0.617
00008	0.594	0.594	0.594	0.000	0.594
00009	0.607	0.607	0.607	0.000	0.607
00010	0.604	0.604	0.604	0.000	0.604
00011	0.611	0.611	0.611	0.000	0.611
00012	0.608	0.608	0.608	0.000	0.608
00013	0.601	0.601	0.601	0.000	0.601
00014	0.600	0.600	0.600	0.000	0.600
00015	0.617	0.617	0.617	0.000	0.617
00016	0.613	0.613	0.613	0.000	0.613

Max	0.617
Min	0.584
Del_T	0.033
Ave	0.605

[illegible] LII 4/22/98

STATISTICS

Component ID: BAY6

Datafile(s): BAY6

COLUMN:

Lowest Value: 0.584 A

Highest Value: 0.617 A

Lowest Del_T: 0.033 A

Highest Del_T: 0.033 A

ROW:

Lowest Value: 0.584 00005

Highest Value: 0.617 00015

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.605

LII 4/22/58

Component ID: BAY8
Datafile(s): BAY8

	A	Max	Min	Del_T	Ave
00001	0.583	0.583	0.583	0.000	0.583
00002	0.615	0.615	0.615	0.000	0.615
00003	0.614	0.614	0.614	0.000	0.614
00004	0.606	0.606	0.606	0.000	0.606
00005	0.586	0.586	0.586	0.000	0.586
00006	0.609	0.609	0.609	0.000	0.609
00007	0.613	0.613	0.613	0.000	0.613
00008	0.607	0.607	0.607	0.000	0.607
00009	0.608	0.608	0.608	0.000	0.608
00010	0.607	0.607	0.607	0.000	0.607
00011	0.605	0.605	0.605	0.000	0.605
00012	0.598	0.598	0.598	0.000	0.598
00013	0.608	0.608	0.608	0.000	0.608
00014	0.607	0.607	0.607	0.000	0.607
00015	0.601	0.601	0.601	0.000	0.601
00016	0.603	0.603	0.603	0.000	0.603

Max	0.615
Min	0.583
Del_T	0.032
Ave	0.604

M A Shearer III 4/22/98

STATISTICS

Component ID: BAY8

Datafile(s): BAY8

COLUMN:

Lowest Value: 0.583 A

Highest Value: 0.615 A

Lowest Del_T: 0.032 A

Highest Del_T: 0.032 A

ROW:

Lowest Value: 0.583 00001

Highest Value: 0.615 00002

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.604

TMSkeen LEI 4/22/98

Component ID: BAY9
Datafile(s): BAY9

	A	Max	Min	Del_T	Ave
00001	0.594	0.594	0.594	0.000	0.594
00002	0.610	0.610	0.610	0.000	0.610
00003	0.609	0.609	0.609	0.000	0.609
00004	0.599	0.599	0.599	0.000	0.599
00005	0.590	0.590	0.590	0.000	0.590
00006	0.606	0.606	0.606	0.000	0.606
00007	0.601	0.601	0.601	0.000	0.601
00008	0.596	0.596	0.596	0.000	0.596
00009	0.599	0.599	0.599	0.000	0.599
00010	0.600	0.600	0.600	0.000	0.600
00011	0.582	0.582	0.582	0.000	0.582
00012	0.593	0.593	0.593	0.000	0.593
00013	0.601	0.601	0.601	0.000	0.601
00014	0.601	0.601	0.601	0.000	0.601
00015	0.593	0.593	0.593	0.000	0.593
00016	0.591	0.591	0.591	0.000	0.591

Max	0.610
Min	0.582
Del_T	0.028
Ave	0.598

LIT 4/22/98

Component ID: BAY9

Datafile(s): BAY9

COLUMN:

Lowest Value: 0.582 A

Highest Value: 0.610 A

Lowest Del_T: 0.028 A

Highest Del_T: 0.028 A

ROW:

Lowest Value: 0.582 00011

Highest Value: 0.610 00002

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.598

TWSheu LII 4/22/98

Component ID: BAY10
Datafile(s): BAY10

	A	Max	Min	Del_T	Ave
00001	0.585	0.585	0.585	0.000	0.585
00002	0.629	0.629	0.629	0.000	0.629
00003	0.631	0.631	0.631	0.000	0.631
00004	0.584	0.584	0.584	0.000	0.584
00005	0.586	0.586	0.586	0.000	0.586
00006	0.628	0.628	0.628	0.000	0.628
00007	0.629	0.629	0.629	0.000	0.629
00008	0.583	0.583	0.583	0.000	0.583
00009	0.598	0.598	0.598	0.000	0.598
00010	0.597	0.597	0.597	0.000	0.597
00011	0.598	0.598	0.598	0.000	0.598
00012	0.596	0.596	0.596	0.000	0.596
00013	0.593	0.593	0.593	0.000	0.593
00014	0.592	0.592	0.592	0.000	0.592
00015	0.594	0.594	0.594	0.000	0.594
00016	0.595	0.595	0.595	0.000	0.595
00017	0.588	0.588	0.588	0.000	0.588
00018	0.589	0.589	0.589	0.000	0.589

Max	0.631
Min	0.583
Del_T	0.048
Ave	0.600

TA Shear LII 4/22/98

STATISTICS

Component ID: BAY10

Datafile(s): BAY10

COLUMN:

Lowest Value: 0.583 A

Highest Value: 0.631 A

Lowest Del_T: 0.048 A

Highest Del_T: 0.048 A

ROW:

Lowest Value: 0.583 00008

Highest Value: 0.631 00003

Lowest Del_T: 0.000 00018

Highest Del_T: 0.000 00018

Overall Average Value: 0.600

2H 4/22/98

Component ID: BAY11
Datafile(s): BAY11

	A	Max	Min	Del_T	Ave
00001	0.586	0.586	0.586	0.000	0.586
00002	0.618	0.618	0.618	0.000	0.618
00003	0.617	0.617	0.617	0.000	0.617
00004	0.594	0.594	0.594	0.000	0.594
00005	0.588	0.588	0.588	0.000	0.588
00006	0.621	0.621	0.621	0.000	0.621
00007	0.618	0.618	0.618	0.000	0.618
00008	0.592	0.592	0.592	0.000	0.592
00009	0.585	0.585	0.585	0.000	0.585
00010	0.586	0.586	0.586	0.000	0.586
00011	0.602	0.602	0.602	0.000	0.602
00012	0.601	0.601	0.601	0.000	0.601
00013	0.587	0.587	0.587	0.000	0.587
00014	0.589	0.589	0.589	0.000	0.589
00015	0.598	0.598	0.598	0.000	0.598
00016	0.598	0.598	0.598	0.000	0.598

Max	0.621
Min	0.585
Del_T	0.036
Ave	0.599

LII 4/22/98

STATISTICS

Component ID: BAY11

Datafile(s): BAY11

COLUMN:

Lowest Value: 0.585 A

Highest Value: 0.621 A

Lowest Del_T: 0.036 A

Highest Del_T: 0.036 A

ROW:

Lowest Value: 0.585 00009

Highest Value: 0.621 00006

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.599

MJ Shear LH 4/22/98

Component ID: BAY12
Datafile(s): BAY12

	A	Max	Min	Del_T	Ave
00001	0.609	0.609	0.609	0.000	0.609
00002	0.642	0.642	0.642	0.000	0.642
00003	0.640	0.640	0.640	0.000	0.640
00004	0.593	0.593	0.593	0.000	0.593
00005	0.610	0.610	0.610	0.000	0.610
00006	0.636	0.636	0.636	0.000	0.636
00007	0.633	0.633	0.633	0.000	0.633
00008	0.588	0.588	0.588	0.000	0.588
00009	0.594	0.594	0.594	0.000	0.594
00010	0.596	0.596	0.596	0.000	0.596
00011	0.618	0.618	0.618	0.000	0.618
00012	0.610	0.610	0.610	0.000	0.610
00013	0.595	0.595	0.595	0.000	0.595
00014	0.596	0.596	0.596	0.000	0.596
00015	0.612	0.612	0.612	0.000	0.612
00016	0.607	0.607	0.607	0.000	0.607

Max	0.642
Min	0.588
Del_T	0.054
Ave	0.611

TMSchaar LII 4/22/98

STATISTICS

Component ID: BAY12

Datafile(s): BAY12

COLUMN:

Lowest Value: 0.588 A

Highest Value: 0.642 A

Lowest Del_T: 0.054 A

Highest Del_T: 0.054 A

ROW:

Lowest Value: 0.588 00008

Highest Value: 0.642 00002

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.611

LII 4/22/98

Component ID: BAY13
Datafile(s): BAY13

	A	Max	Min	Del_T	Ave
00001	0.595	0.595	0.595	0.000	0.595
00002	0.632	0.632	0.632	0.000	0.632
00003	0.633	0.633	0.633	0.000	0.633
00004	0.601	0.601	0.601	0.000	0.601
00005	0.597	0.597	0.597	0.000	0.597
00006	0.639	0.639	0.639	0.000	0.639
00007	0.641	0.641	0.641	0.000	0.641
00008	0.603	0.603	0.603	0.000	0.603
00009	0.599	0.599	0.599	0.000	0.599
00010	0.595	0.595	0.595	0.000	0.595
00011	0.585	0.585	0.585	0.000	0.585
00012	0.585	0.585	0.585	0.000	0.585
00013	0.599	0.599	0.599	0.000	0.599
00014	0.596	0.596	0.596	0.000	0.596
00015	0.586	0.586	0.586	0.000	0.586
00016	0.585	0.585	0.585	0.000	0.585

Max	0.641
Min	0.585
Del_T	0.056
Ave	0.604

M A Shearer LII 4/22/98

STATISTICS

Component ID: BAY13

Datafile(s): BAY13

COLUMN:

Lowest Value: 0.585 A

Highest Value: 0.641 A

Lowest Del_T: 0.056 A

Highest Del_T: 0.056 A

ROW:

Lowest Value: 0.585 00016

Highest Value: 0.641 00007

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.604

TM Shaw LII 4/22/78

Component ID: BAY14
Datafile(s): BAY14

	A	Max	Min	Del_T	Ave
00001	0.591	0.591	0.591	0.000	0.591
00002	0.626	0.626	0.626	0.000	0.626
00003	0.625	0.625	0.625	0.000	0.625
00004	0.590	0.590	0.590	0.000	0.590
00005	0.573	0.573	0.573	0.000	0.573
00006	0.613	0.613	0.613	0.000	0.613
00007	0.614	0.614	0.614	0.000	0.614
00008	0.596	0.596	0.596	0.000	0.596
00009	0.597	0.597	0.597	0.000	0.597
00010	0.598	0.598	0.598	0.000	0.598
00011	0.590	0.590	0.590	0.000	0.590
00012	0.595	0.595	0.595	0.000	0.595
00013	0.594	0.594	0.594	0.000	0.594
00014	0.594	0.594	0.594	0.000	0.594
00015	0.590	0.590	0.590	0.000	0.590
00016	0.594	0.594	0.594	0.000	0.594
00017	0.592	0.592	0.592	0.000	0.592
00018	0.593	0.593	0.593	0.000	0.593

Max	0.626
Min	0.573
Del_T	0.053
Ave	0.598

J M Sleau L II 4/22/98

STATISTICS

Component ID: BAY14

Datafile(s): BAY14

COLUMN:

Lowest Value: 0.573 A

Highest Value: 0.626 A

Lowest Del_T: 0.053 A

Highest Del_T: 0.053 A

ROW:

Lowest Value: 0.573 00005

Highest Value: 0.626 00002

Lowest Del_T: 0.000 00018

Highest Del_T: 0.000 00018

Overall Average Value: 0.598

LJT 4/22/98

Component ID: BAY15
Datafile(s): BAY15

	A	Max	Min	Del_T	Ave
00001	0.585	0.585	0.585	0.000	0.585
00002	0.604	0.604	0.604	0.000	0.604
00003	0.605	0.605	0.605	0.000	0.605
00004	0.597	0.597	0.597	0.000	0.597
00005	0.589	0.589	0.589	0.000	0.589
00006	0.609	0.609	0.609	0.000	0.609
00007	0.610	0.610	0.610	0.000	0.610
00008	0.599	0.599	0.599	0.000	0.599
00009	0.582	0.582	0.582	0.000	0.582
00010	0.582	0.582	0.582	0.000	0.582
00011	0.607	0.607	0.607	0.000	0.607
00012	0.606	0.606	0.606	0.000	0.606
00013	0.584	0.584	0.584	0.000	0.584
00014	0.580	0.580	0.580	0.000	0.580
00015	0.605	0.605	0.605	0.000	0.605
00016	0.604	0.604	0.604	0.000	0.604
00017	0.587	0.587	0.587	0.000	0.587
00018	0.581	0.581	0.581	0.000	0.581

Max	0.610
Min	0.580
Del_T	0.030
Ave	0.595

MASheare LII 4/22/98

Component ID: BAY15

Datafile(s): BAY15

COLUMN:

Lowest Value: 0.580 A

Highest Value: 0.610 A

Lowest Del_T: 0.030 A

Highest Del_T: 0.030 A

ROW:

Lowest Value: 0.580 00014

Highest Value: 0.610 00007

Lowest Del_T: 0.000 00018

Highest Del_T: 0.000 00018

Overall Average Value: 0.595

LII 4/22/98

Component ID: BAY16
Datafile(s): BAY16

	A	Max	Min	Del_T	Ave
00001	0.587	0.587	0.587	0.000	0.587
00002	0.613	0.613	0.613	0.000	0.613
00003	0.615	0.615	0.615	0.000	0.615
00004	0.601	0.601	0.601	0.000	0.601
00005	0.587	0.587	0.587	0.000	0.587
00006	0.616	0.616	0.616	0.000	0.616
00007	0.619	0.619	0.619	0.000	0.619
00008	0.611	0.611	0.611	0.000	0.611
00009	0.601	0.601	0.601	0.000	0.601
00010	0.607	0.607	0.607	0.000	0.607
00011	0.613	0.613	0.613	0.000	0.613
00012	0.610	0.610	0.610	0.000	0.610
00013	0.597	0.597	0.597	0.000	0.597
00014	0.602	0.602	0.602	0.000	0.602
00015	0.611	0.611	0.611	0.000	0.611
00016	0.585	0.585	0.585	0.000	0.585

Max	0.619
Min	0.585
Del_T	0.034
Ave	0.605

W A Shearer III 4/22/98

STATISTICS

Component ID: BAY16

Datafile(s): BAY16

COLUMN:

Lowest Value: 0.585 A

Highest Value: 0.619 A

Lowest Del_T: 0.034 A

Highest Del_T: 0.034 A

ROW:

Lowest Value: 0.585 00016

Highest Value: 0.619 00007

Lowest Del_T: 0.000 00016

Highest Del_T: 0.000 00016

Overall Average Value: 0.605

LII 4/22/98

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THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-128

PLANT V.Y. OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 7 EN N/A

LOCATION RB 213' OUTSIDE TORUS

MATERIAL: C/S PRODUCT FORM: WROUGHT APPROX. THICK.: 0.6"

INSTRUMENT: MAKE: PANAMETRICS MODEL: 26 DL + SERIAL NO.: 93134807

CRT ☐ DIGITAL ☑ S/N 69315 HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHZ SIZE: .312"

CAL. BLOCK MATERIAL: C/S 93-6691 PRODUCT FORM: STEPWEDGE THICKNESSES: .35" - 1.0"

CALIBRATION TIMES: INITIAL: 1420 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 1435

SKETCH WITH RESULTS:

RE-INSPECTION OF GRID PATTERN FOR THICKNESS OF TORUS BOTTOM-POST SAND BLAST.

LOCATION	THICKNESS
1	.578"
2	.622"
3	.627"
4	.596"
5	.577"
6	.619"
7	.624"
8	.599"

LOCATION	THICKNESS
9	.600"
10	.600"
11	.592"
12	.591"
13	.598"
14	.592"
15	.596"
16	.597"
17	.581"
18	.581"

Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 5-9-98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 5-9-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-125

PLANT V.Y. OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 4 EN N/A

LOCATION R.B. 213' OUTSIDE TORUS

MATERIAL: C/S PRODUCT FORM: PLATE APPROX. THICK.: 0.6"

INSTRUMENT: MAKE: PANAMETRICS MODEL: 26 DL + SERIAL NO.: 93129207

CRT ☐ DIGITAL ☑ S/N 69315 HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS D791RM MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHZ SIZE: .312"

CAL. BLOCK MATERIAL: C/S S/N 93-6689 PRODUCT FORM: STEPWEDGE THICKNESSES: .25" – 1.0"

CALIBRATION TIMES: INITIAL: 0850 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 0904

THERMOMETER S/N 162579 CAL BLOCK TEMP - 76°F COMP. TEMP - 72°F

SKETCH WITH RESULTS:

SAMPLE UT INSPECTIONS UNDER BAFFLE SUPPORT PLATES

ROW 4A

LOCATION # 21 - .641"
22 - .644"
23 - .641"
24 - .638"
25 - .602"
26 - .605"
27 - .605"
28 - .608"

NOTE: THICKNESSES TAKEN FROM OUTSIDE TORUS WITH PAINT REMOVED

Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 5-8-98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 5-8-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-126

PLANT V.Y OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 15 EN N/A

LOCATION R.B. 213' OUTSIDE TORUS

MATERIAL: C/S PRODUCT FORM: PLATE APPROX. THICK.: 0.6"

INSTRUMENT: MAKE: PANAMETRICS MODEL: 26 DL + SERIAL NO.: 93129207

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHZ SIZE: .312"

CAL. BLOCK MATERIAL: C/S S/N 93-6689 PRODUCT FORM: STEPWEDGE THICKNESSES: .25" - 1.0"

CALIBRATION TIMES: INITIAL: 0905 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 0920

THERMOMETER S/N 162579 CAL BLOCK TEMP - 76°F COMP. TEMP - 72°F

SKETCH WITH RESULTS:

SAMPLE UT INSPECTIONS UNDER BAFFLE SUPPORT PLATES

	ROW 15A	ROW 15B
LOCATION	#21 - .599"	#21 - .600"
	22 - .596"	22 - .602"
	23 - .596"	23 - .600"
	24 - .594"	24 - .596"
	25 - .586"	25 - .609"
	26 - .590"	26 - .597"
	27 - .588"	27 - .610"
	28 - .589"	28 - .609"

Evaluation Required: (YES) NO

NOTE: THICKNESSES TAKEN FROM OUTSIDE TORUS WITH PAINT REMOVED

EXAMINER [signature] LEVEL II DATE 5-8-98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 5-8-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

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THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-127

PLANT V.Y. OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 7 TORUS OPENING INDICATION EN N/A

LOCATION R.B. 213' INSIDE TORUS

MATERIAL: C/S PRODUCT FORM: WROUGHT APPROX. THICK.: 0.6"

INSTRUMENT:
MAKE: PANAMETRICS MODEL: 26 DL+ SERIAL NO.: 93134807

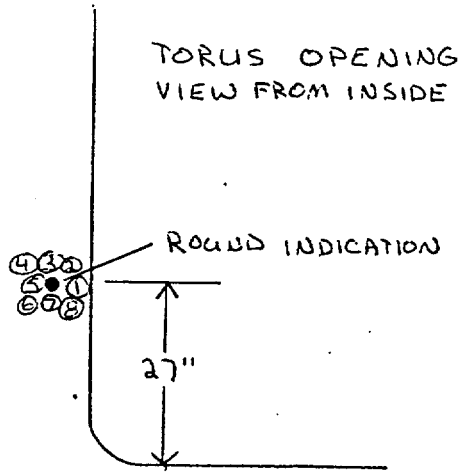
CRT ☐ DIGITAL ☑ S/N 69315 HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHZ SIZE: .312"

CAL. BLOCK MATERIAL: C/S S/N 93-6691 PRODUCT FORM: STEPWEDGE THICKNESSES: .25" - 1.0"

CALIBRATION TIMES:
INITIAL: 1350 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 1415

SKETCH WITH RESULTS: NOTED ON WPC VY-NCR 17



THICKNESS READINGS

1 - .594"
2 - .594"
3 - .594"
4 - .595"
5 - .592"
6 - .593"
7 - .593"
8 - .594"

Evaluation Required: YES NO

EXAMINER	[signature]	LEVEL II	DATE 5-9-98
EXAM AGENCY (Optional)	N/A		DATE N/A
ISI COORDINATOR (Optional)	[signature]		DATE 5-9-98
COGNIZANT ENGINEER	[signature]		DATE 5/9/98
QA (Optional)	N/A		DATE N/A
ANII (Optional)	N/A		DATE N/A

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THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-129

PLANT V.Y. OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 7 TORUS OPENING INDICATION NO. N/A

LOCATION R.B. 213' INSIDE TORUS

MATERIAL: C/S PRODUCT FORM: WROUGHT APPROX. THICK.: 0.6"

INSTRUMENT:
MAKE: PANAMETRICS MODEL: 26 DL + SERIAL NO.: 93134807

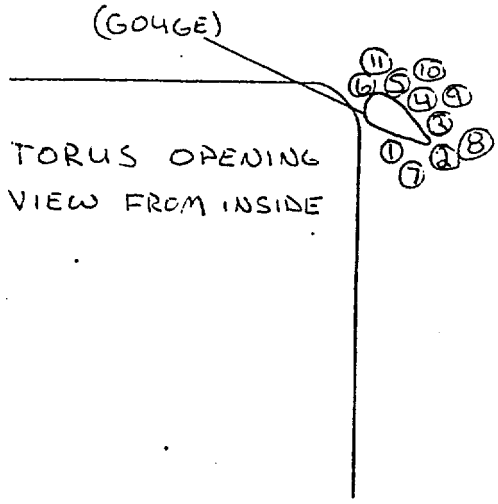
CRT ☐ DIGITAL ☑ S/N 69315 HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHZ SIZE: .312"

CAL. BLOCK MATERIAL: C/S S/N 93-6691 PRODUCT FORM: STEPWEDGE THICKNESSES: .25" - 1.0"

CALIBRATION TIMES:
INITIAL: 1350 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 1415

SKETCH WITH RESULTS: NOTED ON WPC VY-NCR 17



THICKNESS READING

1 - .593"
2 - .589"
3 - .590"
4 - .591"
5 - .591"
6 - .590"
7 - .589"
8 - .591"
9 - .594"
10 - .591"
11 - .591"

Evaluation Required: YES NO

EXAMINER [signature] LEVEL II DATE 5-9-98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 5-9-98

COGNIZANT ENGINEER [signature] DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

THICKNESS DATA SHEET

DATA SHEET NO. _____

PLANT Vermont Yankee OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM Torus COMPONENT/WELD NO. Bay 1 area 1 EN N/A

LOCATION Inside Torus Bay 1

MATERIAL: CS PRODUCT FORM: Plate APPROX. THICK.: .584"

INSTRUMENT MAKE: Panametrics MODEL: 26 DL+ SERIAL NO.: 93134807

CRT ☐ DIGITAL ☒ S/N 69315 HORIZONTAL LINEARITY PERFORMED ☐

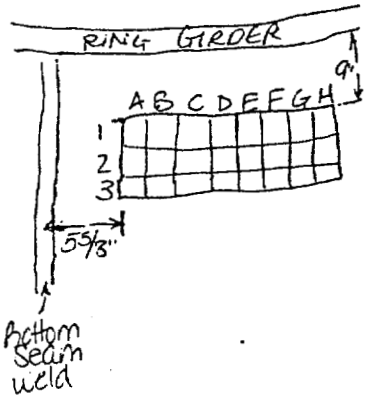
TRANSDUCER MAKE/MODEL: Panametrics D791RM MODE: ☒ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: CS S/N 93-6689 PRODUCT FORM: STEP THICKNESSES: .250", .500", .750", 1.0"

CALIBRATION TIMES: INITIAL: 1542 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 1605

SKETCH WITH RESULTS: Thermo S/N 162556 calblk-72°F comp -70°F

Bay 1 area 1 located 9" from 16/1 Ring girder, starting at 55/8" from ℄ seam weld.



Evaluation Required: (YES) NO

EXAMINER Janet L Miles / Jerry [illegible] LEVEL II/II DATE 3/31/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [illegible] DATE 4.1.98

COGNIZANT ENGINEER [illegible] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) _____ DATE _____

Component ID: BAY1A1
Datafile(s): BAY1A1

	A	B	C	D	E	F	G	H	Max	Min	Del_T	Ave
00001	0.610	0.608	0.608	0.609	0.609	0.607	0.606	0.610	0.610	0.606	0.004	0.608
00002	0.610	0.609	0.609	0.610	0.608	0.609	0.610	0.609	0.610	0.608	0.002	0.609
00003	0.610	0.610	0.612	0.611	0.615	0.612	0.612	0.612	0.615	0.610	0.005	0.612
Max	0.610	0.610	0.612	0.611	0.615	0.612	0.612	0.612				
Min	0.610	0.608	0.608	0.609	0.608	0.607	0.606	0.609				
Del_T	0.000	0.002	0.004	0.002	0.007	0.005	0.006	0.003				
Ave	0.610	0.609	0.610	0.610	0.611	0.609	0.609	0.610				

Janet L Miles II 3/31/98

Steve Sanger 4-1-98

STATISTICS

Component ID: BAY1A1

Datafile(s): BAY1A1

COLUMN:

Lowest Value: 0.606 G

Highest Value: 0.615 E

Lowest Del_T: 0.000 A

Highest Del_T: 0.007 E

ROW:

Lowest Value: 0.606 00001

Highest Value: 0.615 00003

Lowest Del_T: 0.002 00002

Highest Del_T: 0.005 00003

Overall Average Value: 0.610

Janet K Miller II 3/31/98

[illegible] 4.1.98

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-27

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY Z, AREA 1 EN N/A

LOCATION Rx Bldg 213' Torus Bottom Exterior

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: 0.6 inches

INSTRUMENT: MAKE: Panametrics MODEL: 26DL PLUS SERIAL NO.: 93134807

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: Panametrics/D791-RM/69318 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5 MHz SIZE: 0.312"

CAL. BLOCK MATERIAL: CS SN: 93-6689 PRODUCT FORM: STEPWEDGE THICKNESSES: 0.250"–1.000

CALIBRATION TIMES: INITIAL: 04:20 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 06:15

SKETCH WITH RESULTS: THERMOMETER 162557 CAL BLOCK TEMP: 70°F PLANT TEMP: 67°F

1" GRIDS
A1-F6

Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 3/29/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: B2A1
Datafile(s): B2A1

	A	B	C	D	E	F	Max	Min	Del_T	Ave
00001	0.608	0.607	0.608	0.608	0.591	0.609	0.609	0.591	0.018	0.605
00002	0.605	0.604	0.606	0.600	0.609	0.607	0.609	0.600	0.009	0.605
00003	0.603	0.605	0.602	0.603	0.608	0.605	0.608	0.602	0.006	0.604
00004	0.603	0.605	0.605	0.608	0.609	0.606	0.609	0.603	0.006	0.606
00005	0.606	0.608	0.608	0.607	0.608	0.609	0.609	0.606	0.003	0.608
00006	0.605	0.602	0.605	0.606	0.605	0.607	0.607	0.602	0.005	0.605
Max	0.608	0.608	0.608	0.608	0.609	0.609				
Min	0.603	0.602	0.602	0.600	0.591	0.605				
Del_T	0.005	0.006	0.006	0.008	0.018	0.004				
Ave	0.605	0.605	0.606	0.605	0.605	0.607				

Charles P. Cat
3/29/98

3.30.98

STATISTICS

Component ID: B2A1

Datafile(s): B2A1

Charles R. Cato
3/29/98

COLUMN:

Lowest Value: 0.591 E

Highest Value: 0.609 F

Lowest Del_T: 0.004 F

Highest Del_T: 0.018 E

SLP Sugar 3.30.98

ROW:

Lowest Value: 0.591 00001

Highest Value: 0.609 00005

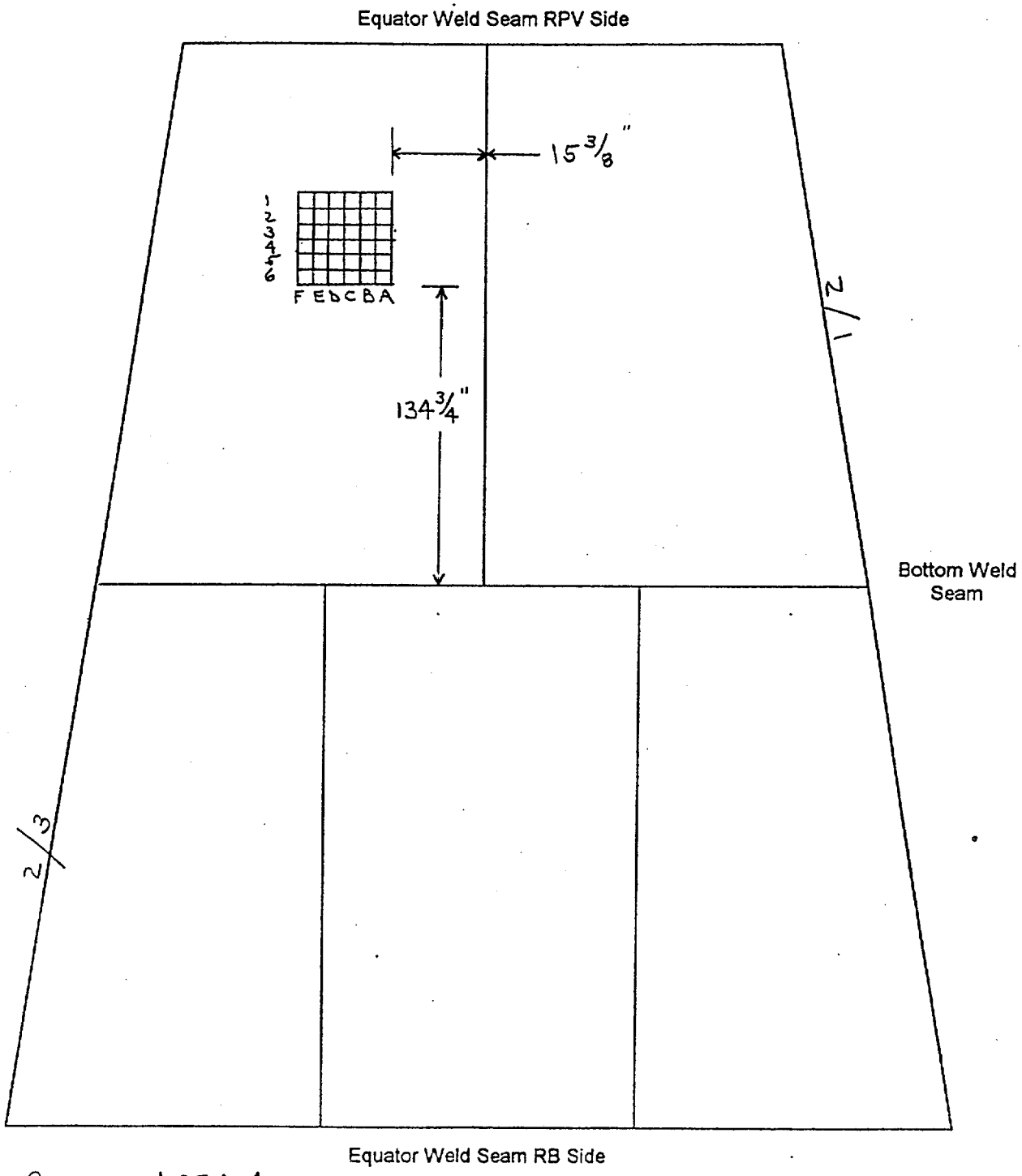
Lowest Del_T: 0.003 00005

Highest Del_T: 0.018 00001

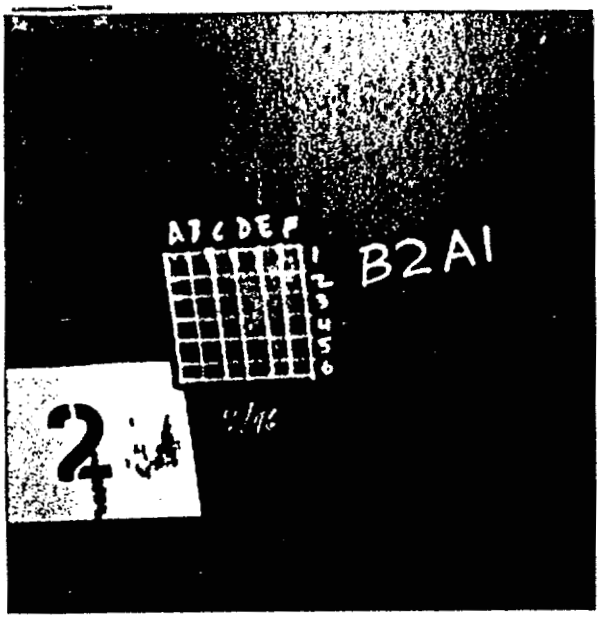
Overall Average Value: 0.606

Torus Rollout - Bay 2

Bottom Half - Shell Exterior



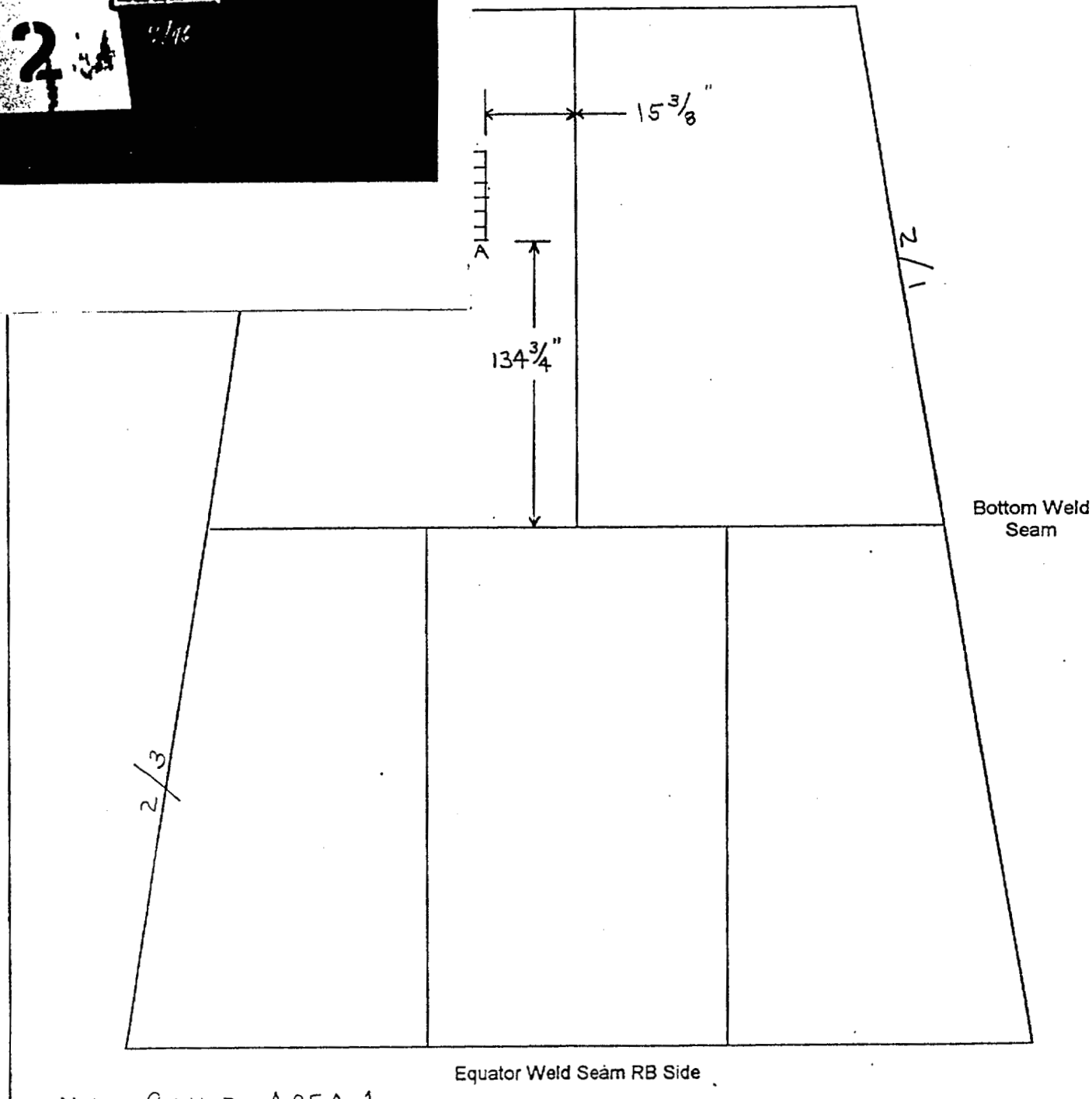
Notes: BAY 2, AREA 1



ay 2

erior

uator Weld Seam RPV Side



Notes: BAY 2, AREA 1

THICKNESS DATA SHEET

DATA SHEET NO. _____

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 2 AREA 2 EN _____

LOCATION RB 213'

MATERIAL: CARBON STEEL PRODUCT FORM: PLATE APPROX. THICK.: .580

INSTRUMENT:
MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93134807

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

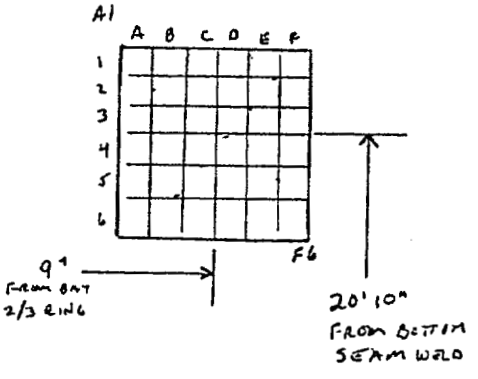
TRANSDUCER
MAKE/MODEL: PANAMETRICS S/N 89303 D791-RM MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK
MATERIAL: 4340 S/N 97-6691 PRODUCT FORM: STEPWEDGE THICKNESSES: .25, .50, .75

CALIBRATION TIMES:
INITIAL: 2030 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 2142

SKETCH WITH RESULTS:

THERMAL S/N 162557
CAL BLK TEMP 72°
COMP TEMP 75°



NOTE
PERFORMED SONDBLASTING

Evaluation Required: YES NO

EXAMINER [signature] LEVEL II DATE 3/31/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 4-1-98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) _____ DATE _____

Component ID: B2A2
Datafile(s): B2A2

	A	B	C	D	E	F	Max	Min	Del_T	Ave
00001	0.570	0.571	0.571	0.570	0.570	0.571	0.571	0.570	0.001	0.571
00002	0.569	0.570	0.572	0.570	0.568	0.571	0.572	0.568	0.004	0.570
00003	0.569	0.568	0.568	0.570	0.571	0.570	0.571	0.568	0.003	0.569
00004	0.570	0.570	0.570	0.567	0.570	0.569	0.570	0.567	0.003	0.569
00005	0.571	0.573	0.572	0.571	0.573	0.569	0.573	0.569	0.004	0.572
00006	0.572	0.572	0.572	0.570	0.570	0.570	0.572	0.570	0.002	0.571
Max	0.572	0.573	0.572	0.571	0.573	0.571				
Min	0.569	0.568	0.568	0.567	0.568	0.569				
Del_T	0.003	0.005	0.004	0.004	0.005	0.002				
Ave	0.570	0.571	0.571	0.570	0.570	0.570				

MA Shearer LII 3/31/98

4.1.98

STATISTICS

Component ID: B2A2

Datafile(s): B2A2

COLUMN:

Lowest Value: 0.567 D

Highest Value: 0.573 E

Lowest Del_T: 0.002 F

Highest Del_T: 0.005 E

ROW:

Lowest Value: 0.567 00004

Highest Value: 0.573 00005

Lowest Del_T: 0.001 00001

Highest Del_T: 0.004 00005

Overall Average Value: 0.570

TMA Shear LII 3/31/98

GWP Swayne 4.1.98

Pg 1 of 3

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-131

PLANT VY CUTAGE 20 DRAWING NA REV. NA

SYSTEM TORUS COMPONENT/WELD NO. BAY 2 AREA 2 EN NA

LOCATION RB 213'

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .580

INSTRUMENT MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93134807

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

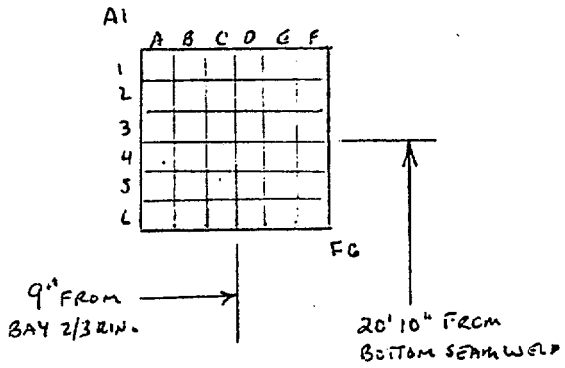
TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM SIN 69315 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 SIZE: .312

CAL. BLOCK MATERIAL: CS 93-6691 PRODUCT FORM: STEP WEDGE THICKNESSES: .25, .5, .75, 1.0

CALIBRATION TIMES: INITIAL: 2100 CHECK: NA CHECK: NA CHECK: NA FINAL: 2120

THERMO S/N 162579 CAL BLK TEMP 73° COMP TEMP 70°

SKETCH WITH RESULTS:



Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 5/9/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 5-11-98

COGNIZANT ENGINEER DATE

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: B2A2AFT
Datafile(s): B2A2AFT

	A	B	C	D	E	F	Max	Min	Del_T	Ave
00001	0.569	0.568	0.569	0.569	0.569	0.568	0.569	0.568	0.001	0.569
00002	0.567	0.568	0.568	0.568	0.568	0.567	0.568	0.567	0.001	0.568
00003	0.569	0.568	0.567	0.568	0.569	0.568	0.569	0.567	0.002	0.568
00004	0.569	0.569	0.569	0.567	0.568	0.568	0.569	0.567	0.002	0.568
00005	0.569	0.570	0.569	0.570	0.569	0.569	0.570	0.569	0.001	0.569
00006	0.569	0.569	0.570	0.569	0.569	0.570	0.570	0.569	0.001	0.569
Max	0.569	0.570	0.570	0.570	0.569	0.570				
Min	0.567	0.568	0.567	0.567	0.568	0.567				
Del_T	0.002	0.002	0.003	0.003	0.001	0.003				
Ave	0.569	0.569	0.569	0.569	0.569	0.568				

TMA Sleaner LII 5/9/98

5-11-98

STATISTICS

Component ID: B2A2AFT

Datafile(s): B2A2AFT

COLUMN:

Lowest Value: 0.567 F

Highest Value: 0.570 F

Lowest Del_T: 0.001 E

Highest Del_T: 0.003 F

ROW:

Lowest Value: 0.567 00004

Highest Value: 0.570 00006

Lowest Del_T: 0.001 00006

Highest Del_T: 0.002 00004

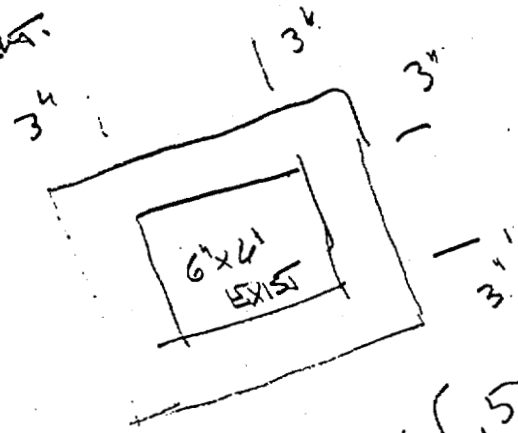
Overall Average Value: 0.569

TMAshcraft LII 5/9/98

GMPSnyder 5-11-98

Δt ONE ≈ .001" BEFORE/AFTER BLOSS.

MIKE BOY 2 AREA 2
ONLY AREA WITH UT THICKNESS
≤ .574" , NEED TO REEXAMINE
~~EXTEND~~.



t FOR THIS PLOTE IS { .577" , .583"

EXTEND GRIDS TO 12" SQUARE AREA

Pg 1 of 3

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-133

PLANT VY CUTAGE 20 DRAWING NA REV. NA

SYSTEM TORUS COMPONENT/WELD NO. BAY 2 AREA 2 (EXPANSION) EN NA

LOCATION RB 213'

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .6

INSTRUMENT:
MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93134501

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

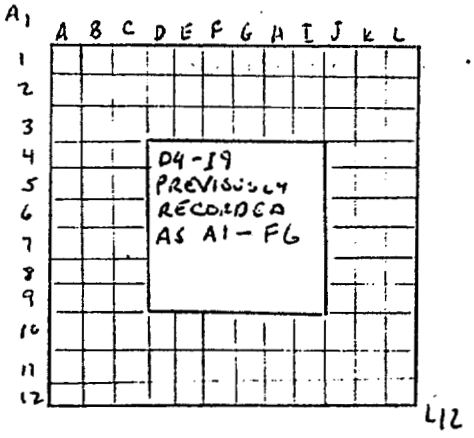
TRANSDUCER MAKE/MODEL: PANAMETRICS S/N 89303 D791-RM MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 SIZE: .312

CAL. BLOCK MATERIAL: CS 93-6691 PRODUCT FORM: STEP WEDGE THICKNESSES: .25, .5, .75, 1.0

CALIBRATION TIMES:
INITIAL: 1240 CHECK: NA CHECK: NA CHECK: NA FINAL: 1310

THERM S/N 122927 CAL BLK TEMP 70° COMP TEMP 66°

SKETCH WITH RESULTS:



SEE DATA SHEET # YA-UT-112-131 FOR POST BLAST THICKNESSES in LOCATIONS A1-F6.

5.12.98

Evaluation Required: YES NO

EXAMINER [signature] LEVEL II DATE 5/12/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 5-12-98

COGNIZANT ENGINEER DATE

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: B2A2X
Datafile(s): B2A2X

	A	B	C	D	E	F	G	H	I	J	K	L	Max	Min	Del_T	Ave
00001	0.573	0.570	0.572	0.571	0.573	0.572	0.572	0.571	0.572	0.571	0.573	0.574	0.574	0.570	0.004	0.572
00002	0.570	0.570	0.568	0.571	0.571	0.572	0.570	0.568	0.570	0.569	0.569	0.571	0.572	0.568	0.004	0.570
00003	0.572	0.570	0.571	0.571	0.570	0.572	0.570	0.571	0.570	0.569	0.571	0.570	0.572	0.569	0.003	0.571
00004	0.569	0.569	0.570							0.569	0.569	0.568	0.570	0.568	0.002	0.569
00005	0.572	0.570	0.570							0.569	0.571	0.571	0.572	0.569	0.003	0.570
00006	0.570	0.571	0.571							0.568	0.570	0.571	0.571	0.568	0.003	0.570
00007	0.570	0.572	0.570							0.570	0.569	0.572	0.572	0.569	0.003	0.570
00008	0.572	0.571	0.571							0.571	0.572	0.573	0.573	0.571	0.002	0.572
00009	0.572	0.571	0.571							0.571	0.572	0.573	0.573	0.571	0.002	0.572
00010	0.572	0.572	0.571	0.571	0.571	0.573	0.572	0.572	0.573	0.573	0.572	0.574	0.574	0.571	0.003	0.572
00011	0.571	0.571	0.572	0.571	0.572	0.572	0.573	0.572	0.573	0.572	0.574	0.571	0.574	0.571	0.003	0.572
00012	0.570	0.569	0.571	0.571	0.571	0.572	0.571	0.572	0.572	0.572	0.572	0.572	0.572	0.569	0.003	0.571
Max	0.573	0.572	0.572	0.571	0.573	0.573	0.573	0.572	0.573	0.573	0.574	0.574				
Min	0.569	0.569	0.568	0.571	0.570	0.572	0.570	0.568	0.570	0.568	0.569	0.568				
Del_T	0.004	0.003	0.004	0.000	0.003	0.001	0.003	0.004	0.003	0.005	0.005	0.006				
Ave	0.571	0.570	0.571	0.571	0.571	0.572	0.571	0.571	0.572	0.570	0.571	0.572				

LII 5/12/98

LII 5-12-98

5.12.98

YA-UT-112-133

YA-UT-112-137 Kg 5/12

STATISTICS

Component ID: B2A2X

Datafile(s): B2A2X

COLUMN:

Lowest Value: 0.568 L

Highest Value: 0.574 L

Lowest Del_T: 0.000 D

Highest Del_T: 0.006 L

ROW:

Lowest Value: 0.568 00006

Highest Value: 0.574 00011

Lowest Del_T: 0.002 00009

Highest Del_T: 0.004 00002

Overall Average Value: 0.571

L-II 5/12/98

L-II 5-12-98

5-12-98

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-26

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 5, AREA 1 EN N/A

LOCATION Rx Bldg. 213' TORUS Bottom Exterior

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: 0.6 inches

INSTRUMENT MAKE: Panametrics MODEL: 26 DL PLUS SERIAL NO.: 93134807

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: Panametrics/D791-RM/69318 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5 MHz SIZE: 0.312"

CAL. BLOCK MATERIAL: CS SN: 93-6689 PRODUCT FORM: STEPWEDGE THICKNESSES: 0.250" – 1.000"

CALIBRATION TIMES: INITIAL: 04:20 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 06:15

SKETCH WITH RESULTS: Thermometer 162557 Cal block temp: 70°F part temp: 67°F

1" grids

A1-013

Evaluation Required: YES NO

EXAMINER [signature] LEVEL II DATE 3/29/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: B5A1
Datafile(s): B5A1

98TORUS

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Max	Min	Del_T	Ave
00001	0.597	0.590	0.600	0.593	0.600	0.590	0.592	0.600	0.600	0.599	0.598	0.594	0.600	0.595	0.599	0.600	0.590	0.010	0.596
00002	0.598	0.596	0.597	0.587	0.591	0.595	0.590	0.589	0.599	0.594	0.593	0.596	0.594	0.597	0.592	0.599	0.587	0.012	0.594
00003	0.600	0.596	0.597	0.595	0.595	0.596	0.599	0.596	0.596	0.594	0.596	0.595	0.599	0.602	0.599	0.602	0.594	0.008	0.597
00004	0.601	0.601	0.598	0.587	0.593	0.585	0.597	0.597	0.598	0.598	0.599	0.598	0.594	0.597	0.597	0.601	0.585	0.016	0.596
00005	0.599	0.600	0.587	0.595	0.591	0.598	0.590	0.585	0.596	0.599	0.599	0.599	0.597	0.593	0.594	0.600	0.585	0.015	0.595
00006	0.594	0.598	0.597	0.589	0.582*	0.594	0.593	0.594	0.595	0.596	0.594	0.593	0.592	0.594	0.599	0.599	0.582	0.017	0.594
00007	0.600	0.601	0.600	0.597	0.598	0.599	0.597	0.598	0.595	0.595	0.597	0.597	0.599	0.600	0.594	0.601	0.594	0.007	0.598
00008	0.600	0.599	0.598	0.601	0.595	0.596	0.598	0.598	0.595	0.595	0.594	0.594	0.595	0.596	0.595	0.601	0.594	0.007	0.597
00009	0.597	0.597	0.594	0.601	0.602	0.594	0.597	0.594	0.596	0.602	0.596	0.597	0.595	0.598	0.599	0.602	0.594	0.008	0.597
00010	0.594	0.597	0.594	0.598	0.600	0.593	0.596	0.596	0.598	0.598	0.597	0.593	0.597	0.599	0.597	0.600	0.593	0.007	0.596
00011	0.597	0.599	0.600	0.601	0.599	0.596	0.595	0.596	0.596	0.599	0.599	0.596	0.599	0.596	0.594	0.601	0.594	0.007	0.597
00012	0.599	0.598	0.594	0.598	0.594	0.595	0.594	0.594	0.593	0.593	0.597	0.591	0.599	0.595	0.595	0.599	0.591	0.008	0.595
00013	0.595	0.598	0.592	0.597	0.595	0.593	0.598	0.594	0.593	0.596	0.594	0.593	0.593	0.592	0.592	0.598	0.592	0.006	0.594
Max	0.601	0.601	0.600	0.601	0.602	0.599	0.599	0.600	0.600	0.602	0.599	0.599	0.600	0.602	0.599				
Min	0.594	0.590	0.587	0.587	0.582	0.585	0.590	0.585	0.593	0.593	0.593	0.591	0.592	0.592	0.592				
Del_T	0.007	0.011	0.013	0.014	0.020	0.014	0.009	0.015	0.007	0.009	0.006	0.008	0.008	0.010	0.007				
Ave	0.598	0.598	0.596	0.595	0.595	0.594	0.595	0.595	0.596	0.597	0.596	0.595	0.596	0.596	0.596				

Charles P. Cota
3/29/98

* LOCATION E-6 RECHECKED AND FOUND TO BE .586". SEE DATA SHEET # VA-UT-UZ-46.

3.30.98

STATISTICS

Component ID: B5A1

Datafile(s): B5A1

COLUMN:

Lowest Value: 0.582 E

Highest Value: 0.602 N

Lowest Del_T: 0.006 K

Highest Del_T: 0.020 E

ROW:

Lowest Value: 0.582 00006

Highest Value: 0.602 00009

Lowest Del_T: 0.006 00013

Highest Del_T: 0.017 00006

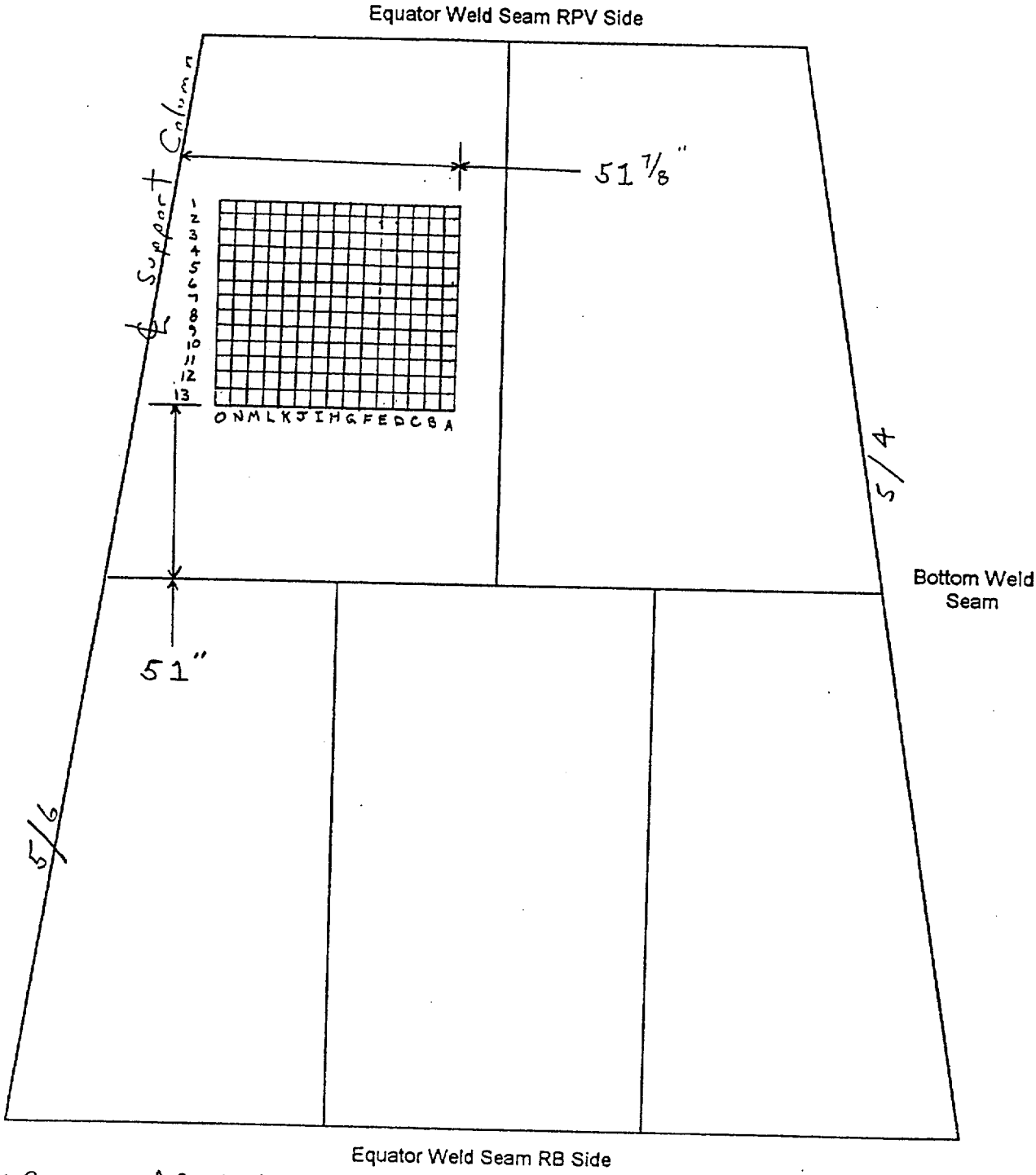
Overall Average Value: 0.596

Charles P. Cole
3/29/98

3.30.98

Torus Rollout - Bay 5

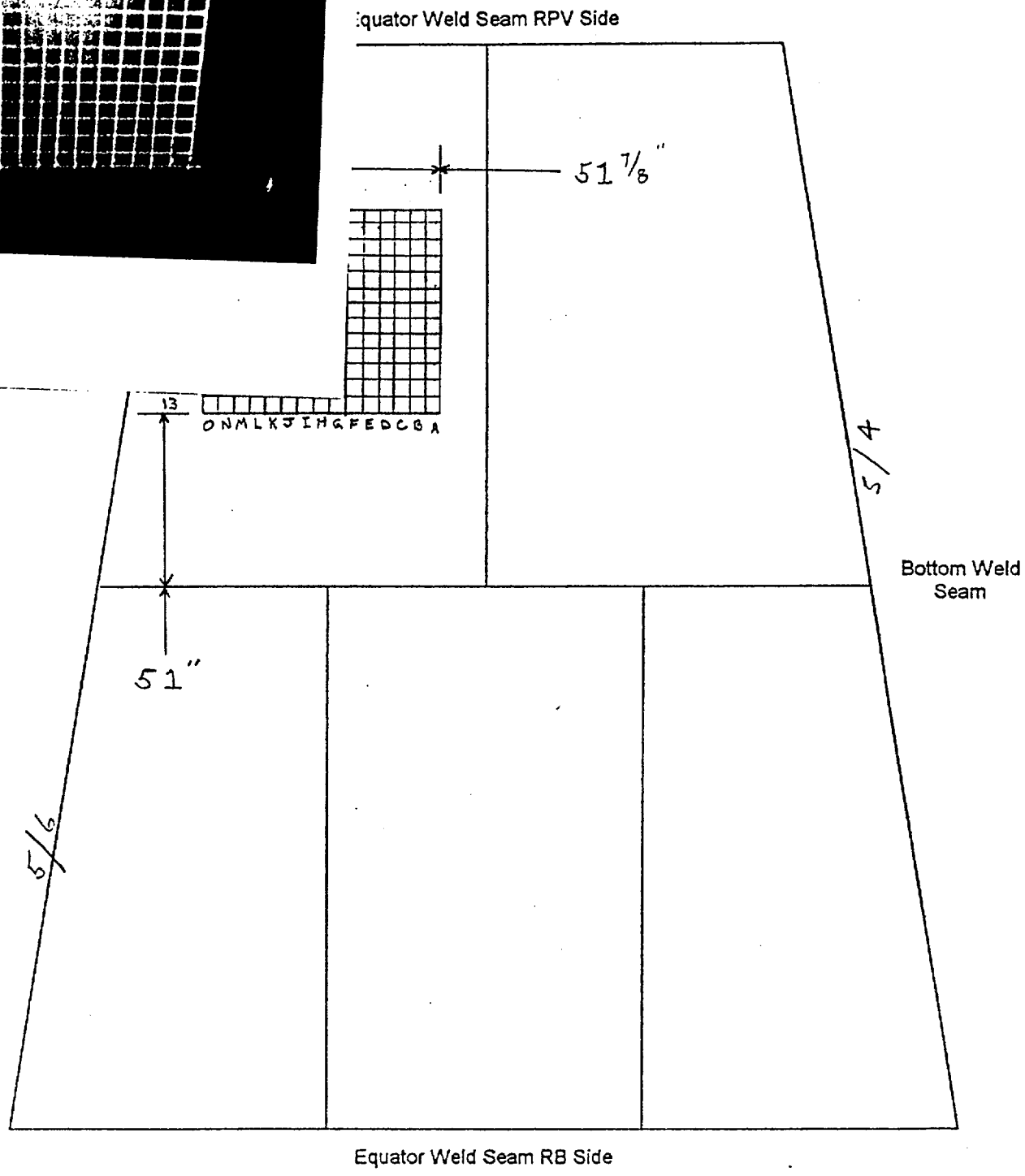
Bottom Half - Shell Exterior



Notes: BAY 5, AREA 1

Bay 5

xterior



Notes: BAY 5, AREA 1

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-46

PLANT V.Y. OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 5 AREA 1+2, BAY 12 AREA 2 EN N/A

LOCATION R.B. 213'

MATERIAL: CARBON STEEL PRODUCT FORM: PLATE APPROX. THICK.: 0.6"

INSTRUMENT: MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93134807

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 69315 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: 4340 S/N 93-6689 PRODUCT FORM: STEP WEDGE THICKNESSES: 0.25" - 1.0"

CALIBRATION TIMES: INITIAL: 1028 CHECK: 1117 CHECK: 1132 CHECK: N/A FINAL: 1205

SKETCH WITH RESULTS:

THERMOMETER S/N - 162556

CAL BLOCK TEMP - 75°F

COMP. TEMP - 70°F

BAY 5 AREA 1 - E-6 - .586"

BAY 5 AREA 2 - I-6 - .593"

BAY 12 AREA 2 -	J-1 - .571"	J-7 - .580"	K-4 - .582"	K-11 - .582"
	J-2 - .580"	J-8 - .583"	K-5 - .582"	L-1 - .570"
	J-3 - .581"	K-1 - .581"	K-7 - .582"	L-2 - .575"
	J-4 - .583"	K-2 - .580"	K-8 - .582"	
	J-6 - .582"	K-3 - .581"	K-9 - .581"	

NOTE: BAY 12 AREA 2 READINGS WERE TAKEN FROM THE FIRST SIGNAL OF A SPLIT SIGNAL BACK REFLECTION.

Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 3-30-98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3.30.98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-25

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAYS AREA 2 EN N/A

LOCATION RB 213'

MATERIAL: CARBON STEEL PRODUCT FORM: PLATE APPROX. THICK.: .530

INSTRUMENT:
MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93129407

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER
MAKE/MODEL: PANAMETRICS S/N 69315 A791-RM MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK
MATERIAL: 4340 S/N 93-6689 PRODUCT FORM: STEP WEDGE THICKNESSES: .25, .50, .75

CALIBRATION TIMES:
INITIAL: 0305 CHECK: 0430 CHECK: 0530 CHECK: 0600 FINAL: 0630

SKETCH WITH RESULTS:

THERMO S/N 162557
CAL BLK TEMP 70°
COMP TEMP 67°

Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 3/25/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: B5A2
Datafile(s): B5A2

98TORUS

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Max	Min	Del_T	Ave
00001	0.596	0.595	0.595	0.595	0.595	0.594	0.596	0.595	0.596	0.597	0.596	0.587	0.588	0.596	0.597	0.592	0.596	0.595	0.596	0.594	0.595	0.595	0.595	0.596	0.596	0.597	0.587	0.010	0.595
00002	0.596	0.595	0.596	0.596	0.596	0.597	0.596	0.595	0.596	0.597	0.592	0.586	0.595	0.595	0.596	0.596	0.596	0.595	0.596	0.596	0.595	0.596	0.596	0.595	0.596	0.597	0.586	0.011	0.595
00003	0.596	0.596	0.597	0.597	0.597	0.595	0.595	0.596	0.596	0.595	0.586	0.596	0.597	0.597	0.597	0.598	0.598	0.596	0.590	0.596	0.598	0.597	0.596	0.598	0.597	0.598	0.586	0.012	0.596
00004	0.597	0.596	0.597	0.596	0.596	0.596	0.596	0.595	0.596	0.598	0.586	0.596	0.596	0.595	0.596	0.596	0.596	0.594	0.596	0.597	0.595	0.595	0.596	0.596	0.597	0.598	0.586	0.012	0.596
00005	0.595	0.595	0.597	0.596	0.596	0.598	0.596	0.596	0.595	0.595	0.595	0.594	0.597	0.594	0.596	0.597	0.596	0.596	0.595	0.595	0.596	0.598	0.598	0.597	0.597	0.598	0.594	0.004	0.596
00006	0.597	0.596	0.596	0.595	0.595	0.596	0.596	0.595	0.551*	0.596	0.591	0.596	0.595	0.596	0.596	0.595	0.597	0.596	0.597	0.594	0.597	0.596	0.598	0.598	0.596	0.598	0.551	0.047	0.594
00007	0.595	0.595	0.595	0.595	0.595	0.595	0.596	0.595	0.595	0.596	0.595	0.595	0.596	0.595	0.595	0.596	0.596	0.596	0.595	0.595	0.595	0.596	0.597	0.598	0.595	0.598	0.595	0.003	0.595
00008	0.596	0.595	0.595	0.596	0.596	0.594	0.594	0.593	0.594	0.597	0.594	0.594	0.596	0.597	0.597	0.597	0.595	0.597	0.594	0.597	0.594	0.596	0.596	0.596	0.594	0.597	0.593	0.004	0.595
00009	0.595	0.595	0.595	0.594	0.595	0.590	0.597	0.595	0.595	0.594	0.594	0.594	0.595	0.597	0.598	0.596	0.598	0.597	0.595	0.595	0.598	0.596	0.597	0.597	0.596	0.598	0.590	0.008	0.596
00010	0.598	0.596	0.594	0.596	0.597	0.596	0.596	0.596	0.597	0.597	0.597	0.598	0.596	0.596	0.597	0.598	0.597	0.596	0.596	0.598	0.596	0.598	0.597	0.596	0.596	0.598	0.594	0.004	0.597
00011	0.595	0.596	0.595	0.595	0.596	0.597	0.597	0.596	0.598	0.598	0.594	0.594	0.594	0.595	0.597	0.597	0.597	0.596	0.597	0.597	0.596	0.595	0.596	0.595	0.596	0.598	0.594	0.004	0.596
00012	0.596	0.596	0.597	0.596	0.597	0.596	0.596	0.596	0.597	0.596	0.596	0.596	0.597	0.596	0.598	0.596	0.596	0.598	0.594	0.597	0.596	0.596	0.596	0.594	0.596	0.598	0.594	0.004	0.596
00013	0.596	0.597	0.596	0.597	0.598	0.596	0.596	0.584	0.593	0.586	0.597	0.597	0.597	0.596	0.597	0.596	0.597	0.597	0.595	0.595	0.596	0.596	0.596	0.597	0.596				

LEI 3/25/98

* LOCATION I-6 RECHECKED AND FOUND TO BE .593". SEE DATA SHEET # YA-UT-112-46

3.30.98

																	0.597	0.597	0.595	0.595	0.596	0.596	0.596	0.597	0.596	0.598	0.584	0.014	0.595
00014	0.595	0.597	0.595	0.595	0.597	0.596	0.594	0.598	0.595	0.597	0.597	0.596	0.597	0.598	0.598	0.597	0.598	0.599	0.598	0.598	0.599	0.597	0.597	0.598	0.599	0.599	0.594	0.005	0.597
00015	0.597	0.598	0.598	0.596	0.594	0.596	0.596	0.596	0.595	0.595	0.593	0.597	0.596	0.596	0.596	0.589	0.596	0.596	0.596	0.596	0.596	0.597	0.596	0.597	0.595	0.598	0.589	0.009	0.596
00016	0.596	0.597	0.598	0.597	0.597	0.596	0.596	0.596	0.596	0.597	0.596	0.598	0.598	0.597	0.597	0.597	0.598	0.597	0.598	0.595	0.598	0.596	0.598	0.596	0.595	0.598	0.595	0.003	0.597
00017	0.594	0.595	0.596	0.597	0.597	0.596	0.596	0.596	0.598	0.597	0.597	0.596	0.596	0.597	0.597	0.596	0.598	0.597	0.597	0.597	0.597	0.597	0.597	0.598	0.598	0.598	0.594	0.004	0.597
00018	0.596	0.596	0.596	0.596	0.595	0.595	0.595	0.595	0.595	0.593	0.596	0.597	0.597	0.598	0.596	0.596	0.597	0.597	0.597	0.597	0.596	0.598	0.595	0.597	0.598	0.598	0.593	0.005	0.596
00019	0.595	0.597	0.595	0.596	0.596	0.598	0.596	0.594	0.593	0.598	0.595	0.595	0.595	0.596	0.598	0.597	0.597	0.596	0.596	0.597	0.597	0.596	0.597	0.597	0.597	0.598	0.593	0.005	0.596
00020	0.595	0.595	0.595	0.596	0.595	0.596	0.596	0.596	0.597	0.597	0.596	0.595	0.595	0.596	0.597	0.596	0.597	0.596	0.596	0.596	0.597	0.595	0.596	0.596	0.595	0.597	0.595	0.002	0.596
00021	0.596	0.596	0.595	0.595	0.597	0.596	0.595	0.596	0.597	0.598	0.595	0.596	0.595	0.596	0.597	0.597	0.596	0.596	0.595	0.597	0.596	0.595	0.596	0.596	0.596	0.598	0.595	0.003	0.596
00022	0.596	0.595	0.595	0.596	0.595	0.595	0.596	0.590	0.596	0.596	0.593	0.595	0.595	0.597	0.594	0.597	0.597	0.595	0.595	0.595	0.596	0.595	0.596	0.596	0.595	0.597	0.590	0.007	0.595
00023	0.596	0.580	0.595	0.597	0.595	0.597	0.596	0.598	0.596	0.596	0.596	0.596	0.596	0.596	0.596	0.595	0.596	0.596	0.595	0.595	0.595	0.596	0.595	0.596	0.597	0.598	0.580	0.018	0.595
00024	0.596	0.597	0.596	0.596	0.594	0.594	0.595	0.596	0.595	0.596	0.595	0.595	0.596	0.586	0.595	0.594	0.596	0.596	0.595	0.595	0.596	0.596	0.596	0.596	0.596	0.597	0.586	0.011	0.595
00025	0.596	0.597	0.594	0.593	0.596	0.597	0.593	0.595	0.596	0.597	0.596	0.596	0.596	0.595	0.597	0.592	0.596	0.596	0.596	0.596	0.596	0.595	0.596	0.595	0.596	0.597	0.592	0.005	0.596
00026	0.595	0.597	0.596	0.596	0.596	0.595	0.596	0.597	0.596	0.596	0.595	0.596	0.597	0.597	0.594	0.597	0.596	0.597	0.598	0.596	0.597	0.597	0.597	0.596	0.595				

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													0.596	0.597	0.596	0.596	0.595	0.596	0.597	0.597	0.594	0.597	0.596	0.597	0.598	0.596	0.597	0.597	0.597	0.596	0.595	0.598	0.594	0.004	0.596
Max	0.598	0.598	0.598	0.597	0.598	0.598	0.597	0.598	0.598	0.598	0.597	0.598	0.598	0.598	0.598	0.598	0.598	0.599	0.598	0.598	0.599	0.598	0.598	0.598	0.599										
Min	0.594	0.580	0.594	0.593	0.594	0.590	0.593	0.584	0.551	0.586	0.586	0.586	0.588	0.586	0.594	0.589	0.595	0.594	0.590	0.594	0.594	0.595	0.595	0.594	0.594										
Del_T	0.004	0.018	0.004	0.004	0.004	0.008	0.004	0.014	0.047	0.012	0.011	0.012	0.010	0.012	0.004	0.009	0.003	0.005	0.008	0.004	0.005	0.003	0.003	0.004	0.005										
Ave	0.596	0.595	0.596	0.596	0.596	0.596	0.596	0.595	0.594	0.596	0.594	0.595	0.596	0.596	0.596	0.596	0.597	0.596	0.596	0.596	0.596	0.596	0.596	0.596	0.596										

LEI 3/29/98

Component ID: B5A2
Datafile(s): B5A2

	Z	Max	Min	Del_T	Ave
00001	0.596	0.596	0.596	0.000	0.596
00002	0.596	0.596	0.596	0.000	0.596
00003	0.596	0.596	0.596	0.000	0.596
00004	0.596	0.596	0.596	0.000	0.596
00005	0.596	0.596	0.596	0.000	0.596
00006	0.597	0.597	0.597	0.000	0.597
00007	0.595	0.595	0.595	0.000	0.595
00008	0.596	0.596	0.596	0.000	0.596
00009	0.596	0.596	0.596	0.000	0.596
00010	0.596	0.596	0.596	0.000	0.596
00011	0.596	0.596	0.596	0.000	0.596
00012	0.595	0.595	0.595	0.000	0.595
00013	0.597	0.597	0.597	0.000	0.597
00014	0.598	0.598	0.598	0.000	0.598
00015	0.596	0.596	0.596	0.000	0.596
00016	0.595	0.595	0.595	0.000	0.595
00017	0.596	0.596	0.596	0.000	0.596
00018	0.596	0.596	0.596	0.000	0.596
00019	0.595	0.595	0.595	0.000	0.595
00020	0.596	0.596	0.596	0.000	0.596
00021	0.595	0.595	0.595	0.000	0.595
00022	0.596	0.596	0.596	0.000	0.596
00023	0.596	0.596	0.596	0.000	0.596
00024	0.595	0.595	0.595	0.000	0.595
00025	0.596	0.596	0.596	0.000	0.596
00026	0.597	0.597	0.597	0.000	0.597

Max	0.598
Min	0.595
Del_T	0.003
Ave	0.596

LEI 3/29/98 3.30.98

STATISTICS

Component ID: B5A2

Datafile(s): B5A2

COLUMN:

Lowest Value: 0.551 I

Highest Value: 0.599 Y

Lowest Del_T: 0.003 Z

Highest Del_T: 0.047 I

ROW:

Lowest Value: 0.551 00006

Highest Value: 0.599 00014

Lowest Del_T: 0.002 00020

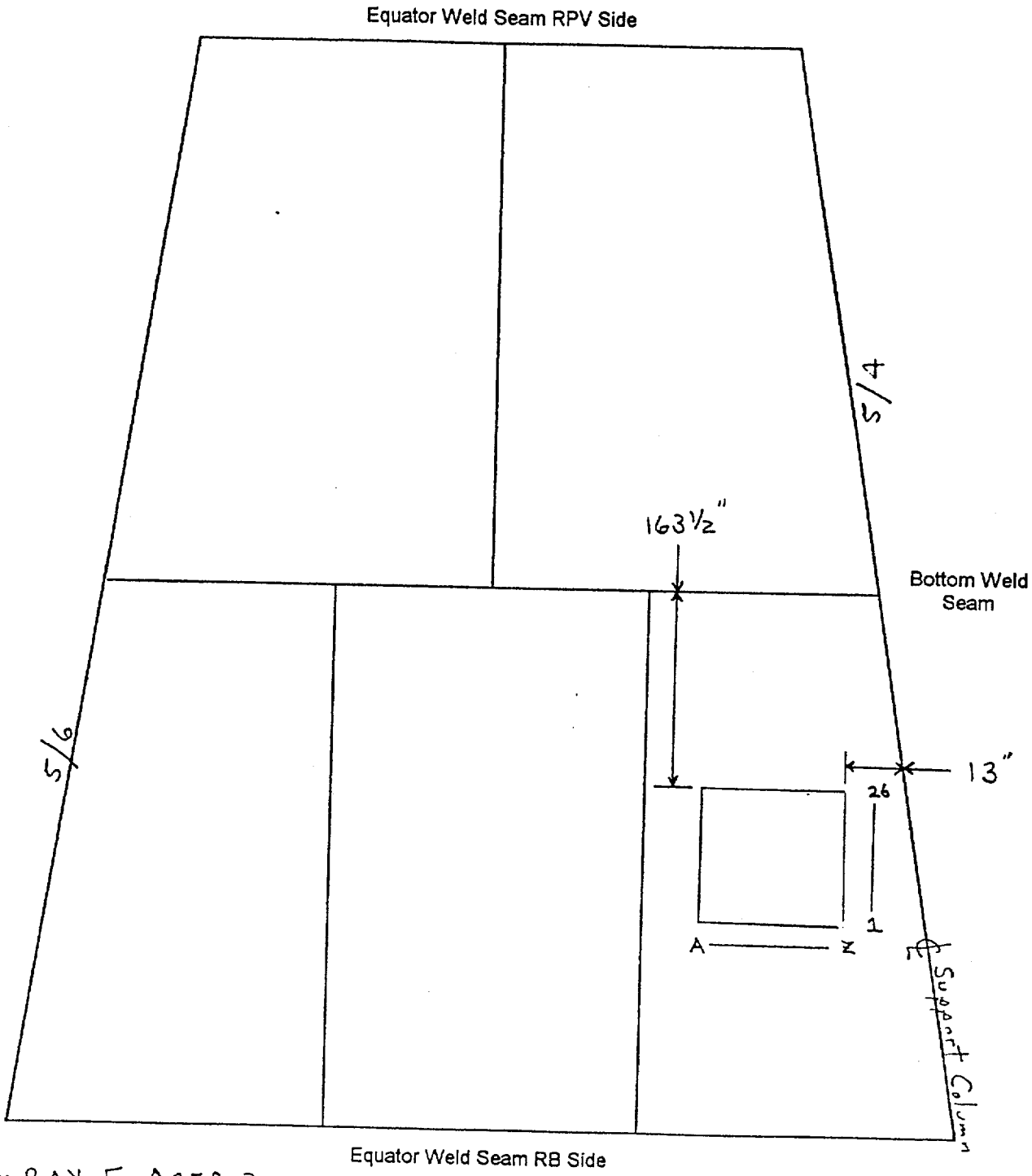
Highest Del_T: 0.047 00006

Overall Average Value: 0.596

3/25/98 3·30·98

Torus Rollout - Bay 5

Bottom Half - Shell Exterior

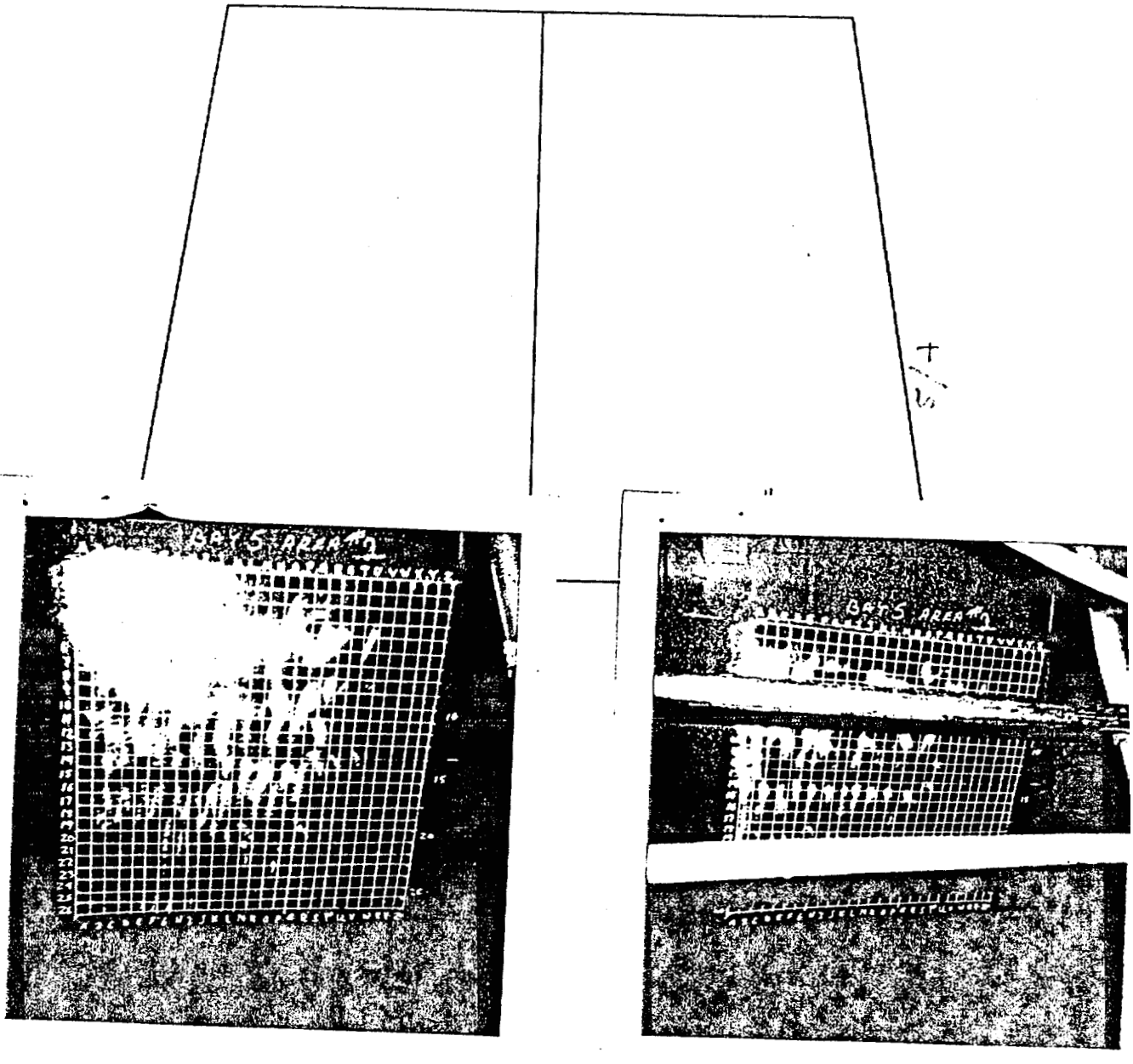


Notes: BAY 5, AREA 2

Torus Rollout - Bay 5

Bottom Half - Shell Exterior

Equator Weld Seam RPV Side



Notes: BAY 5, AREA 2

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-46

PLANT V.Y. OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 5 AREA 1+2, BAY 12 AREA 2 EN N/A

LOCATION R.B. 213'

MATERIAL: CARBON STEEL PRODUCT FORM: PLATE APPROX. THICK.: 0.6"

INSTRUMENT: MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93134807

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 69315 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: 4340 S/N 93-6689 PRODUCT FORM: STEP WEDGE THICKNESSES: 0.25" - 1.0"

CALIBRATION TIMES: INITIAL: 1028 CHECK: 1117 CHECK: 1132 CHECK: N/A FINAL: 1205

SKETCH WITH RESULTS:

THERMOMETER S/N - 162556

CAL BLOCK TEMP - 75°F

COMP. TEMP - 70°F

BAY 5 AREA 1 - E-6 - .586"

BAY 5 AREA 2 - I-6 - .593"

BAY 12 AREA 2 -	J-1 - .571"	J-7 - .580"	K-4 - .582"	K-11 - .582"
	J-2 - .580"	J-8 - .583"	K-5 - .582"	L-1 - .570"
	J-3 - .581"	K-1 - .581"	K-7 - .582"	L-2 - .575"
	J-4 - .583"	K-2 - .580"	K-8 - .582"	
	J-6 - .582"	K-3 - .581"	K-9 - .581"	

NOTE: BAY 12 AREA 2 READINGS WERE TAKEN FROM THE FIRST SIGNAL OF A SPLIT SIGNAL BACK REFLECTION.

Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 3-30-98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3.30.98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-67

PLANT VY OUTAGE 20 DRAWING NA REV. NA

SYSTEM TORUS COMPONENT/WELD NO. BAY 5 AREA 1 (INSIDE) EN NA

LOCATION RB 213'

MATERIAL: CARBON STEEL PRODUCT FORM: PLATE APPROX. THICK.: .6

INSTRUMENT:
MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93125307

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS S/N 69311 D791-RM MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: 4340 S/N 93-6689 PRODUCT FORM: STEP WEDGE THICKNESSES: .25, .5, .75

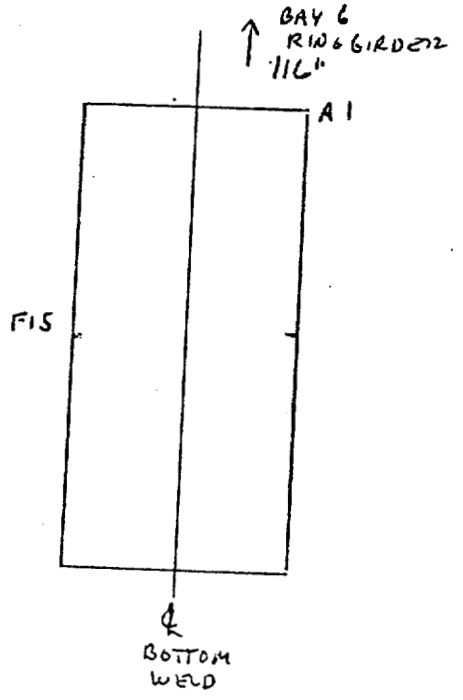
CALIBRATION TIMES:
INITIAL: 0515 CHECK: NA CHECK: NA CHECK: NA FINAL: 0705

SKETCH WITH RESULTS:

THERMO S/N 162579

CAL BLK TEMP 73°

COMP TEM 70°



Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 4/5/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 4-7-98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: B5A1INA
Datafile(s): B5A1INA

	A	B	C	D	E	F	Max	Min	Del_T	Ave
00001	0.599	0.599	0.603	0.616	0.618	0.617	0.618	0.599	0.019	0.609
00002	0.600	0.600	0.599	0.616	0.615	0.621	0.621	0.599	0.022	0.609
00003	0.602	0.599	0.603	0.619	0.620	0.622	0.622	0.599	0.023	0.611
00004	0.602	0.600	0.596	0.620	0.619	0.623	0.623	0.596	0.027	0.610
00005	0.601	0.602	0.605	0.622	0.628	0.626	0.628	0.601	0.027	0.614
00006	0.600	0.600	0.599	0.626	0.625	0.628	0.628	0.599	0.029	0.613
00007	0.602	0.600	0.603	0.627	0.627	0.629	0.629	0.600	0.029	0.615
00008	0.604	0.599	0.602	0.626	0.630	0.632	0.632	0.599	0.033	0.615
00009	0.605	0.601	0.603	0.630	0.631	0.631	0.631	0.601	0.030	0.617
00010	0.604	0.600	0.597	0.629	0.630	0.633	0.633	0.597	0.036	0.615
00011	0.602	0.599	0.598	0.632	0.630	0.634	0.634	0.598	0.036	0.616
00012	0.599	0.598	0.599	0.628	0.628	0.635	0.635	0.598	0.037	0.615
00013	0.597	0.595	0.599	0.632	0.635	0.635	0.635	0.595	0.040	0.615
00014	0.597	0.598	0.597	0.630	0.634	0.636	0.636	0.597	0.039	0.615
00015	0.593	0.596	0.598	0.624	0.634	0.634	0.634	0.593	0.041	0.613
Max	0.605	0.602	0.605	0.632	0.635	0.636				
Min	0.593	0.595	0.596	0.616	0.615	0.617				
Del_T	0.012	0.007	0.009	0.016	0.020	0.019				
Ave	0.600	0.599	0.600	0.625	0.627	0.629				

TMA Shearer 2 II 4/5/98

STATISTICS

Component ID: B5A1INA

Datafile(s): B5A1INA

COLUMN:

Lowest Value: 0.593 A

Highest Value: 0.636 F

Lowest Del_T: 0.007 B

Highest Del_T: 0.020 E

ROW:

Lowest Value: 0.593 00015

Highest Value: 0.636 00014

Lowest Del_T: 0.019 00001

Highest Del_T: 0.041 00015

Overall Average Value: 0.613

J M Shearer LII 4/5/98

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-68

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 5 AREA 1 (INSIDE) EN N/A

LOCATION TORUS BAY 5

MATERIAL: C/S PRODUCT FORM: PLATE APPROX. THICK.: 0.600

INSTRUMENT MAKE: Panametrics MODEL: 26 DL PLUS SERIAL NO.: 93134807

CRT ☐ DIGITAL ■ HORIZONTAL LINEARITY PERFORMED ☐

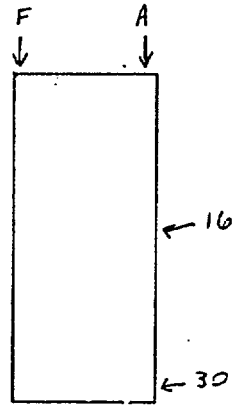
TRANSDUCER MAKE/MODEL: Panametrics D790SM/69395 MODE: ■ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5MHz SIZE: 0.312"

CAL. BLOCK MATERIAL: C/S PRODUCT FORM: STEPWEDGE THICKNESSES: 0.199" – 0.897"

CALIBRATION TIMES: INITIAL: 0515 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 0705

SKETCH WITH RESULTS: Thermometer 162579 Part temp: 70°F CalBlock temp: 73°F

A16 – F30



Evaluation Required: (YES) NO

EXAMINER Charles P. [signature] LEVEL II DATE 4-4-98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 4-7-98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: B5A1INB
Datafile(s): B5A1INB

	A	B	C	D	E	F	Max	Min	Del_T	Ave
00016	0.586	0.594	0.589	0.633	0.633	0.636	0.636	0.586	0.050	0.612
00017	0.593	0.591	0.594	0.632	0.634	0.634	0.634	0.591	0.043	0.613
00018	0.592	0.592	0.584	0.630	0.635	0.644	0.644	0.584	0.060	0.613
00019	0.590	0.591	0.589	0.634	0.636	0.640	0.640	0.589	0.051	0.613
00020	0.591	0.591	0.590	0.636	0.635	0.642	0.642	0.590	0.052	0.614
00021	0.591	0.590	0.588	0.637	0.638	0.640	0.640	0.588	0.052	0.614
00022	0.598	0.590	0.583	0.623	0.637	0.640	0.640	0.583	0.057	0.612
00023	0.589	0.589	0.586	0.623	0.633	0.642	0.642	0.586	0.056	0.610
00024	0.592	0.593	0.589	0.636	0.640	0.641	0.641	0.589	0.052	0.615
00025	0.588	0.587	0.587	0.634	0.636	0.642	0.642	0.587	0.055	0.612
00026	0.588	0.587	0.584	0.626	0.640	0.641	0.641	0.584	0.057	0.611
00027	0.585	0.586	0.583	0.620	0.636	0.641	0.641	0.583	0.058	0.608
00028	0.583	0.587	0.586	0.634	0.638	0.644	0.644	0.583	0.061	0.612
00029	0.595	0.592	0.591	0.635	0.636	0.643	0.643	0.591	0.052	0.615
00030	0.592	0.591	0.590	0.633	0.641	0.643	0.643	0.590	0.053	0.615
Max	0.598	0.594	0.594	0.637	0.641	0.644				
Min	0.583	0.586	0.583	0.620	0.633	0.634				
Del_T	0.015	0.008	0.011	0.017	0.008	0.010				
Ave	0.590	0.590	0.588	0.631	0.637	0.641				

Charles P. Cole
4-6-98

STATISTICS

Component ID: B5A1INB

Datafile(s): B5A1INB

Charles P. Cots
4-6-98

COLUMN:

Lowest Value: 0.583 C

Highest Value: 0.644 F

Lowest Del_T: 0.008 E

Highest Del_T: 0.017 D

ROW:

Lowest Value: 0.583 00028

Highest Value: 0.644 00028

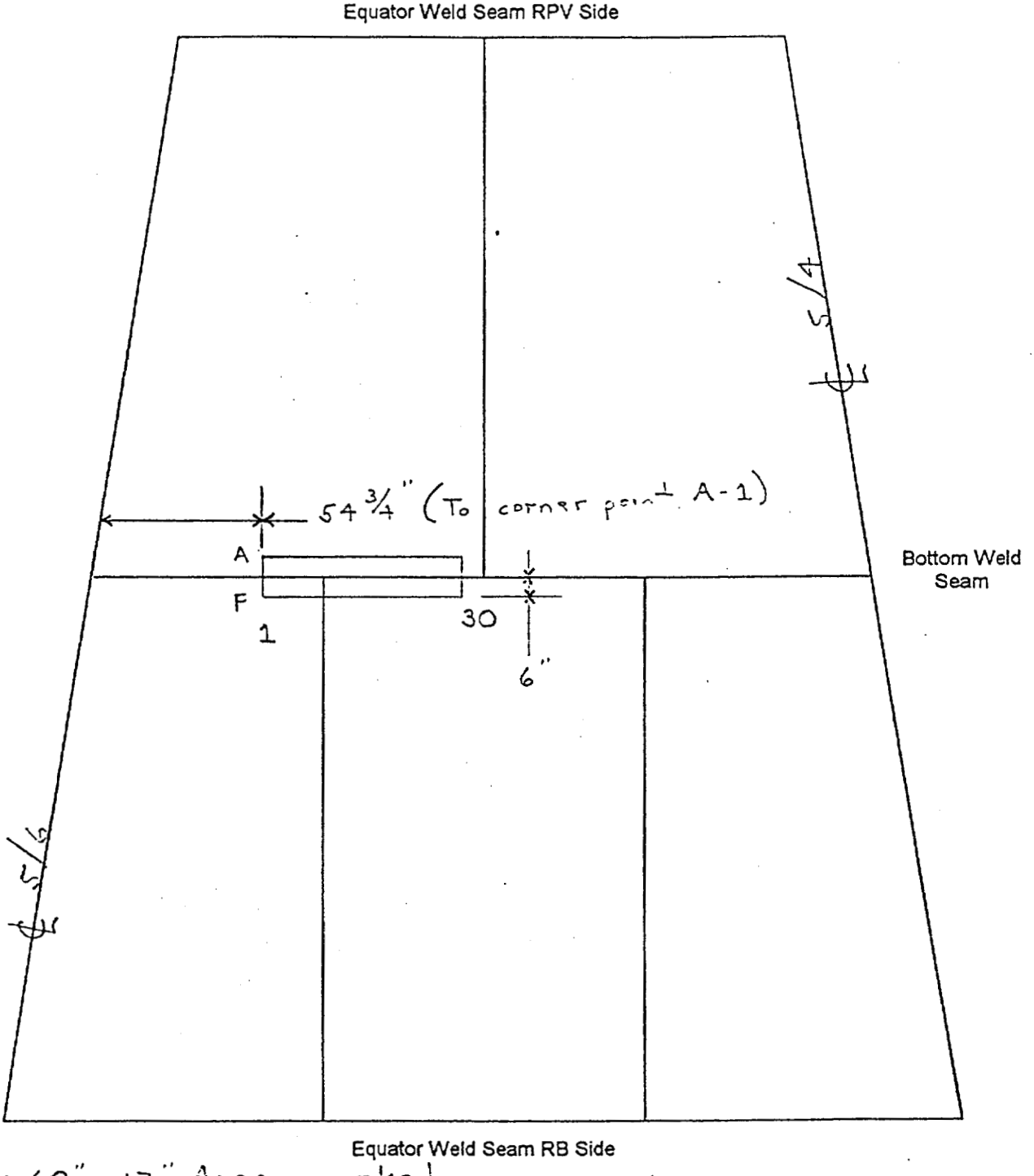
Lowest Del_T: 0.043 00017

Highest Del_T: 0.061 00028

Overall Average Value: 0.613

Torus Rollout - Bay 5

Bottom Half - Shell Interior



Notes: 60" x 12" Area, marked in 2" Grid

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-48

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 12 (AREA 1) EN N/A

LOCATION RB 213'

MATERIAL: CARBON STEEL PRODUCT FORM: PLATE APPROX. THICK.: .580"

INSTRUMENT:
MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 9313 4867

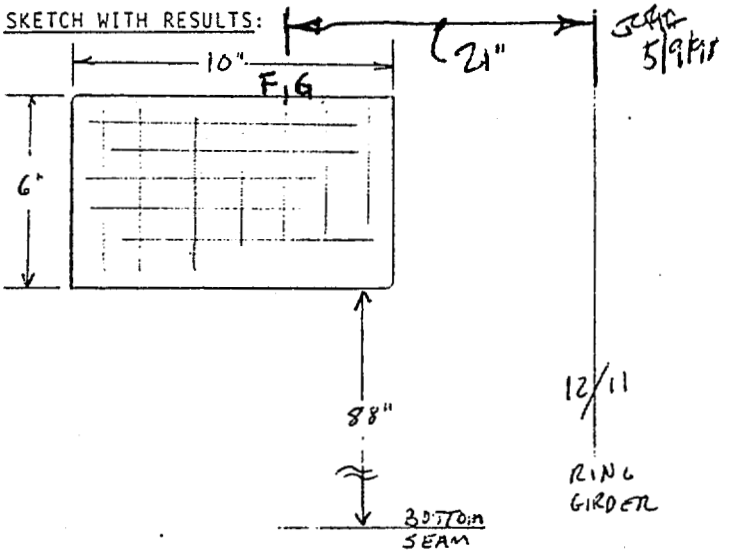
CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM S/N 89303 MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: 4340 S/N 93-6691 PRODUCT FORM: STEPWEDGE THICKNESSES: .25, .5, .75

CALIBRATION TIMES:
INITIAL: 0120 CHECK: 0155 CHECK: N/A CHECK: N/A FINAL: 0250

SKETCH WITH RESULTS:



THERMO S/N 162557
CAL BLK TEMP 77°
COMP TEMP 69°

NOTE:
IDENTIFIED AS AREA 1 ON
YA-VT-11-10

Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 3/31/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3.31.98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: B12A3
Datafile(s): B12A3

	A	B	C	D	E	F	G	H	I	J	Max	Min	Del_T	Ave
00001	0.591	0.590	0.593	0.593	0.591	0.593	0.592	0.593	0.592	0.593	0.593	0.590	0.003	0.592
00002	0.592	0.591	0.592	0.591	0.592	0.592	0.594	0.591	0.592	0.590	0.594	0.590	0.004	0.592
00003	0.593	0.592	0.590	0.591	0.590	0.594	0.593	0.591	0.593	0.591	0.594	0.590	0.004	0.592
00004	0.592	0.591	0.593	0.592	0.592	0.592	0.591	0.590	0.590	0.591	0.593	0.590	0.003	0.591
00005	0.592	0.593	0.593	0.592	0.591	0.594	0.592	0.591	0.593	0.593	0.594	0.591	0.003	0.592
00006	0.593	0.591	0.591	0.591	0.595	0.592	0.591	0.591	0.592	0.591	0.595	0.591	0.004	0.592
Max	0.593	0.593	0.593	0.593	0.595	0.594	0.594	0.593	0.593	0.593				
Min	0.591	0.590	0.590	0.591	0.590	0.592	0.591	0.590	0.590	0.590				
Del_T	0.002	0.003	0.003	0.002	0.005	0.002	0.003	0.003	0.003	0.003				
Ave	0.592	0.591	0.592	0.592	0.592	0.593	0.592	0.591	0.592	0.591				

LH 3/31/98

3.31.98

STATISTICS

Component ID: B12A3

Datafile(s): B12A3

COLUMN:

Lowest Value: 0.590 J

Highest Value: 0.595 E

Lowest Del_T: 0.002 F

Highest Del_T: 0.005 E

ROW:

Lowest Value: 0.590 00004

Highest Value: 0.595 00006

Lowest Del_T: 0.003 00005

Highest Del_T: 0.004 00006

Overall Average Value: 0.592

MASheen LII 3/31/98

SWPSwyn 3.31.98

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-24

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 12 AREA 2 EN N/A

LOCATION RB 213'

MATERIAL: CARBON STEEL PRODUCT FORM: PLATE APPROX. THICK.: .580

INSTRUMENT:
MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93129407

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER
MAKE/MODEL: PANAMETRICS S/N 69315 D791-RM MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK
MATERIAL: 4340 S/N 93-6689 PRODUCT FORM: STEP WEDGE THICKNESSES: .25, .50, .75

CALIBRATION TIMES:
INITIAL: 0305 CHECK: 0430 CHECK: 0530 CHECK: 0600 FINAL: 0630

SKETCH WITH RESULTS:

THERMO S/N 162557
CAL BLK TEMP 70°
COMP TEMP 67°

Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 3/29/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3.30.98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

Component ID: B12A2
Datafile(s): B12A2

98TORUS

	A	B	C	D	E	F	G	H	I	J*	K*	L*	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Max	Min	Del_T	Ave
00001	0.615	0.615	0.616	0.613	0.611	0.609	0.609	0.608	0.601	0.571	0.581	0.569	0.587	0.588	0.587	0.589	0.589	0.587	0.588	0.589	0.590	0.589	0.590	0.588	0.590	0.616	0.569	0.047	0.595
00002	0.615	0.614	0.613	0.613	0.612	0.610	0.611	0.608	0.597	0.580	0.582	0.574	0.588	0.587	0.586	0.589	0.589	0.589	0.588	0.588	0.588	0.589	0.589	0.588	0.589	0.615	0.574	0.041	0.595
00003	0.617	0.614	0.613	0.614	0.610	0.609	0.609	0.608	0.601	0.581	0.581	0.586	0.587	0.585	0.586	0.589	0.589	0.589	0.589	0.588	0.589	0.589	0.589	0.588	0.588	0.617	0.581	0.036	0.596
00004	0.617	0.614	0.608	0.611	0.611	0.612	0.607	0.609	0.600	0.583	0.582	0.584	0.587	0.586	0.585	0.584	0.587	0.588	0.589	0.588	0.587	0.589	0.588	0.590	0.589	0.617	0.582	0.035	0.595
00005	0.619	0.614	0.596	0.597	0.609	0.598	0.603	0.593	0.606	0.585	0.582	0.586	0.587	0.588	0.586	0.587	0.588	0.587	0.588	0.588	0.589	0.588	0.589	0.588	0.589	0.619	0.582	0.037	0.593
00006	0.617	0.615	0.611	0.610	0.612	0.610	0.607	0.605	0.603	0.582	0.585	0.586	0.588	0.588	0.588	0.587	0.590	0.588	0.587	0.588	0.589	0.589	0.591	0.589	0.588	0.617	0.582	0.035	0.596
00007	0.617	0.618	0.617	0.612	0.613	0.611	0.612	0.610	0.600	0.580	0.582	0.587	0.588	0.588	0.589	0.588	0.587	0.587	0.586	0.587	0.587	0.588	0.589	0.590	0.590	0.618	0.580	0.038	0.596
00008	0.617	0.614	0.616	0.614	0.612	0.614	0.610	0.610	0.604	0.583	0.587	0.585	0.588	0.588	0.589	0.589	0.588	0.588	0.588	0.588	0.589	0.590	0.591	0.590	0.589	0.617	0.583	0.034	0.597
00009	0.616	0.613	0.613	0.612	0.611	0.611	0.610	0.609	0.601	0.592	0.582	0.584	0.586	0.588	0.588	0.588	0.587	0.586	0.586	0.588	0.589	0.588	0.588	0.587	0.589	0.616	0.582	0.034	0.596
00010	0.616	0.613	0.614	0.612	0.612	0.605	0.605	0.602	0.602	0.587	0.579	0.588	0.587	0.586	0.586	0.588	0.587	0.589	0.588	0.588	0.588	0.586	0.588	0.588	0.587	0.616	0.579	0.037	0.595
00011	0.613	0.613	0.613	0.612	0.611	0.600	0.590	0.597	0.594	0.588	0.582	0.588	0.588	0.587	0.587	0.590	0.588	0.589	0.590	0.590	0.590	0.588	0.590	0.589	0.589	0.613	0.582	0.031	0.594
00012	0.616	0.613	0.612	0.612	0.611	0.609	0.610	0.603	0.599	0.586	0.585	0.587	0.588	0.587	0.589	0.590	0.590	0.590	0.589	0.588	0.590	0.589	0.588	0.590	0.590	0.616	0.585	0.031	0.596
Max	0.619	0.618	0.617	0.614	0.613	0.614	0.612	0.610	0.606	0.592	0.587	0.588	0.588	0.588	0.589	0.590	0.590	0.590	0.590	0.590	0.590	0.590	0.591	0.590	0.590				
Min	0.613	0.613	0.596	0.597	0.609	0.598	0.590	0.593	0.594	0.571	0.579	0.569	0.586	0.585	0.585	0.584	0.587	0.586	0.586	0.587	0.587	0.586	0.588	0.587	0.587				
Del_T	0.006	0.005	0.021	0.017	0.004	0.016	0.022	0.017	0.012	0.021	0.008	0.019	0.002	0.003	0.004	0.006	0.003	0.004	0.004	0.003	0.003	0.004	0.003	0.003	0.003				
Ave	0.616	0.614	0.612	0.611	0.611	0.608	0.607	0.605	0.601	0.583	0.582	0.584	0.587	0.587	0.587	0.588	0.588	0.588	0.588	0.588	0.589	0.588	0.589	0.589	0.589				

LIT 3/29/98 3.30.98

* LOCATIONS BELOW .584" WERE RECHECKED. SEE DATA SHEETS
#YA-UT-112-46 FOR RESULTS.
YA-UT-112-47

STATISTICS

Component ID: B12A2

Datafile(s): B12A2

COLUMN:

Lowest Value: 0.569 L

Highest Value: 0.619 A

Lowest Del_T: 0.002 M

Highest Del_T: 0.022 G

ROW:

Lowest Value: 0.569 00001

Highest Value: 0.619 00005

Lowest Del_T: 0.031 00012

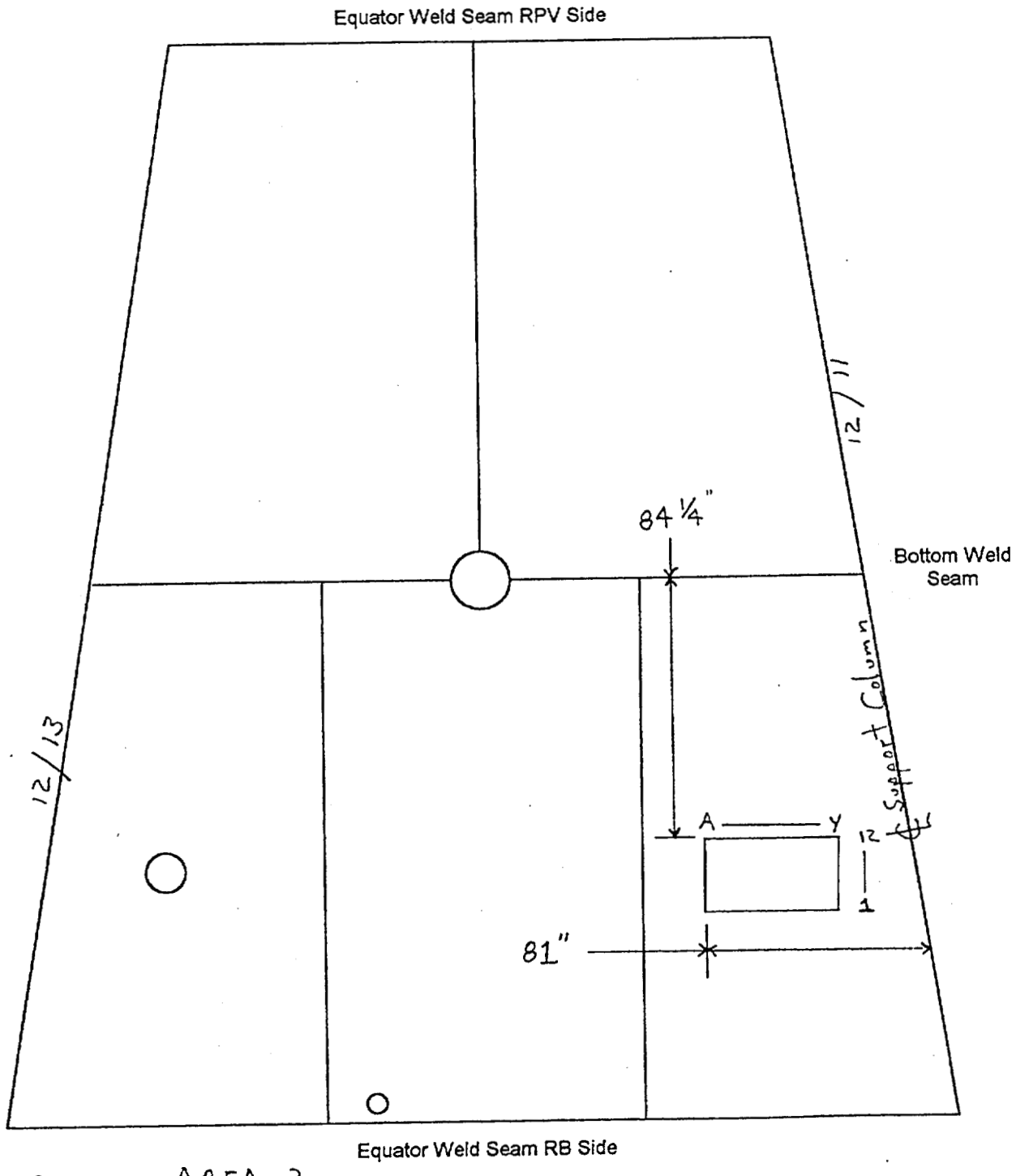
Highest Del_T: 0.047 00001

Overall Average Value: 0.595

3/29/98 3.30.98

Torus Rollout - Bay 12

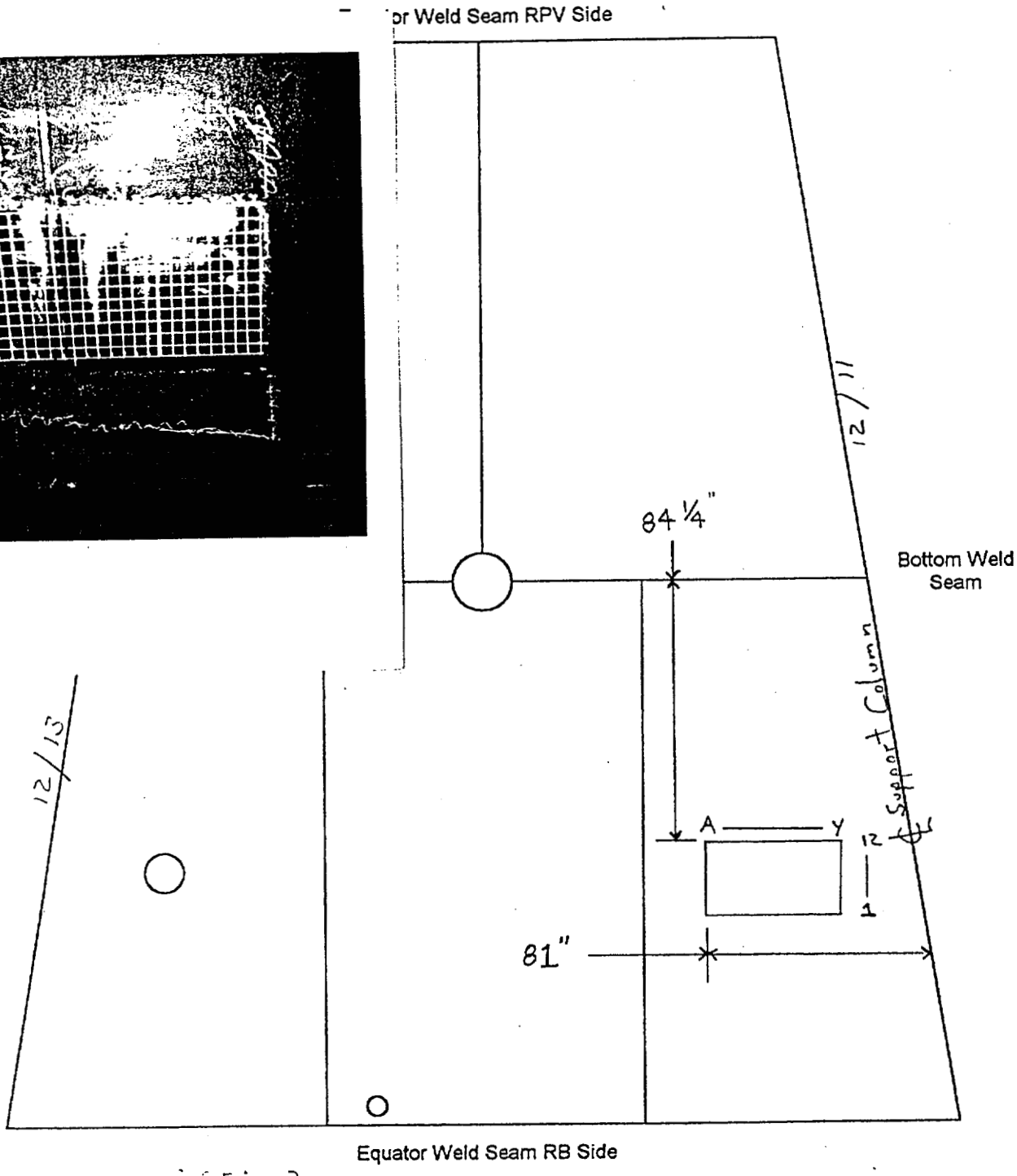
Bottom Half - Shell Exterior



Notes: BAY 12, AREA 2

Torus Rollout - Bay 12

Bottom Half - Shell Exterior



Notes: BAY 12, AREA 2

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-47

PLANT VERMONT YANKEE OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. TORUS BAY 12 AREA 2 EN N/A

LOCATION 213' R B UNDER TORUS

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .584"

INSTRUMENT MAKE: STAVELEY MODEL: SONIC 136 SERIAL NO.: 934K

CRT ☐ DIGITAL ☐ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: KBA MSEBA S/N 57462-07466 MODE: ☒ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 4.0MHz SIZE: 3.5x10mm

CAL. BLOCK MATERIAL: CS S/N 93-6689 PRODUCT FORM: STEPWEDGE THICKNESSES: .25", .50", .75"

CALIBRATION TIMES: INITIAL: 1620 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 1720

SKETCH WITH RESULTS:

Cal blk temp - 75°F
Comp temp - 70°F
thermo. S/N - 162556

BAY 12 AREA 2 RDGS RE-VERIFIED WITH A-SCAN, 1/2" SCREEN READING .25" TO .75".

J-1 - .580"/.630"
J-2 - .580"/.670"
J-3 - .585"
J-4 - .580"/.680"
J-6 - .585"
J-7 - .590"
J-8 - .590"
K-1 - .585"
K-2 - .580"/.650"
K-3 - .580"/.650"
K-4 - .580"/.660"
K-5 - .580"/.660"
K-7 - .585"/.660"
K-8 - .585"/.670"
K-9 - .580"/.650"
K-11 - .580"/.660"
L-1 - .570"/.640"
L-2 - .570"/.650"

Evaluation Required: YES NO

EXAMINER Janet K Miles LEVEL II DATE 3/30/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3-30-98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

LINEARITY REPORT

PLANT VY DATE 3/30/98

Instrument Serial No. VY 934K Manufacturer STAVELEY Inst. Model SONIC 1360

Owner VY Referenced Standard 93-66 89

Transducer Type Gamma HP Serial No. K15367

Screen Height Linearity

High	Low	High	Low
1. 100	50	6. 50	25
2. 90	45	7. 40	20
3. 80	40	8. 30	15
4. 70	35	9. 20	10
5. 60	30	10. 10	5

Amplitude Control Linearity

Initial	dB	Result	Tolerance
80	-6	38	32 to 48%
80	-12	20	16 to 24%
40	+6	88	64 to 96%
20	+12	80	64 to 96%

Results: Accepted ☒ Rejected ☐

Examiner Janet F Mills Level II Date 3/30/98

Instrument Serial No. _____ Manufacturer _____ Inst. Model _____

Owner _____ Referenced Standard _____

Transducer Type _____ Serial No. _____

Screen Height Linearity

High	Low	High	Low
1.		6.	
2.		7.	
3.		8.	
4.		9.	
5.		10.	

Amplitude Control Linearity

Initial	dB	Result	Tolerance
80	-6		32 to 48%
80	-12		16 to 24%
40	+6		64 to 96%
20	+12		64 to 96%

Results: Accepted ☐ Rejected ☐

Examiner _____ Level _____ Date _____

Instrument Serial No. _____ Manufacturer _____ Inst. Model _____

Owner _____ Referenced Standard _____

Transducer Type _____ Serial No. _____

Screen Height Linearity

High	Low	High	Low
1.		6.	
2.		7.	
3.		8.	
4.		9.	
5.		10.	

Amplitude Control Linearity

Initial	dB	Result	Tolerance
80	-6		32 to 48%
80	-12		16 to 24%
40	+6		64 to 96%
20	+12		64 to 96%

Results: Accepted ☐ Rejected ☐

Examiner _____ Level _____ Date _____

COG. ENG./EXAM AGENCY N/A Date N/A

ISI COORDINATOR (If ASME XI Exam) [signature] Date 3-30-98

QA (Optional) N/A Date N/A

ANII (Optional) _____ Date _____

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-46

PLANT V.Y. OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 5 AREA 1+2, BAY 12 AREA 2 EN N/A

LOCATION R.B. 213'

MATERIAL: CARBON STEEL PRODUCT FORM: PLATE APPROX. THICK.: 0.6"

INSTRUMENT: MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93134807

CRT ☐ DIGITAL ☑ S/N 69315 HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS D791-RM MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: 4340 S/N 93-6689 PRODUCT FORM: STEP WEDGE THICKNESSES: 0.25" - 1.0"

CALIBRATION TIMES: INITIAL: 1028 CHECK: 1117 CHECK: 1132 CHECK: N/A FINAL: 1205

SKETCH WITH RESULTS:

THERMOMETER S/N - 162556

CAL BLOCK TEMP - 75°F

COMP. TEMP - 70°F

BAY 5 AREA 1 - E-6 - .586"

BAY 5 AREA 2 - I-6 - .593"

BAY 12 AREA 2 -	J-1 - .571"	J-7 - .580"	K-4 - .582"	K-11 - .582"
	J-2 - .580"	J-8 - .583"	K-5 - .582"	L-1 - .570"
	J-3 - .581"	K-1 - .581"	K-7 - .582"	L-2 - .575"
	J-4 - .583"	K-2 - .580"	K-8 - .582"	
	J-6 - .582"	K-3 - .581"	K-9 - .581"	

NOTE: BAY 12 AREA 2 READINGS WERE TAKEN FROM THE FIRST SIGNAL OF A SPLIT SIGNAL BACK REFLECTION.

Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 3-30-98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 3.30.98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) N/A DATE N/A

THICKNESS DATA SHEET

DATA SHEET NO. _____

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 15 AREA 1 EN N/A

LOCATION RB 213'

MATERIAL: CARBON STEEL PRODUCT FORM: PLATE APPROX. THICK.: .580

INSTRUMENT:
MAKE: PANAMETRICS MODEL: 26DL PLUS SERIAL NO.: 93134807

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

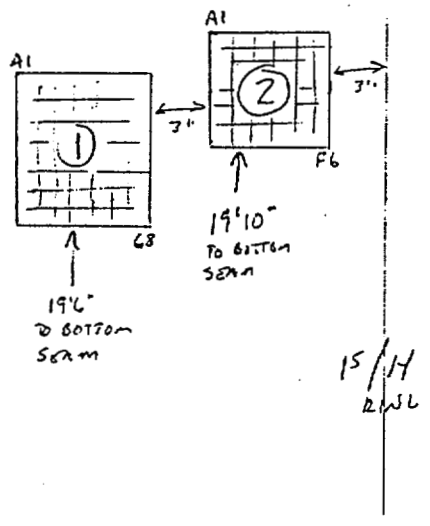
TRANSDUCER MAKE/MODEL: PANAMETRICS S/N 89303 D791-RM MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: 4340 S/N 93-6689 PRODUCT FORM: STEP WEDGE THICKNESSES: .125", .50", .75"

CALIBRATION TIMES:
INITIAL: 0300 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 0420

SKETCH WITH RESULTS:

THERMO S/N 162557
CAL BLK TEMP 73°
COMP TEMP 75°



Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 4/1/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 4.1.98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) _____ DATE _____

Component ID: B15A1
Datafile(s): B15A1

	A	B	C	D	E	F	G	Max	Min	Del_T	Ave
00001	0.599	0.603	0.603	0.601	0.602	0.600	0.600	0.603	0.599	0.004	0.601
00002	0.601	0.601	0.601	0.602	0.599	0.599	0.601	0.602	0.599	0.003	0.601
00003	0.602	0.602	0.601	0.602	0.600	0.599	0.599	0.602	0.599	0.003	0.601
00004	0.601	0.599	0.601	0.600	0.601	0.597	0.601	0.601	0.597	0.004	0.600
00005	0.603	0.602	0.602	0.602	0.601	0.599	0.598	0.603	0.598	0.005	0.601
00006	0.600	0.601	0.600	0.601	0.600	0.597	0.599	0.601	0.597	0.004	0.600
00007	0.598	0.600	0.601	0.600	0.601	0.597	0.600	0.601	0.597	0.004	0.600
00008	0.601	0.599	0.599	0.602	0.600	0.599	0.599	0.602	0.599	0.003	0.600
Max	0.603	0.603	0.603	0.602	0.602	0.600	0.601				
Min	0.598	0.599	0.599	0.600	0.599	0.597	0.598				
Del_T	0.005	0.004	0.004	0.002	0.003	0.003	0.003				
Ave	0.601	0.601	0.601	0.601	0.601	0.598	0.600				

TMSheam + EI 4/1/98

SWD Dugan 4.1.98

STATISTICS

Component ID: B15A1

Datafile(s): B15A1

COLUMN:

Lowest Value: 0.597 F

Highest Value: 0.603 C

Lowest Del_T: 0.002 D

Highest Del_T: 0.005 A

ROW:

Lowest Value: 0.597 00007

Highest Value: 0.603 00005

Lowest Del_T: 0.003 00008

Highest Del_T: 0.005 00005

Overall Average Value: 0.600

LII 4/1/98

4-1-98

THICKNESS DATA SHEET

DATA SHEET NO. _____

PLANT VY OUTAGE 20 DRAWING N/A REV. N/A

SYSTEM TORUS COMPONENT/WELD NO. BAY 15 AREA 2 EN N/A

LOCATION RB 213'

MATERIAL: CARBON STEEL PRODUCT FORM: PLATE APPROX. THICK.: .580

INSTRUMENT: MAKE: PANAMETRICS MODEL: 26DL PLUS SERIAL NO.: 93134807

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

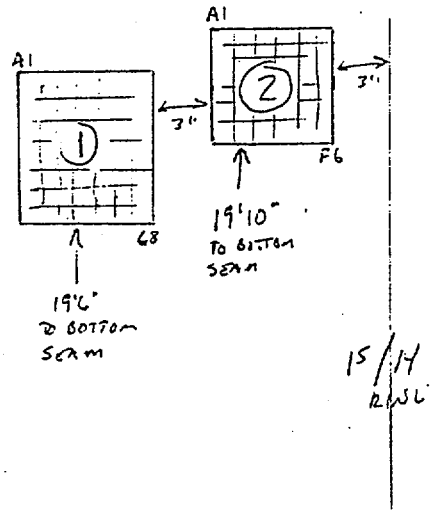
TRANSDUCER MAKE/MODEL: PANAMETRICS S/N 89303 D791-RM MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 MHz SIZE: .312"

CAL. BLOCK MATERIAL: 4340 S/N 93-6689 PRODUCT FORM: STEP WEDGE THICKNESSES: .25", .50", .75"

CALIBRATION TIMES: INITIAL: 0300 CHECK: N/A CHECK: N/A CHECK: N/A FINAL: 0420

SKETCH WITH RESULTS:

THERMO S/N 162559
CAL BLK TEMP 73°
COMP. TEMP 75°



Evaluation Required: (YES) NO

EXAMINER [signature] LEVEL II DATE 4/1/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) [signature] DATE 4-1-98

COGNIZANT ENGINEER [signature] DATE 5/8/98

QA (Optional) N/A DATE N/A

ANII (Optional) _____ DATE _____

Component ID: B15A2
Datafile(s): B15A2

	A	B	C	D	E	F	Max	Min	Del_T	Ave
00001	0.601	0.600	0.601	0.597	0.601	0.602	0.602	0.597	0.005	0.600
00002	0.594	0.600	0.601	0.598	0.598	0.603	0.603	0.594	0.009	0.599
00003	0.600	0.600	0.600	0.590	0.599	0.603	0.603	0.590	0.013	0.599
00004	0.599	0.584	0.585	0.600	0.601	0.603	0.603	0.584	0.019	0.595
00005	0.587	0.598	0.599	0.599	0.600	0.543	0.600	0.543	0.057	0.588
00006	0.598	0.596	0.599	0.598	0.598	0.602	0.602	0.596	0.006	0.598

Max	0.601	0.600	0.601	0.600	0.601	0.603
Min	0.587	0.584	0.585	0.590	0.598	0.543
Del_T	0.014	0.016	0.016	0.010	0.003	0.060
Ave	0.596	0.596	0.598	0.597	0.600	0.593

THE LOW READING AT LOCATION F5 IS ISOLATED AND APPEARS TO BE LESS THAN THE DIAMETER OF THE TRANSDUCER (.312")

M A Shearer LEF 4/1/98

4.1.98

STATISTICS

Component ID: B15A2

Datafile(s): B15A2

COLUMN:

Lowest Value: 0.543 F

Highest Value: 0.603 F

Lowest Del_T: 0.003 E

Highest Del_T: 0.060 F

ROW:

Lowest Value: 0.543 00005

Highest Value: 0.603 00004

Lowest Del_T: 0.005 00001

Highest Del_T: 0.057 00005

Overall Average Value: 0.597

TMSheaner LII 4/1/98

SLP Sugr 4.1.98

YA-VT-11-25

VT-1/VT-3 CONTAINMENT EXAMINATION REPORT

PLANT VY OUTAGE 20 DRAWING NA REV. N/A
SYSTEM TORUS COMPONENT NO. BAYS 1-6, 10-16
LOCATION RB 213'

EXAMINATION CONDITIONS

VT-1 Only: Resolution Check: ☒ YES ☐ NO Access <24": ☒ YES ☐ NO Angle >30°: ☒ YES ☐ NO
Exam Aids Description: FLASHLIGHT, LIGHT METER, PIT GAGE, WE REC QUAL CARD

EXAMINATION ATTRIBUTES

VT-1 OR VT-3 EXAMINATION OF COATED SURFACES

VT-1 ☐ VT-3 ☐

	Accept	Recordable	N/A
Cracks	☐	☐	☐
Physical Damage or Displacement	☐	☐	☐
Debris	☐	☐	☐
Paint Blistering	☐	☐	☐
Paint Flaking or Peeling	☐	☐	☐
Discoloration	☐	☐	☐
Corrosion	☐	☐	☐
Erosion	☐	☐	☐
Other	☐	☐	☐

N/A

REMARKS

VT-1 OR VT-3 EXAMINATION OF NON-COATED SURFACES

VT-1 ☒ VT-3 ☐

	Accept	Recordable	N/A
Cracks	☒	☐	☐
Pitting	☒	☐	☐
Arc Strikes	☒	☐	☐
Gouges or Dents	☒	☐	☐
Other Surface Discontinuities	☒	☐	☐
Physical Damage or Displacement	☒	☐	☐
Debris	☒	☐	☐
Wear	☒	☐	☐
Discoloration	☒	☐	☐
Excessive Corrosion	☒	☐	☐
Erosion	☒	☐	☐
Other	☐	☐	☒

REMARKS POST BLAST

Seals Gaskets and Moisture Barriers

	Accept	Recordable	N/A
Wear	☐	☐	☐
Damage	☐	☐	☐
Erosion	☐	☐	☐
Tears	☐	☐	☐
Surface Cracks	☐	☐	☐
Other	☐	☐	☐

N/A

REMARKS

SUPPLEMENTAL DATA SHEET ATTACHED: ☐ YES ☐ NO

EXAMINER [signature] / [signature] / [signature] Level: II Date: 4/27/98
Cog. Eng./Exam Agency N/A Date: N/A
ISI Coordinator [signature] ☒ Accept ☐ Reject Date: 4-28-98
NOTE: Accepted recordable attributes shall have evaluation data attached.
QA (Optional) N/A Date: N/A
ANII (Optional) Date:

FORM B-2

YA-VT-11-27

VT-1/VT-3 CONTAINMENT EXAMINATION REPORT

PLANT VY OUTAGE RF20 DRAWING ~~N/A~~ 6202-1 REV. ~~N/A~~ 1 04-28-98

SYSTEM Torus COMPONENT NO. Bays 7, 8, & 9

LOCATION RB 213'

EXAMINATION CONDITIONS

VT-1 Only: Resolution Check: ☑ YES ☐ NO Access <24": ☑ YES ☐ NO Angle >30°: ☑ YES ☐ NO

Exam Aids Description: Flashlight, Light Meter, Pit Gauge, IWE Proc. Qual. Card

EXAMINATION ATTRIBUTES

VT-1 OR VT-3 EXAMINATION OF COATED SURFACES

VT-1 ☐ VT-3 ☐

	Accept	Recordable	N/A
Cracks	☐	☐	☐
Physical Damage or Displacement	☐	☐	☐
Debris	☐	☐	☐
Paint Blistering	☐	☐	☐
Paint Flaking or Peeling	☐	☐	☐
Discoloration	☐	☐	☐
Corrosion	☐	☐	☐
Erosion	☐	☐	☐
Other	☐	☐	☐

N A

REMARKS

VT-1 OR VT-3 EXAMINATION OF NON-COATED SURFACES

VT-1 ☑ VT-3 ☐

	Accept	Recordable	N/A
Cracks	☑	☐	☐
Pitting	☑	☐	☐
Arc Strikes	☑	☐	☐
Gouges or Dents	☑	☐	☐
Other Surface Discontinuities	☑	☐	☐
Physical Damage or Displacement	☑	☐	☐
Debris	☑	☐	☐
Wear	☑	☐	☐
Discoloration	☑	☐	☐
Excessive Corrosion	☑	☐	☐
Erosion	☑	☐	☐
Other	☐	☐	☑

REMARKS Per engineering, acceptance criteria utilized for inspections are: non-reportable, unless indications were greater than One inch diameter and 1/16" deep.

Seals Gaskets and Moisture Barriers

	Accept	Recordable	N/A
Wear	☐	☐	☐
Damage	☐	☐	☐
Erosion	☐	☐	☐
Tears	☐	☐	☐
Surface Cracks	☐	☐	☐
Other	☐	☐	☐

N A

REMARKS

SUPPLEMENTAL DATA SHEET ATTACHED: ☐ YES ☐ NO

EXAMINER [signature] L.A. Sam II Level: II Date: 4-26-98

Cog. Eng./Exam Agency N/A Date: N/A

ISI Coordinator [signature] ☑ Accept ☐ Reject Date: 4-28-98

NOTE: Accepted recordable attributes shall have evaluation data attached.

QA (Optional) N/A Date: N/A

ANII (Optional) Date:

YA-VT-11-28

VT-1/VT-3 CONTAINMENT EXAMINATION REPORT

PLANT Vermont Yankee OUTAGE 20 R DRAWING N/A REV. N/A
SYSTEM Torus COMPONENT NO. Downcomers in Bays 1 thru 16.
LOCATION Inside Torus 213' EL Reactor Bldg.

EXAMINATION CONDITIONS

VT-1 Only: Resolution Check: ☑ YES ☐ NO Access <24": ☑ YES ☐ NO Angle >30°: ☑ YES ☐ NO
Exam Aids Description:

EXAMINATION ATTRIBUTES

VT-1 OR VT-3 EXAMINATION OF COATED SURFACES

VT-1 ☐ VT-3 ☐

	Accept	Recordable	N/A
Cracks	☐	☐	☐
Physical Damage or Displacement	☐	☐	☐
Debris	☐	☐	☑
Paint Blistering	☐	☐	☐
Paint Flaking or Peeling	☐	☐	☐
Discoloration	☐	☐	☐
Corrosion	☐	☐	☐
Erosion	☐	☐	☑
Other	☐	☐	☐

REMARKS N/A

VT-1 OR VT-3 EXAMINATION OF NON-COATED SURFACES

VT-1 ☑ VT-3 ☐

	Accept	Recordable	N/A
Cracks	☑	☐	☐
Pitting	☑	☐	☐
Arc Strikes	☑	☐	☐
Gouges or Dents	☑	☐	☑
Other Surface Discontinuities	☑	☐	☐
Physical Damage or Displacement	☑	☐	☐
Debris	☑	☐	☐
Wear	☑	☐	☐
Discoloration	☐	☐	☑
Excessive Corrosion	☑	☐	☐
Erosion	☑	☐	☐
Other	☐	☐	☑

REMARKS Post Blast

Seals Gaskets and Moisture Barriers

	Accept	Recordable	N/A
Wear	☐	☐	☐
Damage	☐	☐	☐
Erosion	☐	☐	☐
Tears	☐	☐	☐
Surface Cracks	☐	☐	☐
Other	☐	☐	☐

REMARKS N/A

SUPPLEMENTAL DATA SHEET ATTACHED: ☐ YES ☑ NO

EXAMINER [signature] / Michael Gagnier Level: II Date: 4/26/98
Cog. Eng./Exam Agency Date:
ISI Coordinator [signature] ☑ Accept ☐ Reject Date: 4-28-98
NOTE: Accepted recordable attributes shall have evaluation data attached.
QA (Optional) N/A Date: N/A
ANII (Optional) Date:

FORM B-2

YA-VT-11-48

VT-1/VT-3 CONTAINMENT EXAMINATION REPORT

PLANT Vermont Yankee OUTAGE RF20 DRAWING 6202-1 REV. 1
SYSTEM Torus COMPONENT NO. Equipment Access Plate (cut out for torus painting)
LOCATION RB 213', Bay 7

EXAMINATION CONDITIONS

VT-1 Only: Resolution Check: ☑ YES ☐ NO Access <24": ☑ YES ☐ NO Angle >30°: ☑ YES ☐ NO
Exam Aids Description: Flashlight, Light Meter, IWE Proc. Qual. Card, Pit Gauge

EXAMINATION ATTRIBUTES

VT-1 OR VT-3 EXAMINATION OF COATED SURFACES

VT-1 ☐ VT-3 ☐

	Accept	Recordable	N/A
Cracks	☐	☐	☐
Physical Damage or Displacement	☐	☐	☐
Debris	☐	☐	☐
Paint Blistering	☐	☐	☐
Paint Flaking or Peeling	☐	☐	☐
Discoloration	☐	☐	☐
Corrosion	☐	☐	☐
Erosion	☐	☐	☐
Other	☐	☐	☐

N A

REMARKS

VT-1 OR VT-3 EXAMINATION OF NON-COATED SURFACES

VT-1 ☑ VT-3 ☐

	Accept	Recordable	N/A
Cracks	☑	☐	☐
Pitting	☑	☐	☐
Arc Strikes	☑	☐	☐
Gouges or Dents	☑	☐	☐
Other Surface Discontinuities	☑	☐	☐
Physical Damage or Displacement	☑	☐	☐
Debris	☑	☐	☐
Wear	☑	☐	☐
Discoloration	☑	☐	☐
Excessive Corrosion	☑	☐	☐
Erosion	☑	☐	☐
Other	☐	☐	☑

REMARKS Per engineering, acceptance criteria utilized for examination: Indications are recordable, if greater than 1" Ø and 1/16" deep. NOTE: Edge of prepped plate has a rubber protective gasket taped all around.

Seals Gaskets and Moisture Barriers

	Accept	Recordable	N/A
Wear	☐	☐	☐
Damage	☐	☐	☐
Erosion	☐	☐	☐
Tears	☐	☐	☐
Surface Cracks	☐	☐	☐
Other	☐	☐	☐

N A

REMARKS

SUPPLEMENTAL DATA SHEET ATTACHED: ☐ YES ☑ NO

EXAMINER Dave Stogden Level: II Date: 5-6-98
Cog. Eng./Exam Agency N/A Date: N/A
ISI Coordinator Steve Sung ☑ Accept ☐ Reject Date: 5-6-98
NOTE: Accepted recordable attributes shall have evaluation data attached.
QA (Optional) N/A Date: N/A
ANII (Optional) [illegible] Date: 5-8-98

FORM B-2

THICKNESS DATA SHEET

DATA SHEET NO. YA-UT-112-123 1 of 6

PLANT VY CUTAGE 20 DRAWING NA REV. NA

SYSTEM TORUS COMPONENT/WELD NO. PLATING BAYS 4, 11, 12, 15, 16 EN NA

LOCATION RB 213'

MATERIAL: CS PRODUCT FORM: PLATE APPROX. THICK.: .6

INSTRUMENT:
MAKE: PANAMETRICS MODEL: 26 DL PLUS SERIAL NO.: 93129207

CRT ☐ DIGITAL ☑ HORIZONTAL LINEARITY PERFORMED ☐

TRANSDUCER MAKE/MODEL: PANAMETRICS S/N 69315 D791-RM MODE: ☑ PITCH/CATCH ☐ PULSE/ECHO FREQUENCY: 5.0 SIZE: .312"

CAL. BLOCK MATERIAL: CS 93-6691 PRODUCT FORM: STEP WEDGE THICKNESSES: .25, .5, .75, 1.0

CALIBRATION TIMES:
INITIAL: 0130 CHECK: NA CHECK: NA CHECK: NA FINAL: 0255

SKETCH WITH RESULTS:

UT AFTER SURFACE CONDITIONING TO REMOVE RAISED METAL AT DELAMINATIONS IN BAYS 4, 11, 12, 15, 16. SEE ATTACHED SKETCHES.

Evaluation Required: (YES) NO

EXAMINER M Sheam LEVEL II DATE 4/30/98

EXAM AGENCY (Optional) N/A DATE N/A

ISI COORDINATOR (Optional) SWPDuge DATE 4.30.98

COGNIZANT ENGINEER JCA DATE 5/9/98

QA (Optional) N/A DATE N/A

ANII (Optional) DATE

SUPPLEMENTAL DATA SHEET YA-UT-112-123 2 of 6

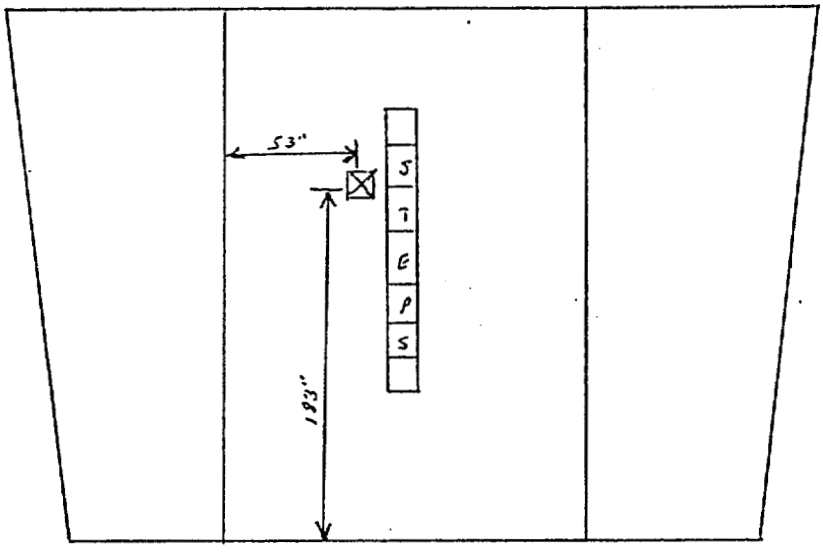
PLANT: VY OUTAGE: 20 DRAWING: NA REV.: NA

SYSTEM: TORUS COMPONENT/WELD NO.: BAY 4 PLATING EN: NA

LOCATION: RB 213'

Examination Details/Sketch:

FINAL THICKNESS AFTER REMOVAL OF RAISED METAL - .644"



EXAMINER [signature] LEVEL II DATE 4/30/98

COG. ENG./EXAM AGENCY DATE

ISI COORDINATOR (If ASME XI Exam) [signature] DATE 4.30.98

QA (Optional) N/A DATE N/A

ANII (Optional) DATE

SUPPLEMENTAL DATA SHEET YA-UT-112-123 3 of 6

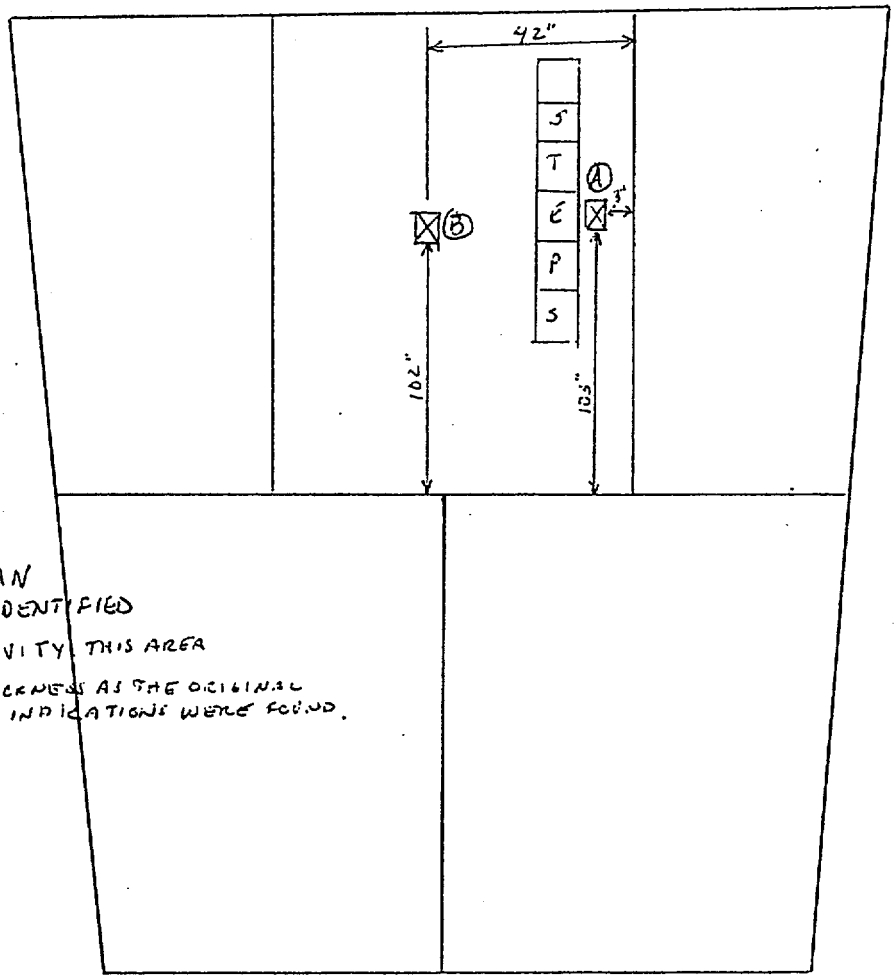
PLANT: VY OUTAGE: 20 DRAWING: NA REV.: NA

SYSTEM: TORUS COMPONENT/WELD NO.: BAY 11 EN: NA

LOCATION: RB 213'

Examination Details/Sketch:

FINAL THICKNESS AFTER REMOVAL OF RAISED METAL (A) .602" (B) .604"



LOCATION (B) IS AN ADDITIONAL AREA IDENTIFIED DURING THIS ACTIVITY. THIS AREA WAS SCANNED FOR THICKNESS AS THE ORIGINAL AREAS. NO LAMINAR INDICATIONS WERE FOUND.

EXAMINER [signature] LEVEL II DATE 4/30/98

COG. ENG./EXAM AGENCY DATE

ISI COORDINATOR (If ASME XI Exam) [signature] DATE 4.30.98

QA (Optional) N/A DATE N/A

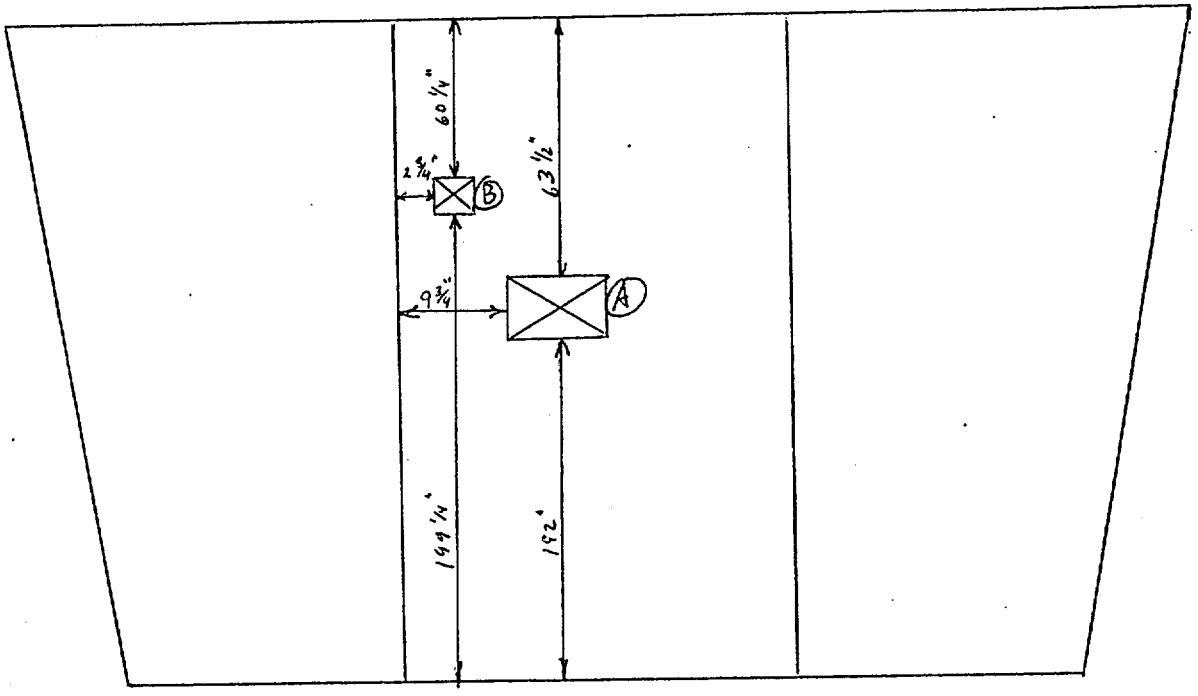
ANII (Optional) DATE

SUPPLEMENTAL DATA SHEET YA-UT-112-123 4 of 6

PLANT: VY OUTAGE: 20 DRAWING: NA REV.: NA
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 12 EN: NA
LOCATION: RB 213'

Examination Details/Sketch:

FINAL THICKNESS AFTER REMOVAL OF RAISED METAL (A) .618"
(B) .615"



EXAMINER [signature] LEVEL II DATE 4/30/98
COG. ENG./EXAM AGENCY DATE
ISI COORDINATOR (If ASME XI Exam) [signature] DATE 4.30.98
QA (Optional) N/A DATE N/A
ANII (Optional) DATE

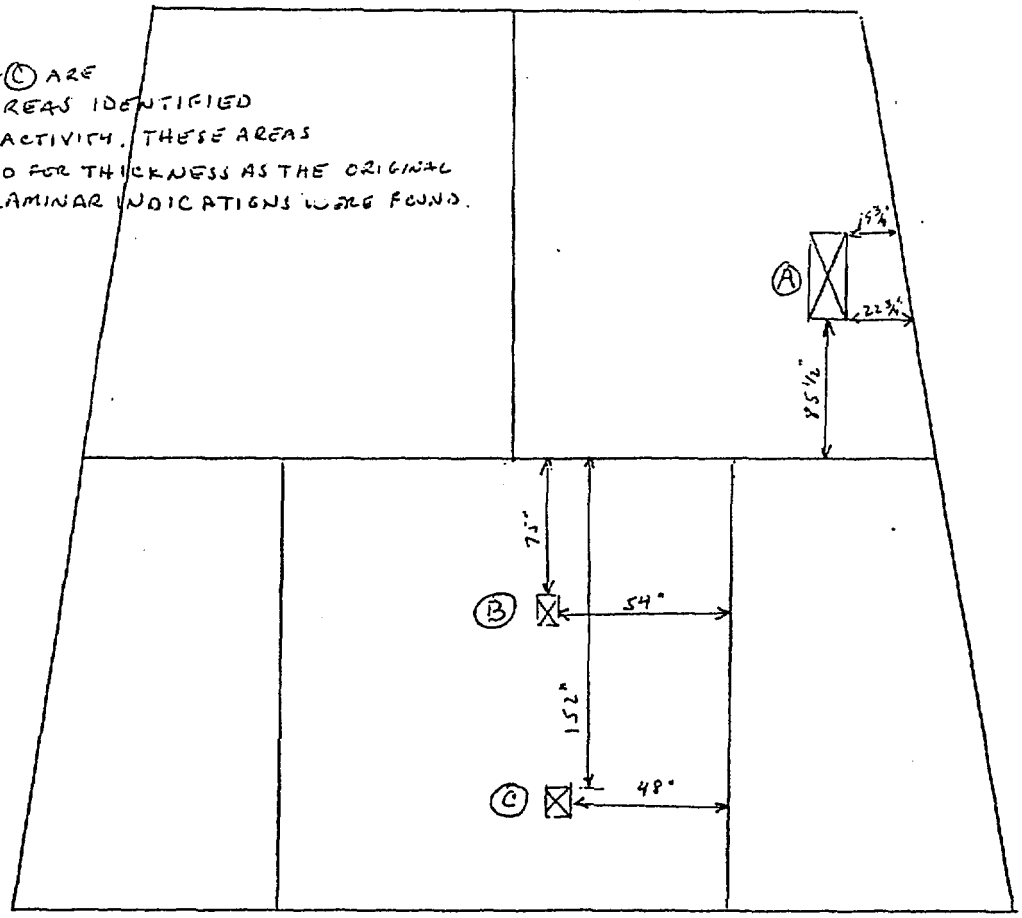
SUPPLEMENTAL DATA SHEET YA-UT-112-123 5 of 6

PLANT: VY OUTAGE: 20 DRAWING: NA REV.: NA
SYSTEM: TORUS COMPONENT/WELD NO.: BAY 15 EN: NA
LOCATION: RB 213'

Examination Details/Sketch:

FINAL THICKNESS AFTER REMOVAL OF RAISED METAL (A) .603" (B) .608" (C) .617"

LOCATIONS (B) + (C) ARE ADDITIONAL AREAS IDENTIFIED DURING THIS ACTIVITY. THESE AREAS WERE SCANNED FOR THICKNESS AS THE ORIGINAL AREAS. NO LAMINAR INDICATIONS WERE FOUND.



EXAMINER [signature] LEVEL II DATE 4/30/98
COG. ENG./EXAM AGENCY DATE
ISI COORDINATOR (If ASME XI Exam) [signature] DATE 4-30-98
QA (Optional) N/A DATE N/A
ANII (Optional) DATE