Prepared for

NAVAL FACILITIES ENGINEERING COMMAND
ENGINEERING SERVICE CENTER
Port Hueneme, California

Technical Submittal for Project:

Project Title: CLEAN, INSPECT, AND REPAIR STORAGE TANKS 5 & 17
Location: PEARL NAVAL BASE – REDHILL COMPLEX, Pearl Harbor, HI
Task Order No.: N62583-09-D-0132/0003
WGS Project Number: 54118
Date: 18 Nov, 2010

TANK 5 & 17 CLEANING, INSPECTION AND REPAIRS PROJECT

TANK 5 INSPECTION REPORT

Submitted By:
Willbros Government Services, LLC
2087 E. 71st Street
Tulsa, OK 74136

Rev	Date	Description	Reviewed	Approved
A	11/22/10	Issue Draft Report & Data for Info	RC	TDA
B	4/2/11	Issue for Review & Approval	JS / DB	TDA
C	5/23/11	Issue for Review & Approval	JS / DB	TDA
D	6/02/2011	Issue for Review & Approval	JS / DB	TDA
E	8/09/2011	Issue for Review & Approval	JS / DB	TDA

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WILLBROS GOVERNMENT SERVICES (U.S.), LLC

A WILLBROS COMPANY

Project Client:

NAVAL FACILITIES ENGINEERING COMMAND
ENGINEERING SERVICE CENTER

Port Hueneme, California

Technical Data & Submittal for Project:

Project Title: CLEAN, INSPECT, AND REPAIR STORAGE TANKS
Location: PEARL HARBOR NAVAL STATION, OAHU, HI
Task Order No.: N62583-09-D-0132/0003
WGS Project Number: 54118
Date: November 22, 2010

FINAL DRAFT TANK INSPECTION & INTEGRITY REPORT

REDHILL COMPLEX TANK 5

Submitted By:
Willbros Government Services, LLC.
2087 E. 71st Street
Tulsa, OK 74136

Rev	Date	Description	Reviewed	Approved
A	11/22/10	Issue Draft Report & Data for Info	RC	TDA
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E	8/09/2011	Issue for Review & Approval	JS / DB	TDA

Distribution is limited to US Government agencies and their contractors; administra ive/operational use within the context of this project or specific equipment. Other request shall be referred to the Naval Facili ies Engineering Service Center for information needed. This report is confidential and shall be maintained to this extent.

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

A WILLBROS COMPANY

Statement of Compliance

All work performed on this tank under this contract have been performed within the required project scope of work, specifications and regulations. All data provided has been obtained during the inspection, reviewed and verified to determine the existing condition of each item or component. Within the limits stated in this report to the extent visible, accessible or able to evaluate from the activities performed.

NDE Inspection & Testing performed by:

TESTEX, INC. & AES
NDE / INSPECTION SERVICES

Performed / Reviewed By	Date
Tim Anderson API653 Tank Inspector - #494, API570 / API510 Insp.	11/22/2010
Doug Bayles - Approval on File Tank Expert/Engineer - Doug Bayles, P.E. HI#11128-C, API653 Insp.	11/22/2010
Tim Anderson - Approval on File Project Manager - Tim Anderson, API 653 / API570 / API510 Insp.	11/22/2010

General Statement and Conditions

The information referenced in this inspection and engineering report is based solely upon the area or areas agreed upon and contracted for inspection; on the date of the inspection and under those present, known, same, accessible and current conditions. This report was prepared using retrievable data from those areas that were properly cleaned and prepared and made available and accessible during the inspection. Areas outside the scope of work which was not contracted for inspection and areas that were not cleaned and made available and / or accessible are not included in this report.

The methods, standards and regulations used by Willbros Government Services, LLC (Willbros) during the inspection and in preparing this engineering report comply with the most current and widely accepted industry standards and regulations, in which these standards and regulations make no representation, warranty or guarantee. The professional opinions and recommendations stated in this report, including predictability of life, maximum length of time for re-inspection, suitability for product storage, and safe fill height are conclusive approximations and are intended to serve mainly as guidelines in accordance with industry codes, standards and / or practices for obtaining the utmost in spill prevention and environmental protection. The listed recommendations may not necessarily be mandatory actions, but corrective actions that Willbros suggests would better preserve the owners'/operators' facility components and may contribute to a safer and more convenient operation. Failure to comply with these could result in, but may not be limited to, reduction of service life, tank operational mishap, legal consequences and/or fines for owners/operators. It is best advised that the recommended repairs, corrective actions and procedures be fully and accurately reviewed and complied with in order to meet the required and applicable federal, state and local regulations, and to have the necessary repairs and up-grades performed prior to making any change in service, product and/or current conditions.

Some recommendations and requirements are necessary to bring the component(s) into compliance with federal, state, and local regulations. Willbros recommends re-inspection after any corrective action, repair or review when there is a change in service. Any change in facility conditions that are applicable to this inspection report, such as, but not limited to, environmental anomalies or conditions, a change in service or usage could result in outdating this report. The predictability of any component in this report is a result of following the procedures in the applicable industry standard. Willbros accepts absolutely no responsibility or liability for any mishap or failure, including any subsequent clean-up costs or legal ramifications, resulting from owners'/operators' failure to perform the required repairs, inspections and re-inspections, as applicable.

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LIST OF ACRONYMS AND ABBREVIATIONS

API	American Petroleum Institute
ASME-BPV	American Society of Mechanical Engineers – Boiler & Pressure Vessel Code
ASNT	American Society of Non-Destructive Testing
AWS	American Welding Society
BMP	Best Management Practice
CO	Contracting Officer
CP	Cathodic Protection
DBB	Double Block and Bleed Valve
DO	Delivery Order
DOT	Department of Transportation
EPP	Environmental Protection Plan
FFD	Federal / Naval Fire Department
F-76	Diesel Fuel Marine
FHWA	Federal Highway Administration
FISC	Fleet and Industrial Supply Center
FLD	Field Operating Procedure
FORFAC	Fuel Oil Reclamation Facility
HSO	Health and Safety Officer
HASP	Health and Safety Plan
HPV	High Point Vent
JP-5	Jet Propellant Grade 5
JP-8	Jet Propellant Grade 8
LOTO	Lockout Tagout
LPD	Low Point Drain
NAVFAC	Naval Facilities Engineering Command
NAVFAC ESC	Naval Facilities Engineering Service Center
NAVSTA	Naval Station
NDE	Non-Destructive Examination
NPDES	National Pollution Discharge Elimination System
NTR	Navy Technical Representative
PM	Project Manager
POC	Point of Contact
PPE	Personal Protective Equipment
QA	Quality Assurance
QC	Quality Control
SSHEP	Site Specific Health & Environmental Plan
SM	Site Manager
SOW	Statement or Scope of Work
TO	Task Order
USACE	U.S. Army Corp of Engineers
USN	U.S. Navy
UST	Underground Storage Tank
VS	Valve Station
WDP	Waste Disposal Plan
WP	Work Plan

Section 1.0 – Executive Summary

Willbros Government Services (Willbros) completed the modified API 653 inspection of the Tank 5 (TK5) on November 16, 2010 to verify the tank's current condition; integral and structural components; and coating integrity. Tank 5 (TK 5) is a vertical underground storage tank (UST) located in the Redhill Complex of the Pearl Harbor Naval Station, Oahu HI. Tank 5 is 100 ft. dia. x 250 ft. high; upper and lower dome sections (50 ft. radius each), carbon steel tank which has been externally reinforced during construction by a concrete / gunite lining.

Willbros performed all preliminary activities required to perform the SOW including (LOTO) Lock-Out & Tag Out on the tank and ancillary piping systems. Willbros removed the tank's isolation skin valves and installed mechanical blinds. Willbros cleaned the tank by high pressure washing all internal surfaces. Residual fuel was transferred to FISC operations; unusable fuel and wash rinsate were transported to a regulated waste disposal site for processing and disposal.

Testex, Inc. performed (NDE) non-destructive examination and testing inspection on 100% of the tank's welds, shell, upper and lower dome surfaces to determine the remaining wall thickness and condition of each section or component. During the NDE examinations and inspection all relevant indications observed were identified, recorded and photographed as necessary to document the condition of each relevant indication in the tank. These areas were inspected by certified ASNT Level II NDE Inspection Technicians.

Willbros performed hydrostatic pressure testing on the tank's nozzles and ancillary piping to the first isolation flange on the tank. Willbros performed a visual inspection of the tank's welds, shell, upper and lower dome, nozzles and structural surfaces to determine the actual condition and integrity of each section or component. During the visual inspection all relevant indications observed were identified, recorded and photographed as necessary to document the condition of each relevant indication in the tank. These areas were inspected by a certified API 653 Tank Inspector and ASNT Level II NDE Inspection Technician.

1.1 Summary of Inspection Findings

Willbros and Testex performed a thorough API 653 modified inspection and NDE examination of Tank 5 surfaces and components. During the inspection there were over (800+) various types of indications and flaws found throughout the tank. These indications varied in type, cause and severity. The following indications or flaws were found in various locations in the tank. The repair indications or flaws are identified in the Table 7-1 of this report. Repair considerations and recommendations for each relevant indications or flaws has been reviewed and listed in Table 7-1 for each repair type, size and classification for mandatory, short term and long term intervals.

1.1.1 Summary of Indications and Flaws

- Gouges – Ranging in various depths and sizes. Typical depths ranged from 0.020" to 0.190" in depth, with various diameters and configurations.
- Corrosion Areas and Pits – Ranging in various depths and sizes. Typical depths ranged from 0.015" to 0.195" in depth, with various diameters and configurations.
- Holes – Two (2) holes were found, (1) in the shell extension and (1) in the upper dome.
- Weld Discontinuities and Defects
    - Porosity – Ranging in various sizes. Typical sizes ranged from 0.020" to 0.188" in diameter.
    - Undercut – Ranging in various depths and sizes. Typical depths ranged from 0.015" to 0.240" in typically a 0.250" original plate thickness.
    - Lack of Fusion and Cold Lap - Ranging in various sizes. Typical sizes ranged from 0.25" to 1.5" in length.
    - Slag Inclusions - Ranging in various sizes. Typical sizes ranged from 0.125" to 0.375" in length.

  - Underfill – Areas were observed in the vertical and horizontal welds where the weld reinforcement was less than base metal thickness.
  - Excess Weld Reinforcement - Areas were observed in the vertical and horizontal welds where the weld reinforcement was more than allowed per code from base metal surface to the top of the weld.
  - Weld Sizes - Areas were observed in the vertical and horizontal welds where the weld pass size and reinforcement exceeded the weld widths, configurations and sizes relative to the base metal thickness.
  - Weld Arc Gouges – Arc pull or wash outs, ranging in various depths and sizes. Typical depths ranged from 0.025" to 0.125" in depth, with various diameters and configurations.
  - Torch Gouges – One area was found where a torch gouged or cut thru the weld seam and exposed the open joint seam connection completely for approximately 3/8" in length. This is a complete thru wall opening, leak or equivalent hole in the upper dome.
  - Leak – One area was observed leaking in the telltale system. The weld in this area has failed and leaking product in the upper dome.
  - Un-welded Seams – One seal plate (2"W x 8"L) and one 2" diameter nozzle was found tacked, but not welded in the upper dome.
- Dents & Bulges – Dents were observed ranging in various depths and sizes. Typical depths ranged from 0.125" to 0.5" in depth, with various diameters and configurations. Bulges were observed throughout the tank's internal plate surfaces.
- Pressure Testing Failures –
  - The 32" diameter main line internal connection flange failed twice and gaskets were changed to compensate for the out of plane and wavy surface. The third hydro test application passed.
  - Sample Lines – Failed and leaked at various joint connections.
  - Slop / Drain Line – Failed and leaked. The internal hose leaked during pressure testing and the casing will not hold pressure due to a coupling which was damaged by operations approximately one year previously.
- Bolts – Were found missing or in correct length, (52) missing bolts were replaced in the tower and catwalk structures.
- Coating – The overall coating is in poor condition. The coating has disbonded, flaked or deteriorated over 80% of all internal surface areas.
- Detailed list of indications and repairs are provided for each component in the appropriate section listed in Tables 6-1 thru 6-4 and 7-1.

1.2 Summary of Recommendations

Willbros and Testex found over (800+) various indications and flaws during the API 653 modified inspection and NDE examination of Tank 5 surfaces and components. Most of these indications or flaws are relatively small in overall size and repair(s) that will be required. The indications found varied in type, cause and severity as listed in Section 1.1. Due to the types of indication or flaw sizes, depths and conditions found in Tank 5; it was found not suitable to return to service until all of the items identified are repaired as appropriate for the intended service and operational interval. The following table list in Section 7.0 describes the repairs by type, size, classification and action to be taken. Reference the following Table 7-1 Summary of Tank Repairs for the complete list of repairs for each plate, location along with the associated repair(s) required and classification type.

Mandatory Repairs – Immediate repairs required before returning tank to service.

- Repair (2) areas found with thru wall holes.
- Repair weld where torch gouged thru the weld seam, completely open joint connection, leak or hole equivalent.
- Repair leak found in the telltale system.
- Replace or repair lines failed during Hydrotesting.
- Weld Discontinuities or Defects - Which exceed code limits.

- Un-Welded Seams – One (1) seal plate and one (1) nozzle, leak or hole equivalent.
- Repair areas where pits, gouges or corrosion is below the minimum thickness (t_{min}) required.
- Detailed list of indications and repairs are provided for each component in the appropriate section listed in Tables 6-1 thru 6-4 and 7-1.

Short Term Repairs – Repair indications or flaws found that have the criteria which exceeds the intended (10yr) service and operational interval.

- Repair areas where pits, gouges or corrosion is below the minimum thickness (t_{min}) required for this interval.
- Repair coating in areas required to eliminate corrosion cells on internal surfaces, extend component service life and inspection intervals.
- Detailed list of indications and repairs are provided for each component in the appropriate section listed in Tables 6-1 thru 6-4 and 7-1.

Long Term Repairs - Repair indications or flaws found that have the criteria which exceeds the intended (20yr) service and operational interval.

- Repair areas where pits, gouges or corrosion is below the minimum thickness (t_{min}) required for this interval.
- Repair coating in areas required to eliminate corrosion cells on internal surfaces, extend component service life and inspection intervals.
- Detailed list of indications and repairs are provided for each component in the appropriate section listed in Tables 6-1 thru 6-4 and 7-1.

Section 2.0 – Suitability for Service Statement

Suitability for Service Statement

For Redhill Complex UST Tank 5 – Pearl Harbor, HI

Tank 5 integral structural and component integrity is not satisfactory for continued service and cannot be placed back in normal operation. The repairs will need to include the mandatory repairs and the repairs required for the next desired operational interval. After the repairs are completed, the repairs will need to be re-inspected and tested for compliance. Once all repairs are completed, inspected and approved; then the next inspection intervals can be determined.

The next API-653 internal inspection should be conducted in xxxx (0) years, or by xxxxxx [1/2 of the shell life based on the tank having greater than 0 years remaining shell life]. The bottom life calculations give the tank bottom greater than xxxx (0) years of remaining operation. A visual inspection of UST internal coatings should be conducted in ten years.

API-653 Inspector:

Tim D. Anderson; API-653 # 494

Professional Engineer's Review:

Douglas J. Bayles, P.E. – Hawaii P.E. Registration Number 11128-C

Section 3.0 – Project References and Specifications

Willbros reviewed the project SOW and listed the applicable requirements for reference and utilization in the development and execution of the project activities to ensure compliance with all relevant regulations, project requirements including the following codes and specifications:

3.1 American Petroleum Institute (API)

3.1.1 API Recommended Practice 574, *Inspection Practices for Piping System Components*, Latest Edition.

3.1.2 API Recommended Practice 575, *Inspection of Atmospheric and Low-Pressure Storage Tanks*, Latest Edition.

3.1.3 API Standard 650, *Welded Steel Tanks for Oil Storage*, Latest Edition.

3.1.4 API Recommended Practice 651, *Cathodic Protection of Aboveground Petroleum Storage Tanks*, Latest Edition.

3.1.5 API Recommended Practice 652, *Lining of Aboveground Petroleum Storage Tanks*, Latest Edition.

3.1.6 API Standard 653, *Tank Inspection, Repair, Alteration and Reconstruction*, Latest Edition.

3.1.7 API/ANSI Standard 2015, *Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks*

3.1.8 API/ANSI RP 2016 *Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks*

3.1.9 API Standard 2550, *Measurement and Calibration of Upright Cylindrical Tanks*

3.2 American Society of Mechanical Engineers (ASME)

3.2.1 ASME B31.3, *Process Piping*, Latest Edition.

3.2.2 ASME B31.4, *Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids*, Latest Edition.

3.2.3 ASME VII Non-Destructive Examination, Latest Edition.

3.2.4 ASME IX Welding and Brazing, Latest Edition.

3.3 Code of Federal Regulations (CFR)

3.3.1 29 CFR 1910, *Permit-Required Confined Spaces for General Industry*.

3.3.2 40 CFR 112, *Oil Pollution Prevention*.

3.4 Military Handbooks (MIL-HDBK)

3.4.1 MIL-HDBK 1022A, D*epartment of Defense Handbook: Petroleum Fuel Facilities*, 01 November 1999.

3.4.2 MIL-HDBK 201B, *Military Standardization Handbook: Petroleum Operations*.

3.5 National Association of Corrosion Engineers (NACE)

3.5.1 NACE Recommended Practice, RP0184-97, *Repair of Lining Systems*.

3.5.2 NACE Recommended Practice, RP0193, *External Cathodic Protection of On-Grade Metallic Storage Tank Bottoms*.

3.5.3 NACE Recommended Practice, RP0288-94, *Inspection of Linings on Steel and Concrete*.

3.6 National Fire Protection Association (NFPA)

3.6.1 NFPA-30, *Flammable and Combustible Liquids Code*.

3.7 Steel Tank Institute (STI)

3.7.1 STI SP001, *Standard for the Inspection of Aboveground Storage Tanks*.

3.8 Safety

3.8.1 EM 385-1-1, *U.S. Army Corps of Engineers Safety and Health Requirement, Appendix A Minimum Basic Outline for Accident Prevention, and sections*.

3.9 Unified Facilities Criteria (UFC)

3.9.1 UFC 3-460-01, *Petroleum Fuel Facilities*.

3.10 Unified Facilities Guide Specification (UFGS)

3.10.1 UFGS 09970, Epoxy/Fluoropolyurethane Interior Coating Of Welded Steel Petroleum Fuel Tank

3.10.2 UFGS 09971, Exterior Coating System for Welded Steel Petroleum Storage Tanks

3.10.3 UFGS 09973, Interior Coating System for Welded Steel Petroleum Storage Tanks

3.10.4 UFGS 01351, Safety, Health, and Emergency Response

3.10.5 UFGS 13205, Steel Tanks with Fixed Roofs

Section 4.0 – Tank Data

4.1 Project Data:

Client: Naval Facilities Engineering Service Center (NAVFAC ESC)
Client Contract / Task Order Number: N62583-09-D-0132/0003
Contracted by: Willbros Government Services (US), LLC
Willbros Project / Job Number: 54118

4.2 Tank Description:

Owner/Operator: FISC – PH
Location: Redhill Complex - Pearl Harbor, Oahu HI
Tank Identification: Tank 5 (TK5)
Tank Size / Volume:
- Diameter: 100.00 feet
- Shell Height: 150.00 feet
- Upper Dome: 50.00 feet
- Lower Dome: 50.00 feet
- Capacity: 12,756,725 Gallons / 303,732 BBLs
- Configuration: Vertical UST (Pill shaped, vertical shell with 50 ft rad. upper / lower domes)

Foundation: Concrete / Gunite encasement with embedded rebar and I-beams
Secondary Containment: None
Year Installed: Facility Construction 1940-1943, tank completed in 1942
Age: 68 years
Construction Code: Unknown
Manufacturer: Morrison Knudsen

4.3 Service Description:

Service: JP-8
Specific Gravity: 0.82
Operating Limits:
- Minimum Metal Temperature: Ambient
- Maximum Metal Temperature: 200 F
- Minimum Pressure: Atmospheric (no vacuum)
- Maximum Pressure: Atmospheric (hydrostatic)

Seismic Zone: 1
Current Fill Height: 190.00 feet
Max Fill Height: 240.00 feet

4.4 Component / Part Description:

Bottom -
- Material: Carbon Steel
- Specification: Unknown Specification
- Design: Dome, 50 ft radius

Shell -
- Material: Carbon Steel
- Specification: Unknown Specification
- Design: Cylindrical

Roof -

Material: Carbon Steel
Specification: Unknown Specification
Design: Dome, 50 ft radius

4.5 Joint Type Description:

Bottom Plate-to-Plate: Butt Welded
Shell Plate-to-Plate: Butt Welded
Roof Plate-to-Plate: Butt Welded
Bottom-to-Shell: Butt Welded
Shell-to-Roof: Butt Welded
Efficiency Factor: Unknown

4.6 Tank History:

Last Cleaned: 1983
Previous Cleaning(s): 1981, 1974, 1971, 1970, 1964 and 1952
Last Inspection: 1983 Specific testing for leaks, Inspected 1981
Previous Inspection(s): 1974, 1981
Last Repairs: 1983 telltale leaks
Previous Repairs(s): 1981-1982 Major repairs and coating,
1976 Sample line,
1975 Sample line,
1974, 1972, 1965

(Historical Records available located in App. F)

4.7 Project Inspection Description:

Inspection Type: Modified API-653 Out-of-Service
Inspection & Testing Date(s): Aug 18, 2010 thru Nov 16, 2010
Inspector(s): Tim D. Anderson
Pressure Test Technicians: Reed Cavin, Pat Collins and Robert Chapman
ASNT NDE Level II Technicians: Larry McDougal, Joe Wolfe, Pat Hayden,
Jassel Bolden, Boyd Magil and Chris Kocher

4.7 Project Inspection Equipment Description:

Krautkramer Ultrasonic Shearwave / Thickness Meter – Component integrity and wall thickness
Hawkeye BFET 2000 – Weld Inspection for surface and slight subsurface indications
Falcon LFET Mark II Scanner 2000 – Wall thickness
Magnetic Particle - Dry powder, color contrast for surface and slight subsurface indications
3D Laser Scanner (For tank calibrations – to be performed after repairs are completed)
Hydrostatic Test Pump
Small hand tools

(See App. A or Section 5.5 for detailed equipment data and calibrations)

Section 5.0 – Project Scope of Work and Inspection Methodology

5. 1 Introduction and background

The project objectives under this contract are to provide mechanical isolation, cleaning, waste disposal, NDE, inspection and integrity analysis for Tanks 5 & 17. Repairs are to be performed under a contract modification as selected and approved by NAFVAC ESC. The scope limits includes the tank, components and to the first flange connection on the tank to the first isolation valve. The scope of work is defined in the NAVFAC SOW document and described in the Willbros work plan.

The project site is located on the Pearl Harbor Naval Base, Redhill Complex on Oahu, HI. The Redhill Tank Complex provides strategic fuel supply to the USN Pacific Fleet. The Redhill Complex contains twenty (20) UST tanks, 100 ft. dia. X 250 ft. high and ancillary equipment. The complex was originally built beginning in December 1940 and construction was completed in September 1943.

5. 2 Project Implementation

All site activities were performed in accordance with the Willbros WP, policies and procedures, applicable federal and local standards, and specified NAVFAC ESC requirements. In the event that the aforementioned regulations conflict, the most stringent standards will be met. The project WP, SSHEP, HASP, EPP and WDP, submitted under separate cover. All Willbros and subcontractor personnel involved in this project shall review and understand these documents prior to the start of work.

5. 3 Project Specifications

The project specifications listed in Section 3.0 are compiled from the NAVFAC SOW and related contract documents. These project specifications were implemented in the development, design and execution of the project work plan. The project monitored activities to insure compliance with all local, state and federal regulations and Willbros standard policies and procedures.

5. 4 Project Permits and Environmental Responsibilities

Willbros obtained the required gas free certificates after completing the cleaning and gas freeing the tank. Willbros contracted Pacific Commercial Services (PCS) to transport the unusable fuel and wash rinsate to the disposal facility and coordinate the disposal in accordance with regulation requirements.

Willbros obtained the required hot work permits for any hot work task on the storage tank and confined space permits were obtained as needed. A Marine Chemist certified the site condition was gas free and ready for hot work. Willbros coordinated with Federal Fire to obtain hot work permits. No environmental or other permits were required.

5. 5 Tank Inspections and Methodologies

The inspection of Red Hill Complex Tank 5 was performed in accordance with the requirements of API Standard 653, *Tank Inspection, Repair, Alteration and Reconstruction*; and as supplemented by the NAVFAC ESC Statement of Work. The inspections were performed in a safe and professional manner. The inspection, preliminary and final field reports; tank evaluation and integrity analysis are completed in accordance with applicable general industry practices, codes, standards; federal and local regulations.

Willbros inspected and evaluated the tank's structural tower and catwalk structures after gas freeing the tank. Minor repairs were made tank's structural tower and catwalk structures to replace missing bolts and inadequate structural sections. After all of the structural repairs were completed and checked, Willbros installed two (2) boom systems on the tower structure with man baskets. The man baskets were utilized to access all the internal surfaces areas of the tank for testing and inspection.

Testex performed all of the (NDE) non-destructive examination and testing for the tank shell, upper and lower domes, welds and appurtenances. Testex provided two (2) non-destructive examination and testing (NDE) crews which examined the walls and components for remaining wall thickness readings. Testex utilized three different (NDE) methods as previously performed on the last (4) tank inspections at the Red Hill Storage Tanks. The (NDE) evaluation and testing methods utilized the (LFET) Low Frequency Electromagnetic Technique – Falcon 2000 Mark II and (BFET) Balanced Field Electromagnetic Technique – Hawkeye 2000; and traditional ultrasonic longitudinal and shearwave inspection for proofing areas. Testex developed site specific equipment for the inspection and testing of the Redhill Tanks, along with site specific testing procedures.

The NDE testing and evaluation was performed in accordance with the project SOW which included 100% of courses A, B, C, D, E and F of the upper dome; the extension (including the manway); the tank's shell barrel (including under Cat Walk); courses 1, 2, 3, 4 of the lower dome; and the floor. The LFET Falcon 2000 Mark II system was used for component scanning for wall thickness and back side corrosion, with UT prove up as needed for actual wall condition or weld quality. The BFET - Hawkeye system was used to evaluate the accessible tank welds for surface and toe cracks. Ultrasonic (UT) shearwave and magnetic particle (MT) color contrast dry particle testing was used for prove up as needed.

The API653 inspector was assisted by Willbros on-site personnel as needed to perform the visual inspection of all accessible tank surfaces. Testex and the Willbros API653 inspector are qualified to ASNT NDE Level II in performing all NDE inspections. The API653 inspector monitored the NDE testing and reviewed the test data acquired for potential areas of concern and to identify areas for follow-up proof UT or NDE inspections.

5.5.1 Historical Record Review

The API653 inspector reviewed the available historical records for the entire tank detailing as much information as possible, including the information as accessible:

- Nameplate Information - tank dimensions, capacity, operating and design pressure.
- Tank Data- original manufacturer, construction contractor, and year of construction.
- All applicable construction standards used.
- A general plan drawing, showing the general arrangement of the major components, and the location and size of all penetrations. Product presently stored.
- Design specific gravity, maximum permissible liquid level and maximum operating temperature.
- Shell material and allowable stress of each shell course to be used in calculations.
- Previous inspection reports, as available.
- List and description of any significant environmental (earthquake, hurricane, etc.) Or operational (over-pressure, vacuum, foundation settlement, etc.) events.
- Description of any repairs or alterations completed (drawings, material test reports/certifications, radiographs attached, etc.)
- All other pertinent information and details.

5.5.2 General Tank Overview

The API653 inspector performed a general overview of the tank for compliance with latest editions of API650, *Welded Steel Tanks for Oil Storage*, API653, *Tank inspection, repair, alteration and reconstruction*, API651, *Cathodic protection of aboveground petroleum storage tanks*; applicable codes and standards; good tank construction, industry standards and operating practices. This includes as applicable, but is not limited to:

- General assessment of the tank site, soil structures, berm, dike and dike drainage, soil conditions and surrounding areas.
- Description of nearby tanks that could possibly affect the tank undergoing inspection.
- Description of any signs of over-pressure or vacuum such as shell buckling, distortions, dimpling not accounted for in the historical review.
- Description of any signs of significant natural attack or event not accounted for in the historical review.

5.5.3 Bottom & Lower Dome Inspection

The NDE technicians and API653 inspector conducted examinations and inspections according to Section 5.0, API-653 and SOW Section 4. The API653 inspector performed a comprehensive visual inspection on all tank components and recorded all relevant observations.

5.5.3.1 LFET or UT readings and Visual inspection as follows:

- Rectangular plates: Per the NDT section SOW.
- Sketch plates: Per the NDT section SOW.
- Circumferential readings: Per the NDT section SOW.
- Any relevant indications or defects were mapped in the Tank Inspection Report and marked on the tank surface.
- Any relevant corrosion areas were mapped in the Tank Inspection Report and marked on the tank surface.
- In areas where LFET examination indicates loss of material, UT measurement back up is completed to verify extent of underside corrosion.

5.5.3.2 BFET / UT or MT inspection as follows:

- Rectangular plate welds: Per the NDT section SOW.
- Sketch plate welds: Per the NDT section SOW.
- Circumferential reading welds: Per the NDT section SOW.
- Any relevant indications or defects were mapped in the Tank Inspection Report and marked on the tank surface.
- In areas where BFET examination indicated a discontinuity, UT shearwave or MT examination was performed to verify extent of the discontinuity and limits for acceptability.

5.5.4 Shell and Extension Inspection

The NDE technicians and API653 inspector conducted examinations and inspections according to Section 5.0, API-653 and SOW Section 4. The API653 inspector performed a comprehensive visual inspection on all tank components and recorded all relevant observations.

5.5.4.1 LFET or UT readings and Visual inspection as follows:

- Rectangular plates: Per the NDT section SOW.
- Sketch plates: Per the NDT section SOW.
- Circumferential readings: Per the NDT section SOW.
- Any relevant indications or defects were mapped in the Tank Inspection Report and marked on the tank surface.
- Any relevant corrosion areas were mapped in the Tank Inspection Report and marked on the tank surface.

- In areas where LFET examination indicates loss of material, UT measurement back up is completed to verify extent of underside corrosion.

5.5.4.2 BFET / UT or MT inspection as follows:
- Rectangular plate welds: Per the NDT section SOW.
- Sketch plate welds: Per the NDT section SOW.
- Circumferential reading welds: Per the NDT section SOW.
- Any relevant indications or defects were mapped in the Tank Inspection Report and marked on the tank surface.
- In areas where BFET examination indicated a discontinuity, UT shearwave or MT examination was performed to verify extent of the discontinuity and limits for acceptability.

5.5.4.2 Tank Shell Measurements
The tank shell was measured in accordance with API-653 for dimensional tolerances. All measurements, including peaking, banding, plumbness and roundness, were performed in accordance to API-653 and recorded in the inspection report and engineering data.

5.5.5 Upper Dome / Roof Inspection

The NDE technicians and API653 inspector conducted examinations and inspections according to Section 5.0, API-653 and SOW Section 4. The API653 inspector performed a comprehensive visual inspection on all tank components and recorded all relevant observations.

5.5.5.1 LFET or UT readings and Visual inspection as follows:
- Rectangular plates: Per the NDT section SOW.
- Sketch plates: Per the NDT section SOW.
- Circumferential readings: Per the NDT section SOW.
- Any relevant indications or defects were mapped in the Tank Inspection Report and marked on the tank surface.
- Any relevant corrosion areas were mapped in the Tank Inspection Report and marked on the tank surface.
- In areas where LFET examination indicates loss of material, UT measurement back up is completed to verify extent of underside corrosion.

5.5.5.2 BFET / UT or MT inspection as follows:
- Rectangular plate welds: Per the NDT section SOW.
- Sketch plate welds: Per the NDT section SOW.
- Circumferential reading welds: Per the NDT section SOW.
- Any relevant indications or defects were mapped in the Tank Inspection Report and marked on the tank surface.
- In areas where BFET examination indicated a discontinuity, UT shearwave or MT examination was performed to verify extent of the discontinuity and limits for acceptability.

5.5.6 Tank Foundation Inspection

A survey of the foundation near the outside of the tank could not be performed since the tank is a UST and encased in a concrete / gunite. The condition of any anchor rods, embedment rebars or beams were not accessible for observation or recording.

5.5.7 Tank Appurtenances

The tank nozzles, man-ways, and other appurtenances were examined and inspected for adequacy of wall thickness, reinforcement, weld spacing and corrosion. Observations were made from both the outside and inside of the tank, as accessible. Nozzles were examined for structural adequacy and compliance with

applicable standard. Tank accessories, such as instruments, relief valves and level gauges were examined for functionality and general condition, if possible.

5.5.8 Inspection Checklists

Inspection checklists from API653 for an In-service and / or Out-of-service checklist was completed and it is located in App. B. The majority (>90%) of the items listed are not-applicable items due to the configuration of the tank. All items, components and accessories on the tank were inspected and observations recorded.

5.5.9 Tank Calibration

The tank will be strapped / calibrated after all repairs are completed in accordance with API's Manual of Petroleum Measurement Standards Chapter 2 – Tank Calibration utilizing the Optical Method. A three-dimensional scan of the tank internal wall will be performed utilizing a GPT-3100W Non-Prism Total Station to accomplish a high definition scan. A proprietary computer program will then be utilized to determine precise tank capacities and generate the final tank calibration charts. Gauge Point Systems will perform the strapping, dimensioning and final tank calibration charts.

5.5.10 Technologies and Equipment

Willbros in conjunction with Testex and subcontractors utilize the most modern technologies available and proven instruments to perform equipment, STI or API 653 inspection and Non-Destructive Examinations. Some of the technologies utilized, but are not limited to, are as follow:

- A TesTex - BFET Hawkeye low voltage remote eddy current scanner to detect surface cracks in metal plates or weld toes. A small handheld unit is used on hard to reach places.
- A TesTex - LFET Falcon 2000 Mark II low voltage remote eddy current scanner to detect back side corrosion or surface cracks in metal plates. A small handheld unit is used on hard to reach places.
- Krautkramer DMS 2 Ultrasonic thickness meters to determine metal thickness. These meters are of the latest technology displaying both a thickness reading for the metal but also a second reading of the coating thickness when measuring through paint. All measurements are electronically stored and down loaded into the API-653 Report Program. All minimum required thicknesses, corrosion rates, tank safe fill heights and tank life before required repairs are necessary.
- Krautkramer USN-60 Ultrasonic longitudinal and shearwave test equipment used to determine or evaluate metal thickness. These test equipment are of the latest technology longitudinal and shearwave test equipment for evaluating material flaws in metal plates and thickness testing. The equipment can be set up for displaying both a thickness reading for the metal but also a second reading of the coating thickness when measuring through paint.
- Thorpe pit gauges when measuring pitting on tank bottoms, shells and roofs. Also when evaluating pitting and corrosion on piping during an API-510/570/653 evaluation.
- Eagle Monitors / REA Systems / Industrial Scientific: Atmospheric testing equipment

Section 6.0 – Inspection Results and Findings

Willbros performed a detailed and thorough visual inspection of the accessible tank components and all appurtenances. Testex was subcontracted to perform the NDE inspection of the tank's shell, shell extension, upper and lower domes, associated welds and integral pressure retaining components. The inspection and test data was recorded during the inspection and listed in the applicable report section(s).

The following sections provide detailed descriptions of the actual condition which includes general conditions and relevant indications observed during the inspection. These general conditions, areas or locations, relevant indications and NDE test results were utilized to determine the overall condition of the tank, engineering integrity analysis and suitability for the intended service. These conditions, indications and test results were utilized to evaluate the components and develop a detailed list for repairs required for the Mandatory, Short Term and Long Term intervals.

Due to the overall size of the tank and number of components and plates; the inspection and testing data is extremely large. The data has been compiled and configured into a format that should make future inspections and condition comparisons easier to manage and process.

6.1 Summary of Inspection Findings

Willbros performed a thorough API 653 modified inspection and Testex performed NDE examination of TK 5 surfaces and components. During the inspection there were over (800+) various types of indications and flaws found throughout the tank. These indications varied in type, cause and severity. The following indications or flaws were found in various locations in the tank. The repair indications or flaws are identified in the Table 7-1 of this report. Repair considerations and recommendations for each relevant indications or flaws has been reviewed and listed in Table 7-1 for each type of repair classification; mandatory, short term and long term.

6.1.1 Summary of Indications and Flaws

- Gouges – Ranging in various depths and sizes. Typical depths ranged from 0.020" to 0.190" in depth, with various diameters and configurations.
- Corrosion Areas and Pits – Ranging in various depths and sizes. Typical depths ranged from 0.015" to 0.195" in depth, with various diameters and configurations.
- Holes – Two (2) holes were found, (1) in the shell extension and (1) in the upper dome.
- Weld Discontinuities and Defects
    - Porosity – Ranging in various sizes. Typical sizes ranged from 0.020" to 0.188" in diameter.
    - Undercut – Ranging in various depths and sizes. Typical depths ranged from 0.015" to 0.240" in typically a 0.250" original plate thickness.
    - Lack of Fusion and Cold Lap - Ranging in various sizes. Typical sizes ranged from 0.25" to 1.5" in length.
    - Slag Inclusions - Ranging in various sizes. Typical sizes ranged from 0.125" to 0.375" in length.
    - Underfill – Areas were observed in the vertical and horizontal welds where the weld reinforcement was less than base metal thickness.
    - Excess Weld Reinforcement - Areas were observed in the vertical and horizontal welds where the weld reinforcement was more than allowed per code from base metal surface to the top of the weld.
    - Weld Sizes - Areas were observed in the vertical and horizontal welds where the weld pass size and reinforcement exceeded the weld widths, configurations and sizes relative to the base metal thickness.
    - Weld Arc Gouges – Arc pull or wash outs, ranging in various depths and sizes. Typical depths ranged from 0.025" to 0.125" in depth, with various diameters and configurations.

  - Torch Gouges – One area was found where a torch gouged or cut thru the weld seam and exposed the open joint seam connection completely for approximately 3/8" in length. This is a complete thru wall opening, leak or equivalent hole in the upper dome.
  - Leak – One area was observed leaking in the telltale system. The weld in this area has failed and leaking product in the upper dome.
  - Un-welded Seams – One seal plate (2"W x 8"L) and one 2" diameter nozzle was found tacked, but not welded in the upper dome.
- Dents & Bulges – Dents were observed ranging in various depths and sizes. Typical depths ranged from 0.125" to 0.5" in depth, with various diameters and configurations. Bulges were observed throughout the tank's internal plate surfaces.
- Pressure Testing Failures –
  - The 32" diameter main line internal connection flange failed twice and gaskets were changed to compensate for the out of plane and wavy surface. The third hydro test application passed.
  - Sample Lines – Failed and leaked at various joint connections.
  - Slop / Drain Line – Failed and leaked. The internal hose leaked during pressure testing and the casing will not hold pressure due to a coupling which was damaged by operations approximately one year previously.
- Bolts – Were found missing or in correct length, (52) missing bolts were replaced in the tower and catwalk structures.
- Coating – The overall coating is in poor condition. The coating has disbonded, flaked or deteriorated over 80% of all internal surface areas.

6.2 Historical Record Review

The API653 inspector reviewed the available historical records for the entire tank detailing as much information as possible, including the information listed below as accessible. This data was utilized for the inspection report and engineering integrity analysis.

- Nameplate Information - tank dimensions, capacity, operating and design pressure.
- Tank Data- original manufacturer, construction contractor, and year of construction.
- All applicable construction standards used.
- A general plan drawing, showing the general arrangement of the major components, and the location and size of all penetrations. Product presently stored.
- Design specific gravity, maximum permissible liquid level and maximum operating temperature.
- Shell material and allowable stress of each shell course to be used in calculations.
- Previous inspection reports, as available.
- List and description of any significant environmental (earthquake, hurricane, etc.) Or operational (over-pressure, vacuum, foundation settlement, etc.) events.
- Description of any repairs or alterations completed (drawings, material test reports/certifications, radiographs attached, etc.)
- All other pertinent information and details.

See Appendix F for copies of the historical records available.

6.3 General Tank Overview

Overall the tank is in good condition with respect and comparison to the vast overall size, surface areas, components, plates and appurtenances. Some areas were identified that repairs are required to meet the mandatory requirements to return to the intended service, along with the short and long term requirements for the desired operational service period. The majority of the required repairs observed during this inspection appear to be indications / gouges induced during fabrication and construction activities. The overall internal surfaces don't show any signs of major service induced problems, damage or deterioration. The overall external / back wall surfaces which are encased in a concrete / gunite lining were found by NDE to be in good condition with only some isolated areas of concern as noted in the report.

Anchor, patch and nozzle reinforcement plates were found scattered throughout the tank surfaces. These plates do not meet the requirements API 653 for size and configurations. No relevant signs of deterioration, stress or fatigue were observed on or around the plates during this inspection.

Note: Reference Fig. 7-1 Legend & Details for the explanation of the inspection tables found in Section 6 and 7.

6.4 Bottom & Lower Dome

The API653 inspector and NDE technicians performed examinations and inspections according to Section 5.0, API-653 and SOW Section 4. The API653 inspector performed a comprehensive visual inspection on all tank components. The detailed and itemized list of inspection observations and findings for each plate have been identified and recorded in the relevant plate section of Table 6-1.

Overall the plate surfaces were found in good condition. Some areas were observed with light scattered corrosion and pitting. The areas of corrosion and pitting observed were in various sizes, configurations and depths. Some isolated and localized dents were found scattered throughout the tank's plate surfaces which probably occurred during the fabrication and construction of the tank. Gouges were observed along the weld seams and plate surfaces from fabrication and construction activities. These gouges are consistent with typical construction practices, but are typically repaired after construction activities are complete.

Some of the gouges found were configured to typical delaminated plate areas which were common in the 1940's steel mill products. These laminations are typically concealed during the milling process and practices; then sometimes discovered later during the manufacturing or construction process. Laminations which are located near the surface can also delaminate over time due to abrasion or corrosion. This allows the area to open up to the surface and the steel laminated piece to fall away, providing an apparent area of metal loss.

The tank surfaces were checked and measured in accordance with API-653 for dimensional tolerances. All measurements, including peaking, banding, plumbness and roundness, were performed in accordance to API-653 and recorded in the inspection report and engineering data. Some isolated and localized distortions were found in the plate surfaces which probably occurred during the fabrication and construction of the tank. Most likely during the installation of the concrete / gunite lining could have easily induced the localized distortions in the flat plate surfaces. These localized areas of distortion were hammer tested to check for proper bonding with the concrete / gunite encasement lining. No areas of concern or voids were located during this inspection.

Some weld overlays of various sizes were observed on the plate surfaces and found in good condition. There was no documentation or data to explain the reason for the weld overlays.

The welds were observed in good condition and overall integrity. Scattered discontinuities were observed throughout the horizontal and vertical weld seams; nozzle and appurtenance welds. The weld discontinuities were of various types, sizes, configurations, orientation and locations scattered throughout the tank seams and welds. The weld discontinuities observed during this inspection included porosity, slag inclusions, lack of fusion, undercut, underfill, excess reinforcement, excess weld pass sizes and arc gouges (fish eyes or pullouts). The welds were examined over 100% of all accessible surfaces.

Arc strikes were observed over the majority of the weld seams located in the tank.

All relevant indications were inspected, recorded, evaluated to determine the extent and acceptable limits in accordance with code. Each area was evaluated to determine the overall condition and effects to the tank integrity and operational service / inspections intervals. All relevant indications and repairs have been identified, recorded and listed in the relevant plate section of Table 6-1.

6.5 Shell and Shell Extension

The API653 inspector and NDE technicians performed examinations and inspections according to Section 5.0, API-653 and SOW Section 4. The API653 inspector performed a comprehensive visual inspection on all tank components. The detailed and itemized list of inspection observations and findings for each plate have been identified and recorded in the relevant plate section of Table 6-2 for the Shell and Table 6-3 for the Shell Extension.

Overall the plate surfaces were found in good condition. Some areas were observed with light scattered corrosion and pitting. The areas of corrosion and pitting observed were in various sizes, configurations and depths. Some isolated and localized dents were found scattered throughout the tank's plate surfaces which probably occurred during the fabrication and construction of the tank. Gouges were observed along the weld seams and plate surfaces from fabrication and construction activities. These gouges are consistent with typical construction practices, but are typically repaired after construction activities are complete.

Some of the gouges found were configured to typical delaminated plate areas which were common in the 1940's steel mill products. These laminations are typically concealed during the milling process and practices; then sometimes discovered later during the manufacturing or construction process. Laminations which are located near the surface can also delaminate over time due to abrasion or corrosion. This allows the area to open up to the surface and the steel laminated piece to fall away, providing an apparent area of metal loss.

The tank surfaces were checked and measured in accordance with API-653 for dimensional tolerances. All measurements, including peaking, banding, plumbness and roundness, were performed in accordance to API-653 and recorded in the inspection report and engineering data. Some isolated and localized distortions were found in the plate surfaces which probably occurred during the fabrication and construction of the tank. Most likely during the installation of the concrete / gunite lining could have easily induced the localized distortions in the flat plate surfaces. These localized areas of distortion were hammer tested to check for proper bonding with the concrete / gunite encasement lining. No areas of concern or voids were located during this inspection.

Some weld overlays of various sizes were observed on the plate surfaces and found in good condition. There was no documentation or data to explain the reason for the weld overlays.

The welds were observed in good condition and overall integrity. Scattered discontinuities were observed throughout the horizontal and vertical weld seams; nozzle and appurtenance welds. The weld discontinuities were of various types, sizes, configurations, orientation and locations scattered throughout the tank seams and welds. The weld discontinuities observed during this inspection included porosity, slag inclusions, lack of fusion, undercut, underfill, excess reinforcement, excess weld pass sizes and arc gouges (fish eyes or pullouts). The welds were examined over 100% of all accessible surfaces.

Arc strikes were observed over the majority of the weld seams located in the tank.

All relevant indications were inspected, recorded, evaluated to determine the extent and acceptable limits in accordance with code. Each area was evaluated to determine the overall condition and effects to the tank integrity and operational service / inspections intervals. All relevant indications and repairs have been identified, recorded and listed in the relevant plate section of Table 6-2 for the Shell and Table 6-3 for the Shell Extension.

6.6 Upper Dome / Roof

The API653 inspector and NDE technicians performed examinations and inspections according to Section 5.0, API-653 and SOW Section 4. The API653 inspector performed a comprehensive visual inspection on all tank components. The detailed and itemized list of inspection observations and findings for each plate have been identified and recorded in the relevant plate section of Table 6-4.

Overall the plate surfaces were found in good condition. Some areas were observed with light scattered corrosion and pitting. The areas of corrosion and pitting observed were in various sizes, configurations and depths. Some isolated and localized dents were found scattered throughout the tank's plate surfaces which probably occurred during the fabrication and construction of the tank. Gouges were observed along the weld seams and plate surfaces from fabrication and construction activities. These gouges are consistent with typical construction practices, but are typically repaired after construction activities are complete.

Some of the gouges found were configured to typical delaminated plate areas which were common in the 1940's steel mill products. These laminations are typically concealed during the milling process and practices; then sometimes discovered later during the manufacturing or construction process. Laminations which are located near the surface can also delaminate over time due to abrasion or corrosion. This allows the area to open up to the surface and the steel laminated piece to fall away, providing an apparent area of metal loss.

The tank surfaces were checked and measured in accordance with API-653 for dimensional tolerances. All measurements, including peaking, banding, plumbness and roundness, were performed in accordance to API-653 and recorded in the inspection report and engineering data. Some isolated and localized distortions were found in the plate surfaces which probably occurred during the fabrication and construction of the tank. Most likely during the installation of the concrete / gunite lining could have easily induced the localized distortions in the flat plate surfaces. These localized areas of distortion were hammer tested to check for proper bonding with the concrete / gunite encasement lining. No areas of concern or voids were located during this inspection.

Some weld overlays of various sizes were observed on the plate surfaces and found in good condition. There was no documentation or data to explain the reason for the weld overlays.

The welds were observed in good condition and overall integrity. Scattered discontinuities were observed throughout the horizontal and vertical weld seams; nozzle and appurtenance welds. The weld discontinuities were of various types, sizes, configurations, orientation and locations scattered throughout the tank seams and welds. The weld discontinuities observed during this inspection included porosity, slag inclusions, lack of fusion, undercut, underfill, excess reinforcement, excess weld pass sizes and arc gouges (fish eyes or pullouts). The welds were examined over 100% of all accessible surfaces.

Arc strikes were observed over the majority of the weld seams located in the tank.

All relevant indications were inspected, recorded, evaluated to determine the extent and acceptable limits in accordance with code. Each area was evaluated to determine the overall condition and effects to the tank integrity and operational service / inspections intervals. All relevant indications and repairs have been identified, recorded and listed in the relevant plate section of Table 6-4.

6.7 Tank Tower and Structure

Overall the tower structure and catwalk were found in good condition. Some areas were observed with light scattered corrosion and pitting. The areas of corrosion and pitting observed were in various sizes, configurations and depths; no relevant corrosion or areas of concern were found. Scattered bolts were observed loose and missing during the inspection. The missing bolts were replaced in (52) locations and others were retightened to ensure joint integrity. The items identified and repaired we re-inspected to ensure the overall structural integrity of the tower and catwalk for the inspection activities.

The catwalk handrails were observed to be approximately 36" in height, below the required 42" as required per OSHA for platform handrails.

6.8 Tank Foundation

The foundation for the UST tank is an encased concrete / gunite lining. The condition of concrete / gunite lining; any anchor rods, embedment rebars or beams were not accessible for observation or recording.

6.9 Tank Appurtenances

The API653 inspector and NDE technicians performed examinations and inspections according to Section 5.0, API-653 and SOW Section 4. The API653 inspector performed a comprehensive visual inspection on all tank components.

The tank nozzles, man-ways, and other appurtenances were examined and inspected for adequacy of wall thickness, reinforcement, weld spacing and corrosion. Observations were made from both the outside and inside of the tank, as accessible. Nozzles were examined for structural adequacy and code compliance.

Overall the component surfaces were found in good condition. Some areas were observed with light scattered corrosion and pitting. The areas of corrosion and pitting observed were in various sizes, configurations and depths.

The welds were observed in good condition and overall integrity. Scattered discontinuities were observed throughout the horizontal and vertical weld seams; nozzle and appurtenance welds. The weld discontinuities were of various types, sizes, configurations, orientation and locations scattered throughout the tank seams and welds. The weld discontinuities observed during this inspection included porosity, slag inclusions, lack of fusion, undercut, underfill, excess reinforcement, excess weld pass sizes and arc gouges (fish eyes or pullouts). The welds were examined over 100% of all accessible surfaces.

Arc strikes were observed over the majority of the weld seams located in the tank.

All relevant indications were inspected, recorded, evaluated to determine the extent and acceptable limits in accordance with code. Each area was evaluated to determine the overall condition and effects to the tank integrity and operational service / inspections intervals. All relevant indications and repairs have been identified, recorded and listed in the relevant plate table sections per the component location.

6.10 Tank Coatings and Linings

Tank 5 is an underground storage tank (UST) in JP5 product service which is located in the Redhill Complex. The tank exterior is encased in a concrete / gunite lining. The interior tank surfaces had an internal thin film epoxy lining applied over the entire tank. The tank was recoated over the entire interior surfaces between 1981-1983 and has been immersed in JP5 product service until it was removed for inspection. The tank was removed from service in May 2010; drained, cleaned and gas freed. The tank has been force ventilated for atmospheric controls and for personnel safety in a confined space.

During initial tank entry the coating was observed to have several major areas of deterioration and concern. The majority of the bottom dome and up several of the lower shell courses had major deterioration, flaking, disbonding and missing in large areas. The shell and upper dome was in fair condition with scattered random areas of deterioration, flaking, disbonding and missing.

The coating continued to dry out after being in immersed service for a long duration; additional disbonding and flaking were observed. This continued during the inspection and NDE testing activities until it reached the point it was hindering the inspection process. An RFI was submitted to NAVFAC ESC to high pressure blast off the loose and disbonded areas for inspection and examination activities. The loose and disbonded areas

were blasted off in accordance with the RFI, which revealed that approximately 70-80 % of the interior coating has deteriorated and observed in poor condition. The coating needs to be properly removed and repaired in the critical sections in accordance with Naval specifications.

This is a typical problem that occurs on equipment where coating is in an immersed service application. When the equipment is brought out of service and left out of service for an extended period of time, the evaporative / moisture rate of the coating as it dries out can induce tension in the coating if the rate varies (areas where coating thickness varies dramatically), rough surface conditions or there is deterioration which may not be visible (disbonding behind the coating) during an internal inspection. As the coating dries out the tension between the thickness interfaces are greater than the coating limits or strength; causing separation, tearing or disbonding. The areas where improper coating applications, rough surfaces, contamination, voids or bubbles were observed on the original coating application are more subjective to failures as they dry out due to coating discontinuities which weaken the overall coating strength.

Tank Inspection Data – Lower Dome

Table 6-1 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C4	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C4-1-1	M	Weld Repair- (G) Gouge 0.050" x 2" L
C4	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C4	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	17	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	18	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	19	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	20	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#42A	L	Pit Repair- 0.060" x 1/4"
C4	21	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	22	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	23	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	24	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	25	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	26	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C4	27	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	28	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	29	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	30	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	31	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	32	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. Isolated corrosion and pitting up to 0.040" in depth, with size(s) up to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.040" to 0.070" in depth along weld seam. There were also scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C4-32-1 (S)C4-32	M L L	Weld Repair- (UC) Undercut 0.070" Pit Repair- 0.060" x 3/8" dia. Pit Repair- 0.050" x 1/4" dia.
C4	33	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	34	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.060" to 0.070" in depth along weld seam. There were also scattered areas of excess reinforcement. Some (UF) underfill or inadequate weld reinforcement of 0.060" in depth and 1/4" diameter was found on one of the weld seams at a weld pullout. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C4-34-1 (P)C4-34-2 (P)C4-34-3	M M M M L x 2	Weld Repair- (UC) Undercut 0.070" x 1/2" L Weld Repair- (UF) Underfill 1/4" L Weld Repair- (UC) Undercut 0.060" x 1/2" L Weld Repair- (UC) Undercut 0.050" Gouge Repair- 0.060"
C4	35	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C4-35-1	M	Weld Repair- (UC) Undercut 0.050" x 1" L
C4	36	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. Isolated corrosion and pitting up to 0.040" in depth, with size(s) from 3/16" to 1" in length. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	37	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C4	38	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	39	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	40	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	41	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	42	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	43	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	44	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	45	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. Isolated corrosion and pitting up to 0.030" in depth, with size(s) to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	46	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	47	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	48	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	49	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C4	50	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or ¼" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	51	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. Isolated corrosion and pitting up to 0.050" in depth, with size(s) 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	52	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C4-52-1	L	Pit Repair- 0.050" x 1/4" dia.
C4	53	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	54	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	55	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	56	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	57	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	58	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	59	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	60	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	61	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C4	62	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	63	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	64	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	65	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C4	66	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" x 1" in length or 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/2" diameter. Isolated corrosion and pitting up to 0.045" in depth, with size(s) up to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C3-1-1 (P)C3-1-2	M x 2 L	Weld Repair- (UC) Undercut 1" L Gouge Repair- 0.050" 3/16" W x 1" L
C3	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/2" diameter. Isolated corrosion and pitting up to 0.045" in depth, with size(s) up to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#235 #234	S L M	GN Repair- Remaining Plate Thk 0.152" GN Repair- Remaining Plate Thk 0.187" Weld Repair- (UC) Undercut 0.060"
C3	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/2" diameter. Isolated corrosion and pitting up to 0.045" in depth, with size(s) up to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/2" diameter. Isolated corrosion and pitting up to 0.045" in depth, with size(s) up to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/2" diameter. Isolated corrosion and pitting up to 0.045" in depth, with size(s) up to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/2" diameter. Isolated corrosion and pitting up to 0.045" in depth, with size(s) up to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C3	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/2" diameter. Isolated corrosion and pitting up to 0.045" in depth, with size(s) up to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/2" diameter. Isolated corrosion and pitting up to 0.045" in depth, with size(s) up to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/2" diameter. Isolated corrosion and pitting up to 0.045" in depth, with size(s) up to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/2" diameter. Isolated corrosion and pitting up to 0.045" in depth, with size(s) up to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/2" diameter. Isolated corrosion and pitting up to 0.045" in depth, with size(s) up to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	17	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C3	18	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.030" in depth, with size(s) from 3/16" to 3/4" in length. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	19	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated gouge up to 0.080" in depth, with size(s) from 3/16" to 1 1/2" in length and 0.095" in depth by 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#43 #43A (P)C3-19-1 (P)C3-19-2	S S L	Gouge Repair- 0.080" 3/16" x 1 1/2" L Gouge Repair- 0.095" x 1/2" dia Gouge Repair- 0.060" x 1/2" dia
C3	20	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	21	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated gouge up to 0.080" in depth, with size(s) from 3/16" to 2" in length. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#41 #41B	M S	Plate Repair- Tack Weld 2" L Gouge Repair- 0.080" 3/16" x 2"L
C3	22	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 16" in length. Isolated gouge up to 0.080" in depth, with size(s) from 3/16" to 2" in length. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#41A (P)C3-22-1	S	Gouge Repair- 0.080" 3/16" x 1 3/4" L
C3	23	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.045" in depth, with size(s) up to3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	24	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.045" in depth, with size(s) up to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C3-24-1	L	Pit Repair- 0.045" x 3/8" dia.
C3	25	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.040" in depth, with size(s) from 1/8" to 1/2" in length. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	26	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	27	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C3	28	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	29	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.050" in depth, with size(s) up to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C3-29-1	L	Pit Repair- 0.050" x 3/8" dia.
C3	30	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	31	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	32	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.070" to 0.090" in depth, with size(s) from 3/16" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.070" to 0.090" in depth around the entire grout nozzle (GN); scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C3-32-1 #33 (P)C3-32-2 (P)C3-32-3	M S S x 2	GN Repair-(UC) Undercut 0.090" Comp. Cir. Gouge Repair- 0.090" x 1/4" dia Gouge Repair- 0.070" x 3/16" dia (2)
C3	33	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	34	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.040" to 0.070" in depth, with size(s)from 1/4" to 1/2" in length. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code and some 0.050" in depth around grout nozzle (GN); scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C3-34-1 (P)C3-34-2	M M S x 2 L	GN Repair- (UC) Undercut 1 1/2" L x 0.060" depth (2) Gouge Repair- 0.070" 1/4" W x 1/2" L (2) Pit Repair- 0.050" x 3/16" dia.
C3	35	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	36	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code and some 0.050" in depth around grout nozzle (GN); scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C3-36-1	M	GN Repair-(UC) Undercut 2" L x 0.050" depth
C3	37	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	38	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C3	39	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	40	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	41	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	42	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	43	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	44	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	45	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	46	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	47	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	48	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	49	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code and some 0.055" in depth along weld seam; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#37 (P)C3-49-2	M S	Weld Repair- (UC) Undercut 0.055" x 2" L Gouge Repair- 0.085" depth
C3	50	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.040" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#37A #37B	L L	Gouge Repair- 0.045" x 3/8" dia. Gouge Repair- 0.060" x 3/8" dia.

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C3	51	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.050" in depth, with size(s) from 1/8" to 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#39 #39A (P)C3-51-1	S S - L L	GN Repair- Remaining Plate Thk 0.146" Gouge Repair- 0.070" x 3/16" dia. - Gouge Repair- 0.050" x 3/8" dia. Gouge Repair- 0.060" x 3/8" dia
C3	52	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	53	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated gouge 0.055" in depth, with size(s) up to 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	54	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#38A	L	Gouge Repair- 0.060" x 1/2" dia.
C3	55	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.040" in depth, with size(s) from 1/8" to 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	56	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	57	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	58	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	59	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	60	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.040" in depth, with size(s) from 1/8" to 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	61	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C3	62	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	63	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	64	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	65	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C3	66	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.050" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C3-66-1	L	Pit Repair- 0.050" x 3/8" dia.
C2	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C2	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#21 (S)C2-8	M	Weld Repair- 6" L x 0.050" depth
C2	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing. **Dents** - A couple of localized depressions were found about 8ft and 13 ft up from the bottom of the course. The area (#17) was 1 3/4" w x 2 1/2" L x 5/16" deep.	#16 #17 (P)C2-15-1 (P)C2-15-2	M M	Weld Repair- (UC) Undercut 4" W x 4" L Dent Repair- 1 3/4" W x 2 1/2" L
C2	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing. **Dents** - A localized depression was found about 10 ft up from the bottom of the course. The area (#19) was 2" w x 5" L x 3/16" deep.	#19 (P)C2-16-1	M	Dent Repair- 3" dia.
C2	17	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	18	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.045" to 0.050" in depth, with size(s) from 1/4"W x 1 3/8" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C2-18-1	L	Pit Repair- 0.050" 1/4" W x 1 3/8" L
C2	19	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C2	20	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	21	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.040" in depth, with size(s) from 3/8"W x 1 1/8" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	22	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	23	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	24	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 3/16"W x 1 1/8" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	25	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	26	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	27	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	28	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	29	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	30	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated gouge 0.035" in depth, with size(s) up to 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C2	31	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.040" to 0.055" in depth along weld seam. There were also scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C2-31-1	M	Weld Repair- (UC) Undercut 0.055" x 6" L
C2	32	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	33	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	34	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.030" in depth, with size(s) from 1/16"W x 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C2-34-1	M	Weld Repair- (UC) Undercut 1/2" L
C2	35	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C2-35-1	L	Pit Repair- 0.050" x 1/4" dia.
C2	36	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	37	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	38	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	39	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	40	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	41	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	42	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C2	43	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	44	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	45	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	46	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	47	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	48	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.090" in depth, with size(s) from 1/4"W x 2 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#248A (P)C2-48-1	S	Gouge Repair- 0.120" 1/4"W x 2 1/2" L
C2	49	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	50	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	51	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	52	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	53	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	54	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C2	55	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	56	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	57	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	58	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	59	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	60	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	61	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	62	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	63	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	64	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.045" in depth, with size(s) up to 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C2-64-1	L	Pit Repair- 0.045" x 1/2" dia.
C2	65	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C2	66	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C1	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#12 (P)C1-3-1	M	Weld Repair- (UF) Underfill 2 1/2" L
C1	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#13 (P)C1-10-1	M	Weld Repair- (UF) Underfill 1" L
C1	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#14 (P)C1-11-1	M	Weld Repair- (UF) Underfill 1" L
C1	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#4 (S)C1-13	L	Plate Repair- 4" W x 4" L x 0.193" Thk.

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C1	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	17	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	18	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	19	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	20	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	21	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	22	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	23	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	24	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	25	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	26	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C1	27	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	28	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	29	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	30	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	31	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	32	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	33	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	34	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	35	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	36	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	37	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	38	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	39	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Lower Dome

Table 6-1 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C1	40	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	41	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	42	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	43	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C1	44	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
Floor	1	**Plate: Condition** – Good **Distortions** – No relevant ones were found. **Corrosion** - Light scattered corrosion and pitting from 0.020" to 0.045" in depth, with size(s) from 1/8" to 1/4" diameter. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

Table 6-2 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
1	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. Isolated pit up to 0.110" in depth, with size(s) from 3/8" W x 1" in length. Isolated corrosion and pitting up to 0.080" in depth, with size(s) from 1/2" diameter. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. A section of the weld had (LF) lack of fusion. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)1-1-1 (P)1-1-2 (P)1-1-3 (P)1-1-4	S S S M	Gouge Repair- 0.110" 3/8" W x 1" L Gouge Repair- 0.085" 3/16" W x 1 1/4" L Pit Repair- 0.080" x 1/2" dia Weld Repair- (LF) Lack of Fusion
1	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter and 1/8" W x 8" in length. Isolated pit up to 0.125" in depth, with size(s) from 3/8" W x 1 3/4" in length. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)1-2-1	S	Gouge Repair- 0.125" 3/8" W x 1 3/4" L
1	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
1	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)1-4-1	M	Weld Repair- (P) Porosity 3/16" dia.
1	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
1	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#189 (S)1-6	L	Pit Repair- 0.050" x 1/2" dia.
1	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
1	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.030" to 0.080" in depth along weld seam. There were also scattered areas of excess reinforcement. Some (UF) underfill or inadequate weld reinforcement of 0.080" in depth and 1/4" diameter was found on one of the weld seams at a weld pullout. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)1-8-1 (P)1-8-2	M M M M	Weld Repair - (UC) Undercut 0.050" x 3/16" dia. (2) Weld Repair - (UC) Undercut 0.080" x 1/4" dia. Weld Repair - (UC) Undercut 0.050" x 1/4" dia.

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
1	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. A section of the weld had (LF) lack of fusion. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)1-9-1	M	Weld Repair - (LF) Lack of Fusion
1	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
1	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#210 (S)1-11	L	Gouge Repair- 0.050" depth
1	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#169 (P)1-12-1	L	Gouge Repair- 0.060" x 1/4" L
1	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
1	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
1	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
1	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)1-16-1	L	Gouge Repair- 0.050" x 1/4" dia.
2	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L and isolated location up to 0.030" in depth, with size(s) from 1/4"W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.		M	Weld Repair- (UC) Undercut 0.060" x 1/2" L

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
2	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L and isolated location up to 0.045" in depth, with size(s) from 1/4"W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)2-2-1	L	Gouge Repair- 0.045" x 3/4" L x 1/4" W
2	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L and isolated location up to 0.045" in depth, with size(s) from 1/4"W x 3/4" L. One (1) area 6" x 6" of general corrosion was found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
2	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L and isolated location up to 0.045" in depth, with size(s) from 1/4"W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
2	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L and isolated location up to 0.045" in depth, with size(s) from 1/4"W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
2	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L and isolated location up to 0.045" in depth, with size(s) from 1/4"W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
2	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L and isolated location up to 0.045" in depth, with size(s) from 1/4"W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
2	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L and isolated location up to 0.045" in depth, with size(s) from 1/4"W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. Some (UF) underfill or inadequate weld reinforcement of 0.090" in depth was found on one of the weld seams. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)2-8-1 #226 #226A (P)2-8-2	M L L	Weld Repair - (UF) Underfill 0.090" x 3/16" dia. Pit Repair- 0.050" depth Pit Repair- 0.050" depth

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
2	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L and isolated location up to 0.045" in depth, with size(s) from 1/4"W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. A section of the weld had (LF) lack of fusion. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)2-9-1	M	Weld Repair- (LF) Lack of Fusion 3/16" L
2	10	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
2	11	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 4" L. An isolated location up to 0.045" in depth, with size(s) from 3/32"W x 1 1/4" L was found. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#209 (P)2-11-1 #209A	M L	Weld Repair- (UC) Undercut 0.060" x 1 1/4" L Gouge Repair- 0.045" depth
2	12	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 4" L. An isolated location up to 0.045" in depth, with size(s) from 3/32"W x 5/32" L was found. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. One area of weld (P) porosity 5/32" diameter was found which exceeded the allowable limits in the weld seams. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)2-12-1 #170 (S)2-12	M L	Weld Repair- (P) Porosity 5/32" dia. Plate Repair- 4" W x 2" L x 0.205" Thk.
2	13	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. One area of weld (P) porosity 5/32" diameter was found which exceeded the allowable limits in the weld seams. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#140 (P)2-13-1 (P)2-13-2	M x 2	Weld Repair - (P) Porosity 5/32" Dia. (2)
2	14	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#134 (P)2-14-1	S	Plate Repair- 1" W x 2" L x 0.171" Thk
2	15	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
2	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)2-16-1	M	Weld Repair- (UC) Undercut 0.060" x 1/4" dia.

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
3	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
3	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
3	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#112 (S)3-3	L	Plate Repair- 0.195" Thk.
3	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
3	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 20" L; up to 0.030" in depth, with size(s) from 1/8"W x 3 1/2" L;and up to 0.020" in depth, with size(s) from 1/2"W x 1 1/2" L. Isolated gouge 0.075" in depth, with size(s) from 3/4" Dia. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)3-5-1	S	Gouge Repair- 0.075" x 1/2" dia.
3	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
3	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 20" L; up to 0.030" in depth, with size(s) from 1/8"W x 3 1/2" L;and up to 0.020" in depth, with size(s) from 1/2"W x 1 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
3	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
3	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; and up to 0.020" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

Table 6-2 **Date: 11/16/2010** **Rev B**

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
3	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; and up to 0.020" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** –Scattered undercutting (UC) within code and some 0.065" in depth along weld seam; scattered areas of excess reinforcement. One area had excessive suck back where the arc pullout was located. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P) 3-10-1	M M	Weld Repair - (UC) Undercut Weld Repair- (UF) Underfill
3	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; and up to 0.020" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
3	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; and up to 0.020" in depth, with size(s) from 1/8"W x 4" L. Isolated pitting up to 0.130" in depth, with size(s) from 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. One area of weld (P) porosity 5/32" diameter was found which exceeded the allowable limits in the weld seams. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)3-12-1	M M	Weld Repair- (G) Gouge 0.130" x 3/8" dia. Weld Repair- (P) Porosity 5/32" dia.
3	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; and up to 0.020" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
3	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; and up to 0.020" in depth, with size(s) from 1/8"W x 4" L. Isolated corrosion and pitting up to 0.090" in depth, with size(s) from 1/2"W x 1/2"L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. Two locations were found to have excessive (UF) underfill or weld reinforcement up to 0.090" in depth, with size(s) up to 8" L.. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)3-14-1 (P)4-13-2	M M S	Weld Repair- (UF) Underfill 0.090" x 3" L Weld Repair- (UF) Underfill 0.090" x 8" L Weld Repair- (G) Gouge x 1/2" dia.
3	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; and up to 0.020" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
3	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; and up to 0.020" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
4	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; and up to 0.020" in depth, with size(s) from 1/4" W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	# 237 (S)4-1	S	Gouge Repair- 0.120" 1" W x 4" L

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
4	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.025" in depth, with size(s) from 1/8"W x 6" L; and up to 0.020" in depth, with size(s) from 1/4" W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
4	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; and up to 0.020" in depth, with size(s) from 1/4" W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
4	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 6" L; and up to 0.020" in depth, with size(s) from 1/4" W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#109 (P)4-4-1	S	GN Repair- 0.177" Remaining Plate Thk
4	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L; and up to 0.020" in depth, with size(s) from 1/4" W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
4	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; and up to 0.020" in depth, with size(s) from 1/4" W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
4	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; and up to 0.020" in depth, with size(s) from 1/4" W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
4	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; and up to 0.020" in depth, with size(s) from 1/4" W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
4	9	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	# 212 (P)4-9-1	M	Weld Repair- (UC) Undercut 0.110" x 1.5" L
4	10	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
4	11	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

Table 6-2 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
4	12	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
4	13	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. Two areas of (LF) lack of fusion and (SI) slag inclusions which exceeded allowable limits were found in the weld seams. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)4-13-1	M M	Weld Repair- (SI) Slag Inclusion Weld Repair- (LF) Lack of Fusion 4" L
4	14	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
4	15	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
4	16	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
5	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter; and up to 0.020" in depth, with size(s) from 1/4" W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
5	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter; and up to 0.020" in depth, with size(s) from 1/4" W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
5	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter; and up to 0.020" in depth, with size(s) from 1/4" W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#91 (P)5-3-1	S	GN Repair- 0.170" Remaining Plate Thk.
5	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter; and up to 0.020" in depth, with size(s) from 1/4" W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#123 (S)5-4	L	GN Repair- 0.201" Remaining Plate Thk.
5	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter; and up to 0.020" in depth, with size(s) from 1/4" W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
5	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter; and up to 0.020" in depth, with size(s) from 1/4" W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#190 (S)5-6	L	GN Repair- 0.203" Remaining Plate Thk.
5	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter; and up to 0.020" in depth, with size(s) from 1/4" W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#193 (S)5-7	L	GN Repair- 0.201" Remaining Plate Thk.
5	8	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.060" to 0.090" in depth along weld seam. There were also scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)5-8-1 - #213 (P)5-8-2	M M L M	Weld Repair- (UC) Undercut 0.070" x 3" L Weld Repair- (UC) Undercut 0.090" x 4" L Plate Repair- 0.202" x 1" dia. Weld Repair- (UC) Undercut 0.050" x 1/2" L
5	9	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; and up to 0.080" in depth, with size(s) from 1/4" W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)5-9-1	S	Pit Repair- 0.080" 1/4" W x 3/4" L
5	10	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
5	11	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
5	12	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting up to 0.075" in depth, with size(s) from 3/16"W x 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)5-12-1	S	Pit Repair- 0.075" 3/16"W x 1/2" L
5	13	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; and up to 0.030" in depth, with size(s) from 1/4" W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#136 (S)5-13	L	Plate Repair- 2" W x 0.197" Thk.
5	14	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.		M	Weld Repair- (UF) Underfill 0.080" depth
5	15	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. Some (UF) underfill or inadequate weld reinforcement of 0.080" in depth was found on one of the weld seams. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)5-15-1 #77 (P)5-15-2	M L	Weld Repair - (UF) Underfill 0.080" depth Plate Repair- 9" L x 0.060" Thk.

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
5	16	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#261 (P)5-16-1	S M	GN Repair- 0.160" Remaining Plate Thk. Weld Repair- (UF) Underfill 0.100" depth
6	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting up to 0.020" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)6-1-1	M	Weld Repair- (UC) Undercut 0.050" x 1/4" dia.
6	2	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting up to 0.020" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
6	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting up to 0.030" in depth, with size(s) from 1/4"W x 1 1/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
6	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting up to 0.030" in depth, with size(s) from 1/4"W x 1 1/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
6	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting up to 0.020" in depth, with size(s) from 1/8"W x 4 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
6	6	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting up to 0.030" in depth, with size(s) from 1/4"W x 1 1/4" L. Isolated corrosion and pitting up to 0.045" in depth, with size(s) from 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)6-6-1	L	Pit Repair- 0.045" x 1/4" dia.
6	7	**Plate: Condition** – Good **Distortions** – From 1" to 3" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting up to 0.020" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
6	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting up to 0.020" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)6-8-1 (P)6-8-2 (P)6-8-3	M M M M M	Weld Repair- (UC) Undercut 0.050" x 1/2" L Weld Repair- (UC) Undercut 0.070" x 1/2" L Weld Repair- (UC) Undercut 0.050" x 1/2" L Weld Repair- (UC) Undercut 0.050" x 1/2" L Weld Repair- (UC) Undercut 0.050" x 1/2" L

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
6	9	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/16" diameter. Isolated corrosion and pitting up to 0.020" in depth, with size(s) from 1/8"W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)6-9-1	M	Weld Repair- (UC) Undercut 0.060" x 1/2" L
6	10	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/16" diameter. Isolated corrosion and pitting up to 0.020" in depth, with size(s) from 1/8"W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
6	11	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/16" diameter. Isolated corrosion and pitting up to 0.020" in depth, with size(s) from 1/8"W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
6	12	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/16" diameter. Isolated corrosion and pitting up to 0.020" in depth, with size(s) from 1/8"W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
6	13	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/16" diameter. Isolated corrosion and pitting up to 0.020" in depth, with size(s) from 1/8"W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
6	14	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/16" diameter. Isolated corrosion and pitting up to 0.020" in depth, with size(s) from 1/8"W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
6	15	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/16" diameter. Isolated corrosion and pitting up to 0.020" in depth, with size(s) from 1/8"W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
6	16	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/16" diameter. Isolated corrosion and pitting up to 0.020" in depth, with size(s) from 1/8"W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
7	1	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/8"" diameter. Isolated corrosion and pitting from 0.030" to 0.045" in depth, with size(s) from 1/4" to 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
7	2	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/8"" diameter. Isolated corrosion and pitting from 0.030" to 0.045" in depth, with size(s) from 1/4" to 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
7	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/8"" diameter. Isolated corrosion and pitting from 0.030" to 0.045" in depth, with size(s) from 1/4" to 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
7	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/8"" diameter. Isolated corrosion and pitting from 0.030" to 0.045" in depth, with size(s) from 1/4" to 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
7	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/8"" diameter. Isolated corrosion and pitting from 0.030" to 0.045" in depth, with size(s) from 1/4" to 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
7	6	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/8"" diameter. Isolated corrosion and pitting from 0.030" to 0.045" in depth, with size(s) from 1/4" to 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
7	7	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/8"" diameter. Isolated corrosion and pitting from 0.030" to 0.045" in depth, with size(s) from 1/4" to 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
7	8	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** –Scattered undercutting (UC) within code and some 0.030" to 0.070" in depth along weld seam. There were also scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)7-8-1	M x 7 - - - M	Weld Repair - (UC) Undercuts Listed: 0.070" x 4" L (3) 0.050" to 0.060" x 1 1/2" L (3) 0.040" x 3" L 0.050 x 1" L
7	9	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
7	10	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter. Isolated corrosion and pitting from 0.020" in depth, with size(s) from 3/8" W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Table 6-2 **Date: 11/16/2010** **Rev B**

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
7	11	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#166 (P)7-11-1	L	Plate Repair- 0.205" x 1 1/2" dia.
7	12	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
7	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/16" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
7	14	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/16" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. One area of weld (P) porosity 3/32" diameter was found which exceeded the allowable limits in the weld seams. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)7-14-1 (P)7-14-2	M	Weld Repair- (P) Porosity 3/32" Dia.
7	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/16" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 3" L. Isolated gouge 0.080" in depth, with size(s) from 1/2" Dia. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)7-15-1	S	Weld Repair- (G) Gouge 0.080" x 1/2" dia.
7	16	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/16" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
8	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#255 (P)8-1-1	L M	Pit Repair- 0.060" depth Weld Repair- (UC) Undercut 0.060" x 1/4" dia.
8	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.025" in depth, with size(s) from 1/8" W x 6" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
8	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.025" in depth, with size(s) from 1/8" W x 6" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#67A (S)8-3	M	Weld Repair- (UC) Undercut 0.125" x 5" L

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
8	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.040" in depth, with size(s) from 1/8" W x 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
8	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.045" in depth, with size(s) from 1/8" W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)8-5-1	L	Pit Repair- 0.045" x 1/8" W x 2 1/2" L
8	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.025" in depth, with size(s) from 1/8" W x 6" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#153 (P)8-6-1	L	Plate Repair- 6" W x 5" L x 0.186" Thk.
8	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.025" in depth, with size(s) from 1/8" W x 6" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
8	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.025" in depth, with size(s) from 1/8" W x 6" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)8-8-1	M x 3 - M	Weld Repair- (UC) Undercut 0.050" x 1/4" dia. (3) Weld Repair- (UC) Undercut 0.100" x 1/4" dia.
8	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 8" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
8	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
8	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
8	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#167 (P)8-12-1	S	Plate Repair- 4" W x 5" L x 0.153" Thk.
8	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
8	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
8	15	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 6" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
8	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
9	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.020" in depth, with size(s) from 1/8" W x 6" L; and up to 0.055" in depth, with size(s) from 3/16" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)9-1-1	L	Pit Repair- 0.055" x 3/16" dia.
9	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.020" in depth, with size(s) from 1/8" W x 6" to 18" L; and up to 0.020" in depth, with size(s) from 3/8" W x 3 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
9	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.025" in depth, with size(s) from 1/8" W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
9	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.025" in depth, with size(s) from 1/8" W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
9	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 3" L; and up to 0.045" in depth, with size(s) from 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)9-5-1	L	Pit Repair- 0.045" x 1/4" dia.
9	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 3"L; and up to 0.035" in depth, with size(s) from 1/4" W x 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
9	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 3/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 3" L; up to 0.030" in depth, with size(s) from 3/16" W x 40" L; and up to 0.040" in depth, with size(s) from 1/8" W x 1 1/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
9	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.010 to 0.030" in depth, with size(s) from 1/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 4" L and up to 0.040" to 0.100" in depth, with size(s) from 3/8" W x 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)9-8-1 (P)9-8-2	M L S L M x 5	Weld Repair- (UC) Undercut 0.100" x 1/4" dia. Pit Repair- 0.060" 3/8"x 1/2" Pit Repair- 0.080" 3/16"x 1/2" Pit Repair- 0.050" 3/16"x 1/2" Weld Repair- (UC) Undercut 0.050" - 0.080" x 1/2" dia. (5)
9	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.010 to 0.030" " in depth, with size(s) from 1/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
9	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.010 to 0.030" " in depth, with size(s) from 1/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
9	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.010 to 0.030" " in depth, with size(s) from 1/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#165 (P)9-11-1	M	Plate Repair- 0.093" Remaining Plate Thk.
9	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.010 to 0.030" " in depth, with size(s) from 1/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
9	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.010 to 0.030" " in depth, with size(s) from 1/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
9	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.010 to 0.030" " in depth, with size(s) from 1/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
9	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.010 to 0.030" " in depth, with size(s) from 1/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 8" L. Isolated corrosion and pitting up to 0.095" in depth, with size(s) from 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
9	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.010 to 0.030" " in depth, with size(s) from 1/8" diameter. Isolated corrosion and pitting from 0.030" in depth, with size(s) from 1/8" W x 10" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
10	1	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
10	2	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 10" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
10	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)10-3-1	M	Weld Repair- (UC) Undercut 0.110" x 3/4" L
10	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/2" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 16" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
10	5	**Plate: Condition** – Good **Distortions** –From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
10	6	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 40" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
10	7	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
10	8	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)10-8-2 (P)10-8-1	S M L M	Gouge Repair- 0.070" x 3/8" dia. Weld Repair- (UC) Undercut- 0.040" x 4" L Pit Repair- 0.050" x 1/2" W x 3/16" L Weld Repair- (UC) Undercut- 0.050" x 1/2" L
10	9	**Plate: Condition** – Good **Distortions** – From 1" to 2 within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)10-9-1	M	Weld Repair- (UC) Undercut 0.060" x 1/2" dia.
10	10	**Plate: Condition** – Good **Distortions** – From 1" to 2 within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
10	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
10	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
10	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
10	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#137A #137B #137C (P)10-14-1	L L L	Plate Repair- 0.196" Thk. Plate Repair- 0.203" Thk. Plate Repair- 0.205" Thk.
10	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
10	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#76 (P)10-16-3	S M	Plate Repair- 6" W x 9" L x 0.175" Thk. Weld Repair- (UC) Undercut 0.050" depth

Tank Inspection Data – Shell Plates

Table 6-2 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
11	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.035" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
11	2	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
11	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
11	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
11	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.040" in depth, with size(s) from 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
11	6	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.070" in depth, with size(s) from 1/4" diameter and up to 0.055" in depth, with size(s) from 1/4" W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. One area of weld (P) porosity 3/16" diameter was found which exceeded the allowable limits in the weld seams. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)11-6-1 (P)11-6-2 (P)11-6-3	M S x 4 L	Weld Repair- (P) Porosity 3/16" dia. Pit Repair- 0.070" x 1/2" dia (4) Pit Repair- 0.055" x 3/4" L
11	7	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)11-7-1	M	Weld Repair- (UC) Undercut 0.040" x 6" L
11	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)11-8-1 (P)11-8-2 (P)11-8-4 (P)11-8-3	M x 3 M x 2 M x 2 L	Weld Repair- (UC) Undercut 0.050" x 8" L Weld Repair- (UC) Undercut 0.070" depth Weld Repair- (UC) Undercut 0.050" depth Gouge Repair- 0.060" x 1/4" dia.
11	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 42" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

Table 6-2 **Date: 11/16/2010** **Rev B**

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
11	10	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 6" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
11	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 18" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
11	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 21" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
11	13	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 8" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
11	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#81 (P)11-14-1	L	Plate Repair- 0.186" Remaining Plate Thk.
11	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
11	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
12	1	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#257 (S)12-1	L	GN Repair- 0.196" Remaining Plate Thk.
12	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
12	3	**Plate: Condition** – Good **Distortions** – From 1" to 3" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
12	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L and isolated location up to 0.035" in depth, with size(s) from 3/8"W x 1 1/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
12	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L and isolated location up to 0.035" in depth, with size(s) from 3/16"W x 1 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#113 (S)12-5	L	GN Repair- 0.197" Remaining Plate Thk.
12	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L and isolated location up to 0.045" in depth, with size(s) from 3/8"W x 1 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code and some 0.110" in depth along weld seam. There were also scattered areas of excess reinforcement. A section of the weld had two locations (LF) lack of fusion. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#155 (S)12-6 (P)12-6-1 (P)12-6-2	L - M M M L	GN Repair- 0.204" Remaining Plate Thk. - Weld Repair- (LF) Lack of Fusion 3/8" L & 1/8" L Weld Repair- (UC) Undercut 0.110" x 1/2" L Pit Repair- 0.045" x 3/8" W x 1 1/2" L
12	7	**Plate: Condition** – Good **Distortions** – From 1" to 3" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#180 #179 (P)12-7-1	L L	Gouge Repair- 0.060" depth GN Repair- 0.203" Remaining Plate Thk.
12	8	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L and isolated location up to 0.025" in depth, with size(s) from 3/4"W x 1 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)12-8-1 (P)12-8-2	M x 2	Weld Repair- (UC) Undercut 0.050" depth (2)
12	9	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#225 (P)12-9-1	L M	GN Repair- 0.202" Remaining Plate Thk. Weld Repair- (UC) Undercut 0.060" x 1/2" dia.
12	10	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
12	11	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

Table 6-2 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
12	12	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 4" L and isolated location up to 0.075" in depth, with size(s) from 1/4"W x 1 1/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)12-12-1	S	Pit Repair- 0.075" 1/4"W x 1 1/4" L
12	13	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
12	14	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 8" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
12	15	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
12	16	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 32" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
13	1	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
13	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.050" in depth, with size(s) from 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code and some 0.070" in depth along weld seam. There were also scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)13-2-1 (P)13-2-2	M L	Weld Repair- (UC) Undercut 0.070" x 1/2" dia. Pit Repair- 0.050" x 1/2" dia.
13	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
13	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.050" in depth, with size(s) from 3/16" to 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** –Scattered undercutting within code and some 0.040" to 0.090" in depth along weld seam. There were also scattered areas of excess reinforcement. A section of the weld had (LF) lack of fusion. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)13-4-1 (P)13-4-2 (P)13-4-3 (P)13-4-4	M M L L	Weld Repair- (LF) Lack of Fusion 1 1/2" L Weld Repair- (UC) Undercut 0.070" x 4" L Pit Repair- 0.045" x 1/4" dia. Pit Repair- 0.050" x 3/8" dia.
13	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.040" in depth, with size(s) from 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
13	6	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 3" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
13	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.045" in depth, with size(s) from 3/16" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.015" to 0.095" in depth along weld seam. There were also scattered areas of excess reinforcement. Some (UF) underfill or inadequate weld reinforcement of 0.095" in depth and 3/8" diameter was found on one of the weld seams at a weld pullout. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)13-7-1 (P)13-7-2	M L	Weld Repair - (UC) Undercut 0.090" x 3/8" dia. Pit Repair- 0.045" x 3/16" dia.
13	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)13-8-1	M	Weld Repair- (UC) Undercut 0.050" depth
13	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
13	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 3/16"W x 1 1/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
13	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
13	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 4 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
13	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
13	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
13	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
13	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
14	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.		M	Weld Repair- (UC) Undercut 0.050" depth
14	2	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" to 0.040" in depth, with size(s) from 1/8" to 1/2" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
14	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 3/16"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
14	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
14	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.040" in depth, with size(s) from 3/8"W x 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
14	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.050" to 0.090" in depth along weld seam. There were also scattered areas of excess reinforcement. A section of the weld had (LF) lack of fusion. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)14-6-1 (P)14-6-2 (P)14-6-3 (P)14-6-4	M S M x 2	Weld Repair- (LF) Lack of Fusion 0.050" dia. Pit Repair- 0.070" x 1/4" dia. Weld Repair- (UC) Undercut 0.090" x 1/2"L (2)
14	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
14	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
14	9	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
14	10	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
14	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter and isolated up to 0.046" in depth, with size(s) from 3/4"W x 1 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)14-11-1	L	Pit Repair- 0.046" x 3/4" W x 1 1/2" L
14	12	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
14	13	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
14	14	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
14	15	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
14	16	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 6" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
15	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
15	2	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 1/2" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
15	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
15	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#114 (P)15-4-1	S	Plate Repair- 0.157" Remaining Plate Thk.
15	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.035" in depth, with size(s) from 1/8" to 3/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
15	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code and some (3/4"L) 0.085"to (1/2") 0.090" in depth along weld seam. There were also scattered areas of excess reinforcement. A section of the weld had (LF) lack of fusion. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
15	7	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 18" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
15	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
15	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 8" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
15	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. There were two locations where the welding leads had arced out and copper contamination was found. Arced out leads with copper contamination can develop cracks along the interface zone. No cracks were found during this inspection. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)15-10-1	M M	Plate Repair- Lead Arc Out / Copper Contamination 1/8" & 1/4" Dia (2)
15	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#200A (S)15-11	S	Gouge Repair- 0.070" depth
15	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
15	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 8" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
15	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
15	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

Table 6-2 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
15	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
16	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
16	2	**Plate: Condition** – Good **Distortions** – From 1" to 3" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 3/16" W x 2" to 4" L. Isolated corrosion and pitting up to 0.040" in depth, with size(s) from 3/16" W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
16	3	**Plate: Condition** – Good **Distortions** – From 1" to 4" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 18" L. Isolated corrosion and pitting up to 0.040" in depth, with size(s) from 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
16	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
16	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
16	6	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
16	7	**Plate: Condition** – Good **Distortions** – From 1" to 3" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/4" diameter; up to 0.035" in depth, with size(s) from 1/4"W x 2" to 8" L. Isolated gouge up to 0.090" in depth, by 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Discontinuities –Scattered undercutting within code and some 0.090" in depth along weld seam. There were also scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#178 (P)16-7-1	M M	Weld Repair- (P) Porosity 0.110" depth Weld Repair- (UC) Undercut 0.090" x 4" L
16	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

Table 6-2 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
16	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
16	10	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
16	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
16	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
16	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#142 (P)16-13-1	L	Plate Repair- 3" W x 3" L x 0.189" Thk.
16	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#133 (S)16-14	L	Plate Repair- 5" W x 0.185" Thk.
16	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#69 (P)16-15-2	L	Plate Repair- 4" x 7" x 0.187" Thk.
16	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
17	1	**Plate: Condition** – Good **Distortions** – From 1" to 3" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

Table 6-2 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
17	2	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
17	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
17	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.040" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#124 (S)17-4	L x 5	Pit Repair- 0.040" x 1/8" to 3/8" dia. (5)
17	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
17	6	**Plate: Condition** – Good **Distortions** – From 1" to 3" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.070" in depth, with size(s) from 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#176 #177 (P)17-6-1	S x 2	Pit Repair- 0.070" x 3/8" dia. (2)
17	7	**Plate: Condition** – Good **Distortions** – From 1" to 3" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
17	8	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. Isolated corrosion and pitting up to 0.030" in depth, with size(s) from 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
17	9	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
17	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

Table 6-2 **Date: 11/16/2010** **Rev B**

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
17	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code and some 0.070" in depth along weld seam. There were also scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)17-11-1	M	Weld Repair- (UC) Undercut 0.035" x 1/2" L
17	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
17	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
17	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
17	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#132 (P)17-15-1	S	Plate Repair- 0.177" Remaining Plate Thk.
17	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
18	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
18	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/8" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
18	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
18	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
18	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
18	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.025" in depth, with size(s) from 1/8" to 1/2" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated gouge up to 0.095" in depth, with size(s) from 3/8" W x 3/4" in length. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#175 (P)18-6-1	S	Gouge Repair- 0.095" 3/8" W x 3/4" L
18	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 12" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
18	8	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.110" in depth, with size(s) from 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)18-8-1	M	Weld Repair- (P) Porosity 0.110" x 1/2" dia.
18	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.080" in depth along weld seam; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(S)18-9-1	M	Weld Repair- (UC) Undercut 0.080" x 1 1/2" L
18	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
18	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
18	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
18	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
18	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
18	15	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#79 (P)18-15-1	S	Plate Repair- 0.190" Thk.
18	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
19	1	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
19	2	**Plate: Condition** – Good **Distortions** – From 1" to 3" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#95 #62 (P)19-2-1	S M	GN Repair- 0.149" Remaining Plate Thk. Weld Repair- (G) Gouge 0.050" x 5" L
19	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
19	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#122 (P)19-4-1	S	GN Repair- 0.151" Remaining Plate Thk.
19	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#158 (S)14-5	L	GN Repair- 0.199" Remaining Plate Thk.

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
19	6	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.050" in depth, with size(s) from 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#197 (P)19-6-1	S L	GN Repair- 0.154" Remaining Plate Thk. Pit Repair- 0.050" x 3/8" dia.
19	7	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 1/4"W x 1 1/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
19	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. Isolated corrosion and pitting up to 0.070" in depth, with size(s) from 1/4" diameter.No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)19-8-1	S	Pit Repair- 0.070" x 1/4" dia.
19	9	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#214 (P)19-9-1	S	GN Repair- 0.155" Remaining Plate Thk.
19	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
19	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
19	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
19	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
19	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
19	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
19	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#229 (S)19-16	L	GN Repair- 0.197" Remaining Plate Thk.
20	1	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)20-1-1	M	Weld Repair- (UF) Underfill 0.100" depth
20	2	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
20	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.040" in depth, with size(s) from 1/8" to 3/16" diameter; up to 0.020" in depth, with size(s) from 1/2" dia to 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
20	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
20	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
20	6	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
20	7	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. Two areas of weld (P) porosity 1/8" and 5/32" diameter were found which exceeded the allowable limits in the weld seams. Some (UF) underfill or inadequate weld reinforcement of 0.060" in depth was found on one of the weld seams. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)20-7-1 (P)20-7-2	M x 2 M	Weld Repair- (P) Porosity 5/32" (2) Weld Repair - (UF) Underfill 0.060" x 1/2"
20	8	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/4" diameter; up to 0.045" in depth, with size(s) from 3/8" to 1/2" diameter; up to 0.045" in depth, with size(s) from 3/16"W x 22" L and isolated location up to 0.075" in depth, with size(s) from 1/8"W x 1/2" L. Isolated corrosion and pitting up to 0.110" in depth, with size(s) from 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#218A,B,C (P)20-8-1 (P)20-8-2 (P)20-8-3 (P)20-8-4	L x 3 M L L M	Gouge Repair- 0.060 depth (3) Weld Repair- (P) Porosity 0.110" x 1/2" Dia Pit Repair- 0.045" x 3/16" W x 22" L Pit Repair- 0.045" x 1/2" dia. Weld Repair- (UC) Undercut 0.050" depth
20	9	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
20	10	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
20	11	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
20	12	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#201 (P)20-12-1	L	Plate Repair- 1" W x 2" L x 0.110" Thk.
20	13	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
20	14	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

Table 6-2 **Date: 11/16/2010** **Rev B**

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
20	15	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#78 (P)20-15-2	L	Plate Repair- 1" W x 2" L x 0.198" Thk.
20	16	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
21	1	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#239 (S)21-1	L	Gouge Repair- 0.050" depth
21	2	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
21	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.040" in depth, with size(s) from 1/4"W x 3" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
21	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 3/8" diameter; up to 0.035" in depth, with size(s) from 1/8"W x 2" to 4" L and isolated location up to 0.035" in depth, with size(s) from 1/4"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
21	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 3/8" diameter; up to 0.035" in depth, with size(s) from 1/8"W x 2" to 4" L and isolated location up to 0.035" in depth, with size(s) from 1/4"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
21	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. Isolated gouge 0.095" in depth, with size(s) from 3/8" Dia. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)21-6-1	M	Gouge Repair- 0.095" x 3/8" dia.
21	7	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
21	8	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.050" in depth, with size(s) from 1/8"W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.070" in depth along weld seam; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)21-8-2 #217A #217B #217C #217D (P)21-8-1	M S S L x 2	Weld Repair- (UC) Undercut 0.070" x 1" L Pit Repair- 0.110" depth Pit Repair- 0.100" depth Pit Repair- 0.050" x 1/8" W x 3/4" L (2)
21	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
21	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
21	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
21	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x4" to 6" L. Isolated corrosion and pitting up to 0.063" in depth, with size(s) from 3/16"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)21-12-1	L	Gouge Repair- 0.063" 3/16"x 1"
21	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
21	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
21	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
21	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
22	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
22	2	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.040" in depth, with size(s) from 3/16" to 3/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)22-2-1	L	Pit Repair- 0.045" x 3/16" W x 1 1/2" L
22	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.045" in depth, with size(s) from 3/16"W x 1 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
22	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.030" in depth, with size(s) from 3/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
22	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
22	6	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 3/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
22	7	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
22	8	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
22	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.015" to 0.080" in depth along weld seam. There were also scattered areas of excess reinforcement. Some (UF) underfill or inadequate weld reinforcement of 0.080" in depth and 1/4" diameter was found on one of the weld seams at a weld pullout. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)22-9-1 (P)22-9-2	M M	Weld Repair - (UC) Undercut 0.080" x 1/4" dia. Weld Repair - (UC) Undercut 0.070" x 1/4" dia.

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
22	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
22	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
22	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
22	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#141 (P)22-13-1	S	Plate Repair- 0.141" Remaining Plate Thk.
22	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#104 (P)22-14-1	S	Plate Repair- 1" W x 2" L x 0.137" Thk.
22	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
22	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 3/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
23	1	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
23	2	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
23	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
23	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.050" in depth, with size(s) from 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)23-4-1	L	Pit Repair- 0.050" x 3/8" dia.
23	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.050" in depth, with size(s) from 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#143AB	L	Pit Repair- 0.050" x 3/8" dia.
23	6	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
23	7	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
23	8	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
23	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
23	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
23	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
23	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
23	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#138A (P)23-14-1	L	Plate Repair- 2" W x 5" L x 0.188" Thk.
23	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
23	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
23	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
24	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
24	2	**Plate: Condition** – Good **Distortions** – From 1" to 3" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
24	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
24	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 26" L. Isolated corrosion and pitting up to 0.040" in depth, with size(s) from 3/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
24	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.045" in depth, with size(s) from 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)24-5-1 (P)24-5-2	L x 2	Gouge Repai Pit Repair- 0.045" x 3/8" dia. (2)
24	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 3/4"W x 1 1/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
24	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.040 to 0.050" in depth, with size(s) from 3/8" diameter and up to 0.035" in depth, with size(s) from 3/4"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)24-7-1 (P)24-7-2	L x 2	Pit Repair- 0.050" x 3/8" dia. (2)
24	8	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
24	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. Isolated gouge 0.035" in depth, with size(s) from 3/8" diameter. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
24	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
24	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
24	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
24	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
24	14	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. A section of the weld had (LF) lack of fusion. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)24-14-1 (P)24-14-3 #131 #139A #139B	M S S - L	Weld Repair- (LF) Lack of Fusion Plate Repair- 0.139" Plate Thk Plate Repair- 0.172" Plate Thk. - Plate Repair- 0.200" Plate Thk.
24	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 6" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
24	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 6" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
25	1	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 26" L. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
25	2	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
25	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
25	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
25	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
25	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
25	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. Isolated gouge 0.035" in depth, with size(s) from 1/2" diameter. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#194 (P)25-7-1	S	Plate Repair- 5" W x 6" L x 0.178" Thk.
25	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.070" in depth, with size(s) from 3/16" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.015" to 0.100" in depth along weld seam. There were also scattered areas of excess reinforcement. Some (UF) underfill or inadequate weld reinforcement of 0.100" in depth and 3/8" diameter was found on one of the weld seams at a weld pullout. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)25-8-1 (P)25-8-2	M S	Weld Repair- (UC) Undercut 0.100" x 3/8" dia. Pit Repair- 0.070" x 3/16" dia.
25	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
25	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
25	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 9" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
25	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
25	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.040" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#164 (P)25-13-2	S	Plate Repair- 5" W x 9" L x 0.175" Thk.
25	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
25	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
25	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
26	1	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L and isolated location up to 0.040" in depth, with size(s) from 1/4"W x 1 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#243A #243B	L L	Pit Repair- 0.050" depth Pit Repair- 0.050" depth
26	2	**Plate: Condition** – Good **Distortions** – From 1" to 3" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
26	3	**Plate: Condition** – Good **Distortions** – From 1" to 3" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
26	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
26	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L and isolated location up to 0.030" in depth, with size(s) from 3/16"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
26	6	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
26	7	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
26	8	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter and isolated up to 0.045" in depth, with size(s) from 3/8" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)26-8-1	L x 2	Pit Repair- 0.045" x 3/8" dia. (2)
26	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
26	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
26	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#203 (P)26-11-1	L	Plate Repair- 2" W x 0.181" Thk.
26	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
26	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
26	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
26	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#70 #71 #105 #106 #107 (P)26-15-1 (P)26-15-2 (P)26-25-3	S S S L L	Plate Repair- 6" W x 6" L x 0.177" to 0.186" Thk. (4) - - Plate Repair- 0.203" Remaining Plate Thk.

Tank Inspection Data – Shell Plates

Table 6-2 **Date: 11/16/2010** **Rev B**

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
26	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. Some (UF) underfill or inadequate weld reinforcement of 0.060" in depth was found on one of the weld seams. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)26-16-3	M	Weld Repair - (UF) Underfill 1/16" dia.
27	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
27	2	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
27	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.115" in depth along weld seam; scattered areas of excess reinforcement. A section of the weld had (LF) lack of fusion. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)27-3-1 (P)27-3-2	M M	Weld Repair- (LF) Lack of Fusion 1/2" Weld Repair- (UC) Undercut 0.115" x 1/2" dia.
27	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.035" to 0.050" in depth, with size(s) from 3/8"W x 1 1/4" L.No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.075" in depth along weld seam where the arc pullout occured; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#130 (S)27-4 (P)27-4-1	L - M	GN Repair- 0.203" Thk. - Weld Repair- (UC) Undercut 0.075" x 1/2" dia.
27	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.070" in depth along weld seam; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)27-5-1	M	Weld Repair- (UC) Undercut 0.070" x 2" L
27	6	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 14" L. Isolated corrosion and pitting up to 0.060" in depth, with size(s) from 3/16"W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)27-6-1 #171 (S)27-6	L L	Pit Repair- 0.060" 3/16" W x 3/4" L GN Repair- 0.230" Remaining Plate Thk.
27	7	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 14" L. Isolated corrosion and pitting up to 0.035" in depth, with size(s) from 3/16"W x 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
27	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#227 (P)27-9-1	L	GN Repair- 0.187" Remaining Plate Thk.

Tank Inspection Data – Shell Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
27	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
27	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
27	11	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
27	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. Isolated gouge up to 0.080" in depth, with size(s) from 0.075" in depth by 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#159 #161 (P)27-12-2 (P)27-12-4	S S M	Plate Repair- 0.170" Plate Thk. Plate Repair- 0.164" Plate Thk. Weld Repair- (G) Arc Gouge 0.070" depth
27	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. Isolated corrosion and pitting up to 0.060" in depth, with size(s) from 1/4"W x 1 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#163 (P)27-13-1 (P)27-13-2	S L	Plate Repair- 0.172" Plate Thk. Pit Repair- 0.060" 1/4" W x 1 1/2" L
27	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#73 #73A (S)27-14	S S	Plate Repair- 6" W x 0.157" Plate Thk. Plate Repair- 9" W x 9" L x 0.115" Thk.
27	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#54 #74 (P)27-15-4 (P)27-15-1	S L	Plate Repair- 8" W x 0.137" Plate Thk. Plate Repair- 6" W x 13" L x 0.186" Thk.
27	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.045" in depth, with size(s) from 1/4"W x 3/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#240 (P)27-16-1	L	GN Repair- 0.199" Remaining Plate Thk.
28	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

Table 6-2 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
28	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
28	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#84 (P)28-3-1	S	Plate Repair- 3" W x 0.180" Plate Thk.
28	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
28	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
28	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
28	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
28	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
28	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
28	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Plates

Table 6-2 **Date: 11/16/2010** **Rev B**

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
28	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
28	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
28	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.085" in depth along weld seam; scattered areas of excess reinforcement. A section of the weld had (LF) lack of fusion. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#160 (P)28-13-1 (P)28-13-2	S M M	Plate Repair- 6" W x 15" L x 0.083" Thk. Weld Repair- (LF) Lack of Fusion 1/4" L Weld Repair- (UC) Undercut 0.085" x 6" L
28	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. A section of the weld had (LF) lack of fusion and porosity which exceeded the code limits. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#101 #102 (P)28-14-1 (P)28-14-2	S - M M	Plate Repair- 20" W x 37" L x 0.167" to 0.174" Thk. Weld Repair- (LF) Lack of Fusion 1/4" L Weld Repair- (P) Porosity 1/4" dia.
28	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
28	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Extension Plates

Table 6-3 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
E1	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E1	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#268 (S)E1-2	L	GN Repair- 0.198" Remaining Plate Thk.
E1	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E1	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#289 (S)E1-4	L	GN Repair- 0.191" Remaining Plate Thk.
E1	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E1	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#278 (S)E1-6	L	GN Repair- 0.192" Remaining Plate Thk.
E1	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E1	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L and isolated 3/4" diameter up to 0.040" in depth. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E1	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data – Shell Extension Plates

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
E1	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E1	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E1	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E1	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E1	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E1	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E1	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E2	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E2	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#262 #263	S S	GN Repair- Remaining Plate Thk 0.180" GN Repair- Remaining Plate Thk 0.180"

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
E2	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L and isolated 3/8" diameter up to 0.050" in depth. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing. **Dents** - Multiple localized depressions were found on the course. The area(s) approximately was 1" w x 2" L x 1/4" deep.	#264 #265 #266 #267 (P)E2-3-1	M M M S L	Dent Repair- 0.200" deep Dent Repair- 0.200" deep Dent Repair- 0.240" deep GN Repair- Remaining Plate Thk 0.153" Pit Repair- 0.050" x 3/8" dia.
E2	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.040" in depth, with size(s) from 3/8"W x 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E2	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E2	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E2	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#283 #284	L S	GN Repair- Remaining Plate Thk 0.181" GN Repair- Remaining Plate Thk 0.144"
E2	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#281	S	GN Repair- Remaining Plate Thk 0.145"
E2	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. Isolated corrosion and pitting up to 0.090" to 0.100" in depth, with size(s) up to 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing. **Dents** - A localized depression was found on the course. The area was 1" w x 2" L x 1/4" deep.	(P)E2-9-1	S x 2 S M	Pit Repairs- 0.090" x 1/4" dia (2) Pit Repair- 0.100" x 1/4" dia Dent Repair- 1" W x 2" L
E2	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#273 (P)E2-10-1	S	Gouge Repair- 0.160" Deep
E2	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing. **Stiffeners** - Some scattered corrosion and pitting up to 0.030" to 0.070" in depth, with size(s) from 1/8" to 1/2" diameter; also some 3/8" W x 1 1/8" L. This was found on the top side where the coating had disbonded and moisture had formed a corrosion cell.	(P)E2-11-1	S	Pit Repairs- 0.070" 3/8" W x 1/2" L

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
E2	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing. **Dents** - A localized depression was found on the course. The area was 1 1/2" w x 3" L x 5/8" deep.	(P)E2-12-1	M	Dent Repair- 1 1/2" W x 3" L
E2	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E2	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing. Dents - A localized depression was found on the course. The area was 3/4" W x 7" L x 1/8" deep.			
E2	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E2	16	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.030" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.030" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing. **Dents** - A localized depression was found on the course. The area was 1" W x 2" L x 1/4" deep.	#275 #276 #277 (P)E2-16-1 (P)E2-16-2 (P)E2-16-3	M M M	Plate Repair- 12" W x 13" L x 0.150" Thk Dent Repair- 4" W x 2" L Plate Repair- 10" W x 10" L x 0.171" Thk
E3	1	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E3	2	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E3	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.045" in depth, with size(s) from 3/8" diameter and up to 0.130" in depth, with size(s) from 3/8"W x 2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)E3-3-1	S L	Gouge Repair- 0.130" 3/8" W x 2" L Pit Repair- 0.045" x 3/8" dia. (3)
E3	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.040" in depth, with size(s) from 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
E3	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)E3-5-1	L	Gouge Repair- 0.045" 1/2" W x 1 1/2" L
E3	6	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing. **Dents** - A localized depression was found on the course. The area was 1" w x 2" L x 1/4" deep.	#282	M	Dent Repair- 0.150" Deep
E3	7	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)E3-7-1	S	Pit Repair- 0.075" x 1" dia.
E3	8	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.040" in depth, with size(s) from 3/16"W x 1/2" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E3	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E3	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E3	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. One area of weld (P) porosity 1/8" diameter was found which exceeded the allowable limits in the weld seams. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)E3-11-1	M	Weld Repair - (P) Porosity 1/8"
E3	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. One area of weld (P) porosity 5/32" diameter was found which exceeded the allowable limits in the weld seams. There is product leaking out of the telltale channel system, indicating this is a thru channel pore. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)E3-12-1	M	Weld Repair- (P) Porosity Leak in Telltale Channel
E3	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
E3	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. Isolated corrosion and pitting up to 0.065" in depth, with size(s) from 1/4" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. One area of weld (P) porosity 5/32" diameter was found which exceeded the allowable limits in the weld seams. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)E3-14-1	M L	Weld Repair - (P) Porosity 5/32" Pit Repair- 0.065" x 1/4" dia
E3	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#274 (P)E3-15-1	M	Plate Repair- 12" W x 25" L x 0.141" Thk
E3	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E4	1	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E4	2	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)E4-2-2	S M	Gouge Repair- 0.080" x 3/8" dia. Dent Repair- 1 1/2" dia.
E4	3	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E4	4	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.030" in depth, with size(s) from 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing. **Dents** - A localized depression was found on the course.	#270 (P)E4-4-1	M	Dent Repair- 1/2" dia.
E4	5	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing. **Dents** - A localized depression was found on the course. The area was 1" w x 2" L x 1/4" deep.	#285A (P)E4-5-1	M	Dent Repair- 3/4" dia.
E4	6	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
E4	7	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. Isolated corrosion and pitting up to 0.030" in depth, with size(s) from 1/2" diameter. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E4	8	**Plate: Condition** – Good **Distortions** – From 1" to 2" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E4	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting (UC) within code and some 0.020" to 0.070" in depth along weld seam. There were also scattered areas of excess reinforcement. Some (UF) underfill or inadequate weld reinforcement of 0.070" in depth and 1/4" diameter was found on one of the weld seams at a weld pullout. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)E4-9-1 (P)E4-9-2	M L	Weld Repair - (UC) Undercut 0.070" x 3/16" dia. Pit Repair- 0.050" x 3/8" dia.
E4	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E4	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E4	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E4	13	**Plate: Condition** – The shell was found in poor condition with a thru wall hole. The NDE readings indicate the affected location is corroded in a larger area adjacent and around the hole. **Distortions** – Up to 1" within the radius **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. One area of weld (P) porosity 1/8" diameter was found which exceeded the allowable limits in the weld seams. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)E4-13-1 (P)E4-13-2	M M	Hole Repair in Shell- 1/4" Dia Weld Repair- (P) Porosity 1/8"
E4	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E4	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#271 (P)E4-15-1	S	Plate Repair- 12" W x 4" L x 0.177" Thk

Tank Inspection Data – Shell Extension Plates

Table 6-3 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
E4	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 1" L. Isolated corrosion and pitting up to 0.085" to 0.090" in depth, with size(s) from 3/8"W x 1 1/4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)E4-16-2 (P)E4-16-3 (P)E4-16-4 (P)E4-16-5 #272	S S S S L	Pit Repair- 0.085" 1/8"W x 1 1/4" L Pit Repair- 0.090" 3/8"W x 1 1/4" L Pit Repair- 0.090" 3/8"W x 1/2" L Pit Repair- 0.085" 1/4"W x 3/4" L Plate Repair- 12"W x 4" L

Tank Inspection Data –Upper Dome

Table 6-4 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
A	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-1-1 (P)A-1-2	S S L x 4 M - M M	Pit Repair- 0.070" x 3/16" dia. Gouge Repair- 0.080" 1" W x 3" L Gouge Repair- 0.060" (4) Weld Repair- (UC) Undercut 0.070" x 2" L at GN Dent Repair- 2" dia. Weld Repair- (P) Porosity 0.250" depth
A	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-3-1	S	Gouge Repair- 0.070" 1"W x 3/16" L
A	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#317 #318 #320 #322 #323 (P)A-4-2	L S S S S M	Plate Repair- 4" W x 4" L x 0.181" Thk. Pit Repairs- 0.100" 5" W x 6" L Gouge Repair- 0.070" depth Gouge Repair- 0.070" depth Gouge Repair- 0.070" depth Weld Repair- (UC) Undercut 0.170" x 2" L
A	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-5-1	L	Pit Repair- 0.045" x 1/4" dia.
A	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#324A #324B (P)A-7-1	M M	Dent Repair- 1" dia. Dent Repair- 1" W x 2" L
A	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data –Upper Dome

Table 6-4 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
A	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#294 #297 (P)A-10-1 (P)A-10-2 #298	S M M M L	Gouge Repair- 0.080" depth Dent Repair- 1 1/2" dia. Dent Repair- 2" dia. Dent Repair- 1" dia. Plate Repair- 4" W x 4" L x 0.198" Thk.
A	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-11-1	M	Weld Repair- (P) Porosity 3/8" W x 1 1/2"L x 0.075" depth
A	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-16-1	S M x 3 M x 4 M L	Pit Repair- 0.110" 3/8" W x 1" L Pit Repair- 0.155" 1/2" W x 1 1/4" L (3) Pit Repair- 0.155" x 1/2" dia. (4) Pit Repair- 0.150" x 1" dia. (1) Pit Repair- 0.045" x 1/2" dia.
A	17	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	18	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data –Upper Dome

Table 6-4 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
A	19	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-19-1 (P)A-19-2	M M x 2	Weld Repair- (UC) Undercut 0.095" x 8" L Weld Repair- (P) Porosity 0.060" (2)
A	20	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-20-1 (S)A-20	S S	Gouge Repair- 0.140" 1 1/2" W x 3/4" L Pit Repair- 0.080" x 1/2" dia.
A	21	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#303 (P)A-21-1	L x 2 S L x 2 M	Pit Repair- 0.065" 1/2" W x 5" L (2) Plate Repair- 4" W x 30" L x 0.157" Thk. Pit Repair- 0.050" x 3/8" dia. (2) Weld Repair- (P) Porosity 5" L
A	22	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#304 (P)A-22-1	S	Plate Repair- 8" W x 37" L x 0.180" Thk.
A	23	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-23-1	S x 2	Pit Repair- 0.070" 1/2" W x 3 1/2" L (2)
A	24	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	25	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-25-1	M	Pit Repair- 0.150" x 1" dia.
A	26	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-26-1	L	Pit Repair- 0.055" x 1/2" dia.
A	27	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-27-2	S x 2 S	Pit Repair- 0.090" 1/2" W x 1/2" L (2) Pit Repair- 0.080" 1/2" W x 1/2"

Tank Inspection Data –Upper Dome

Table 6-4 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
A	28	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-28-1	M	Weld Repair- (UC) Undercut
A	29	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	30	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-30-1 (P)A-30-2	S S	Gouge Repair- 0.085" 1/2" W x 1" L Pit Repair- 0.070" x 3/4" dia.
A	31	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#313 #316 (P)A-31-1 (P)A-31-2 #315	S M - - L	Pit Repair- 0.100" x 3/8" dia. Dent Repair- 3 1/8" dia. - - GN Repair- 0.200" Remaining Plate Thk.
A	32	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	33	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	34	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-34-1	S	Gouge Repair- 0.070" x 3/4" dia.
A	35	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-35-1 (P)A-35-2	S S x 2 L	Gouge Repair- 0.075" 1/4" W x 1" L Pit Repair- 0.090" 1/2" W x 2" L (2) Pit Repair- 0.065" x 1/2" dia.
A	36	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-36-1	L	Gouge Repair- 0.050" x 1/4" dia.

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
A	37	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-37-1 (P)A-37-2	S M x 3	Gouge Repair- 0.070" x 3/4" dia. Weld Repair- (UC) Undercut 0.050" to 0.060"
A	38	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	39	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-39-1	M	Weld Repair- (LF) Lack of Fusion
A	40	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-40-1	M	Weld Repair- (UC) Undercut 0.070" x 1 1/2" L
A	41	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	42	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-42-1	M	Weld Repair- (P) Porosity 5/32" dia.
A	43	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-43-1 (P)A-43-3	S M S	Gouge Repair- 0.070" 1/4" W x 1" L Weld Repair- (LF) Lack of Fusion Gouge Repair- 0.090" x 1 1/2" dia.
A	44	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	45	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
A	46	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-46-1 (P)A-46-2	S x 2 S	Gouge Repair- 0.095" x 1/2" dia (2) Gouge Repair- 0.115" 5/16" W x 1 3/4" L
A	47	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-47-1 (P)A-47-2 #327	M S S	Weld Repair- (LF) Lack of Fusion Gouge Repair- 0.075" 3/16" W x 3/4" L Plate Repair- 9" x 9" x 0.170" Thk.
A	48	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	49	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-49-2	S S S S	Gouge Repair- 0.140" x 3/8" dia Pit Repair- 0.070" 1/2" W x 3/4" L Gouge Repair- 0.090" 3/8" W x 3/4" L Gouge Repair- 0.075" 1/4" W x 1 1/2" L
A	50	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	51	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#326 (P)A-51-1	S	Plate Repair- 4" W x 4" L x 0.145" Thk.
A	52	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-52-1	M	Pit Repair- 0.155" 1/2" W x 3/4" L
A	53	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	54	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
A	55	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	56	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-56-1	M	Weld Repair- (LF) Lack of Fusion
A	57	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	58	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-58-1 (P)A-58-2	M M	Dent Repair- 1 1/4" W x 1 1/2 L Gouge Repair- 0.190" 1 1/4" W x 1 1/2" L
A	59	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-59-1	L	Gouge Repair- 0.060" 3/8" W x 1" L
A	60	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	61	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-61-1 (P)A-61-2	M S S M	Weld Repair- (LF) Lack of Fusion Gouge Repair- 0.080" 3/16" W x 1 1/2" L Gouge Repair- 0.110" x 3/8" dia Weld Repair- (P) Porosity 5/32" dia.
A	62	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	63	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
A	64	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-64-2 #331 (P)A-64-1	S S	Gouge Repair- 0.070" x 3/8" dia. Plate Repair- 3" W x 3" L x 0.131" Thk.
A	65	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	66	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	67	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#329 #330 (P)A-67-1	L S M	Plate Repair- 3" W x 3" L x 0.191" Thk. Plate Repair- 3" W x 3" L x 0.174" Thk. Dent Repair- 0.170" deep
A	68	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#328	L S L	Plate Repair- 3" W x 3" L x 0.194" Thk. Gouge Repair- 0.090" 3/16" W x 1 1/2" L Gouge Repair- 0.060" 3/8" W x 1" L
A	69	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
A	70	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-70-1	S S S x 3	Gouge Repair- 0.125" 1/2"W x 1 1/2" L Gouge Repair- 0.085" 3/16" W x 1 1/2" L Gouge Repair- 0.090" x 1/2" dia. (3)
A	71	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-71-1 (P)A-71-2 (P)A-71-3	M M S	Weld Repair- (UC) Undercut 0.080" x 1" L Weld Repair- (LF) Lack of Fusion 1" L Gouge Repair- 0.080" x 3/8" dia
A	72	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)A-72-1 #292	S L	Gouge Repair- 0.090" 3/16" W x 1 1/4" L Plate Repair- 6" W x 6" L x 0.197" Thk.

Tank Inspection Data –Upper Dome

Table 6-4 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
B	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-1-1	L L x 2	Gouge Repair- 0.060" 3/8" W x 3/16" L Gouge Repair- 0.050" depth (2)
B	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-8-1 #333 (P)B-8-1	S	Dent Repair- 0.125" x 1 1/8" dia.
B	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data –Upper Dome

Table 6-4 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
B	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-10-1 #335 (P)B-10-1	S M	Gouge Repair- 0.080" 1/4" W x 1" L Dent Repair- 2" dia.
B	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	17	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	18	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#337 (P)B-18-1	S	Gouge Repair- 0.750" x 1/2" dia.

Tank Inspection Data –Upper Dome

Table 6-4 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
B	19	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#339 (P)B-19-1	S	Dent Repair- 2" W x 2" L
B	20	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	21	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#340 (P)B-21-1	M L	Dent Repair- 2 1/2" dia. Pit Repair- 0.050" x 1/2" dia.
B	22	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#343 (P)B-22-1	M	Dent Repair- 1 1/2" dia.
B	23	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	24	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#342 (P)B-24-1	S x 5	Pit Repair- 0.100" x 3/8" dia. (5)
B	25	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	26	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	27	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-27-1 (P)B-27-2	L x 2	Pit Repair- 0.050" x 3/8" dia. (2)

Tank Inspection Data –Upper Dome

Table 6-4 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
B	28	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	29	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	30	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-30-1	L	Pit Repair- 0.050" x 3/16" W x 1/2" L
B	31	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	32	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	33	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-33-1	M	Dent Repair- 1" dia.
B	34	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	35	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	36	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-36-1	L	Pit Repair- 0.045" x 1/2" dia.

Tank Inspection Data –Upper Dome

Table 6-4 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
B	37	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#325A (P)B-37-1	S	Plate Repair- 2" W x 2" L x 0.176" Thk.
B	38	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-38-1 (P)B-38-2 (P)B-38-3	S M S x 2	Gouge Repair- 0.080" 1/8" W x 6 1/2" L Gouge Repair- 0.150" x 1/2" dia. Gouge Repair- 0.070" x 3/8" dia. (2)
B	39	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	40	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	41	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-41-1	S M	Gouge Repair- 0.090" 3/8" W x 1" L Weld Repair- (LF) Lack of Fusion 9" L
B	42	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	43	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-43-1 (P)B-43-2	M M M	Weld Repair- (LF) Lack of Fusion Weld Repair- (SI) Slag Inclusion Dent Repair- 1" dia.
B	44	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-44-1 (P)B-44-2 #354	S M S	Pit Repair- 0.095" x 1/2" dia. Dent Repair- 1 1/2" dia. Plate Repair- 10" W x 10" L x 0.180" Thk.
B	45	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-45-1	M	Weld Repair- (SI) Slag Inclusion 1" L

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
B	46	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-46-2	S	Gouge Repair- 0.085" 1/2" W x 1" L
B	47	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-47-1 (P)B-47-3 (P)B-47-4	S M x 2	Gouge Repair- 0.075" 1/8" W x 1" L Weld Repair- (LF) Lack of Fusion (2)
B	48	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-48-1	M	Weld Repair- (LF) Lack of Fusion
B	49	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	50	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-50-1	M M M	Weld Repair- (LF) Lack of Fusion Weld Repair- (P) Porosity Weld Repair- (UF) Underfill
B	51	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	52	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-52-1 (P)B-52-2 (P)B-52-3	S S L	Gouge Repair- 0.075" x 1/2" dia. Gouge Repair- 0.085" x 3/8" dia. Gouge Repair- 0.065" 1/4" W x 7/8" L
B	53	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	54	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
B	55	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-55-1 (P)B-55-2	L S	Gouge Repair- 0.065" x 1/4" dia. Gouge Repair- 0.090" x 3/16" dia.
B	56	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-56-1	S S x 2	Gouge Repair- 0.070" 3/16" W x 3/8" L Gouge Repair- 0.090" x 3/16" dia (2)
B	57	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-57-1 (P)B-57-3	M S	Weld Repair- (UC) Undercut 1 1/2" L Gouge Repair- 0.080" x 1/2" dia.
B	58	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	59	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-59-1 (P)B-59-2 (P)B-59-4 (P)B-59-3	S S L M	Gouge Repair- 0.080" 3/16" W x 1 1/4" L Gouge Repair- 0.070" 3/16" W x 1 1/4" L Gouge Repair- 0.065" x 1/4" dia. Weld Repair- (UC) Undercut 2 1/2" L
B	60	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	61	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-61-1	S S	Gouge Repair- 0.070" x 1/4" dia. Gouge Repair- 0.075" x 3/8" dia.
B	62	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-62-1	L x 2	Gouge Repair- 0.065" x 1/4" dia. (2)
B	63	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-63-1 (P)B-63-2	L L	Gouge Repair- 0.065" x 1/4" dia. Gouge Repair- 0.070" x 1/4" dia.

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
B	64	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#379 (P)B-64-1	L	Plate Repair- 4" W x 4" L x 0.187" Thk.
B	65	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-65-1 (P)B-65-2	S L M	Gouge Repair- 0.080" 3/16" W x 1 1/2" L Gouge Repair- 0.060" x 1/2" dia. Weld Repair- (UC) Undercut 2" L
B	66	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-66-2 (P)B-66-3 #355 (P)B-66-1	S S L S	Gouge Repair- 0.090" 3/16" W x 1/4" L Gouge Repair- 0.070" 3/16" W x 2 1/2" L Plate Repair- 2" W x 2" L x 0.187" Thk. Gouge Repair- 0.080" 3/16" W x 2 1/2" L
B	67	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-67-1 (P)B-67-2 (P)B-67-3	L S S	Gouge Repair- 0.065" x 1/4" dia. Gouge Repair- 0.070" x 1/4" dia. Gouge Repair- 0.085" x 1/4" dia.
B	68	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-68-1	S x 2	Gouge Repair- 0.075" x 3/8" dia. (2)
B	69	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
B	70	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-70-2 (P)B-70-3 (P)B-70-4	S S L	Gouge Repair- 0.085" 3/16" W x 1/2" L Gouge Repair- 0.095" x 1/2" dia. Gouge Repair- 0.065" x 1/2" dia.
B	71	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)B-71-2	S M S	Gouge Repair- 0.085" 3/16" W x 1/4" L Gouge Repair- 0.150" x 3/16" dia. Gouge Repair- 0.070" 3/16" W x 1/2" L
B	72	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-1-1 (P)C-1-2	L x 2 M x 2	Gouge Repair- 0.050" depth Weld Repair- (UC) Undercut 0.050" depth
C	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#374 (P)C-2-1	M M	Dent Repair- 0.200" depth Weld Repair- (G) Gouge 0.050" x 1/8" dia.
C	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-8-1	L	Pit Repair- 0.045" x 3/16" W x 1" L
C	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data –Upper Dome

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-10-1	S	Gouge Repair- 0.130" x 3/16" dia.
C	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-11-1	L	Pit Repair- 0.050" x 1/2" dia.
C	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#362B #363 #362A (P)C-16-1 (P)C-16-2	S S L L L x 2	Pit Repair- 0.115" x 1/2" dia. Pit Repair- 0.100" x 1/2" dia. Pit Repair- 0.065" x 1 1/2" dia. Pit Repair- 0.045" x 1 1/2" dia. Pit Repair- 0.055" x 3/8" dia. (2)
C	17	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	18	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data –Upper Dome

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C	19	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#364 #365A #365B (P)C-19-1 (P)C-19-2	S S L S	Gouge Repair- 0.090" x 1/2" dia. Gouge Repair- 0.090" x 1/2" dia. Gouge Repair- 0.060" depth Gouge Repair- 0.105" 1/4" W x 1 1/8" L
C	20	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#369 (P)C-20-1	S M	Gouge Repair- 0.105" x 1/2" dia. Weld Repair-(LF) Lack of Fusion
C	21	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#371 (P)C-21-1	L	Gouge Repair- 0.060" depth
C	22	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-22-1	S L	Gouge Repair- 0.090" 3/8" W x 1 3/4" L Pit Repair- 0.045" x 3/4" dia.
C	23	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#372	L	GN Repair- 0.204" Remaining Plate Thk.
C	24	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#366 #367 (P)C-24-1	S S	Pit Repair- 0.090" depth Pit Repair- 0.100" depth
C	25	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-25-1	L L	Gouge Repair- 0.050" 3/16" W x 3" L Pit Repair- 0.050" x 1/4" dia.
C	26	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-26-1	L M	Gouge Repair- 0.060" 1/4" W x 2" L Weld Repair- (UC) Undercut 0.050" depth
C	27	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C	28	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-28-1	S	Gouge Repair- 0.090" 1/8" W x 2" L
C	29	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-29-1	S	Gouge Repair- 0.110" 3/16" W x 1/2" L
C	30	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	31	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-31-1 (P)C-31-2	S L S	Gouge Repair- 0.070" 3/16" W x 3/8" L Gouge Repair- 0.060" 3/16" W x 3/8" L Gouge Repair- 0.110" x 3/8" dia.
C	32	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-32-1 (P)C-32-2 (P)C-32-3 #380 (P)C-32-4 (P)C-32-5	S S L M S	Gouge Repair- 0.095" 3/16" W x 2" L Gouge Repair- 0.088" 3/16" W x 2 1/2" L Gouge Repair- 0.065" 3/16" W x 1 1/2" L Gouge Repair- 0.175" 1/4" W x 1 1/2" L Gouge Repair- 0.090" x 1/4" dia.
C	33	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-33-1 (P)C-33-2	S S	Gouge Repair- 0.120" x 3/8" dia. Gouge Repair- 0.085" x 1/2" dia.
C	34	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-34-1 (P)C-34-2 (P)C-34-3	S S S S	Gouge Repair- 0.075" 3/16" W x 3/8" L Gouge Repair- 0.105" 1/2" W x 1" L Gouge Repair- 0.095" x 3/8" dia. Gouge Repair- 0.070" x 3/8" dia.
C	35	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-35-1 (P)C-35-2 (P)C-35-3	S S S	Gouge Repair- 0.070" 1/4" W x 1/2" L Gouge Repair- 0.090" x 3/8" dia. Gouge Repair- 0.070" x 3/8" dia.
C	36	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C	37	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	38	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-38-1 (P)C-38-2	S L L	Gouge Repair- 0.075" 3/16" W x 3/4" L Gouge Repair- 0.060" x 3/8" dia. Gouge Repair- 0.065" x 3/16" dia.
C	39	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	40	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-40-1 (P)C-40-2	L S	Gouge Repair- 0.060" 1/4" W x 3/4" L Gouge Repair- 0.075" x 3/16" dia.
C	41	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-41-1	S	Gouge Repair- 0.075" x 3/16" dia.
C	42	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#356 (P)C-42-1 (P)C-42-2	L S L	Plate Repair- 2" W x 2" L x 0.189" Thk. Gouge Repair- 0.085" 1/4" W x 3/4" L Gouge Repair- 0.065" x 3/8" dia.
C	43	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	44	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	45	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-45-1 (P)C-45-2 (P)C-45-3 (P)C-45-4 (P)C-45-5 (P)C-45-6	S S x 3 S x 2 L x 3 M	Gouge Repair- 0.095" x 1/2" dia. Gouge Repair- 0.075" x 3/8" dia. (3) Gouge Repair- 0.110" x 1/2" dia. Gouge Repair- 0.060" 1/4" W x 3/4" L Weld Repair- (LF) Lack of Fusion

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
C	46	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	47	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
C	48	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)C-48-1	L	Gouge Repair- 0.050" x 1/4" dia.
D	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-1-1 (P)D-2-1	S x 3 S	Gouge Repair- 0.080" x 3/4" dia. (3) Gouge Rapair- 0.070" x 3/16" dia.
D	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-2-1	S	Gouge Repair- 0.080" 3/8" W x 1/2" L
D	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-3-1 (P)D-3-2 (P)D-3-3	S x 2 M	Gouge Repair- 0.090" x 3/8" dia. (2) Weld Repair- (P) Porosity 0.080" depth
D	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-4-2	S	Gouge Repair- 0.075" x 3/8" dia.
D	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-5-1 #387	M L	Weld Repair- (UC) Undercut 2" 0.070" GN Repair- 0.203" Remaining Plate Thk.
D	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-6-1	M	Weld Repair - (UF) Underfill 1" L

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
D	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-7-1	S x 2 L	Gouge Repair- 0.070" x 1/2" dia. (2) Gouge Repair- 0.055" x 3/16" W x 1 1/4" L
D	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
D	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-9-1	S L	Gouge Repair- 0.090" 3/16" W x 1" L Gouge Repair- 0.045" x 3/16" W x 1/2" L
D	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#386B #386A (P)D-10-1	S M	Gouge Repair- 0.110" x 3/16" dia. Dent Repair- 0.140" depth
D	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-11-1	L	Gouge Repair- 0.050" x 3/8" dia.
D	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
D	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-13-1 (P)D-13-2	S S L	Gouge Repair- 0.090" x 1/2" dia. Gouge Repair- 0.070" x 3/8" dia. Gouge Repair- 0.065" x 3/8" dia.
D	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-14-1 (P)D-14-2	L S	Gouge Repair- 0.065" 1/4" W x 2 1/2" L Gouge Repair- 0.080" 3/16" W x 3/4" L
D	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#385 (P)D-15-1	M	Dent Repair- 1 1/2" dia.

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
D	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-16-1 (P)D-16-2	L L	Pit Repair- 0.050" x 1/4" dia. Gouge Repair- 0.050" x 1/2" dia.
D	17	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-17-1	L	Gouge Repair- 0.045" x 1/4" dia.
D	18	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-18-1 (P)D-18-2	S x 2 S	Gouge Repair- 0.085" x 1/2" dia. (2) Gouge Repair- 0.100" 3/16" W x 1 1/2" L
D	19	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-19-1 (P)D-19-2	L L	Gouge Repair- 0.045" x 1/2" dia. Pit Repair- 0.050" x 3/8" dia.
D	20	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-20-1 (P)D-20-2 (P)D-20-3 (P)D-20-4 #388 #388A #390A #390B	S S S S	Gouge Repair- 0.110" x 3/4" dia. Gouge Repair- 0.075" 3/16" W x 1 1/4" L Gouge Repair- 0.115" x 1/2" dia. Gouge Repair- 0.130" x 3/4" dia.
D	21	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#393 (P)D-21-1 (P)D-21-2	S S x 2 L L	Gouge Repair- 0.075" x 3/8" dia. Gouge Repair- 0.095" x 3/8" dia. (2) Gouge Repair- 0.050" x 3/8" dia. Gouge Repair- 0.045" x 1/8" dia.
D	22	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
D	23	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
D	24	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-24-1 #394C	M	Dent Repair- 0.100" depth

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
D	25	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#394 (P)D-25-1 (P)D-25-2 (P)D-25-3	S M S	Gouge Repair- 0.100" 3/16" W x 2 3/4" L GN Repair- (UC) Undercut 0.090" x 4" L Pit Repair- 0.075" depth
D	26	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-26-1	L x 2	Gouge Repair- 0.060" x 1/2" dia. (2)
D	27	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-27-1 (P)D-27-2	S S	Gouge Repair- 0.080" x 3/4" dia. Gouge Repair- 0.090" x 1/2" dia.
D	28	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-28-1 (P)D-28-2	L S	Gouge Repair- 0.065" x 1/2" dia. Gouge Repair- 0.105" 3/16" W x 2 1/2" L
D	29	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-29-1	L	Gouge Repair- 0.045" 1/8" W x 1" L
D	30	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	#395	L	Plate Repair- 3" W x 3" L x 0.203" Thk.
D	31	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-31-1 (P)D-31-2 (P)D-31-3 (P)D-31-4 #396	S L x 2 L S L	Gouge Repair- 0.080" x 3/8" dia. Gouge Repair- 0.065" x 3/8" dia. (2) Gouge Repair- 0.060" 1/4" W x 1" L Gouge Repair- 0.070" 5/8" W x 1 1/8" L Plate Repair- 3" W x 3" L x 0.198" Thk.
D	32	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-32-1	L L	Gouge Repair- 0.045" 1/8" W x 1" L Pit Repair- 0.050" x 1/8" dia.
D	33	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-33-1 #397	L L	Gouge Repair- 0.065" 3/16" W x 1 1/4" L Plate Repair- 7" W x 7" L x 0.198" Thk.

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
D	34	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-34-1 (P)D-34-2	S L M	Gouge Repair- 0.070" 3/16" W x 1 1/2" L Gouge Repair- 0.060" x 1/2" dia. Weld Repair- (UC) Undercut 0.065" x 2" L
D	35	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-35-1 (P)D-35-2 #398	S x 4 L x 2 S	Gouge Repair- 0.095 " x 3/8" dia. (4) Gouge Repair- 0.060 " x 1/2" dia. (2) Gouge Repair- 0.095" 1/4" W x 2 1/4" L
D	36	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-36-1 (P)D-36-2	S S	Gouge Repair- 0.100" x 1/2" dia. Gouge Repair- 0.105" x 5/8" dia.
D	37	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-37-1 (P)D-37-2 (P)D-37-3 #400	S S S L	Gouge Repair- 0.095" x 1/2" dia. Gouge Repair- 0.075" 3/8" W x 2 1/4" L Gouge Repair- 0.085" 3/16" W x 2 1/8" L Gouge Repair- 0.050" 3/16" W x 2" L
D	38	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-38-1	S	Gouge Repair- 0.075" x 1/2" dia.
D	39	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
D	40	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
D	41	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
D	42	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
D	43	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
D	44	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
D	45	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-45-1	L	Gouge Repair- 0.065" 1/4" W x 3/4" L
D	46	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
D	47	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-47-1 (P)D-47-2 (P)D-47-3 (P)D-47-5 #382A #381 #382 #382C	S S S M L	Gouge Repair- 0.110" x 1/2" dia. Gouge Repair- 0.075" x 3/8" dia. Gouge Repair- 0.125" x 3/4" dia. Dent Repair- 0.225" depth Pit Repair- 0.050" depth
D	48	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)D-48-1	S S	Gouge Repairs- 0.100" x 1/2" dia. Gouge Repairs- 0.085" 3/16" W x 1/2" L
E	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E	2	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
E	3	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.		S	Gouge Repair- 0.110" 1/4" W x 3/4" L
E	4	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E	5	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.		M	Hole Repair- 3/4" dia.
E	6	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E	7	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E	8	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)E-8-1	M S - L	Weld Repair- (P) Porosity 5/32" dia. Plate Repair- Weld Seal Plate, not welded, just tacked 2" W x 8" L PL Pit Repair- 0.050" x 1/2" dia.
E	9	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)E-9-1	M	Gouge Repair- 0.188" 1/4" W x 1 3/4" L
E	10	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.		L	Gouge Repair- 0.045" 1/4" W x 1" L
E	11	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.		L	Gouge Repair- 0.050" 1/4" W x 1 1/4" L

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Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
E	12	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E	13	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.	(P)E-13-3 (P)E-13-4	S S S x 2 L	Gouge Repair- 0.070" x 3/8" dia. Gouge Repair- 0.070" x 1" dia. Gouge Repair- 0.070" 1/4" W x 1 1/4" L (2) Gouge Repair- 0.060" x 1" dia.
E	14	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E	15	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E	16	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E	17	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.		L	Gouge Repair- 0.050" 1/8" W x 1 1/8" L
E	18	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.		S	Gouge Repair- 0.125" 3/16" W x 3/8" L
E	19	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.		M - M - S	GN Repair- 2" dia. (Nozzle is not welded, just tacked) Weld Repair- (UC) Undercut 0.220" x 1 1/2" L (Near thru hole) Gouge Repair- 0.125" 1/2" W x 1 1/4" L
E	20	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			

Tank Inspection Data –Upper Dome

Table 6-4 Date: 11/16/2010 Rev B

Row No.	Plate No.	Description of Condition / Inspection Findings	Picture / Sketch	Repair Type	Repairs Required
E	21	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E	22	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E	23	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
E	24	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
F	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.			
Top MW	1	**Plate: Condition** – Good **Distortions** – Up to 1" within the radius. **Corrosion** - Light scattered corrosion and pitting up to 0.020" in depth, with size(s) from 1/8" to 1/4" diameter; up to 0.020" in depth, with size(s) from 1/8"W x 2" to 4" L. No relevant areas of corrosion were found. **Welds:** Overall fair condition. **Corrosion** - Light scattered corrosion and pitting, no relevant areas were found. **Discontinuities** – Scattered undercutting within code; scattered areas of excess reinforcement. **Paint / Coating:** Overall poor; with areas disbonded, flaking or missing.		M x 4 - M x 2	Weld Repair- (P) Porosity 5/32" Dia. (4) locations Weld Repair- (UC) Undercut 2" 0.080" (2)

Section 7.0 – Recommendations

Willbros and Testex found over (800+) various indications and flaws during the API 653 modified inspection and NDE examination of Tank 5 surfaces and components. Most of these indications or flaws are relatively small in overall size and repair(s) that will be required. The indications found were varied in type, cause and severity as listed in Section 6.1. and 7.0. Due to the types of indication or flaw sizes, depths and conditions found in Tank 5; it was not found suitable to return to service until all of the items identified are repaired as appropriate for the intended service and operational interval. The following list describes the repairs by classification and action to be taken. Reference the following Table 7-1 Summary of Repairs for the complete list of repairs for each plate, location along with the associated repair(s) required and classification type.

7.1 Mandatory Repairs – Immediate repairs required before returning tank to service

- Repair (2) areas found with thru wall holes.
- Repair weld where torch gouged thru the weld seam, completely open joint connection, leak or hole equivalent.
- Repair leak found in the telltale system.
- Replace or repair lines failed during Hydrotesting.
- Weld Discontinuities or Defects - Which exceed code limits.
- Un-Welded Seams – One (1) seal plate and one (1) nozzle, leak or hole equivalent.
- Repair areas where pits, gouges or corrosion is below the minimum thickness (t_{min}) required.
- Detailed list provided in Tables 6-1 thru 6-4.

7.2 Short Term Repairs – Repair indications or flaws found that have the criteria which exceeds the intended service and operational interval. (10yr)

- Repair areas where pits, gouges or corrosion is below the minimum thickness (t_{min}) required for this interval.
- Repair coating in areas required to eliminate corrosion cells on internal surfaces, extend component service life and inspection intervals.
- Detailed list provided in Tables 6-1 thru 6-4.

7.3 Long Term Repairs - Repair indications or flaws found that have the criteria which exceeds the intended service and operational interval. (20yr)

- Repair areas where pits, gouges or corrosion is below the minimum thickness (t_{min}) required for this interval.
- Repair coating in areas required to eliminate corrosion cells on internal surfaces, extend component service life and inspection intervals.
- Detailed list provided in Tables 6-1 thru 6-4.

Note: Reference Fig. 7-1 Legend & Details for the explanation of the inspection tables found in Section 6 and 7.

Table 7-1 Summary of Tank Repairs

FIG. 7-1 TABLE LEGEND & DETAILS

Area	Row No.	Plate No.	Picture / Sketch	Repair Type	Repairs Required	Repair Required
Upper Dome	A	1	(P)A-1-1 (P)A-1-2	S S L x 4 M - M M	Pit Repair- 0.070" x 3/16" dia. Gouge Repair- 0.080" 1" W x 3" L Gouge Repair- 0.060" (4) Weld Repair- (UC) Undercut 0.070" x 2" L at GN Dent Repair- 2" dia. Weld Repair- (P) Porosity 0.250" depth	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	A	3	(P)A-3-1	S	Gouge Repair- 0.070" 1"W x 3/16" L	Patch plate NDE testing of repairs
Upper Dome	A	4	#317 #318 #320 #322 #323 (P)A-4-2	L S S S S M	Plate Repair- 4" W x 4" L x 0.181" Thk. Pit Repairs- 0.100" 5" W x 6" L Gouge Repair- 0.070" depth Gouge Repair- 0.070" depth Gouge Repair- 0.070" depth Weld Repair- (UC) Undercut 0.170" x 2" L	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs

Main component
area / section location

Plate or Sheet Number
located within the row of the main component or section

Repair Type
M = Mandatory
S = Short Term
L = Long Term
x4 = (4) Areas

Repair / Action -
required for compliance

Picture / NDE Flaw No's -
(#317) = NDE Flaw # 317
(P)A-1-1 = below details
(P) = Picture
A = Row #
1-1 = Plate # 1 and Pic # 1

Type of Repairs found / identified
Pit = Excessive depth / wall loss
Gouge = Excessive depth / wall loss
Plate = Excessive depth / wall loss
Hole = Complete wall loss
Weld Repair = Indication observed in excess of code allowances
Dent = Depth of indentation exceeds fiber / membrane stress allowances
GN = Grout Nozzle
0.070" 1"W x 3/16" L = following
0.070" = Depth of wall loss
1"W x 3/16" L = Size of indication / area observed
Dia. = Diameter
L = Length
W = Width

Table 7-1 Summary of Tank Repairs

Area	Row No.	Plate No.	Picture / Sketch	Repair Type	Repairs Required	Repair Required
Upper Dome	A	1	(P)A-1-1 (P)A-1-2	S S L x 4 M - M M	Pit Repair- 0.070" x 3/16" dia. Gouge Repair- 0.080" 1" W x 3" L Gouge Repair- 0.060" (4) Weld Repair- (UC) Undercut 0.070" x 2" L at GN Dent Repair- 2" dia. Weld Repair- (P) Porosity 0.250" depth	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	A	3	(P)A-3-1	S	Gouge Repair- 0.070" 1"W x 3/16" L	Patch plate NDE testing of repairs
Upper Dome	A	4	#317 #318 #320 #322 #323 (P)A-4-2	L S S S S M	Plate Repair- 4" W x 4" L x 0.181" Thk. Pit Repairs- 0.100" 5" W x 6" L Gouge Repair- 0.070" depth Gouge Repair- 0.070" depth Gouge Repair- 0.070" depth Weld Repair- (UC) Undercut 0.170" x 2" L	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	A	5	(P)A-5-1	L	Pit Repair- 0.045" x 1/4" dia.	Patch plate NDE testing of repairs
Upper Dome	A	7	#324A #324B (P)A-7-1	M M	Dent Repair- 1" dia. Dent Repair- 1" W x 2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	10	#294 #297 (P)A-10-1 (P)A-10-2 #298	S M M M L	Gouge Repair- 0.080" depth Dent Repair- 1 1/2" dia. Dent Repair- 2" dia. Dent Repair- 1" dia. Plate Repair- 4" W x 4" L x 0.198" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	11	(P)A-11-1	M	Weld Repair- (P) Porosity 3/8" W x 1 1/2"L x 0.075" depth	Repair Weld(s) NDE testing of repairs
Upper Dome	A	16	(P)A-16-1	S M x 3 M x 4 M L	Pit Repair- 0.110" 3/8" W x 1" L Pit Repair- 0.155" 1/2" W x 1 1/4" L (3) Pit Repair- 0.155" x 1/2" dia. (4) Pit Repair- 0.150" x 1" dia. (1) Pit Repair- 0.045" x 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	19	(P)A-19-1 (P)A-19-2	M M x 2	Weld Repair- (UC) Undercut 0.095" x 8" L Weld Repair- (P) Porosity 0.060" (2)	Repair Weld(s) NDE testing of repairs
Upper Dome	A	20	(P)A-20-1 (S)A-20	S S	Gouge Repair- 0.140" 1 1/2" W x 3/4" L Pit Repair- 0.080" x 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	21	#303 (P)A-21-1	L x 2 S L x 2 M	Pit Repair- 0.065" 1/2" W x 5" L (2) Plate Repair- 4" W x 30" L x 0.157" Thk. Pit Repair- 0.050" x 3/8" dia. (2) Weld Repair- (P) Porosity 5" L	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	A	22	#304 (P)A-22-1	S	Plate Repair- 8" W x 37" L x 0.180" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	23	(P)A-23-1	S x 2	Pit Repair- 0.070" 1/2" W x 3 1/2" L (2)	Patch plate(s) for pits and gouges as required NDE testing of repairs

Upper Dome	A	25	(P)A-25-1	M	Pit Repair- 0.150" x 1" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	26	(P)A-26-1	L	Pit Repair- 0.055" x 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	27	(P)A-27-2	S x 2 S	Pit Repair- 0.090" 1/2" W x 1/2" L (2) Pit Repair- 0.080" 1/2" W x 1/2"	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	28	(P)A-28-1	M	Weld Repair- (UC) Undercut	Repair Weld(s) NDE testing of repairs
Upper Dome	A	30	(P)A-30-1 (P)A-30-2	S S	Gouge Repair- 0.085" 1/2" W x 1" L Pit Repair- 0.070" x 3/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	31	#313 #316 (P)A-31-1 (P)A-31-2 #315	S M - - L	Pit Repair- 0.100" x 3/8" dia. Dent Repair- 3 1/8" dia. - - GN Repair- 0.200" Remaining Plate Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	34	(P)A-34-1	S	Gouge Repair- 0.070" x 3/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	35	(P)A-35-1 (P)A-35-2	S S x 2 L	Gouge Repair- 0.075" 1/4" W x 1" L Pit Repair- 0.090" 1/2" W x 2" L (2) Pit Repair- 0.065" x 1/2" dia.	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	A	36	(P)A-36-1	L	Gouge Repair- 0.050" x 1/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	37	(P)A-37-1 (P)A-37-2	S M x 3	Gouge Repair- 0.070" x 3/4" dia. Weld Repair- (UC) Undercut 0.050" to 0.060"	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	A	39	(P)A-39-1	M	Weld Repair- (LF) Lack of Fusion	Repair Weld(s) NDE testing of repairs
Upper Dome	A	40	(P)A-40-1	M	Weld Repair- (UC) Undercut 0.070" x 1 1/2" L	Repair Weld(s) NDE testing of repairs
Upper Dome	A	42	(P)A-42-1	M	Weld Repair- (P) Porosity 5/32" dia.	Repair Weld(s) NDE testing of repairs
Upper Dome	A	43	(P)A-43-1 (P)A-43-3	S M S	Gouge Repair- 0.070" 1/4" W x 1" L Weld Repair- (LF) Lack of Fusion Gouge Repair- 0.090" x 1 1/2" dia.	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	A	46	(P)A-46-1 (P)A-46-2	S x 2 S	Gouge Repair- 0.095" x 1/2" dia (2) Gouge Repair- 0.115" 5/16" W x 1 3/4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	47	(P)A-47-1 (P)A-47-2 #327	M S S	Weld Repair- (LF) Lack of Fusion Gouge Repair- 0.075" 3/16" W x 3/4" L Plate Repair- 9" x 9" x 0.170" Thk.	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	A	49	(P)A-49-2	S S S S	Gouge Repair- 0.140" x 3/8" dia Pit Repair- 0.070" 1/2" W x 3/4" L Gouge Repair- 0.090" 3/8" W x 3/4" L Gouge Repair- 0.075" 1/4" W x 1 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	51	#326 (P)A-51-1	S	Plate Repair- 4" W x 4" L x 0.145" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs

Upper Dome	A	52	(P)A-52-1	M	Pit Repair- 0.155" 1/2" W x 3/4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	56	(P)A-56-1	M	Weld Repair- (LF) Lack of Fusion	Repair Weld(s) NDE testing of repairs
Upper Dome	A	58	(P)A-58-1 (P)A-58-2	M M	Dent Repair- 1 1/4" W x 1 1/2 L Gouge Repair- 0.190" 1 1/4" W x 1 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	59	(P)A-59-1	L	Gouge Repair- 0.060" 3/8" W x 1" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	61	(P)A-61-1 (P)A-61-2	M S S M	Weld Repair- (LF) Lack of Fusion Gouge Repair- 0.080" 3/16" W x 1 1/2" L Gouge Repair- 0.110" x 3/8" dia Weld Repair- (P) Porosity 5/32" dia.	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	A	64	(P)A-64-2 #331 (P)A-64-1	S S	Gouge Repair- 0.070" x 3/8" dia. Plate Repair- 3" W x 3" L x 0.131" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	67	#329 #330 (P)A-67-1	L S M	Plate Repair- 3" W x 3" L x 0.191" Thk. Plate Repair- 3" W x 3" L x 0.174" Thk. Dent Repair- 0.170" deep	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	68	#328	L S L	Plate Repair- 3" W x 3" L x 0.194" Thk. Gouge Repair- 0.090" 3/16" W x 1 1/2" L Gouge Repair- 0.060" 3/8" W x 1" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	70	(P)A-70-1	S S S x 3	Gouge Repair- 0.125" 1/2"W x 1 1/2" L Gouge Repair- 0.085" 3/16" W x 1 1/2" L Gouge Repair- 0.090" x 1/2" dia. (3)	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	A	71	(P)A-71-1 (P)A-71-2 (P)A-71-3	M M S	Weld Repair- (UC) Undercut 0.080" x 1" L Weld Repair- (LF) Lack of Fusion 1" L Gouge Repair- 0.080" x 3/8" dia	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	A	72	(P)A-72-1 #292	S L	Gouge Repair- 0.090" 3/16" W x 1 1/4" L Plate Repair- 6" W x 6" L x 0.197" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	1	(P)B-1-1	L L x 2	Gouge Repair- 0.060" 3/8" W x 3/16" L Gouge Repair- 0.050" depth (2)	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	8	(P)B-8-1 #333 (P)B-8-1	S	Dent Repair- 0.125" x 1 1/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	10	(P)B-10-1 #335 (P)B-10-1	S M	Gouge Repair- 0.080" 1/4" W x 1" L Dent Repair- 2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	18	#337 (P)B-18-1	S	Gouge Repair- 0.750" x 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	19	#339 (P)B-19-1	S	Dent Repair- 2" W x 2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	21	#340 (P)B-21-1	M L	Dent Repair- 2 1/2" dia. Pit Repair- 0.050" x 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	22	#343 (P)B-22-1	M	Dent Repair- 1 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	24	#342 (P)B-24-1	S x 5	Pit Repair- 0.100" x 3/8" dia. (5)	Patch plate(s) for pits and gouges as required NDE testing of repairs

Upper Dome	B	27	(P)B-27-1 (P)B-27-2	L x 2	Pit Repair- 0.050" x 3/8" dia. (2)	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	30	(P)B-30-1	L	Pit Repair- 0.050" x 3/16" W x 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	33	(P)B-33-1	M	Dent Repair- 1" dia.	Patch plate(s) for the dent area damaged NDE testing of repairs
Upper Dome	B	36	(P)B-36-1	L	Pit Repair- 0.045" x 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	37	#325A (P)B-37-1	S	Plate Repair- 2" W x 2" L x 0.176" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	38	(P)B-38-1 (P)B-38-2 (P)B-38-3	S M S x 2	Gouge Repair- 0.080" 1/8" W x 6 1/2" L Gouge Repair- 0.150" x 1/2" dia. Gouge Repair- 0.070" x 3/8" dia. (2)	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	41	(P)B-41-1	S M	Gouge Repair- 0.090" 3/8" W x 1" L Weld Repair- (LF) Lack of Fusion 9" L	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	B	43	(P)B-43-1 (P)B-43-2	M M M	Weld Repair- (LF) Lack of Fusion Weld Repair- (SI) Slag Inclusion Dent Repair- 1" dia.	Patch plate(s) for the dent area damaged Repair Weld(s) NDE testing of repairs
Upper Dome	B	44	(P)B-44-1 (P)B-44-2 #354	S M S	Pit Repair- 0.095" x 1/2" dia. Dent Repair- 1 1/2" dia. Plate Repair- 10" W x 10" L x 0.180" Thk.	Patch plate(s) for pits, gouges and dents as required NDE testing of repairs
Upper Dome	B	45	(P)B-45-1	M	Weld Repair- (SI) Slag Inclusion 1" L	Repair Weld(s) NDE testing of repairs
Upper Dome	B	46	(P)B-46-2	S	Gouge Repair- 0.085" 1/2" W x 1" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	47	(P)B-47-1 (P)B-47-3 (P)B-47-4	S M x 2	Gouge Repair- 0.075" 1/8" W x 1" L Weld Repair- (LF) Lack of Fusion (2)	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	B	48	(P)B-48-1	M	Weld Repair- (LF) Lack of Fusion	Repair Weld(s) NDE testing of repairs
Upper Dome	B	50	(P)B-50-1	M M M	Weld Repair- (LF) Lack of Fusion Weld Repair- (P) Porosity Weld Repair- (UF) Underfill	Repair Weld(s) NDE testing of repairs
Upper Dome	B	52	(P)B-52-1 (P)B-52-2 (P)B-52-3	S S L	Gouge Repair- 0.075" x 1/2" dia. Gouge Repair- 0.085" x 3/8" dia. Gouge Repair- 0.065" 1/4" W x 7/8" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	55	(P)B-55-1 (P)B-55-2	L S	Gouge Repair- 0.065" x 1/4" dia. Gouge Repair- 0.090" x 3/16" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	56	(P)B-56-1	S S x 2	Gouge Repair- 0.070" 3/16" W x 3/8" L Gouge Repair- 0.090" x 3/16" dia (2)	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	57	(P)B-57-1 (P)B-57-3	M S	Weld Repair- (UC) Undercut 1 1/2" L Gouge Repair- 0.080" x 1/2" dia.	Patch plate(s) for pits and gouges as required

						Repair Weld(s) NDE testing of repairs
Upper Dome	B	59	(P)B-59-1 (P)B-59-2 (P)B-59-4 (P)B-59-3	S S L M	Gouge Repair- 0.080" 3/16" W x 1 1/4" L Gouge Repair- 0.070" 3/16" W x 1 1/4" L Gouge Repair- 0.065" x 1/4" dia. Weld Repair- (UC) Undercut 2 1/2" L	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	B	61	(P)B-61-1	S S	Gouge Repair- 0.070" x 1/4" dia. Gouge Repair- 0.075" x 3/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	62	(P)B-62-1	L x 2	Gouge Repair- 0.065" x 1/4" dia. (2)	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	63	(P)B-63-1 (P)B-63-2	L L	Gouge Repair- 0.065" x 1/4" dia. Gouge Repair- 0.070" x 1/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	64	#379 (P)B-64-1	L	Plate Repair- 4" W x 4" L x 0.187" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	65	(P)B-65-1 (P)B-65-2	S L M	Gouge Repair- 0.080" 3/16" W x 1 1/2" L Gouge Repair- 0.060" x 1/2" dia. Weld Repair- (UC) Undercut 2" L	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	B	66	(P)B-66-2 (P)B-66-3 #355 (P)B-66-1	S S L S	Gouge Repair- 0.090" 3/16" W x 1/4" L Gouge Repair- 0.070" 3/16" W x 2 1/2" L Plate Repair- 2" W x 2" L x 0.187" Thk. Gouge Repair- 0.080" 3/16" W x 2 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	67	(P)B-67-1 (P)B-67-2 (P)B-67-3	L S S	Gouge Repair- 0.065" x 1/4" dia. Gouge Repair- 0.070" x 1/4" dia. Gouge Repair- 0.085" x 1/4" dia.	Patch plate(s) for pits and gouges as NDE testing of repairs
Upper Dome	B	68	(P)B-68-1	S x 2	Gouge Repair- 0.075" x 3/8" dia. (2)	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	70	(P)B-70-2 (P)B-70-3 (P)B-70-4	S S L	Gouge Repair- 0.085" 3/16" W x 1/2" L Gouge Repair- 0.095" x 1/2" dia. Gouge Repair- 0.065" x 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	B	71	(P)B-71-2	S M S	Gouge Repair- 0.085" 3/16" W x 1/4" L Gouge Repair- 0.150" x 3/16" dia. Gouge Repair- 0.070" 3/16" W x 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	1	(P)C-1-1 (P)C-1-2	L x 2 M x 2	Gouge Repair- 0.050" depth Weld Repair- (UC) Undercut 0.050" depth	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	C	2	#374 (P)C-2-1	M M	Dent Repair- 0.200" depth Weld Repair- (G) Gouge 0.050" x 1/8" dia.	Patch plate(s) for the dent area damaged Repair Weld(s) NDE testing of repairs
Upper Dome	C	8	(P)C-8-1	L	Pit Repair- 0.045" x 3/16" W x 1" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	10	(P)C-10-1	S	Gouge Repair- 0.130" x 3/16" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	11	(P)C-11-1	L	Pit Repair- 0.050" x 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs

Upper Dome	C	16	#362B #363 #362A (P)C-16-1 (P)C-16-2	S S L L L x 2	Pit Repair- 0.115" x 1/2" dia. Pit Repair- 0.100" x 1/2" dia. Pit Repair- 0.065" x 1 1/2" dia. Pit Repair- 0.045" x 1 1/2" dia. Pit Repair- 0.055" x 3/8" dia. (2)	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	19	#364 #365A #365B (P)C-19-1 (P)C-19-2	S S L S	Gouge Repair- 0.090" x 1/2" dia. Gouge Repair- 0.090" x 1/2" dia. Gouge Repair- 0.060" depth Gouge Repair- 0.105" 1/4" W x 1 1/8" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	20	#369 (P)C-20-1	S M	Gouge Repair- 0.105" x 1/2" dia. Weld Repair-(LF) Lack of Fusion	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	C	21	#371 (P)C-21-1	L	Gouge Repair- 0.060" depth	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	22	(P)C-22-1	S L	Gouge Repair- 0.090" 3/8" W x 1 3/4" L Pit Repair- 0.045" x 3/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	23	#372	L	GN Repair- 0.204" Remaining Plate Thk.	Patch plate NDE testing of repairs
Upper Dome	C	24	#366 #367 (P)C-24-1	S S	Pit Repair- 0.090" depth Pit Repair- 0.100" depth	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	25	(P)C-25-1	L L	Gouge Repair- 0.050" 3/16" W x 3" L Pit Repair- 0.050" x 1/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	26	(P)C-26-1	L M	Gouge Repair- 0.060" 1/4" W x 2" L Weld Repair- (UC) Undercut 0.050" depth	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	C	28	(P)C-28-1	S	Gouge Repair- 0.090" 1/8" W x 2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	29	(P)C-29-1	S	Gouge Repair- 0.110" 3/16" W x 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	31	(P)C-31-1 (P)C-31-2	S L S	Gouge Repair- 0.070" 3/16" W x 3/8" L Gouge Repair- 0.060" 3/16" W x 3/8" L Gouge Repair- 0.110" x 3/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	32	(P)C-32-1 (P)C-32-2 (P)C-32-3 #380 (P)C-32-4 (P)C-32-5	S S L M S	Gouge Repair- 0.095" 3/16" W x 2" L Gouge Repair- 0.088" 3/16" W x 2 1/2" L Gouge Repair- 0.065" 3/16" W x 1 1/2" L Gouge Repair- 0.175" 1/4" W x 1 1/2" L Gouge Repair- 0.090" x 1/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	33	(P)C-33-1 (P)C-33-2	S S	Gouge Repair- 0.120" x 3/8" dia. Gouge Repair- 0.085" x 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	34	(P)C-34-1 (P)C-34-2 (P)C-34-3	S S S S	Gouge Repair- 0.075" 3/16" W x 3/8" L Gouge Repair- 0.105" 1/2" W x 1" L Gouge Repair- 0.095" x 3/8" dia. Gouge Repair- 0.070" x 3/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	35	(P)C-35-1 (P)C-35-2 (P)C-35-3	S S S	Gouge Repair- 0.070" 1/4" W x 1/2" L Gouge Repair- 0.090" x 3/8" dia. Gouge Repair- 0.070" x 3/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs

Upper Dome	C	38	(P)C-38-1 (P)C-38-2	S L L	Gouge Repair- 0.075" 3/16" W x 3/4" L Gouge Repair- 0.060" x 3/8" dia. Gouge Repair- 0.065" x 3/16" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	40	(P)C-40-1 (P)C-40-2	L S	Gouge Repair- 0.060" 1/4" W x 3/4" L Gouge Repair- 0.075" x 3/16" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	41	(P)C-41-1	S	Gouge Repair- 0.075" x 3/16" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	42	#356 (P)C-42-1 (P)C-42-2	L S L	Plate Repair- 2" W x 2" L x 0.189" Thk. Gouge Repair- 0.085" 1/4" W x 3/4" L Gouge Repair- 0.065" x 3/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	C	45	(P)C-45-1 (P)C-45-2 (P)C-45-3 (P)C-45-4 (P)C-45-5 (P)C-45-6	S S x 3 S x 2 L x 3 M	Gouge Repair- 0.095" x 1/2" dia. Gouge Repair- 0.075" x 3/8" dia. (3) Gouge Repair- 0.110" x 1/2" dia. Gouge Repair- 0.060" 1/4" W x 3/4" L Weld Repair- (LF) Lack of Fusion	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	C	48	(P)C-48-1	L	Gouge Repair- 0.050" x 1/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	1	(P)D-1-1 (P)D-2-1	S x 3 S	Gouge Repair- 0.080" x 3/4" dia. (3) Gouge Repair- 0.070" x 3/16" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	2	(P)D-2-1	S	Gouge Repair- 0.080" 3/8" W x 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	3	(P)D-3-1 (P)D-3-2 (P)D-3-3	S x 2 M	Gouge Repair- 0.090" x 3/8" dia. (2) Weld Repair- (P) Porosity 0.080" depth	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs
Upper Dome	D	4	(P)D-4-2	S	Gouge Repair- 0.075" x 3/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	5	(P)D-5-1 #387	M L	Weld Repair- (UC) Undercut 2" 0.070" GN Repair- 0.203" Remaining Plate Thk.	Patch plate Repair Weld(s) NDE testing of repairs
Upper Dome	D	6	(P)D-6-1	M	Weld Repair - (UF) Underfill 1" L	Repair Weld(s) NDE testing of repairs
Upper Dome	D	7	(P)D-7-1	S x 2 L	Gouge Repair- 0.070" x 1/2" dia. (2) Gouge Repair- 0.055" x 3/16" W x 1 1/4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	9	(P)D-9-1	S L	Gouge Repair- 0.090" 3/16" W x 1" L Gouge Repair- 0.045" x 3/16" W x 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	10	#386B #386A (P)D-10-1	S M	Gouge Repair- 0.110" x 3/16" dia. Dent Repair- 0.140" depth	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	11	(P)D-11-1	L	Gouge Repair- 0.050" x 3/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	13	(P)D-13-1 (P)D-13-2	S S L	Gouge Repair- 0.090" x 1/2" dia. Gouge Repair- 0.070" x 3/8" dia. Gouge Repair- 0.065" x 3/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	14	(P)D-14-1 (P)D-14-2	L S	Gouge Repair- 0.065" 1/4" W x 2 1/2" L Gouge Repair- 0.080" 3/16" W x 3/4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	15	#385 (P)D-15-1	M	Dent Repair- 1 1/2" dia.	Patch plate NDE testing of repairs

Upper Dome	D	16	(P)D-16-1 (P)D-16-2	L L	Pit Repair- 0.050" x 1/4" dia. Gouge Repair- 0.050" x 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	17	(P)D-17-1	L	Gouge Repair- 0.045" x 1/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	18	(P)D-18-1 (P)D-18-2	S x 2 S	Gouge Repair- 0.085" x 1/2" dia. (2) Gouge Repair- 0.100" 3/16" W x 1 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	19	(P)D-19-1 (P)D-19-2	L L	Gouge Repair- 0.045" x 1/2" dia. Pit Repair- 0.050" x 3/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	20	(P)D-20-1 (P)D-20-2 (P)D-20-3 (P)D-20-4 #388 #388A #390A #390B	S S S S	Gouge Repair- 0.110" x 3/4" dia. Gouge Repair- 0.075" 3/16" W x 1 1/4" L Gouge Repair- 0.115" x 1/2" dia. Gouge Repair- 0.130" x 3/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	21	#393 (P)D-21-1 (P)D-21-2	S S x 2 L L	Gouge Repair- 0.075" x 3/8" dia. Gouge Repair- 0.095" x 3/8" dia. (2) Gouge Repair- 0.050" x 3/8" dia. Gouge Repair- 0.045" x 1/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	24	(P)D-24-1 #394C	M	Dent Repair- 0.100" depth	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	25	#394 (P)D-25-1 (P)D-25-2 (P)D-25-3	S M S	Gouge Repair- 0.100" 3/16" W x 2 3/4" L GN Repair- (UC) Undercut 0.090" x 4" L Pit Repair- 0.075" depth	Patch plate(s) for pits, gouges and GN as required NDE testing of repairs
Upper Dome	D	26	(P)D-26-1	L x 2	Gouge Repair- 0.060" x 1/2" dia. (2)	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	27	(P)D-27-1 (P)D-27-2	S S	Gouge Repair- 0.080" x 3/4" dia. Gouge Repair- 0.090" x 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	28	(P)D-28-1 (P)D-28-2	L S	Gouge Repair- 0.065" x 1/2" dia. Gouge Repair- 0.105" 3/16" W x 2 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	29	(P)D-29-1	L	Gouge Repair- 0.045" 1/8" W x 1" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	30	#395	L	Plate Repair- 3" W x 3" L x 0.203" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	31	(P)D-31-1 (P)D-31-2 (P)D-31-3 (P)D-31-4 #396	S L x 2 L S L	Gouge Repair- 0.080" x 3/8" dia. Gouge Repair- 0.065" x 3/8" dia. (2) Gouge Repair- 0.060" 1/4" W x 1" L Gouge Repair- 0.070" 5/8" W x 1 1/8" L Plate Repair- 3" W x 3" L x 0.198" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	32	(P)D-32-1	L L	Gouge Repair- 0.045" 1/8" W x 1" L Pit Repair- 0.050" x 1/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	33	(P)D-33-1 #397	L L	Gouge Repair- 0.065" 3/16" W x 1 1/4" L Plate Repair- 7" W x 7" L x 0.198" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	34	(P)D-34-1 (P)D-34-2	S L M	Gouge Repair- 0.070" 3/16" W x 1 1/2" L Gouge Repair- 0.060" x 1/2" dia. Weld Repair- (UC) Undercut 0.065" x 2" L	Patch plate(s) for pits and gouges as required Repair Weld(s) NDE testing of repairs

Upper Dome	D	35	(P)D-35-1 (P)D-35-2 #398	S x 4 L x 2 S	Gouge Repair- 0.095 " x 3/8" dia. (4) Gouge Repair- 0.060 " x 1/2" dia. (2) Gouge Repair- 0.095" 1/4" W x 2 1/4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	36	(P)D-36-1 (P)D-36-2	S S	Gouge Repair- 0.100" x 1/2" dia. Gouge Repair- 0.105" x 5/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	37	(P)D-37-1 (P)D-37-2 (P)D-37-3 #400	S S S L	Gouge Repair- 0.095" x 1/2" dia. Gouge Repair- 0.075" 3/8" W x 2 1/4" L Gouge Repair- 0.085" 3/16" W x 2 1/8" L Gouge Repair- 0.050" 3/16" W x 2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	38	(P)D-38-1	S	Gouge Repair- 0.075" x 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	45	(P)D-45-1	L	Gouge Repair- 0.065" 1/4" W x 3/4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	D	47	(P)D-47-1 (P)D-47-2 (P)D-47-3 (P)D-47-5 #382A #381 #382 #382C	S S S M L	Gouge Repair- 0.110" x 1/2" dia. Gouge Repair- 0.075" x 3/8" dia. Gouge Repair- 0.125" x 3/4" dia. Dent Repair- 0.225" depth Pit Repair- 0.050" depth	Patch plate(s) for pits, gouges and dents as required NDE testing of repairs
Upper Dome	D	48	(P)D-48-1	S S	Gouge Repairs- 0.100" x 1/2" dia. Gouge Repairs- 0.085" 3/16" W x 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	E	3		S	Gouge Repair- 0.110" 1/4" W x 3/4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	E	5		M	Hole Repair- 3/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	E	8	(P)E-8-1	M S - L	Weld Repair- (P) Porosity 5/32" dia. Plate Repair- Weld Seal Plate, not welded, just tacked 2" W x 8" L PL Pit Repair- 0.050" x 1/2" dia.	Patch plate(s) for pits and gouges as required Repair and complete Weld(s) NDE testing of repairs
Upper Dome	E	9	(P)E-9-1	M	Gouge Repair- 0.188" 1/4" W x 1 3/4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	E	10		L	Gouge Repair- 0.045" 1/4" W x 1" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	E	11		L	Gouge Repair- 0.050" 1/4" W x 1 1/4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	E	13	(P)E-13-3 (P)E-13-4	S S S x 2 L	Gouge Repair- 0.070" x 3/8" dia. Gouge Repair- 0.070" x 1" dia. Gouge Repair- 0.070" 1/4" W x 1 1/4" L (2) Gouge Repair- 0.060" x 1" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	E	17		L	Gouge Repair- 0.050" 1/8" W x 1 1/8" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Upper Dome	E	18		S	Gouge Repair- 0.125" 3/16" W x 3/8" L	Patch plate(s) for pits and gouges as required NDE testing of repairs

Upper Dome	E	19		M - M - S	GN Repair- 2" dia. (Nozzle is not welded, just tacked) Weld Repair- (UC) Undercut 0.220" x 1 1/2" L (Near thru hole) Gouge Repair- 0.125" 1/2" W x 1 1/4" L	Patch plate(s) for gouge and GN Repair Weld(s) NDE testing of repairs
Upper Dome	Top MW	1		M x 4 - M x 2	Weld Repair- (P) Porosity 5/32" Dia. (4) locations Weld Repair- (UC) Undercut 2" 0.080" (2)	Repair Weld(s) NDE testing of repairs
Shell Extension	E1	2	#268 (S)E1-2	L	GN Repair- 0.198" Remaining Plate Thk.	Patch plate NDE testing of repairs
Shell Extension	E1	4	#289 (S)E1-4	L	GN Repair- 0.191" Remaining Plate Thk.	Patch plate NDE testing of repairs
Shell Extension	E1	6	#278 (S)E1-6	L	GN Repair- 0.192" Remaining Plate Thk.	Patch plate NDE testing of repairs
Shell Extension	E2	2	#262 #263	S S	GN Repair- Remaining Plate Thk 0.180" GN Repair- Remaining Plate Thk 0.180"	Patch plates NDE testing of repairs
Shell Extension	E2	3	#264 #265 #266 #267 (P)E2-3-1	M M M S L	Dent Repair- 0.200" deep Dent Repair- 0.200" deep Dent Repair- 0.240" deep GN Repair- Remaining Plate Thk 0.153" Pit Repair- 0.050" x 3/8" dia.	Patch plate(s) NDE testing of repairs
Shell Extension	E2	7	#283 #284	L S	GN Repair- Remaining Plate Thk 0.181" GN Repair- Remaining Plate Thk 0.144"	Patch plates NDE testing of repairs
Shell Extension	E2	8	#281	S	GN Repair- Remaining Plate Thk 0.145"	Patch plate NDE testing of repairs
Shell Extension	E2	9	(P)E2-9-1	S x 2 S M	Pit Repairs- 0.090" x 1/4" dia (2) Pit Repair- 0.100" x 1/4" dia Dent Repair- 1" W x 2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell Extension	E2	10	#273 (P)E2-10-1	S	Gouge Repair- 0.160" Deep	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell Extension	E2	11	(P)E2-11-1	S	Pit Repairs- 0.070" 3/8" W x 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell Extension	E2	12	(P)E2-12-1	M	Dent Repair- 1 1/2" W x 3" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell Extension	E2	16	#275 #276 #277 (P)E2-16-1 (P)E2-16-2 (P)E2-16-3	M M M	Plate Repair- 12" W x 13" L x 0.150" Thk Dent Repair- 4" W x 2" L Plate Repair- 10" W x 10" L x 0.171" Thk	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell Extension	E3	3	(P)E3-3-1	S L	Gouge Repair- 0.130" 3/8" W x 2" L Pit Repair- 0.045" x 3/8" dia. (3)	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell Extension	E3	5	(P)E3-5-1	L	Gouge Repair- 0.045" 1/2" W x 1 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell Extension	E3	6	#282	M	Dent Repair- 0.150" Deep	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell Extension	E3	7	(P)E3-7-1	S	Pit Repair- 0.075" x 1" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell Extension	E3	11	(P)E3-11-1	M	Weld Repair - (P) Porosity 1/8"	Repair weld NDE testing of repairs

Shell Extension	E3	12	(P)E3-12-1	M	Weld Repair- (P) Porosity Leak in Telltale Channel	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell Extension	E3	14	(P)E3-14-1	M L	Weld Repair - (P) Porosity 5/32" Pit Repair- 0.065" x 1/4" dia	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell Extension	E3	15	#274 (P)E3-15-1	M	Plate Repair- 12" W x 25" L x 0.141" Thk	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell Extension	E4	2	(P)E4-2-2	S M	Gouge Repair- 0.080" x 3/8" dia. Dent Repair- 1 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell Extension	E4	4	#270 (P)E4-4-1	M	Dent Repair- 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell Extension	E4	5	#285A (P)E4-5-1	M	Dent Repair- 3/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell Extension	E4	9	(P)E4-9-1 (P)E4-9-2	M L	Weld Repair - (UC) Undercut 0.070" x 3/16" dia. Pit Repair- 0.050" x 3/8" dia.	Patch plate(s) for pit Repair weld NDE testing of repairs
Shell Extension	E4	13	(P)E4-13-1 (P)E4-13-2	M M	Hole Repair in Shell- 1/4" Dia Weld Repair- (P) Porosity 1/8"	Patch plate(s) for hole Repair weld NDE testing of repairs
Shell Extension	E4	15	#271 (P)E4-15-1	S	Plate Repair- 12" W x 4" L x 0.177" Thk	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell Extension	E4	16	(P)E4-16-2 (P)E4-16-3 (P)E4-16-4 (P)E4-16-5 #272	S S S S L	Pit Repair- 0.085" 1/8"W x 1 1/4" L Pit Repair- 0.090" 3/8"W x 1 1/4" L Pit Repair- 0.090" 3/8"W x 1/2" L Pit Repair- 0.085" 1/4"W x 3/4" L Plate Repair- 12"W x 4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	1	1	(P)1-1-1 (P)1-1-2 (P)1-1-3 (P)1-1-4	S S S M	Gouge Repair- 0.110" 3/8" W x 1" L Gouge Repair- 0.085" 3/16" W x 1 1/4" L Pit Repair- 0.080" x 1/2" dia Weld Repair- (LF) Lack of Fusion	Patch plate(s) for pits and gouges as required Repair weld NDE testing of repairs
Shell	1	2	(P)1-2-1	S	Gouge Repair- 0.125" 3/8" W x 1 3/4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	1	4	(P)1-4-1	M	Weld Repair- (P) Porosity 3/16" dia.	Repair weld NDE testing of repairs
Shell	1	6	#189 (S)1-6	L	Pit Repair- 0.050" x 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	1	8	(P)1-8-1 (P)1-8-2	M M M M	Weld Repair - (UC) Undercut 0.050" x 3/16" dia. (2) Weld Repair - (UC) Undercut 0.080" x 1/4" dia. Weld Repair - (UC) Undercut 0.050" x 1/4" dia.	Repair welds NDE testing of repairs
Shell	1	9	(P)1-9-1	M	Weld Repair - (LF) Lack of Fusion	Repair weld NDE testing of repairs
Shell	1	11	#210 (S)1-11	L	Gouge Repair- 0.050" depth	Patch plate(s) for pits and gouges as required NDE testing of repairs

Shell	1	12	#169 (P)1-12-1	L	Gouge Repair- 0.060" x 1/4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	1	16	(P)1-16-1	L	Gouge Repair- 0.050" x 1/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	2	1		M	Weld Repair- (UC) Undercut 0.060" x 1/2" L	Repair weld NDE testing of repairs
Shell	2	2	(P)2-2-1	L	Gouge Repair- 0.045" x 3/4" L x 1/4" W	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	2	8	(P)2-8-1 #226 #226A (P)2-8-2	M L L	Weld Repair - (UF) Underfill 0.090" x 3/16" dia. Pit Repair- 0.050" depth Pit Repair- 0.050" depth	Patch plate(s) for pits and gouges as required Repair weld NDE testing of repairs
Shell	2	9	(P)2-9-1	M	Weld Repair- (LF) Lack of Fusion 3/16" L	Repair weld NDE testing of repairs
Shell	2	11	#209 (P)2-11-1 #209A	M L	Weld Repair- (UC) Undercut 0.060" x 1 1/4" L Gouge Repair- 0.045" depth	Patch plate(s) for pits and gouges as required Repair weld NDE testing of repairs
Shell	2	12	(P)2-12-1 #170 (S)2-12	M L	Weld Repair- (P) Porosity 5/32" dia. Plate Repair- 4" W x 2" L x 0.205" Thk.	Patch plate(s) for pits and gouges as required Repair weld NDE testing of repairs
Shell	2	13	#140 (P)2-13-1 (P)2-13-2	M x 2	Weld Repair - (P) Porosity 5/32" Dia. (2)	Repair weld NDE testing of repairs
Shell	2	14	#134 (P)2-14-1	S	Plate Repair- 1" W x 2" L x 0.171" Thk	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	2	16	(P)2-16-1	M	Weld Repair- (UC) Undercut 0.060" x 1/4" dia.	Repair weld NDE testing of repairs
Shell	3	3	#112 (S)3-3	L	Plate Repair- 0.195" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	3	5	(P)3-5-1	S	Gouge Repair- 0.075" x 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	3	10	(P) 3-10-1	M M	Weld Repair - (UC) Undercut Weld Repair- (UF) Underfill	Repair welds NDE testing of repairs
Shell	3	12	(P)3-12-1	M M	Weld Repair- (G) Gouge 0.130" x 3/8" dia. Weld Repair- (P) Porosity 5/32" dia.	Repair welds NDE testing of repairs
Shell	3	14	(P)3-14-1 (P)4-13-2	M M S	Weld Repair- (UF) Underfill 0.090" x 3" L Weld Repair- (UF) Underfill 0.090" x 8" L Weld Repair- (G) Gouge x 1/2" dia.	Repair welds NDE testing of repairs
Shell	4	1	# 237 (S)4-1	S	Gouge Repair- 0.120" 1" W x 4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	4	4	#109 (P)4-4-1	S	GN Repair- 0.177" Remaining Plate Thk	Patch plates NDE testing of repairs
Shell	4	9	# 212 (P)4-9-1	M	Weld Repair- (UC) Undercut 0.110" x 1.5" L	Repair welds NDE testing of repairs
Shell	4	13	(P)4-13-1	M M	Weld Repair- (SI) Slag Inclusion Weld Repair- (LF) Lack of Fusion 4" L	Repair welds NDE testing of repairs

Shell	5	3	#91 (P)5-3-1	S	GN Repair- 0.170" Remaining Plate Thk.	Patch plates NDE testing of repairs
Shell	5	4	#123 (S)5-4	L	GN Repair- 0.201" Remaining Plate Thk.	Patch plates NDE testing of repairs
Shell	5	6	#190 (S)5-6	L	GN Repair- 0.203" Remaining Plate Thk.	Patch plates NDE testing of repairs
Shell	5	7	#193 (S)5-7	L	GN Repair- 0.201" Remaining Plate Thk.	Patch plates NDE testing of repairs
Shell	5	8	(P)5-8-1 - #213 (P)5-8-2	M M L M	Weld Repair- (UC) Undercut 0.070" x 3" L Weld Repair- (UC) Undercut 0.090" x 4" L Plate Repair- 0.202" x 1" dia. Weld Repair- (UC) Undercut 0.050" x 1/2" L	Repair welds NDE testing of repairs
Shell	5	9	(P)5-9-1	S	Pit Repair- 0.080" 1/4" W x 3/4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	5	12	(P)5-12-1	S	Pit Repair- 0.075" 3/16"W x 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	5	13	#136 (S)5-13	L	Plate Repair- 2" W x 0.197" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	5	14		M	Weld Repair- (UF) Underfill 0.080" depth	Repair welds NDE testing of repairs
Shell	5	15	(P)5-15-1 #77 (P)5-15-2	M L	Weld Repair - (UF) Underfill 0.080" depth Plate Repair- 9" L x 0.060" Thk.	Patch plates NDE testing of repairs
Shell	5	16	#261 (P)5-16-1	S M	GN Repair- 0.160" Remaining Plate Thk. Weld Repair- (UF) Underfill 0.100" depth	Patch plates Repair welds NDE testing of repairs
Shell	6	1	(P)6-1-1	M	Weld Repair- (UC) Undercut 0.050" x 1/4" dia.	Repair welds NDE testing of repairs
Shell	6	6	(P)6-6-1	L	Pit Repair- 0.045" x 1/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	6	8	(P)6-8-1 (P)6-8-2 (P)6-8-3	M M M M M	Weld Repair- (UC) Undercut 0.050" x 1/2" L Weld Repair- (UC) Undercut 0.070" x 1/2" L Weld Repair- (UC) Undercut 0.050" x 1/2" L Weld Repair- (UC) Undercut 0.050" x 1/2" L Weld Repair- (UC) Undercut 0.050" x 1/2" L	Repair welds NDE testing of repairs
Shell	6	9	(P)6-9-1	M	Weld Repair- (UC) Undercut 0.060" x 1/2" L	Repair welds NDE testing of repairs
Shell	7	8	(P)7-8-1	M x 7 - - - M	Weld Repair - (UC) Undercuts Listed: 0.070" x 4" L (3) 0.050" to 0.060" x 1 1/2" L (3) 0.040" x 3" L 0.050 x 1" L	Repair welds NDE testing of repairs
Shell	7	11	#166 (P)7-11-1	L	Plate Repair- 0.205" x 1 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	7	14	(P)7-14-1 (P)7-14-2	M	Weld Repair- (P) Porosity 3/32" Dia.	Repair welds NDE testing of repairs
Shell	7	15	(P)7-15-1	S	Weld Repair- (G) Gouge 0.080" x 1/2" dia.	Repair welds NDE testing of repairs

Shell	8	1	#255 (P)8-1-1	L M	Pit Repair- 0.060" depth Weld Repair- (UC) Undercut 0.060" x 1/4" dia.	Patch plates Repair welds NDE testing of repairs
Shell	8	3	#67A (S)8-3	M	Weld Repair- (UC) Undercut 0.125" x 5" L	Repair welds NDE testing of repairs
Shell	8	5	(P)8-5-1	L	Pit Repair- 0.045" x 1/8" W x 2 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	8	6	#153 (P)8-6-1	L	Plate Repair- 6" W x 5" L x 0.186" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	8	8	(P)8-8-1	M x 3 - M	Weld Repair- (UC) Undercut 0.050" x 1/4" dia. (3) Weld Repair- (UC) Undercut 0.100" x 1/4" dia.	Repair welds NDE testing of repairs
Shell	8	12	#167 (P)8-12-1	S	Plate Repair- 4" W x 5" L x 0.153" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	9	1	(P)9-1-1	L	Pit Repair- 0.055" x 3/16" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	9	5	(P)9-5-1	L	Pit Repair- 0.045" x 1/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	9	8	(P)9-8-1 (P)9-8-2	M L S L M x 5	Weld Repair- (UC) Undercut 0.100" x 1/4" dia. Pit Repair- 0.060" 3/8"x 1/2" Pit Repair- 0.080" 3/16"x 1/2" Pit Repair- 0.050" 3/16"x 1/2" Weld Repair- (UC) Undercut 0.050" - 0.080" x 1/2" dia. (5)	Repair welds Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	9	11	#165 (P)9-11-1	M	Plate Repair- 0.093" Remaining Plate Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	10	3	(P)10-3-1	M	Weld Repair- (UC) Undercut 0.110" x 3/4" L	Repair welds NDE testing of repairs
Shell	10	8	(P)10-8-2 (P)10-8-1	S M L M	Gouge Repair- 0.070" x 3/8" dia. Weld Repair- (UC) Undercut- 0.040" x 4" L Pit Repair- 0.050" x 1/2" W x 3/16" L Weld Repair- (UC) Undercut- 0.050" x 1/2" L	Repair welds Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	10	9	(P)10-9-1	M	Weld Repair- (UC) Undercut 0.060" x 1/2" dia.	Repair welds NDE testing of repairs
Shell	10	14	#137A #137B #137C (P)10-14-1	L L L	Plate Repair- 0.196" Thk. Plate Repair- 0.203" Thk. Plate Repair- 0.205" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	10	16	#76 (P)10-16-3	S M	Plate Repair- 6" W x 9" L x 0.175" Thk. Weld Repair- (UC) Undercut 0.050" depth	Repair welds Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	11	6	(P)11-6-1 (P)11-6-2 (P)11-6-3	M S x 4 L	Weld Repair- (P) Porosity 3/16" dia. Pit Repair- 0.070" x 1/2" dia (4) Pit Repair- 0.055" x 3/4" L	Repair welds Patch plate(s) for pits and gouges as required NDE testing of repairs

Shell	11	7	(P)11-7-1	M	Weld Repair- (UC) Undercut 0.040" x 6" L	Repair welds NDE testing of repairs
Shell	11	8	(P)11-8-1 (P)11-8-2 (P)11-8-4 (P)11-8-3	M x 3 M x 2 M x 2 L	Weld Repair- (UC) Undercut 0.050" x 8" L Weld Repair- (UC) Undercut 0.070" depth Weld Repair- (UC) Undercut 0.050" depth Gouge Repair- 0.060" x 1/4" dia.	Repair welds Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	11	14	#81 (P)11-14-1	L	Plate Repair- 0.186" Remaining Plate Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	12	1	#257 (S)12-1	L	GN Repair- 0.196" Remaining Plate Thk.	Patch plate(s) for GN NDE testing of repairs
Shell	12	5	#113 (S)12-5	L	GN Repair- 0.197" Remaining Plate Thk.	Patch plate(s) for GN NDE testing of repairs
Shell	12	6	#155 (S)12-6 (P)12-6-1 (P)12-6-2	L - M M M L	GN Repair- 0.204" Remaining Plate Thk. - Weld Repair- (LF) Lack of Fusion 3/8" L & 1/8" L Weld Repair- (UC) Undercut 0.110" x 1/2" L Pit Repair- 0.045" x 3/8" W x 1 1/2" L	Patch plate(s) for GN Repair welds Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	12	7	#180 #179 (P)12-7-1	L L	Gouge Repair- 0.060" depth GN Repair- 0.203" Remaining Plate Thk.	Patch plate(s) for GN, pits and gouges as required NDE testing of repairs
Shell	12	8	(P)12-8-1 (P)12-8-2	M x 2	Weld Repair- (UC) Undercut 0.050" depth (2)	Repair welds NDE testing of repairs
Shell	12	9	#225 (P)12-9-1	L M	GN Repair- 0.202" Remaining Plate Thk. Weld Repair- (UC) Undercut 0.060" x 1/2" dia.	Patch plate(s) for GN Repair welds NDE testing of repairs
Shell	12	12	(P)12-12-1	S	Pit Repair- 0.075" 1/4"W x 1 1/4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	13	2	(P)13-2-1 (P)13-2-2	M L	Weld Repair- (UC) Undercut 0.070" x 1/2" dia. Pit Repair- 0.050" x 1/2" dia.	Patch plate(s) for pits Repair welds NDE testing of repairs
Shell	13	4	(P)13-4-1 (P)13-4-2 (P)13-4-3 (P)13-4-4	M M L L	Weld Repair- (LF) Lack of Fusion 1 1/2" L Weld Repair- (UC) Undercut 0.070" x 4" L Pit Repair- 0.045" x 1/4" dia. Pit Repair- 0.050" x 3/8" dia.	Patch plate(s) for pits Repair welds NDE testing of repairs
Shell	13	7	(P)13-7-1 (P)13-7-2	M L	Weld Repair - (UC) Undercut 0.090" x 3/8" dia. Pit Repair- 0.045" x 3/16" dia.	Patch plate(s) for pits Repair welds NDE testing of repairs
Shell	13	8	(P)13-8-1	M	Weld Repair- (UC) Undercut 0.050" depth	Repair welds NDE testing of repairs
Shell	14	1		M	Weld Repair- (UC) Undercut 0.050" depth	Repair welds NDE testing of repairs
Shell	14	6	(P)14-6-1 (P)14-6-2 (P)14-6-3 (P)14-6-4	M S M x 2	Weld Repair- (LF) Lack of Fusion 0.050" dia. Pit Repair- 0.070" x 1/4" dia. Weld Repair- (UC) Undercut 0.090" x 1/2"L (2)	Repair welds NDE testing of repairs
Shell	14	11	(P)14-11-1	L	Pit Repair- 0.046" x 3/4" W x 1 1/2" L	Patch plate(s) for pits and gouges as required

						NDE testing of repairs
Shell	15	4	#114 (P)15-4-1	S	Plate Repair- 0.157" Remaining Plate Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	15	10	(P)15-10-1	M M	Plate Repair- Lead Arc Out / Copper Contamination 1/8" & 1/4" Dia (2)	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	15	11	#200A (S)15-11	S	Gouge Repair- 0.070" depth	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	16	7	#178 (P)16-7-1	M M	Weld Repair- (P) Porosity 0.110" depth Weld Repair- (UC) Undercut 0.090" x 4" L	Repair welds NDE testing of repairs
Shell	16	13	#142 (P)16-13-1	L	Plate Repair- 3" W x 3" L x 0.189" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	16	14	#133 (S)16-14	L	Plate Repair- 5" W x 0.185" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	16	15	#69 (P)16-15-2	L	Plate Repair- 4" x 7" x 0.187" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	17	4	#124 (S)17-4	L x 5	Pit Repair- 0.040" x 1/8" to 3/8" dia. (5)	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	17	6	#176 #177 (P)17-6-1	S x 2	Pit Repair- 0.070" x 3/8" dia. (2)	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	17	11	(P)17-11-1	M	Weld Repair- (UC) Undercut 0.035" x 1/2" L	Repair welds NDE testing of repairs
Shell	17	15	#132 (P)17-15-1	S	Plate Repair- 0.177" Remaining Plate Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	18	6	#175 (P)18-6-1	S	Gouge Repair- 0.095" 3/8" W x 3/4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	18	8	(P)18-8-1	M	Weld Repair- (P) Porosity 0.110" x 1/2" dia.	Repair welds NDE testing of repairs
Shell	18	9	(S)18-9-1	M	Weld Repair- (UC) Undercut 0.080" x 1 1/2" L	Repair welds NDE testing of repairs
Shell	18	15	#79 (P)18-15-1	S	Plate Repair- 0.190" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	19	2	#95 #62 (P)19-2-1	S M	GN Repair- 0.149" Remaining Plate Thk. Weld Repair- (G) Gouge 0.050" x 5" L	Patch plate(s) for GN NDE testing of repairs
Shell	19	4	#122 (P)19-4-1	S	GN Repair- 0.151" Remaining Plate Thk.	Patch plate(s) for GN NDE testing of repairs
Shell	19	5	#158 (S)14-5	L	GN Repair- 0.199" Remaining Plate Thk.	Patch plate(s) for GN NDE testing of repairs
Shell	19	6	#197 (P)19-6-1	S L	GN Repair- 0.154" Remaining Plate Thk. Pit Repair- 0.050" x 3/8" dia.	Patch plate(s) for GN NDE testing of repairs
Shell	19	8	(P)19-8-1	S	Pit Repair- 0.070" x 1/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	19	9	#214 (P)19-9-1	S	GN Repair- 0.155" Remaining Plate Thk.	Patch plate(s) for GN NDE testing of repairs

Shell	19	16	#229 (S)19-16	L	GN Repair- 0.197" Remaining Plate Thk.	Patch plate(s) for GN NDE testing of repairs
Shell	20	1	(P)20-1-1	M	Weld Repair- (UF) Underfill 0.100" depth	Repair welds NDE testing of repairs
Shell	20	7	(P)20-7-1 (P)20-7-2	M x 2 M	Weld Repair- (P) Porosity 5/32" (2) Weld Repair - (UF) Underfill 0.060" x 1/2"	Repair welds NDE testing of repairs
Shell	20	8	#218A,B,C (P)20-8-1 (P)20-8-2 (P)20-8-3 (P)20-8-4	L x 3 M L L M	Gouge Repair- 0.060 depth (3) Weld Repair- (P) Porosity 0.110" x 1/2" Dia Pit Repair- 0.045" x 3/16" W x 22" L Pit Repair- 0.045" x 1/2" dia. Weld Repair- (UC) Undercut 0.050" depth	Patch plate(s) for pits Repair welds NDE testing of repairs
Shell	20	12	#201 (P)20-12-1	L	Plate Repair- 1" W x 2" L x 0.110" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	20	15	#78 (P)20-15-2	L	Plate Repair- 1" W x 2" L x 0.198" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	21	1	#239 (S)21-1	L	Gouge Repair- 0.050" depth	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	21	6	(P)21-6-1	M	Gouge Repair- 0.095" x 3/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	21	8	(P)21-8-2 #217A #217B #217C #217D (P)21-8-1	M S S L x 2	Weld Repair- (UC) Undercut 0.070" x 1" L Pit Repair- 0.110" depth Pit Repair- 0.100" depth Pit Repair- 0.050" x 1/8" W x 3/4" L (2)	Patch plate(s) for pits Repair welds NDE testing of repairs
Shell	21	12	(P)21-12-1	L	Gouge Repair- 0.063" 3/16"x 1"	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	22	2	(P)22-2-1	L	Pit Repair- 0.045" x 3/16" W x 1 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	22	9	(P)22-9-1 (P)22-9-2	M M	Weld Repair - (UC) Undercut 0.080" x 1/4" dia. Weld Repair - (UC) Undercut 0.070" x 1/4" dia.	Repair welds NDE testing of repairs
Shell	22	13	#141 (P)22-13-1	S	Plate Repair- 0.141" Remaining Plate Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	22	14	#104 (P)22-14-1	S	Plate Repair- 1" W x 2" L x 0.137" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	23	4	(P)23-4-1	L	Pit Repair- 0.050" x 3/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	23	5	#143AB	L	Pit Repair- 0.050" x 3/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	23	13	#138A (P)23-14-1	L	Plate Repair- 2" W x 5" L x 0.188" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	24	5	(P)24-5-1 (P)24-5-2	L x 2	Gouge Repair Pit Repair- 0.045" x 3/8" dia. (2)	Patch plate(s) for pits and gouges as required NDE testing of repairs

Shell	24	7	(P)24-7-1 (P)24-7-2	L x 2	Pit Repair- 0.050" x 3/8" dia. (2)	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	24	14	(P)24-14-1 (P)24-14-3 #131 #139A #139B	M S S - L	Weld Repair- (LF) Lack of Fusion Plate Repair- 0.139" Plate Thk Plate Repair- 0.172" Plate Thk. - Plate Repair- 0.200" Plate Thk.	Patch plate(s) for pits Repair welds NDE testing of repairs
Shell	25	7	#194 (P)25-7-1	S	Plate Repair- 5" W x 6" L x 0.178" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	25	8	(P)25-8-1 (P)25-8-2	M S	Weld Repair- (UC) Undercut 0.100" x 3/8" dia. Pit Repair- 0.070" x 3/16" dia.	Patch plate(s) for pits Repair welds NDE testing of repairs
Shell	25	13	#164 (P)25-13-2	S	Plate Repair- 5" W x 9" L x 0.175" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	26	1	#243A #243B	L L	Pit Repair- 0.050" depth Pit Repair- 0.050" depth	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	26	8	(P)26-8-1	L x 2	Pit Repair- 0.045" x 3/8" dia. (2)	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	26	11	#203 (P)26-11-1	L	Plate Repair- 2" W x 0.181" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	26	15	#70 #71 #105 #106 #107 (P)26-15-1 (P)26-15-2 (P)26-25-3	S S S L L	Plate Repair- 6" W x 6" L x 0.177" to 0.186" Thk. (4) - - Plate Repair- 0.203" Remaining Plate Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	26	16	(P)26-16-3	M	Weld Repair - (UF) Underfill 1/16" dia.	Repair welds NDE testing of repairs
Shell	27	3	(P)27-3-1 (P)27-3-2	M M	Weld Repair- (LF) Lack of Fusion 1/2" Weld Repair- (UC) Undercut 0.115" x 1/2" dia.	Repair welds NDE testing of repairs
Shell	27	4	#130 (S)27-4 (P)27-4-1	L - M	GN Repair- 0.203" Thk. - Weld Repair- (UC) Undercut 0.075" x 1/2" dia.	Patch plate(s) for GN Repair welds NDE testing of repairs
Shell	27	5	(P)27-5-1	M	Weld Repair- (UC) Undercut 0.070" x 2" L	Repair welds NDE testing of repairs
Shell	27	6	(P)27-6-1 #171 (S)27-6	L L	Pit Repair- 0.060" 3/16" W x 3/4" L GN Repair- 0.230" Remaining Plate Thk.	Patch plate(s) for GN, pits and gouges as required NDE testing of repairs
Shell	27	8	#227 (P)27-9-1	L	GN Repair- 0.187" Remaining Plate Thk.	Patch plate(s) for GN NDE testing of repairs
Shell	27	12	#159 #161 (P)27-12-2 (P)27-12-4	S S M	Plate Repair- 0.170" Plate Thk. Plate Repair- 0.164" Plate Thk. Weld Repair- (G) Arc Gouge 0.070" depth	Patch plate(s) for pits Repair welds NDE testing of repairs

Shell	27	13	#163 (P)27-13-1 (P)27-13-2	S L	Plate Repair- 0.172" Plate Thk. Pit Repair- 0.060" 1/4" W x 1 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	27	14	#73 #73A (S)27-14	S S	Plate Repair- 6" W x 0.157" Plate Thk. Plate Repair- 9" W x 9" L x 0.115" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	27	15	#54 #74 (P)27-15-4 (P)27-15-1	S L	Plate Repair- 8" W x 0.137" Plate Thk. Plate Repair- 6" W x 13" L x 0.186" Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	27	16	#240 (P)27-16-1	L	GN Repair- 0.199" Remaining Plate Thk.	Patch plate(s) for GN NDE testing of repairs
Shell	28	3	#84 (P)28-3-1	S	Plate Repair- 3" W x 0.180" Plate Thk.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Shell	28	13	#160 (P)28-13-1 (P)28-13-2	S M M	Plate Repair- 6" W x 15" L x 0.083" Thk. Weld Repair- (LF) Lack of Fusion 1/4" L Weld Repair- (UC) Undercut 0.085" x 6" L	Patch plate(s) for pits and gouges as required Repair welds NDE testing of repairs
Shell	28	14	#101 #102 (P)28-14-1 (P)28-14-2	S - M M	Plate Repair- 20" W x 37" L x 0.167" to 0.174" Thk. Weld Repair- (LF) Lack of Fusion 1/4" L Weld Repair- (P) Porosity 1/4" dia.	Patch plate(s) for pits and gouges as required Repair welds NDE testing of repairs
Lower dome	C4	1	(P)C4-1-1	M	Weld Repair- (G) Gouge 0.050" x 2" L	Repair welds NDE testing of repairs
Lower dome	C4	20	#42A	L	Pit Repair- 0.060" x 1/4"	Patch plate(s) for pits and gouges as required NDE testing of repairs
Lower dome	C4	32	(P)C4-32-1 (S)C4-32	M L L	Weld Repair- (UC) Undercut 0.070" Pit Repair- 0.060" x 3/8" dia. Pit Repair- 0.050" x 1/4" dia.	Patch plate(s) for pits and gouges as required Repair welds NDE testing of repairs
Lower dome	C4	34	(P)C4-34-1 (P)C4-34-2 (P)C4-34-3	M M M M L x 2	Weld Repair- (UC) Undercut 0.070" x 1/2" L Weld Repair- (UF) Underfill 1/4" L Weld Repair- (UC) Undercut 0.060" x 1/2" L Weld Repair- (UC) Undercut 0.050" Gouge Repair- 0.060"	Patch plate(s) for pits and gouges as required Repair welds NDE testing of repairs
Lower dome	C4	35	(P)C4-35-1	M	Weld Repair- (UC) Undercut 0.050" x 1" L	Repair welds NDE testing of repairs
Lower dome	C4	52	(P)C4-52-1	L	Pit Repair- 0.050" x 1/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Lower dome	C3	1	(P)C3-1-1 (P)C3-1-2	M x 2 L	Weld Repair- (UC) Undercut 1" L Gouge Repair- 0.050" 3/16" W x 1" L	Patch plate(s) for pits and gouges as required Repair welds NDE testing of repairs

Lower dome	C3	2	#235 #234	S L M	GN Repair- Remaining Plate Thk 0.152" GN Repair- Remaining Plate Thk 0.187" Weld Repair- (UC) Undercut 0.060"	Patch plate(s) for GN, pits and gouges as required Repair welds NDE testing of repairs
Lower dome	C3	19	#43 #43A (P)C3-19-1 (P)C3-19-2	S S L	Gouge Repair- 0.080" 3/16" x 1 1/2" L Gouge Repair- 0.095" x 1/2" dia Gouge Repair- 0.060" x 1/2" dia	Patch plate(s) for pits and gouges as required NDE testing of repairs
Lower dome	C3	21	#41 #41B	M S	Plate Repair- Tack Weld 2" L Gouge Repair- 0.080" 3/16" x 2"L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Lower dome	C3	22	#41A (P)C3-22-1	S	Gouge Repair- 0.080" 3/16" x 1 3/4" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Lower dome	C3	24	(P)C3-24-1	L	Pit Repair- 0.045" x 3/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Lower dome	C3	29	(P)C3-29-1	L	Pit Repair- 0.050" x 3/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Lower dome	C3	32	(P)C3-32-1 #33 (P)C3-32-2 (P)C3-32-3	M S S x 2	GN Repair-(UC) Undercut 0.090" Comp. Cir. Gouge Repair- 0.090" x 1/4" dia Gouge Repair- 0.070" x 3/16" dia (2)	Patch plate(s) for GN, pits and gouges as required NDE testing of repairs
Lower dome	C3	34	(P)C3-34-1 (P)C3-34-2	M M S x 2 L	GN Repair- (UC) Undercut 1 1/2" L x 0.060" depth (2) Gouge Repair- 0.070" 1/4" W x 1/2" L (2) Pit Repair- 0.050" x 3/16" dia.	Patch plate(s) for GN, pits and gouges as required NDE testing of repairs
Lower dome	C3	36	(P)C3-36-1	M	GN Repair-(UC) Undercut 2" L x 0.050" depth	Patch plate(s) for GN NDE testing of repairs
Lower dome	C3	49	#37 (P)C3-49-2	M S	Weld Repair- (UC) Undercut 0.055" x 2" L Gouge Repair- 0.085" depth	Repair welds Patch plate NDE testing of repairs
Lower dome	C3	50	#37A #37B	L L	Gouge Repair- 0.045" x 3/8" dia. Gouge Repair- 0.060" x 3/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Lower dome	C3	51	#39 #39A (P)C3-51-1	S S - L L	GN Repair- Remaining Plate Thk 0.146" Gouge Repair- 0.070" x 3/16" dia. - Gouge Repair- 0.050" x 3/8" dia. Gouge Repair- 0.060" x 3/8" dia	Patch plate(s) for GN, pits and gouges as required NDE testing of repairs
Lower dome	C3	54	#38A	L	Gouge Repair- 0.060" x 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Lower dome	C3	66	(P)C3-66-1	L	Pit Repair- 0.050" x 3/8" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Lower dome	C2	8	#21 (S)C2-8	M	Weld Repair- 6" L x 0.050" depth	Repair welds NDE testing of repairs

Lower dome	C2	15	#16 #17 (P)C2-15-1 (P)C2-15-2	M M	Weld Repair- (UC) Undercut 4" W x 4" L Dent Repair- 1 3/4" W x 2 1/2" L	Repair welds Patch plate NDE testing of repairs
Lower dome	C2	16	#19 (P)C2-16-1	M	Dent Repair- 3" dia.	Patch plate NDE testing of repairs
Lower dome	C2	18	(P)C2-18-1	L	Pit Repair- 0.050" 1/4" W x 1 3/8" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Lower dome	C2	31	(P)C2-31-1	M	Weld Repair- (UC) Undercut 0.055" x 6" L	Repair welds NDE testing of repairs
Lower dome	C2	34	(P)C2-34-1	M	Weld Repair- (UC) Undercut 1/2" L	Repair welds NDE testing of repairs
Lower dome	C2	35	(P)C2-35-1	L	Pit Repair- 0.050" x 1/4" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Lower dome	C2	48	#248A (P)C2-48-1	S	Gouge Repair- 0.120" 1/4"W x 2 1/2" L	Patch plate(s) for pits and gouges as required NDE testing of repairs
Lower dome	C2	64	(P)C2-64-1	L	Pit Repair- 0.045" x 1/2" dia.	Patch plate(s) for pits and gouges as required NDE testing of repairs
Lower dome	C1	3	#12 (P)C1-3-1	M	Weld Repair- (UF) Underfill 2 1/2" L	Repair welds NDE testing of repairs
Lower dome	C1	10	#13 (P)C1-10-1	M	Weld Repair- (UF) Underfill 1" L	Repair welds NDE testing of repairs
Lower dome	C1	11	#14 (P)C1-11-1	M	Weld Repair- (UF) Underfill 1" L	Repair welds NDE testing of repairs
Lower dome	C1	13	#4 (S)C1-13	L	Plate Repair- 4" W x 4" L x 0.193" Thk.	Patch plate NDE testing of repairs
8" Slop Line				M	Tank Nozzle Piping failed pressure test	Remove piping sleeve and replace with new sleeve NDE testing of repairs Hydrotest new sleeve liner
¾" Sample Line - # (1)				M	Tank Sample Lines / Piping failed pressure test	Remove corroded and leaking piping and replace with new piping NDE testing of repairs Hydrotest new piping
¾" Sample Line - # (2)				M	Tank Sample Lines / Piping failed pressure test	Remove corroded and leaking piping and replace with new piping NDE testing of repairs Hydrotest new piping
¾" Sample Line - # (3)				M	Tank Sample Lines / Piping failed pressure test	Remove corroded and leaking piping and replace with new piping NDE testing of repairs

						Hydrotest new piping
¾" Sample Line - # (4)				M	Tank Sample Lines / Piping failed pressure test	Remove corroded and leaking piping and replace with new piping NDE testing of repairs Hydrotest new piping
¾" Sample Line – Bundle Insert Section				M	Tank Sample Lines / Piping failed pressure test	Remove corroded and leaking piping and replace with new piping NDE testing of repairs Hydrotest new piping

Note(s):

1. Typical repair plate is 6" dia. X ¼" thk, A36 carbon steel.
2. Where one or more repair locations are adjacent to one another, a larger plate will be selected to cover all of the affected area(s), extending at as minimum of 1" past the edge of all repair locations.
3. The tank is located underground and there is no way to determine the back side of the plate is in a safe and gas free environment. WGS will drill a ¼" dia. hole for gas testing on all repairs that could provide sufficient back wall surface heating to ignite any hydrocarbons. This is a safety requirement since hydrocarbons have been found in contact with the back wall surfaces in the past tanks. The test port will be located so the new patch plate will cover the test port location.
4. NDE Testing and Inspection –
    a. A visual inspection will be made on all repairs.
    b. Leak / Vacuum box / Pressure testing will be performed on all applicable repairs where the joint or repair configuration will allow testing.
    c. Magnetic Particle (MT) or Dye Penetrant testing will be preformed on all repairs where leak or pressure testing could not be performed due to configuration.
5. All integral structural repairs made to the pressure retaining components will have material test reports provided in the final repair report. All materials shall be marked with the applicable MTR heat numbers for proper identification.

TANK 5 IS NOT SUITABLE FOR SERVICE UNTIL ALL ITEMS LISTED UNDER THE MANDATORY / IMMEDIATE REPAIRS SECTION HAVE BEEN SATISFACTORILY REPAIRED AND REINSPECTED.

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

A WILLBROS COMPANY

Technical Data & Submittal for Project:

Project Title: CLEAN, INSPECT, AND REPAIR STORAGE TANKS
Location: PEARL HARBOR NAVAL STATION, OAHU, HI
Task Order No.: N62583-09-D-0132/0003
WGS Project Number: 54118
Equipment: Tank 5

APPENDIX A
NON-DESTRUCTIVE TESTING DATA
TEST AND PROJECT DATA

Rev	Date	Description	Reviewed	Approved
P	11/18/10	Preliminary - For Info	RC	TDA
A	11/22/10	Draft Data – For Info	RC	TDA
B	4/2/11	For Review and Approval	JS	TDA
0				
1				
2				
3				

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

A WILLBROS COMPANY

APPENDIX A

NON-DESTRUCTIVE TESTING DATA
Section A-1

Rev	Date	Description	Reviewed	Approved
P	11/18/10	Preliminary - For Info	RC	TDA
A	11/22/10	Draft Data – For Info	RC	TDA
B	4/2/11	For Review and Approval	JS	TDA
0				
1				
2				
3				

STATE OF THE ART PRODUCTS & SERVICES
FOR NON-DESTRUCTIVE TESTING

LOW FREQUENCY ELECTROMAGNETIC TECHNIQUE

INSPECTION REPORT

OF

TANK # 5

AT

RED HILL

IN

HONOLULU, HI.

BY

TESTEX, INC.

INSPECTION DATES: AUGUST 18, 2010 - SEPTEMBER 24, 2010

AUTHOR: LARRY MCDOUGAL

REVIEWED BY: PETE BERNARDING

REVIEW DATE: OCTOBER 15, 2010

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1.0 RESULTS AND CONCLUSIONS
Willbros Government Services, LLC
Tulsa, OK
Tank #5

INTRODUCTION

An NDT inspection was conducted on Tank #5 at Red Hill in Honolulu, HI on August 18th – September 24th, 2010. This inspection focused on 100% testing of the Floor, Lower Dome, Barrel, Extension, and Upper Dome areas. The inspection was performed with the TesTex developed ***TS-2000 NDT Multi-channel System*** (for plate scanning using the principles of the ***Low Frequency Electromagnetic Technique***) and the ***Hawkeye 2000 System*** (for weld testing focusing on surface and subsurface cracking and pinholes). All defected areas found with the above-mentioned TesTex equipment were backed up and sized using regular ***Ultrasonic Technique, Ultrasonic Shear wave Technique*** and ***Magnetic Particle Technique***

The ***Ultrasonic Shear wave Technique*** was an additional service used which measured the depth of detected weld defects, provided they were oriented in a position that could be tested. The results of this inspection are detailed in the following report.

RESULTS

It is to be noted that work for this tank took place in 5 day work weeks. The work in all other previously inspected tanks (15, 16, 6, 2, and 20) consisted of 4 day work weeks.

In beginning of this inspection (August 18, 2010), TesTex started scanning the floor plates (6 plates totaling 25 ft. in diameter) of tank #5. By end of the first day, surface area scanning was complete on the floor (491 sq ft), and scanning started on course 1 of the lower dome. Day 2 saw the completion of the surface area scanning of course 1 (2,695 sq ft) and the first 3-foot of course 2. Day 3 consisted of scanning of the welds using the Hawkeye on the floor (and around all pipe entry points), course 1, and the first 3 foot of course 2. The first week came to a close with the completion of the floor, course 1 and the beginning of course 2. It is to be mentioned that all scanning to this point could be reached from standing on either the floor or course 1 of the lower dome. In the beginning of the second week (August 23rd, 2010), both teams had to set up the boomed baskets with the equipment for both types of scanning (LFET for liner plates and BFET for welds), since accessibility was no longer available from standing on the floor or course 1. Once the setup was complete, work continued on course 2 and was finished in the morning of day 2 (4,573 sq ft). Course 3 (5,797 sq ft) was then started and was finished using both baskets by the morning of day 4. The rest of day 4 was spent scanning course 4. Day 5 ended the week and saw the completion of course 4 (5,634 sq ft) and the lower dome and the beginning of Barrel scanning. The third week (August 30th, 2010) picked back up with barrel scanning. The scans in this section of the tank consisted of 8 ft. wide (the width of the basket) drops from the extension/barrel interface down to the lower dome/barrel interface. Each team averages about 2 drops per day. By the end of the week, approximately 50% of the barrel was completed. The fourth week (September 6th, 2010) started off with a holiday and no work for day one. Barrel scanning continued on day 2 and by the end of the week, scanning from the two main boomed baskets was finished. This brought the total finished barrel percentage to approximately 95%. The fifth week (September 13th, 2010) would begin with scanning the Barrel

section under the Catwalk. One crew scanned this section while the other went up to the gallery to scan course F of the upper dome. The end of day 2 saw the completion of the section under the catwalk and thus the completion of barrel scanning (41,598 sq ft). It also saw the completion of course F (491 sq ft). The extension area (4,712 sq ft) was scanned in its entirety on the third day. Day 4 of that week started course A scanning. The morning of the last day of the week was lost due to a need for additional paperwork to be handled at Pass and I.D. Work resumed in the afternoon and saw the completion of Course A (4,437 sq ft) of the upper dome. In week six, the final week (September 20th, 2010), course B (4,082 sq ft) was scanned on day 1, course C (3,458 sq ft) was scanned on day 2, course D (2,632 sq ft) was scanned on day 3, and course E (1,664 sq ft) was scanned on day 4. In that final week, the second day marked the arrival of an ultrasonic technician. The ultrasonic technician began using magnetic particle technology on the welds of the lower dome/floor interface (this was done in place of Shear wave Technique because the intersection welds were concealed by cover plates) and was finished that same day. Shear wave ultrasonics was, however, applied to the first 6 inches of intersection weld between the plates of course 1, just above the cover plates (intersecting the Floor and Course 1). All other possible weld defect locations found in the tank, using the Hawkeye BFET system, were also backed up with the shear wave technique by the ultrasonic technician. This occurred on the last two days of the final week (September 23rd and September 24th) along with the final verification of all defect locations found in the tank. From there, all of the gathered data was examined over the weekend, and a preliminary report was given on Sunday September 26th, which outlined all defects found in the tank. This report characterized type, size, location, etc. for each. In addition to the above-mentioned scanning, all channels (weld covers) associated welds in the upper dome were scanned using the Hawkeye BFET system. Work was also performed in the lower tunnel on U.T. spot checks inside of the 32-inch and 18-inch lines. These spot checks were done on the 32-inch line from the inside and consisted of a group of 8 circumferential readings taken every 3-foot across the approximate 40-foot span. The 18-inch line was too small to access internally, so readings could only be taken at 8 and 18 inches from the end. Also, the inside of the manway and manway cover were scanned using the LFET scanner. It is to be noted that, when it came to scanning course E and F in the upper dome, ultrasonic trolleys had to be used instead of the LFET scanners since the booms could not place the baskets close enough to the walls for safe access.

CONCLUSIONS

As a result of this inspection, TesTex found 404 flaw indications most of which were either proved up with ultrasonic thickness measurements or sized using Ultrasonic Shear Wave Technique. All defects including their respective depth or other flaw characterization may be found in Section **4.0**, **PLATE TEST SUMMARY**.

Section **3.0** is **TANK MAPS,** which clarifies the numbering system and tank layout. Section **5.0** shows **typical waveforms** collected from these sections. Printouts of waveforms collected from this unit are included in **APPENDIX A** and are correlated to each plate where the original flaw indication(s) was observed.

2.0 UNIT DETAILS
Willbros Government Services, LLC
Tulsa, OK
Tank #5

	Totals
Orientation	**Vertical**
Plate Thickness	
Upper Dome	**0.250”**
Lower Dome	**0.250”**
Barrel	**0.250”**
Floor	**0.500”**
Plate Material	**Carbon Steel**
Total Surface Area of Tank #5	**≈ 84,333 sq ft (plates)**
Upper Dome	**≈ 16,763 sq ft (plates)**
Extension	**≈ 4,712 sq ft (plates)**
Barrel	**≈ 43,668 sq ft (plates)**
Lower Dome	**≈ 19,190 sq ft (plates)**
Total Surface Area and Welds Scanned by TesTex	**≈ 84,333 sq ft (plates)**
	≈ 23,978 linear ft (welds)
Upper Dome	**≈ 16,277 sq ft (plates)**
	≈ 5,579 linear ft (welds)
course A	**≈ 4,437 sq ft (plates)**
	≈ 1,394 linear ft (welds)
course B	**≈ 4,082 sq ft (plates)**
	≈ 1,378 linear ft (welds)
course C	**≈ 3,458 sq ft (plates)**
	≈ 985 linear ft (welds)
course D	**≈ 2,632 sq ft (plates)**
	≈ 932 linear ft (welds)
course E	**≈ 1,664 sq ft (plates)**
	≈ 590 linear ft (welds)
course F	**≈ 491 sq ft (plates)**
	≈ 300 linear ft (welds)
Extension	**≈ 4,712 sq ft (plates)**
	≈ 2,094 linear ft (welds)
Barrel	**≈ 43,668 sq ft (plates)**
	≈ 11,346 linear ft (welds)
Lower Dome	**≈ 19,190 sq ft (plates)**
	≈ 4,959 linear ft (welds)
course 4	**≈ 5,634 sq ft (plates)**
	≈ 1,569 linear ft (welds)

2.0 UNIT DETAILS
Willbros Government Services, LLC
Tulsa, OK
Tank #5

course 3	≈ **5,797 sq ft (plates)**
	≈ **1,208 linear ft (welds)**
course 2	≈ **4,573 sq ft (plates)**
	≈ **1,135 linear ft (welds)**
course 1	≈ **2,695 sq ft (plates)**
	≈ **1,047 linear ft (welds)**
base:	≈ **491 sq ft (plates)**
	≈ **169 linear ft (welds)**

Percent surface area of Tank #5 inspected	**≈ 100%**
Surface area of Upper Dome inspected	≈ **100%**
Surface area of Barrel inspected	≈ **100%**
Surface area of Lower Dome inspected	≈ **100%**

Tank Numbering System See **3.0 TANK MAP**

	Totals
Defect distribution	
Tank #5	404
Area	
Upper Dome	110
Extension	30
Barrel	205
Lower Dome	57
Floor	2
Type	
Underside corrosion (WL)	153
Underside corrosion around patch plates/anchors [WL (APP)]	50
Underside corrosion on patch plates/anchors [WL (OPP)]	46
Through holes	0
Topside (pits (SP), gouges (G), tack welds (TW))	36
Dents (D)/bulges	20
Weld (WD): LOF/IP/Porosity/Undercutting	40
Weld: Cracking	1
Grout Nozzles (GN)	48
No Reportable Indication (NRI)	10

2.0 UNIT DETAILS

Willbros Government Services, LLC
Tulsa, OK
Tank #5

Test Equipment:

Electronics:
TS-2000, 8 Channel Plate Scanner
Hawkeye, Single Channel Pencil Probe Weld Scanner

Hardware:
U.T. Viper (Magnetic manual Crawler)

Ultrasonic Thickness Meter:
DMS-2 Krautkramer (with A-Scan Display)

3.0 TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5

The following section contains all individual flaw location drawings and composite drawings. It is to be noted that all flaws on a plate may not appear on the same drawing. Below is a list of those flaws:

Row	Plate	Flaw #'s 1st drawing	Flaw #'s 2nd drawing
1	11	168	210
1	14	101, 102, 103	108
2	4	93	111
3	3	89	112
8	3	88	67A, 67B
8	7	183	191
16	4	110	125, 126, 127, 128
19	2	61, 62	95, 96
19	6	174	197
20	15	68	78
24	14	139	131
26	4	116, 117, 118	83
26	15	70, 71	105, 106, 107
27	12	159	161, 162
27	15	53, 54, 55	74

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank # 5 - Quadrant A/B

TESTEX
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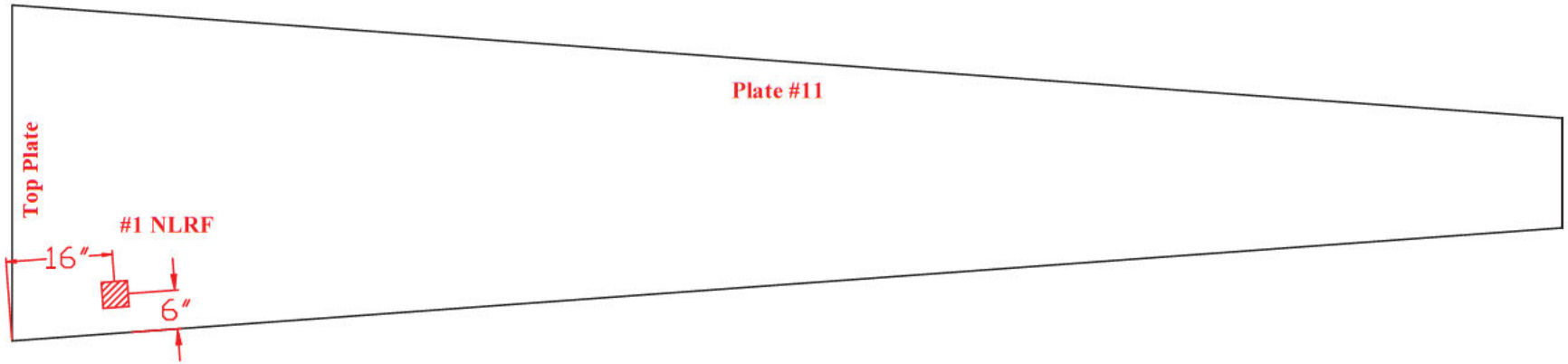
TANK # 5 - QUADRANT A/B
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: A

Course: 1
Plate #: 11

Flaw # - Type - Remaining:
#1 - No Low Reading Found
(Rough Surface)

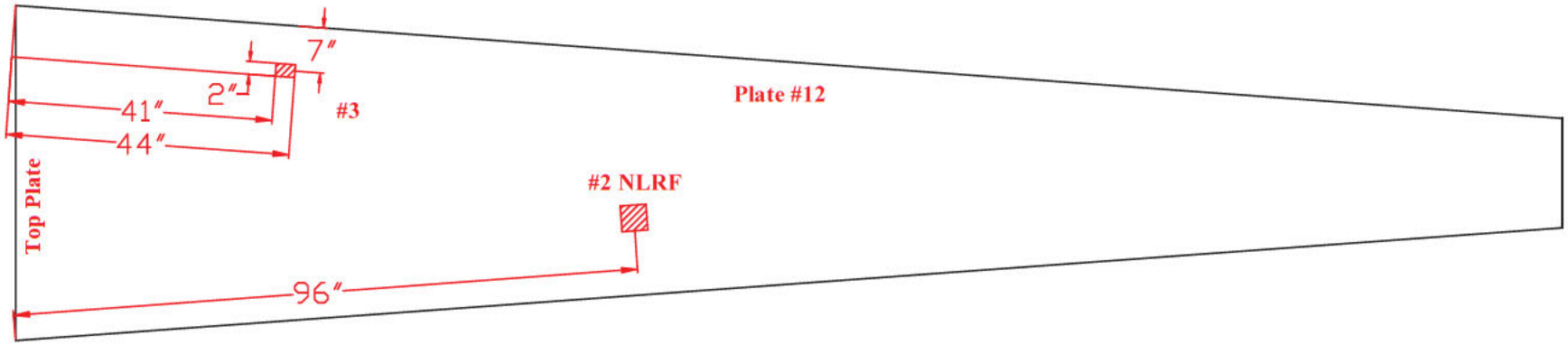


Tank Section: Lower Dome
Quadrant: B

Course: 1
Plate #: 12

Flaw # - Type - Remaining:
#2 - No Low Reading Found
(Rough Surface)

#3 - WL - 0.245"



Drawing is not to scale

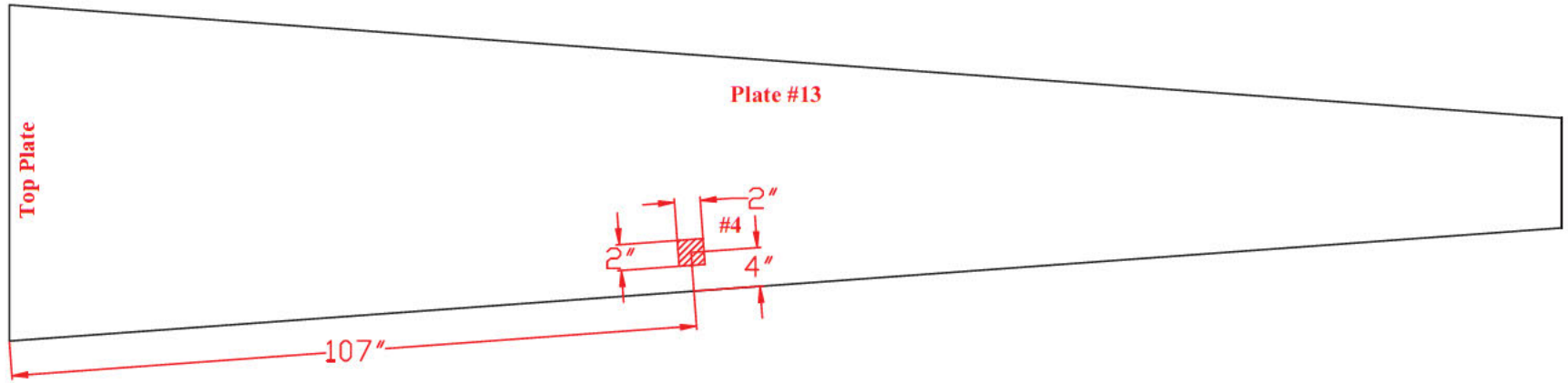
TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank # 5 - Quadrant B/A

TANK # 5 - QUADRANT B/A
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: B

Course: 1
Plate #: 13

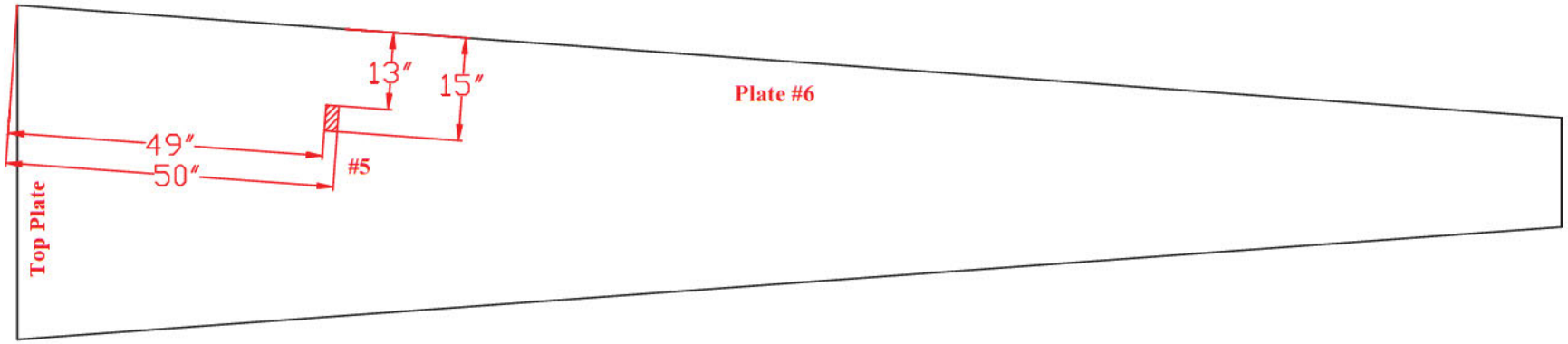
Flaw # - Type - Remaining:
#4 - WL - 0.193"



Tank Section: Lower Dome
Quadrant: A

Course: 1
Plate #: 6

Flaw # - Type - Remaining:
#5 - WL - 0.240"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank # 5 - Quadrant B

TESTEX
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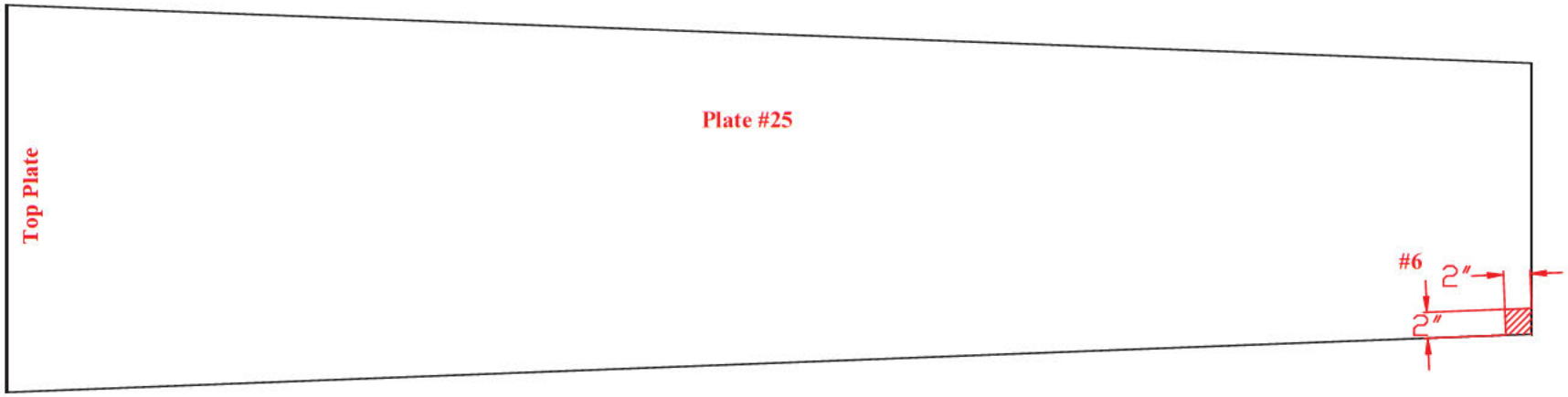
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: B

Course: 2
Plate #: 25

Flaw # - Type - Remaining:
#6 - WL - 0.235"

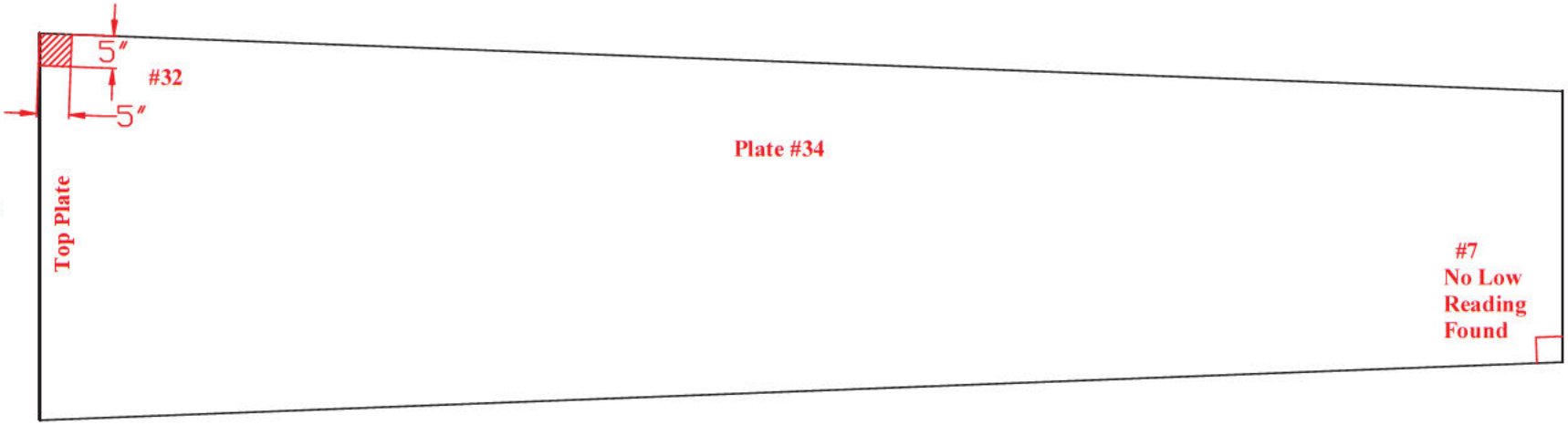


Tank Section: Lower Dome
Quadrant: B

Course: 2
Plate #: 34

Flaw # - Type - Remaining:
#7 - No Low Reading Found

#32 - WL - 0.248"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank # 5 - Quadrant C/D

TESTEX
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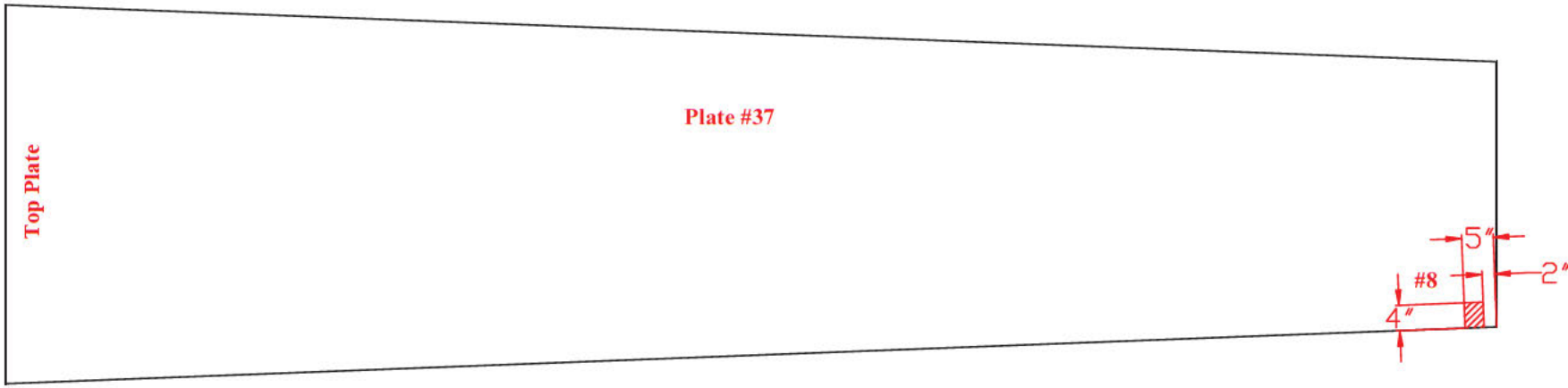
TANK # 5 - QUADRANT C/D
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: C

Course: 2
Plate #: 37

Flaw # - Type - Remaining:
#8 - WL - 0.235"-0 248"

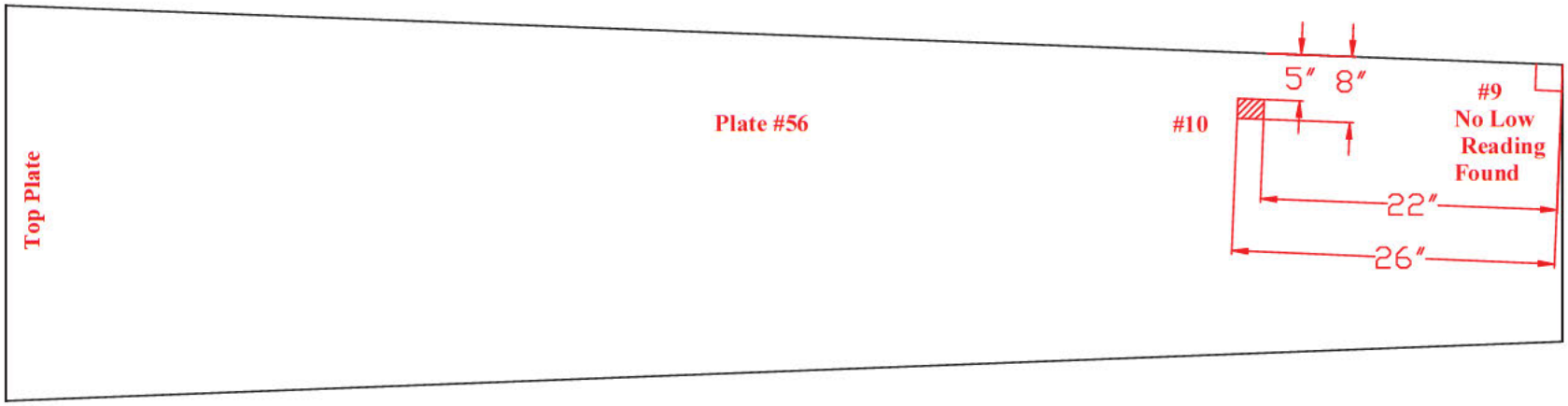


Tank Section: Lower Dome
Quadrant: D

Course: 2
Plate #: 56

Flaw # - Type - Remaining:
#9 - No Low Reading Found

#10 - WL - 0 235"



Drawing is not to scale

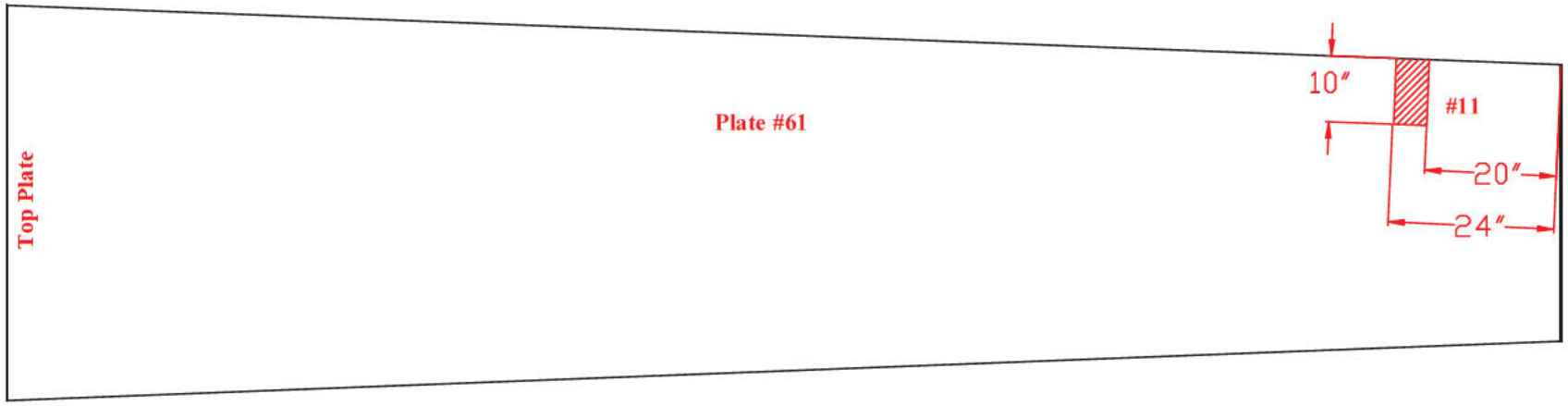
TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank # 5 - Quadrant D/A

TANK # 5 - QUADRANT D/A
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: D

Course: 2
Plate #: 61

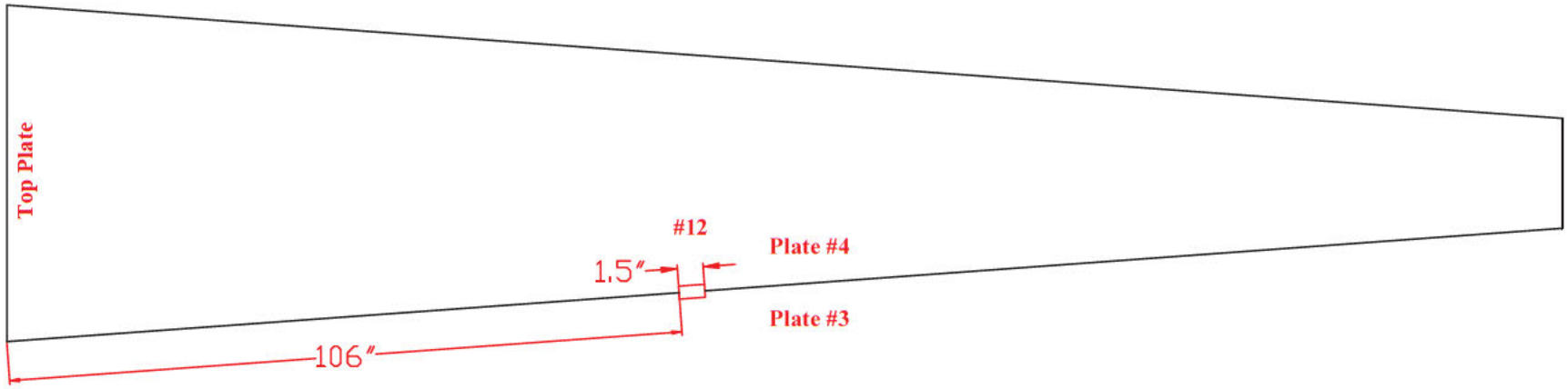
Flaw # - Type - Remaining:
#11 - WL - 0.240"



Tank Section: Lower Dome
Quadrant: A

Course: 1
Plate #: 3, 4

Flaw # - Type - Remaining:
#12 - WD - Insufficient Fill
0.080" Deep, 1.5" Long



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank # 5 - Quadrant A

TESTEX
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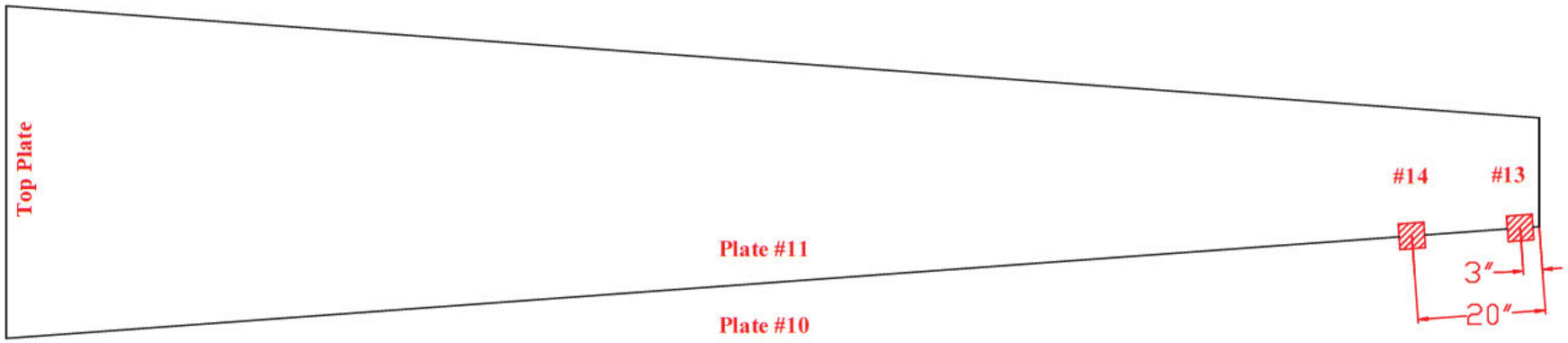
TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: A

Course: 1
Plate #: 10, 11

Flaw # - Type - Remaining:
#13 - WD - Insufficient Fill
0.090" Deep, 1.0" Long
#14 - WD - Insufficient Fill
0.080" Deep, 1.0" Long

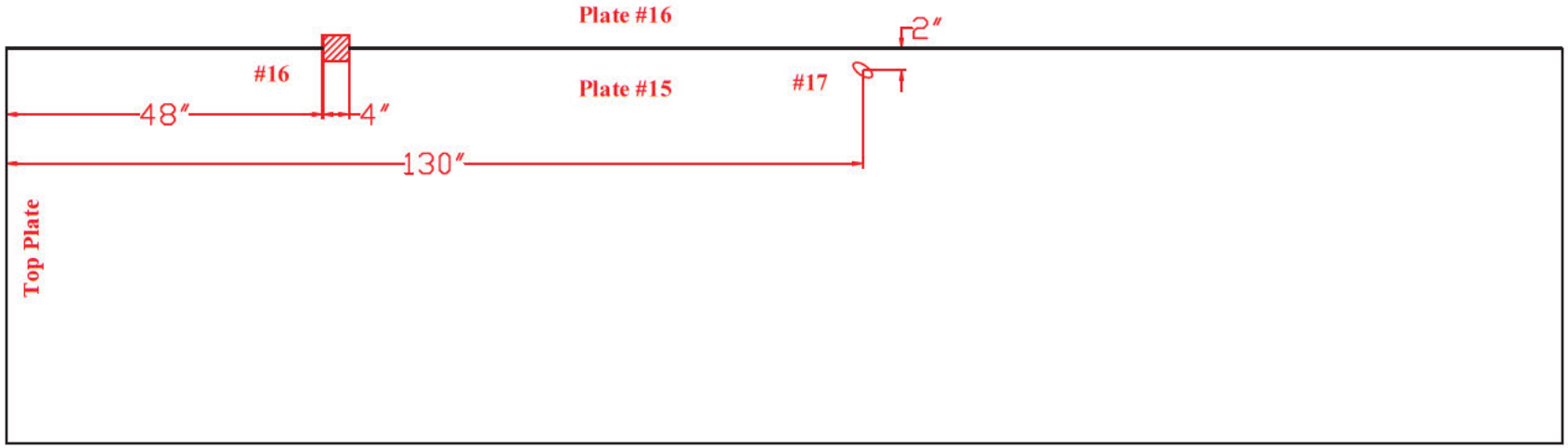


Tank Section: Lower Dome
Quadrant: A

Course: 2
Plate #: 15, 16

Flaw # - Type - Remaining:

#16 - WD - Surface Dent
0.150" Deep
#17 - Dent - 0.500" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B/A

TESTEX
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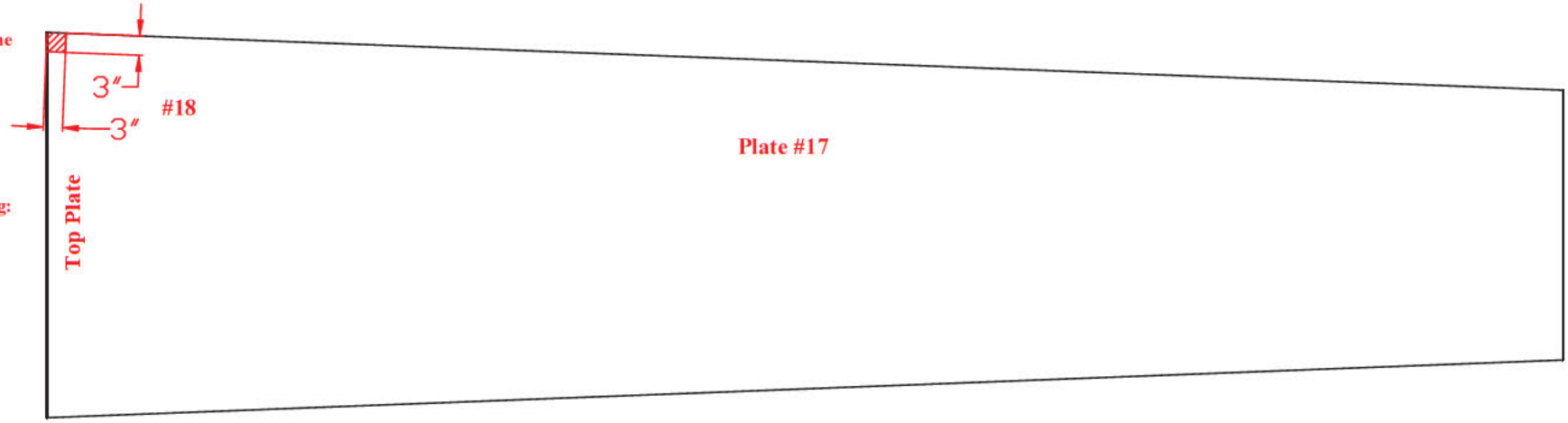
TANK # 5 - QUADRANT B/A
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: B

Course: 2
Plate #: 17

Flaw # - Type - Remaining:

#18 - WL - 0.245"

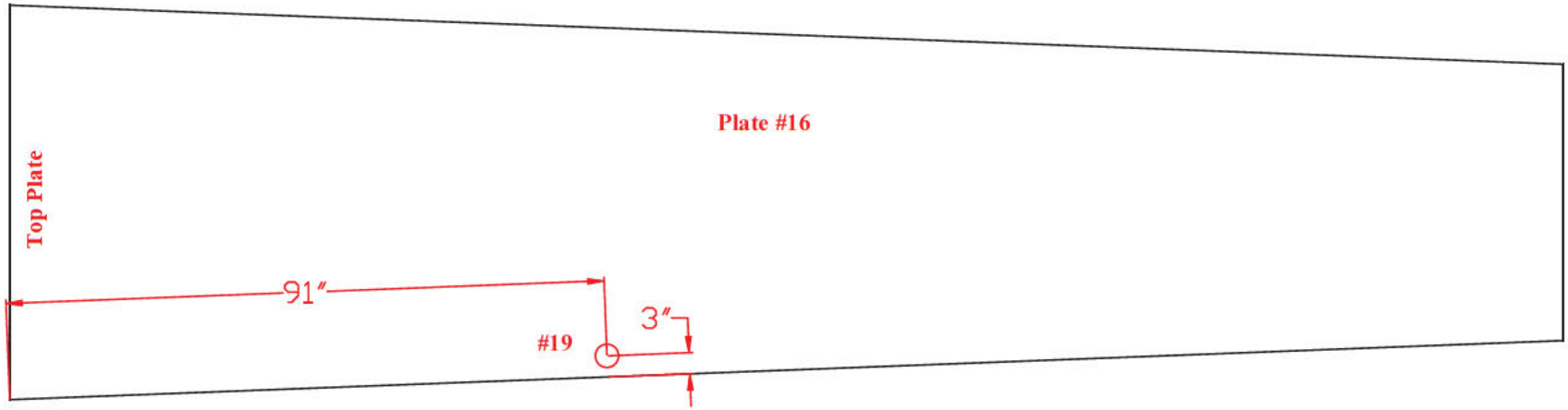


Tank Section: Lower Dome
Quadrant: A

Course: 2
Plate #: 16

Flaw # - Type - Remaining:

#19 - Dent - 0.160" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

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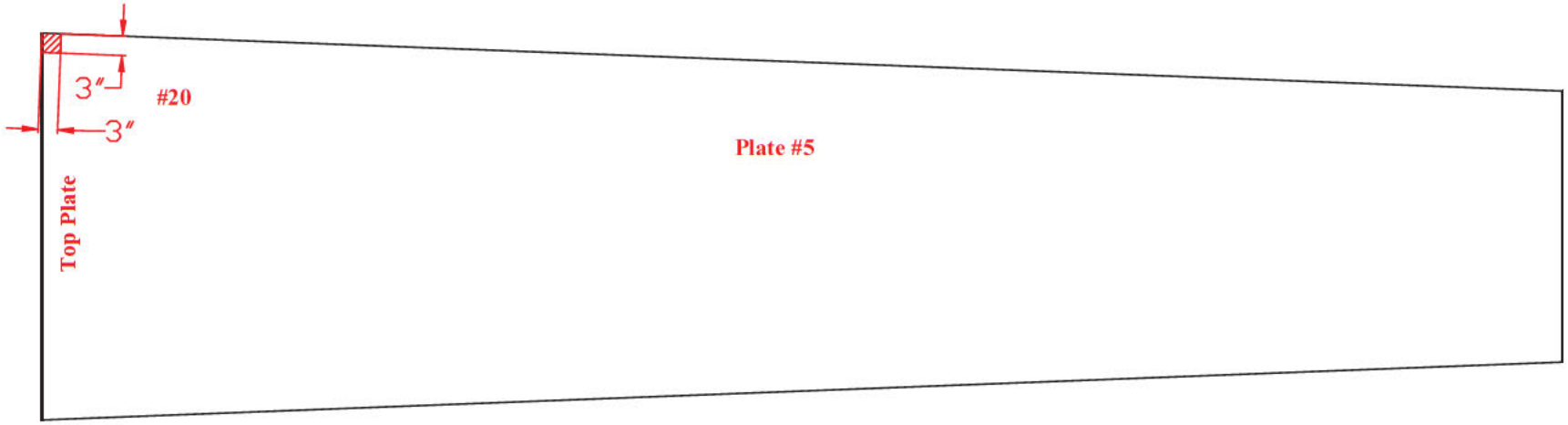
TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: A

Course: 2
Plate #: 5

Flaw # - Type - Remaining:

#20 - WL - 0.240"

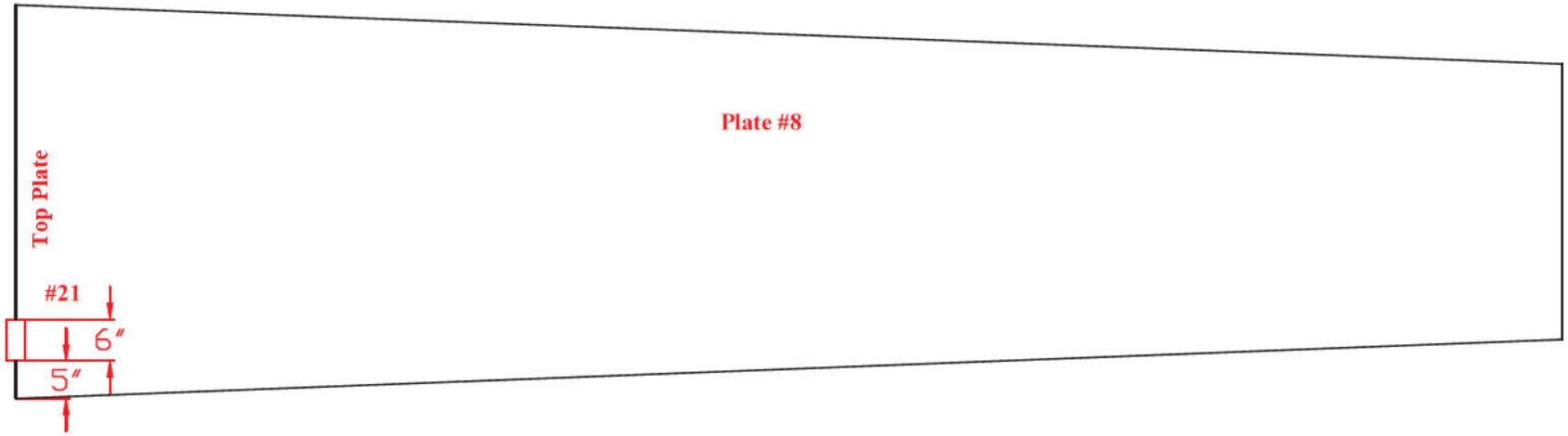


Tank Section: Lower Dome
Quadrant: A

Course: 2
Plate #: 8

Flaw # - Type - Remaining:

#21 - WD- Linear 0.050" Deep, 6" Long



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B/D

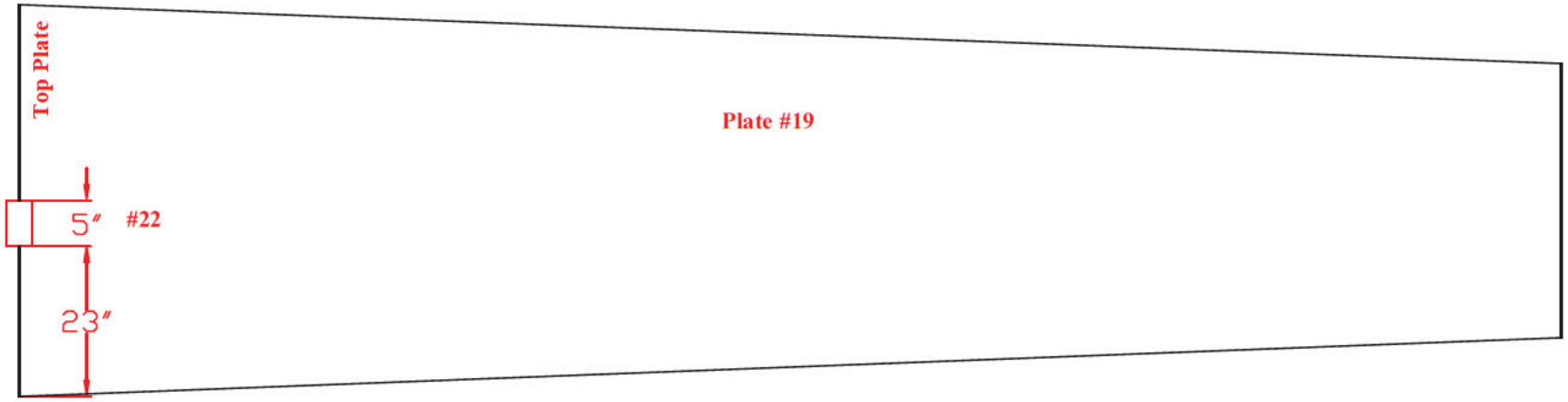
TANK # 5 - QUADRANT B/D
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: B

Course: 2
Plate #: 19

Flaw # - Type - Remaining:

#22 - WD - Surface Indication
0.030" Deep, 5.0" Long

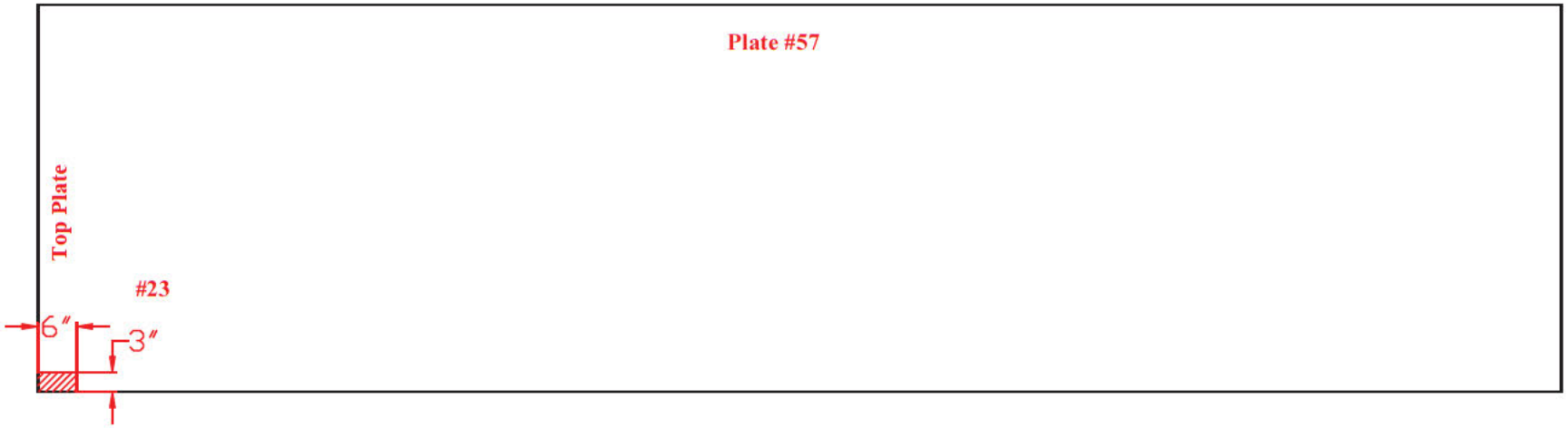


Tank Section: Lower Dome
Quadrant: D

Course: 2
Plate #: 57

Flaw # - Type - Remaining:

#23 - WL - 0.250"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D/B

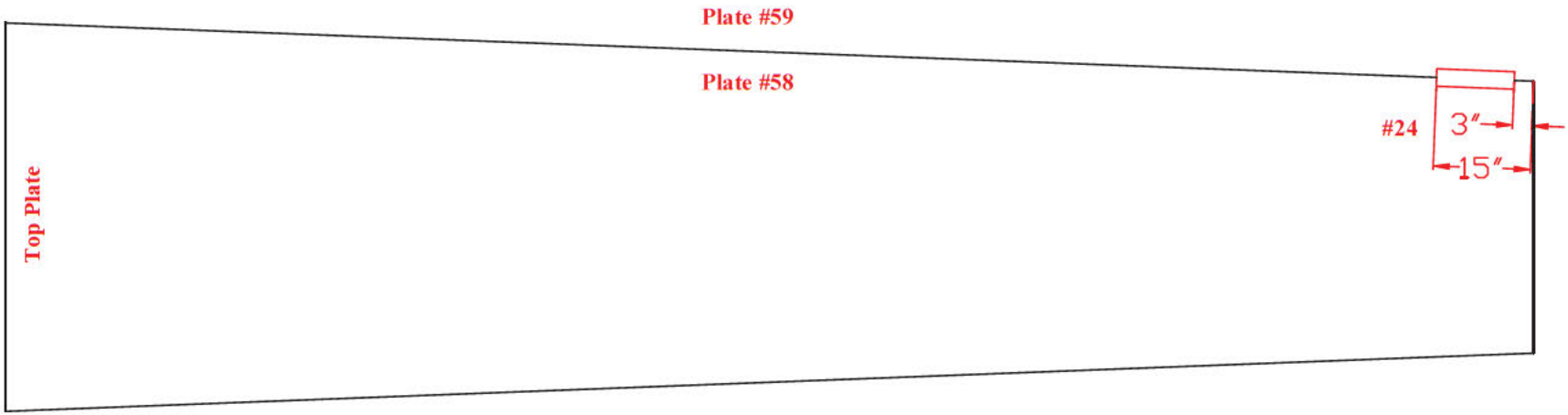
TANK # 5 - QUADRANT D/B
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: D

Course: 2
Plate #: 58, 59

Flaw # - Type - Remaining:

#24 - WD- Surface Indication
(No U.T. Indication)

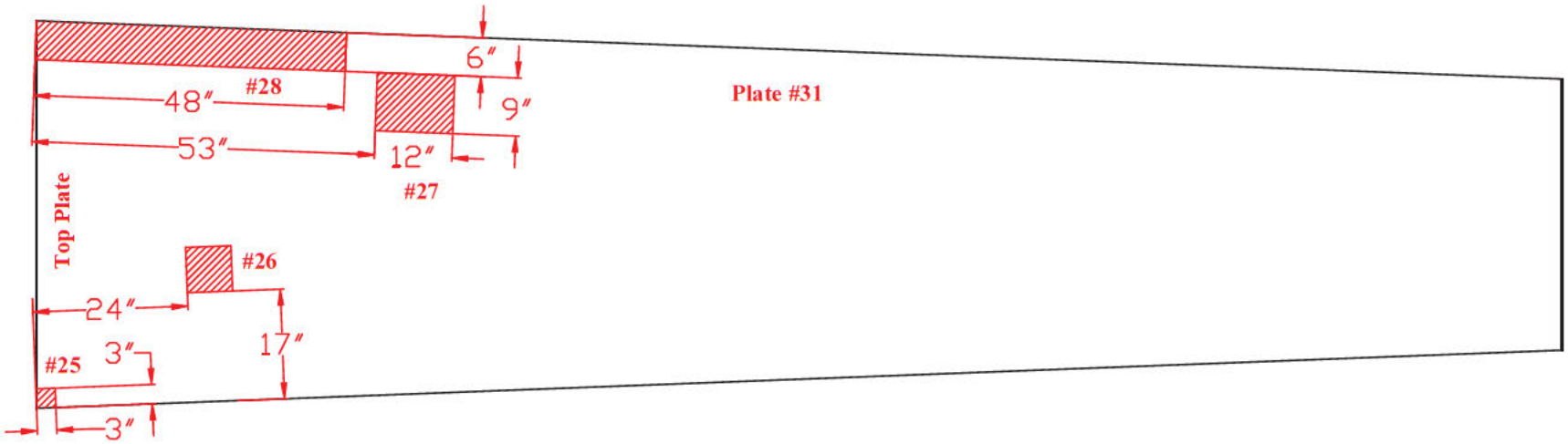


Tank Section: Lower Dome
Quadrant: B

Course: 2
Plate #: 31

Flaw # - Type - Remaining:

#25 - WL - 0 240"
#26 - WL(OPP) - 0.245"
#27 - WL - 0 248"
#28 - WL - 0 250"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
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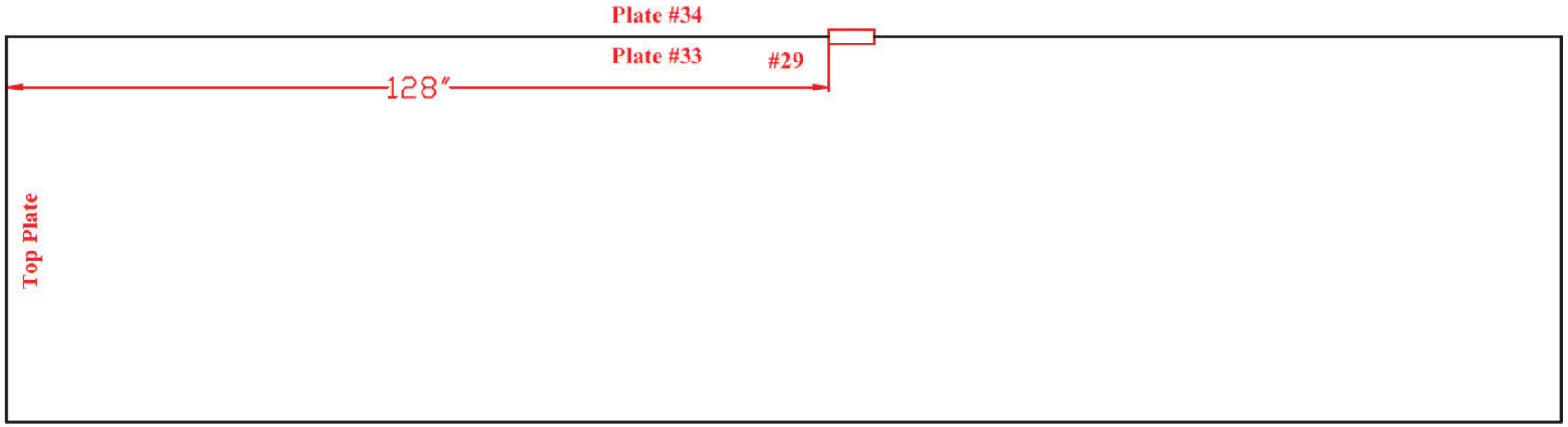
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: B

Course: 3
Plate #: 33, 34

Flaw # - Type - Remaining:

#29 - WD - Excessive Cap
(No U.T. Indication)

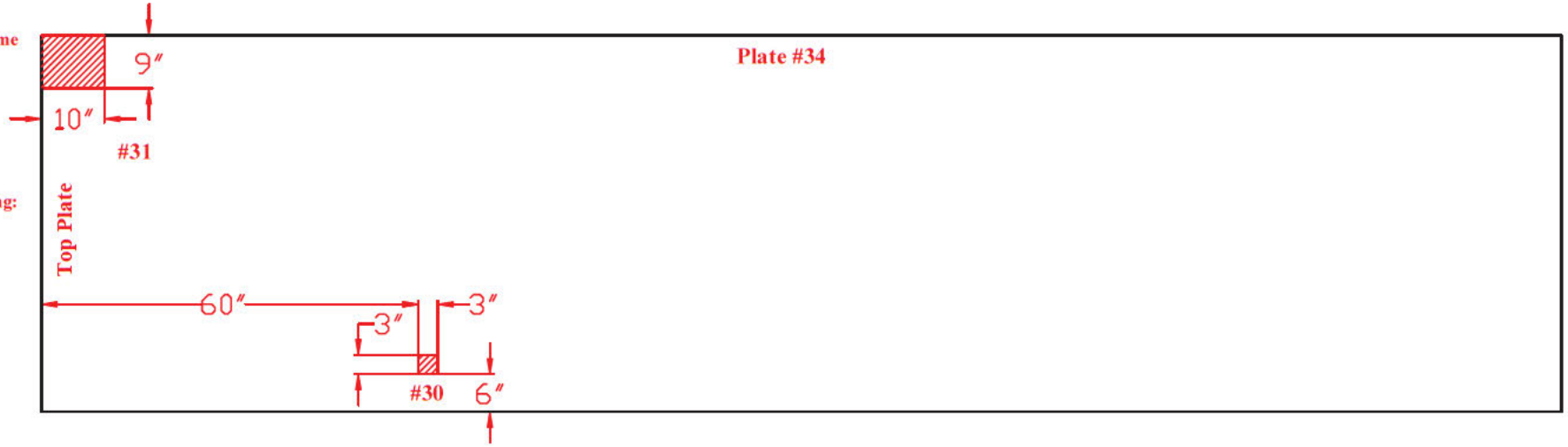


Tank Section: Lower Dome
Quadrant: B

Course: 3
Plate #: 34

Flaw # - Type - Remaining:

#30 - WL - 0 240"
#31 - WL - 0 236"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

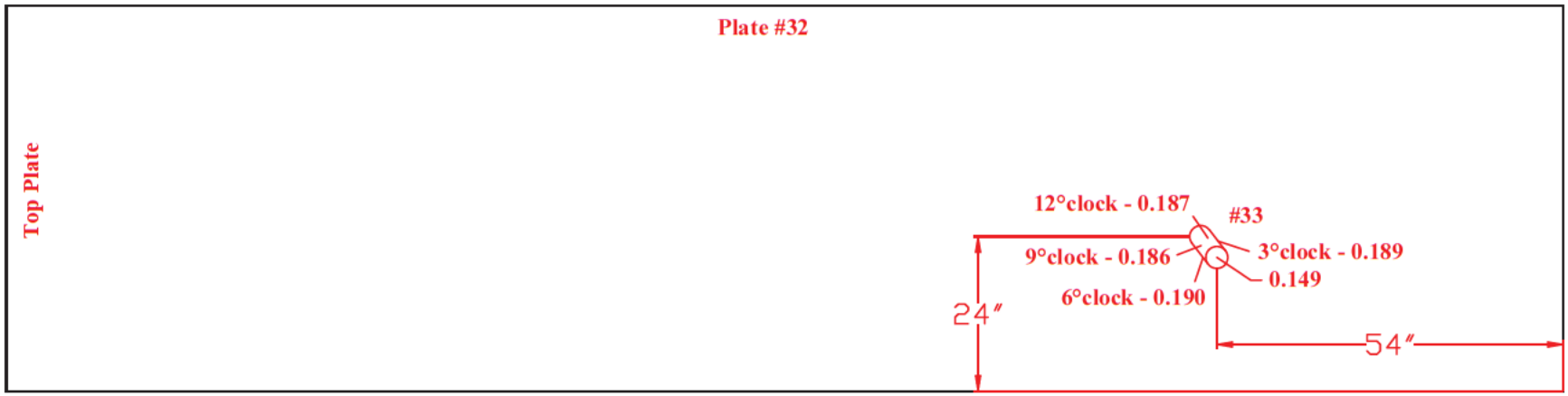
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: B

Course: 3
Plate #: 32

Flaw # - Type - Remaining:

#33 - GN - 0.149"
(0.186"-0.190")

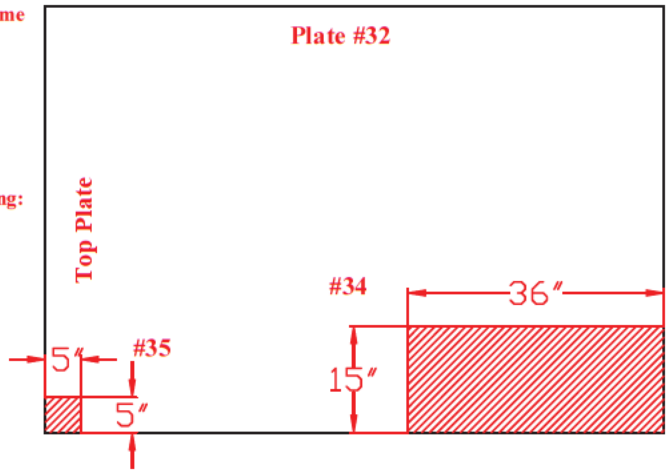


Tank Section: Lower Dome
Quadrant: B

Course: 4
Plate #: 32

Flaw # - Type - Remaining:

#34 - WL - 0.228"
#35 - WL - 0.240"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C

TESTEX
WWW.TESTEX-NDT.COM

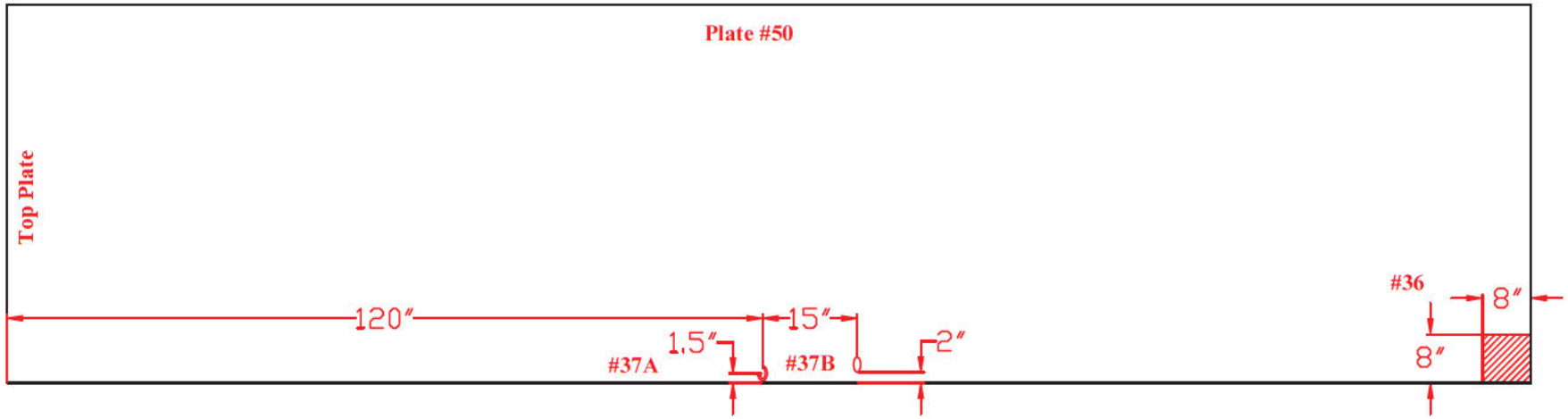
TANK # 5 - QUADRANT C
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: C

Course: 3
Plate #: 50

Flaw # - Type - Remaining:

#36 - WL - 0.236"
#37A - Gouge - 0.045" Deep"
#37B - Gouge - 0.060" Deep"

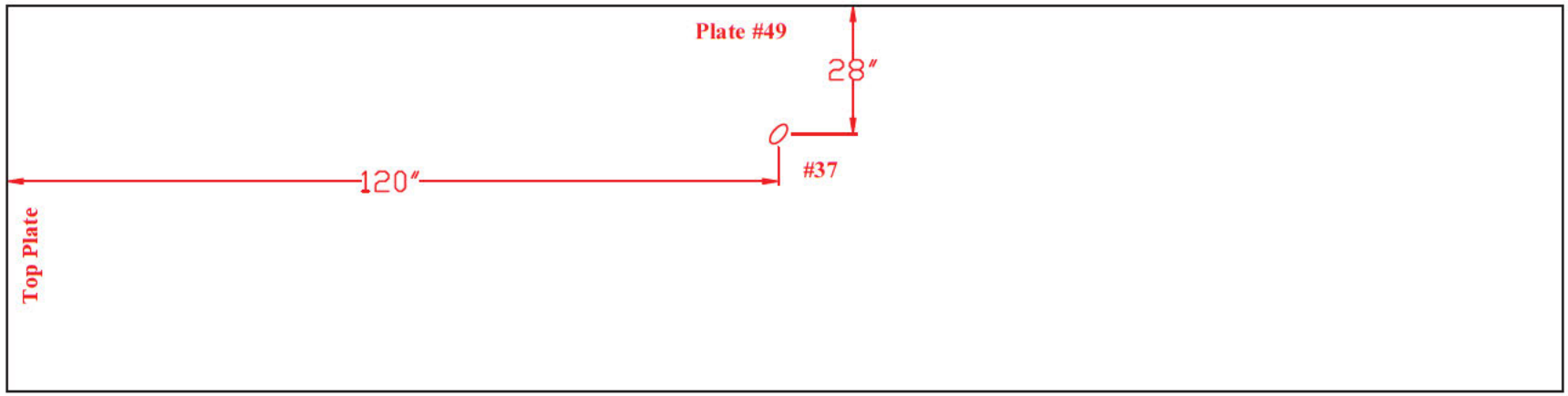


Tank Section: Lower Dome
Quadrant: C

Course: 3
Plate #: 49

Flaw # - Type - Remaining:

#37 - Gouge - 0.085" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

TESTEX
WWW.TESTEX-NDT.COM

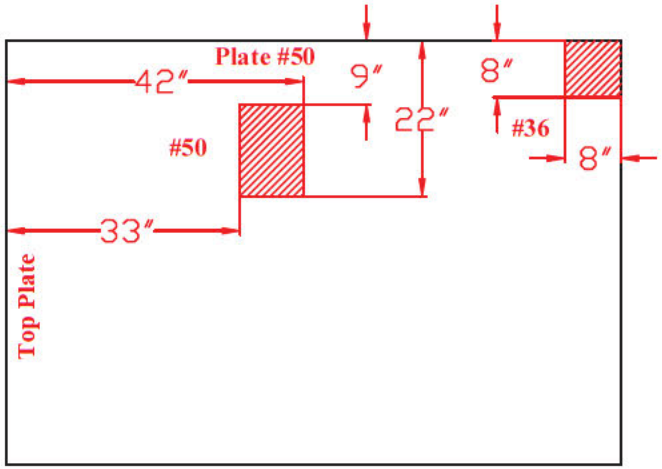
TANK # 5 - QUADRANT D
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: D

Course: 4
Plate #: 50

Flaw # - Type - Remaining:

#36 - WL - 0.236"
#50 - WL - 0.239"

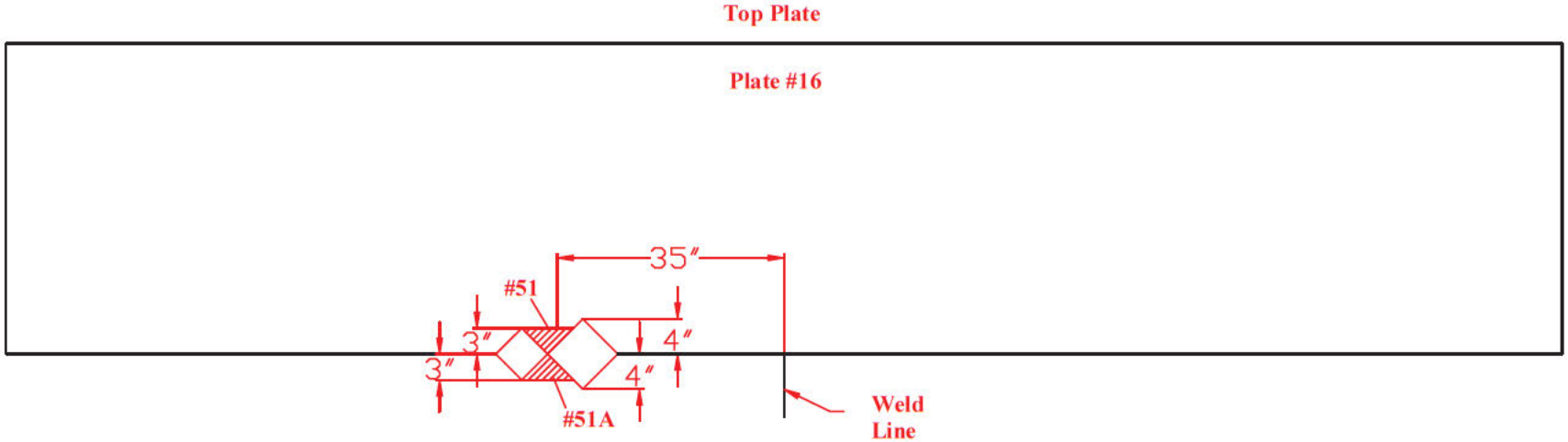


Tank Section: Barrel
Quadrant: D

Row: 26, 25
Plate #: 16

Flaw # - Type - Remaining:

#51 - WL(APP) - 0.218"
#51A - WL(APP) - 0.230"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D/C

TESTEX
WWW.TESTEX-NDT.COM

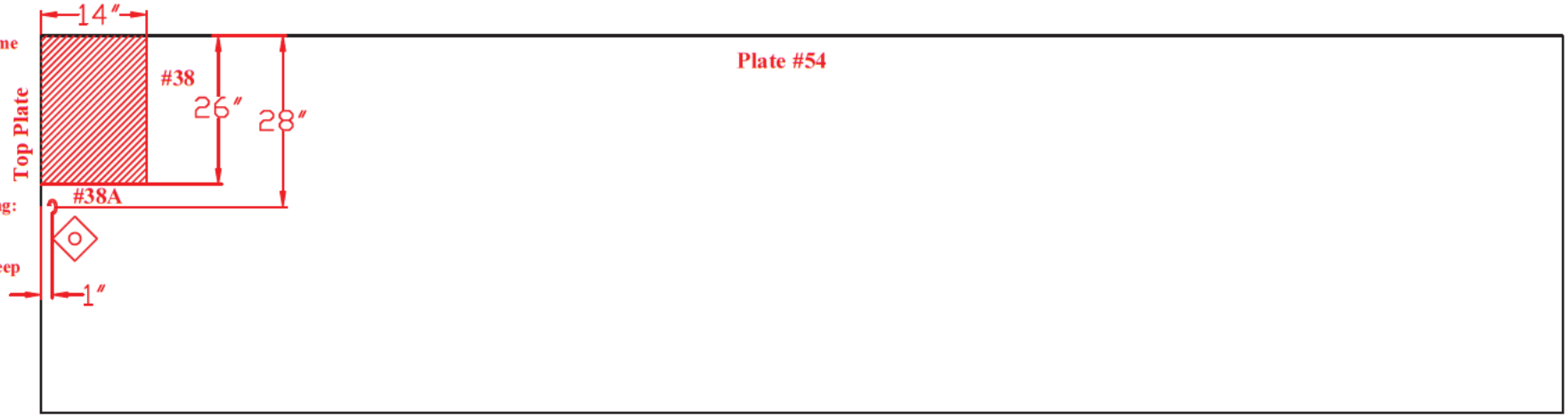
TANK # 5 - QUADRANT D/C
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: D

Course: 3
Plate #: 54

Flaw # - Type - Remaining:

#38 - WL - 0.236"
#38A - Gouge - 0.060" Deep

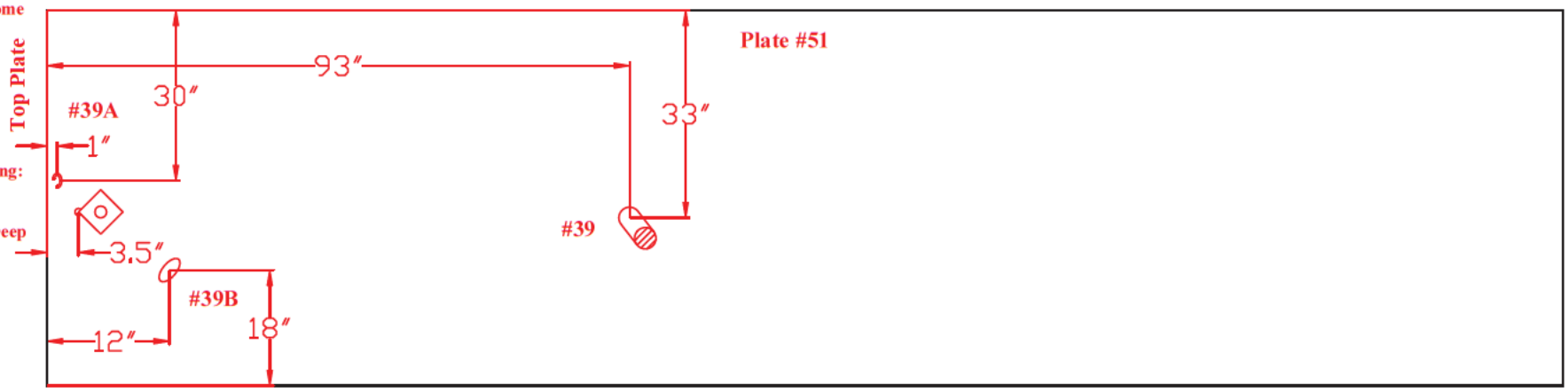


Tank Section: Lower Dome
Quadrant: C

Course: 3
Plate #: 51

Flaw # - Type - Remaining:

#39 - GN - 0.146"
#39A - Gouge - 0.070" Deep
#39B - Undercut



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

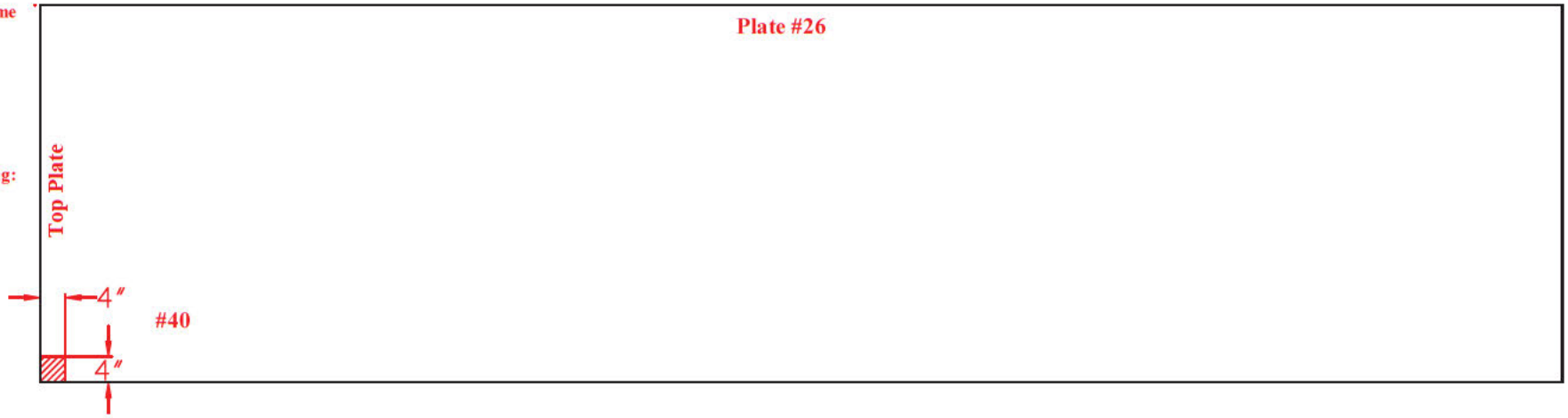
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: B

Course: 3
Plate #: 26

Flaw # - Type - Remaining:

#40 - WL - 0.240"

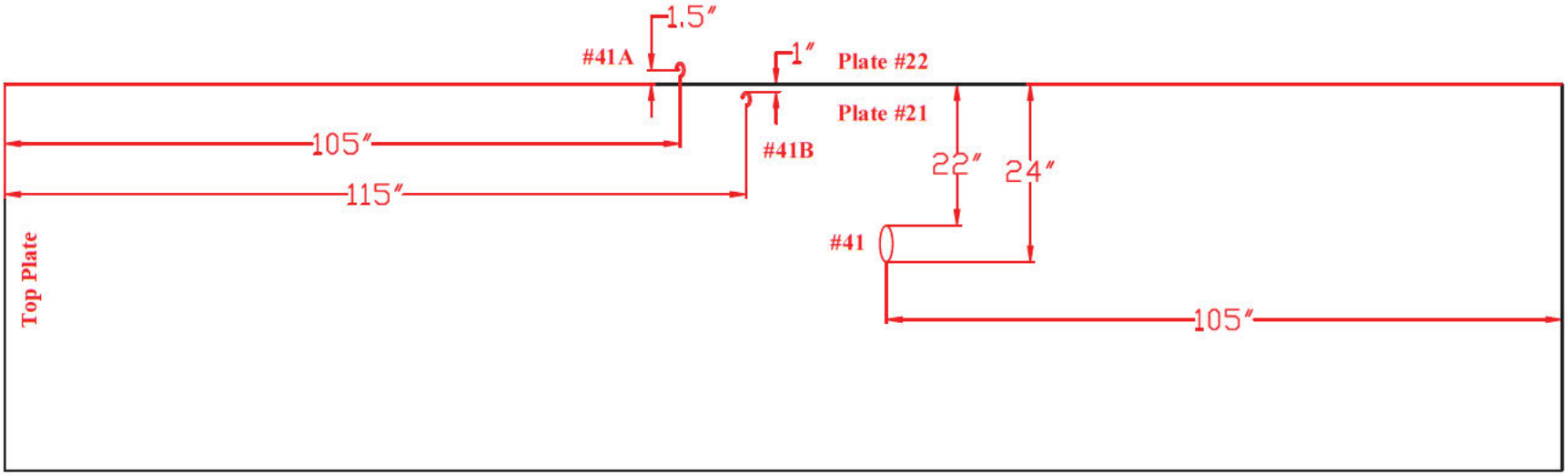


Tank Section: Lower Dome
Quadrant: B

Course: 3
Plate #: 21

Flaw # - Type - Remaining:

#41 - SP - Tack Weld
(Light Scaling)
#41A - Gouge - 0.080" Deep
#41B - Gouge - 0.080" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

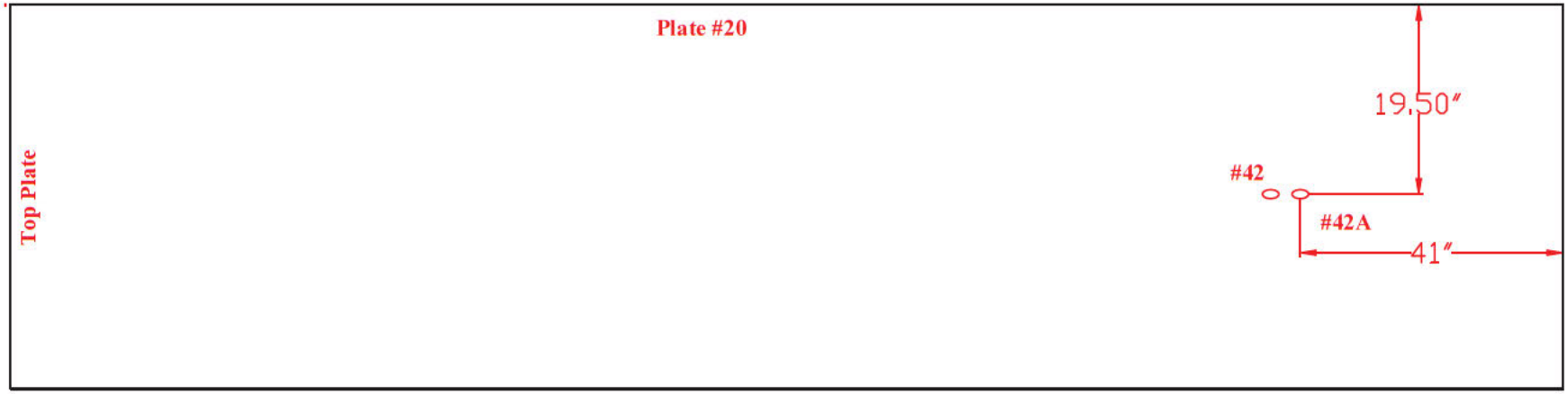
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: B

Course: 4
Plate #: 20

Flaw # - Type - Remaining:

#42 - SP - 0.040" Deep
#42A - SP - 0.060" Deep

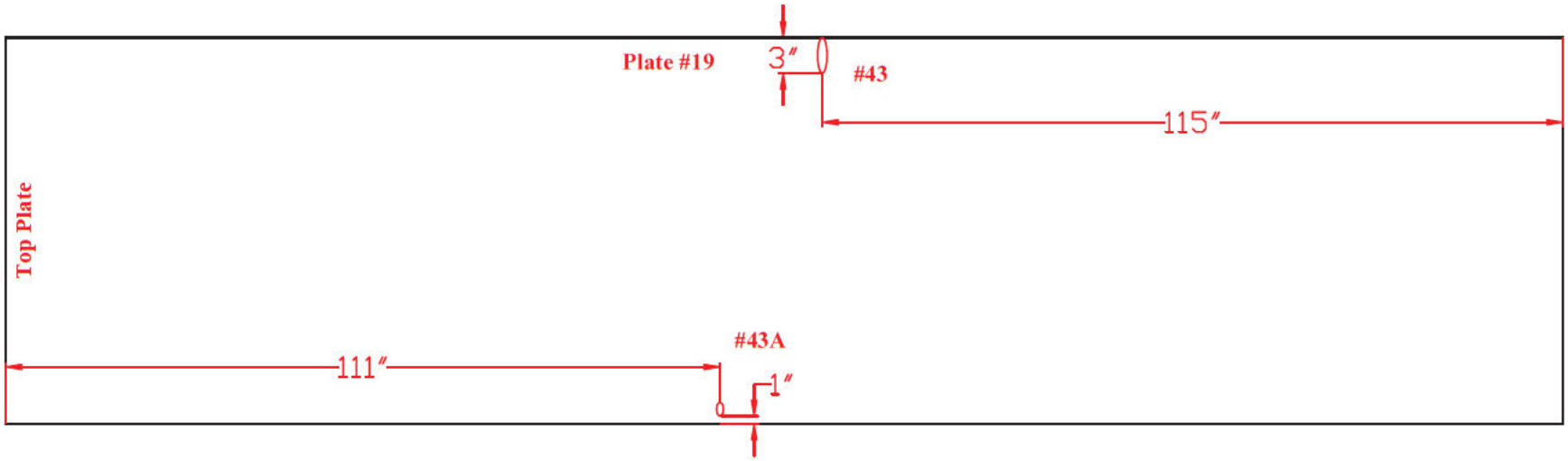


Tank Section: Lower Dome
Quadrant: B

Course: 3
Plate #: 19

Flaw # - Type - Remaining:

#43 - Surface Indication
Gouge 0.080" Deep, 3.0" Long
#43A - Gouge - 0.100" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

TESTEX
WWW.TESTEX-NDT.COM

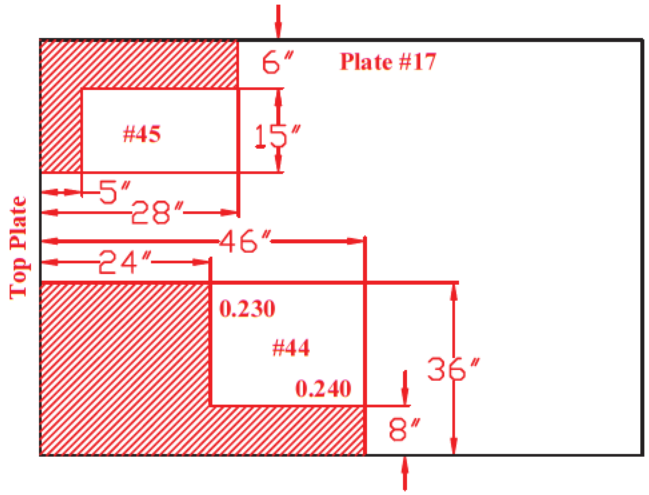
TANK # 5 - QUADRANT A
**Nominal Plate Thickness: 0.250"*

Tank Section: Lower Dome
Quadrant: A

Course: 4
Plate #: 17

Flaw # - Type - Remaining:

#44 - WL - 0.230"/0.240"
#45 - WL - 0.230"

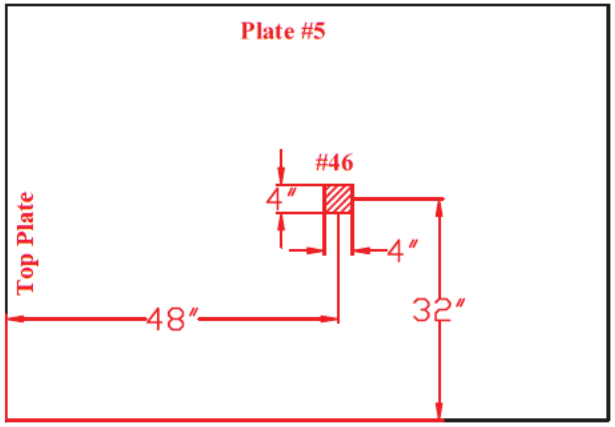


Tank Section: Lower Dome
Quadrant: A

Course: 4
Plate #: 5

Flaw # - Type - Remaining:

#46 - WL(OPP) - 0.238"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

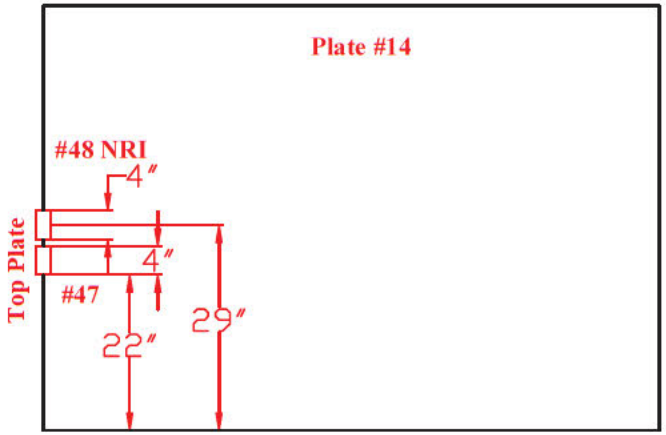
TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: A

Course: 4
Plate #: 14

Flaw # - Type - Remaining:

#47 - WD - Surface Indication (No U.T. Indication)
#48 - WD - NRI

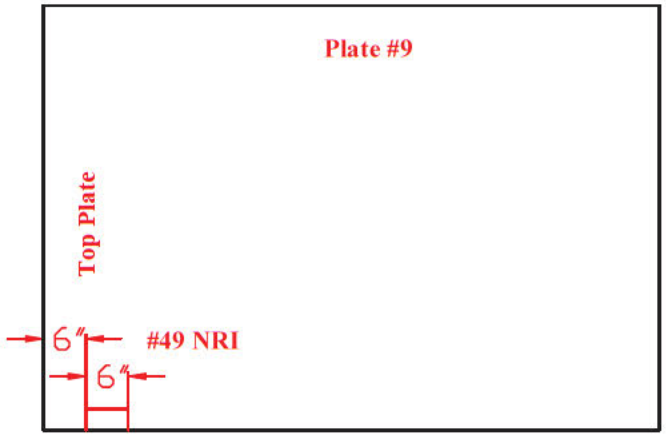


Tank Section: Lower Dome
Quadrant: A

Course: 4
Plate #: 9

Flaw # - Type - Remaining:

#49 - WL - NRI



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

TESTEX
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TANK # 5 - QUADRANT D
Nominal Plate Thickness: 0.250"

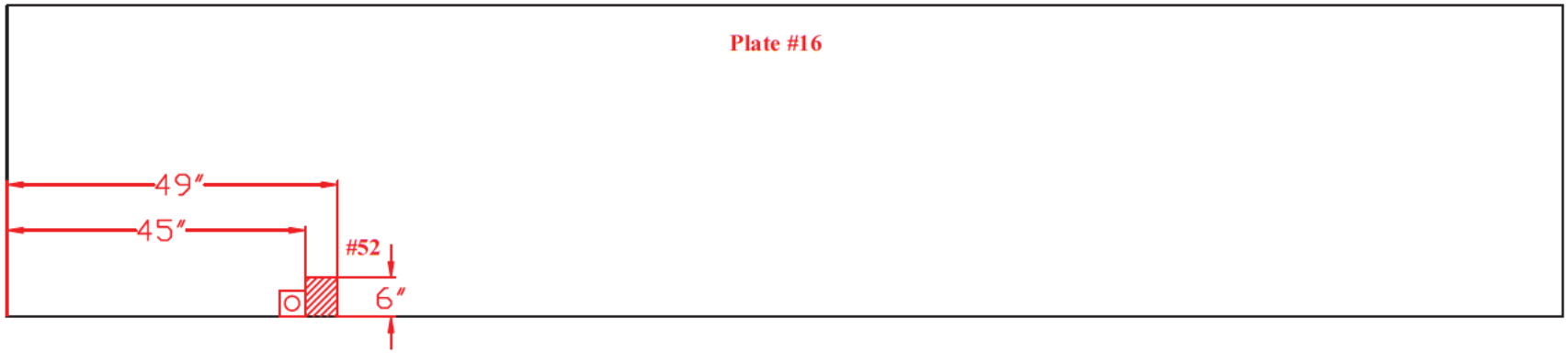
Top Plate

Tank Section: Barrel
Quadrant: D

Row: 24
Plate #: 16

Flaw # - Type - Remaining:

#52 - WL(APP) - 0.219"



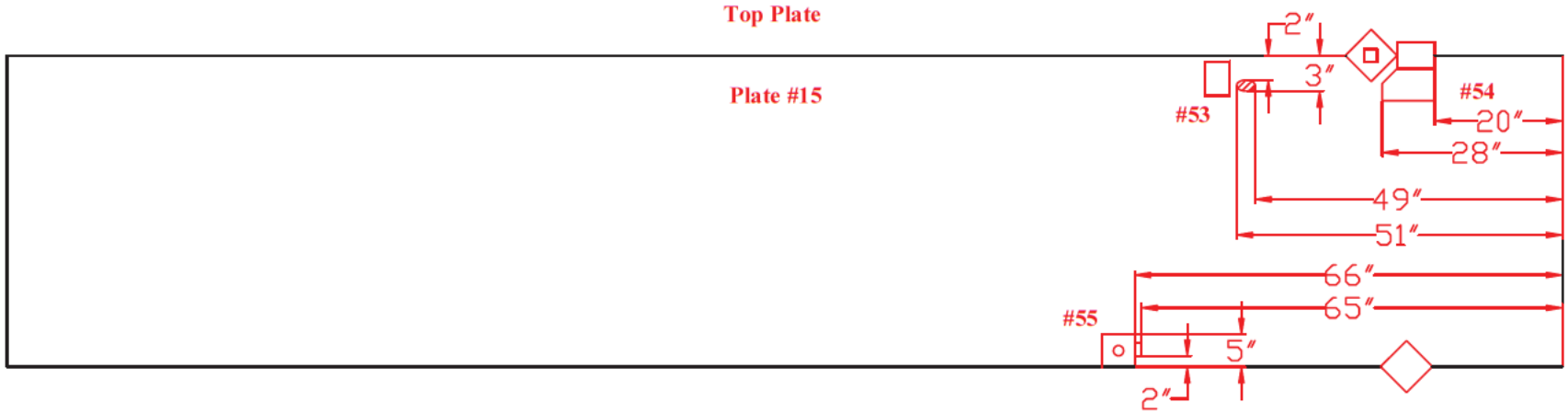
Top Plate

Tank Section: Barrel
Quadrant: D

Row: 27
Plate #: 15

Flaw # - Type - Remaining:

#53 - WL(APP) - 0.209"
#54 - WL(APP) - 0.137"
#55 - WL(APP) - 0.208"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

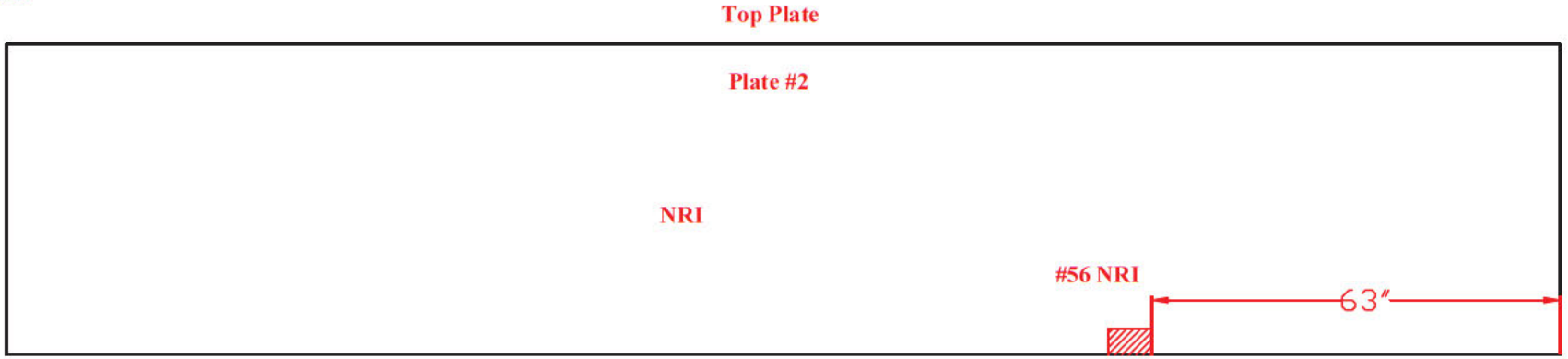
TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: A

Row: 22
Plate #: 2

Flaw # - Type - Remaining:

#56 - NRI

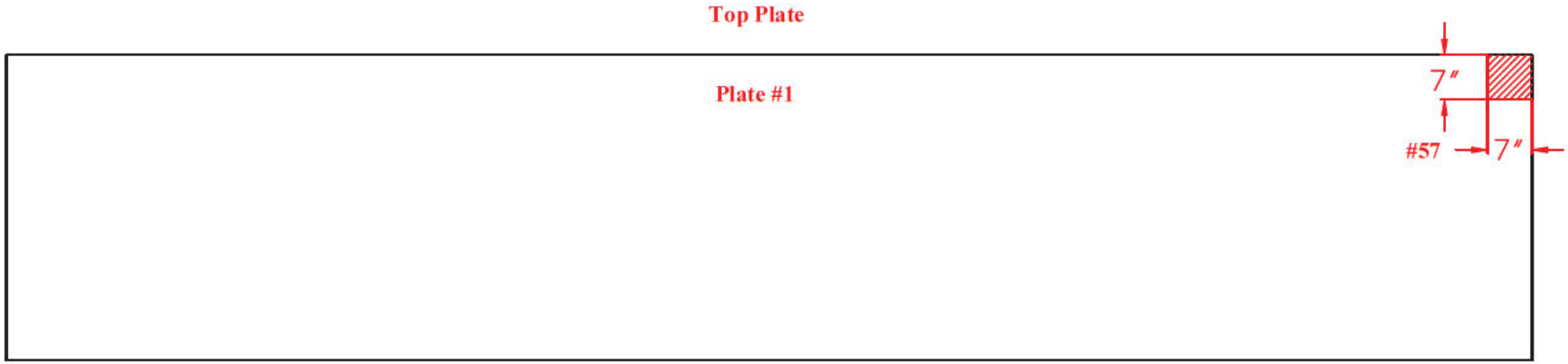


Tank Section: Barrel
Quadrant: A

Row: 10
Plate #: 1

Flaw # - Type - Remaining:

#57 - WL - 0.239"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

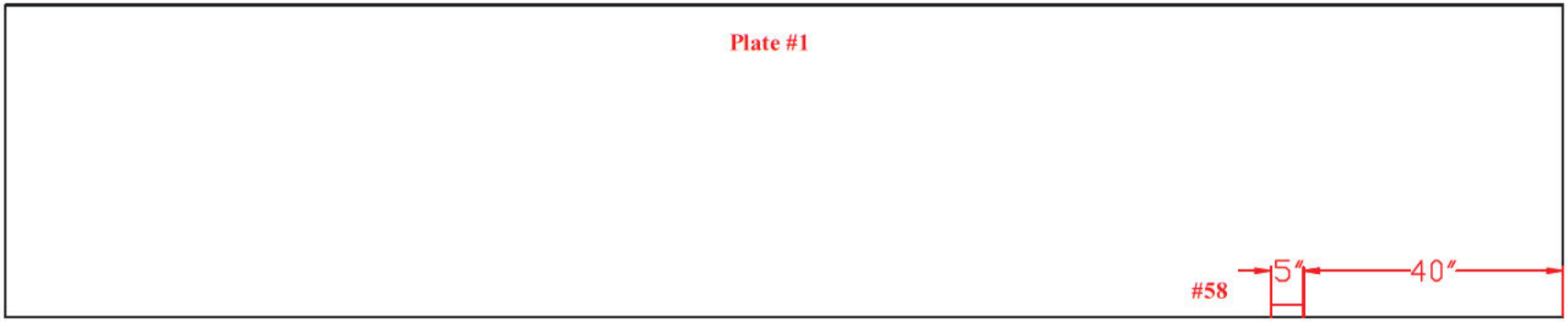
Top Plate

Tank Section: Barrel
Quadrant: A

Row: 7
Plate #: 1

Flaw # - Type - Remaining:

#58 - Surface Indication
0.020" Deep, 5.0" Long



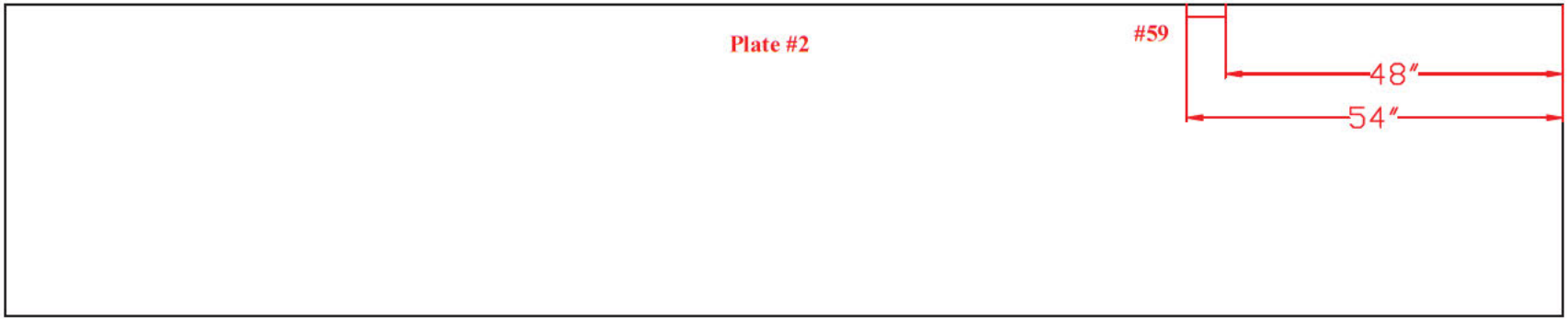
Top Plate

Tank Section: Barrel
Quadrant: A

Row: 10
Plate #: 2

Flaw # - Type - Remaining:

#59 - Surface Indication
6.0" Long



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

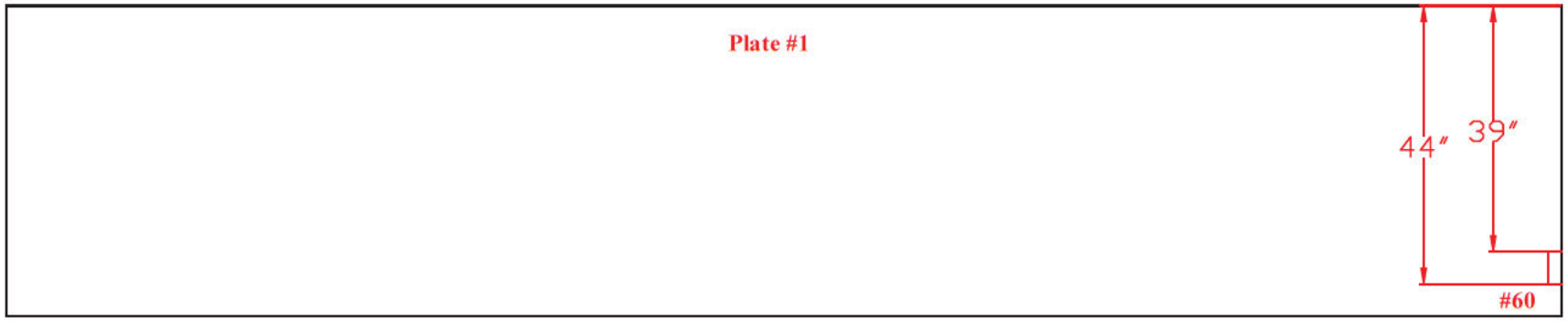
Tank Section: Barrel
Quadrant: A

Row: 17
Plate #: 1

Flaw # - Type - Remaining:

#60 - Surface Indication
(No U.T. Indication)
0.040" Deep, 5" Long

Top Plate



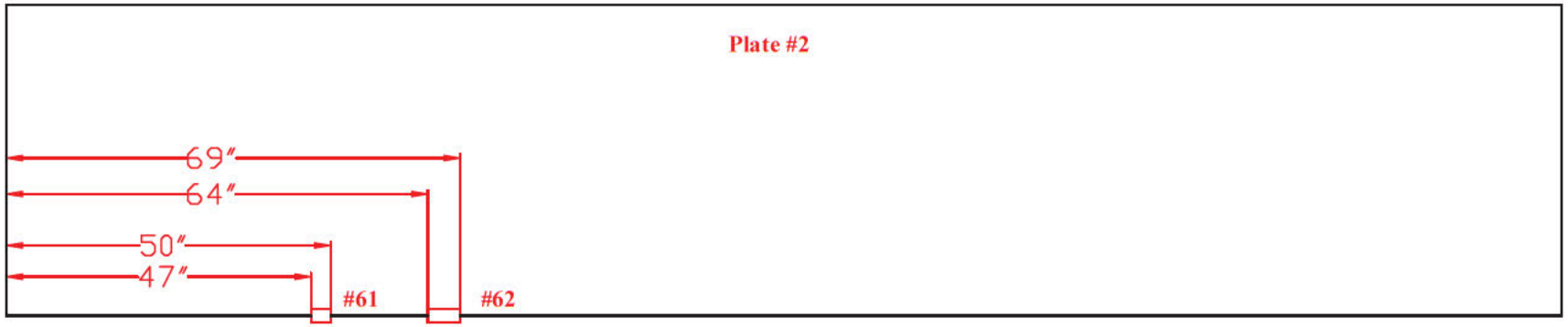
Top Plate

Tank Section: Barrel
Quadrant: A

Row: 19
Plate #: 2

Flaw # - Type - Remaining:

#61 - Surface Indication
(Center Line)
0.030" Deep, 3.0" Long
#62 - Surface Indication
(Center Line)
0.050" Deep, 5.0" Long



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

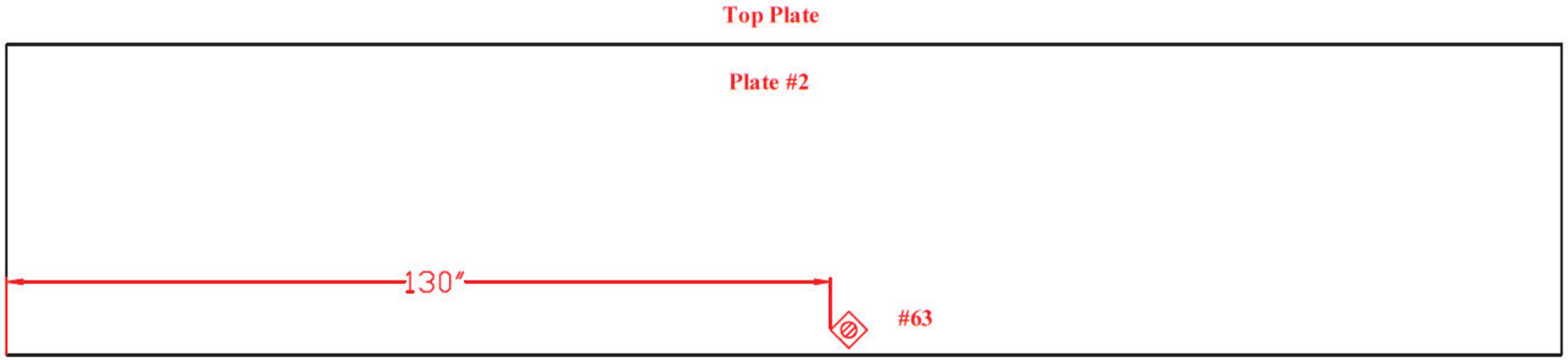
TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: A

Row: 1
Plate #: 2

Flaw # - Type - Remaining:

#63 - WL(OPP) - 0 237"

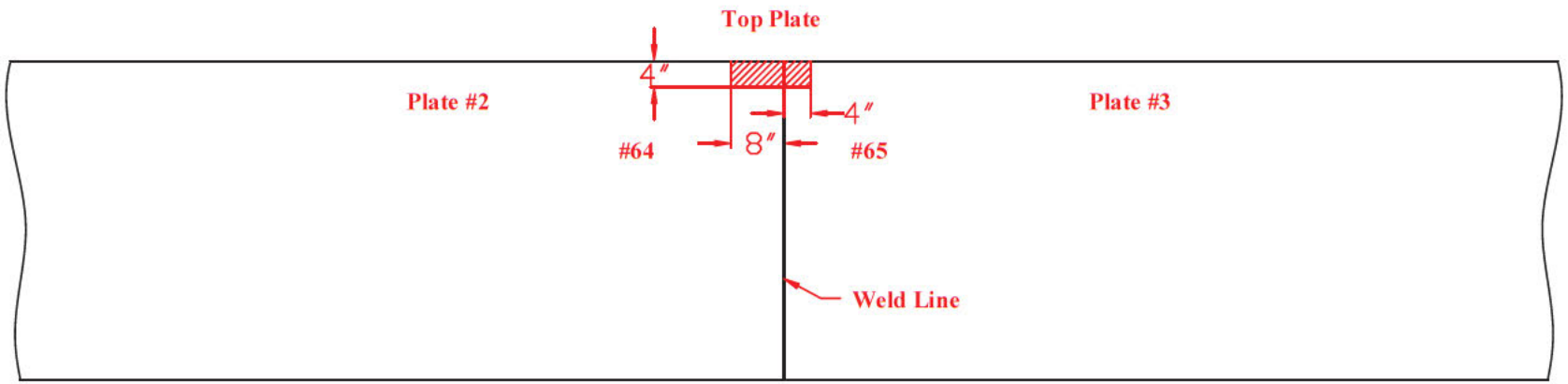


Tank Section: Barrel
Quadrant: A

Row: 9
Plate #: 2, 3

Flaw # - Type - Remaining:

#64 - WL - 0.239"
#65 - WL - 0.240"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

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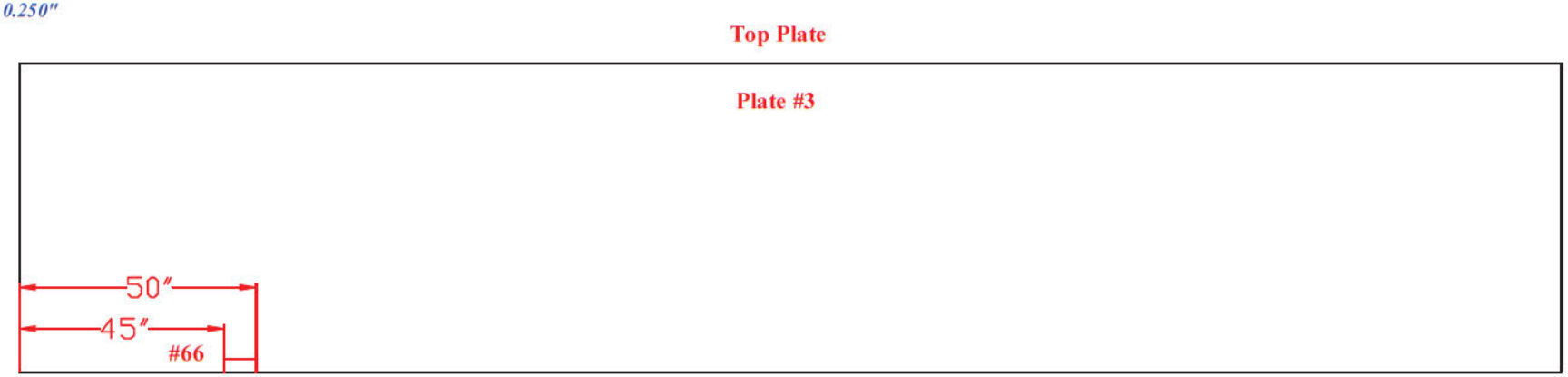
TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: A

Row: 14
Plate #: 3

Flaw # - Type - Remaining:

#66 - Surface Indication
5.0" Long

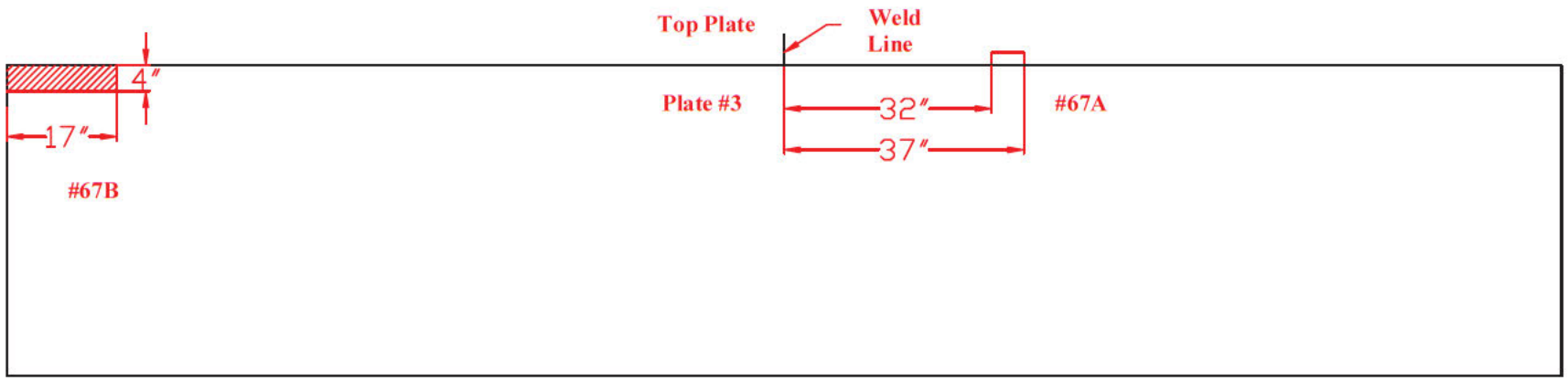


Tank Section: Barrel
Quadrant: A

Row: 8
Plate #: 3

Flaw # - Type - Remaining:

#67A - WD - Undercutting
0.125" Deep, 5.0" Long
#67B - WL - 0.236"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

TESTEX
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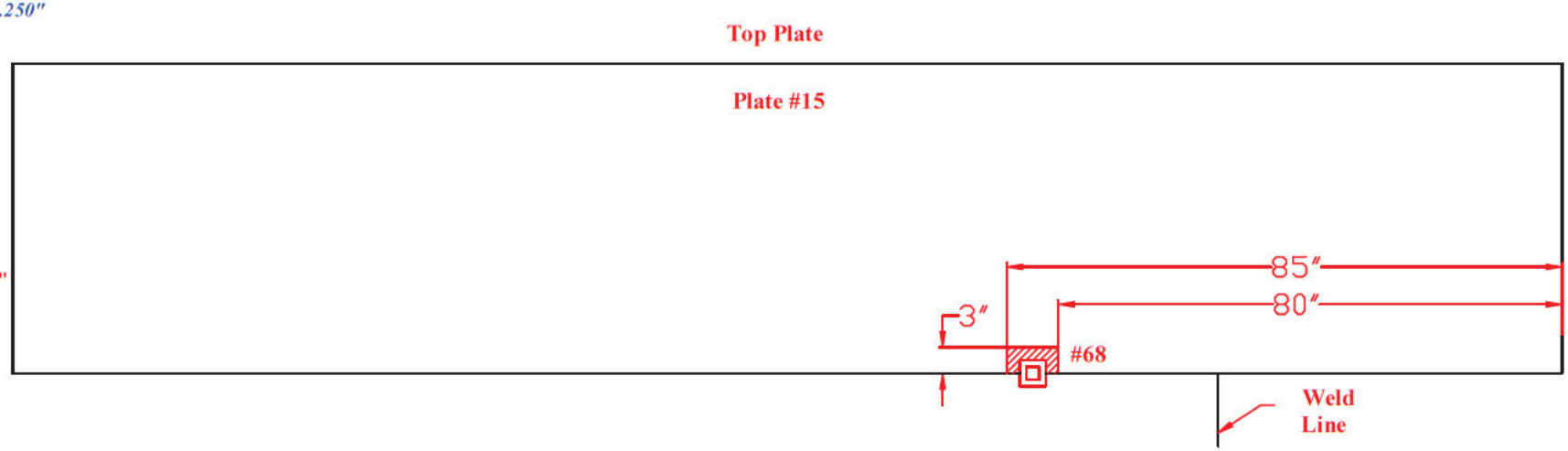
TANK # 5 - QUADRANT D
**Nominal Plate Thickness: 0.250"*

Tank Section: Barrel
Quadrant: D

Row: 20
Plate #: 15

Flaw # - Type - Remaining:

#68 - WL(APP) - 0.207"-0.214"

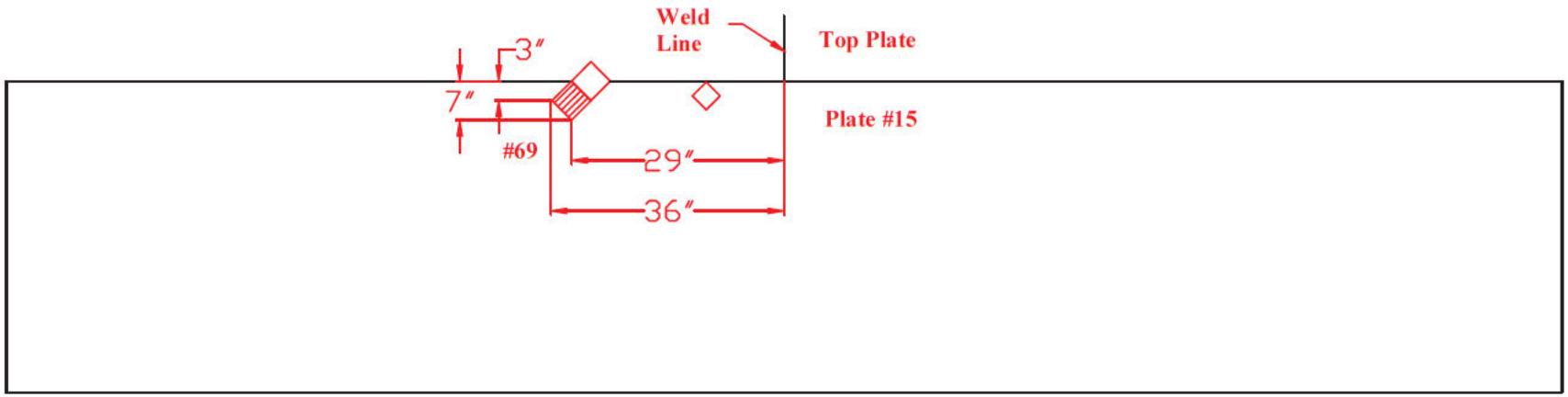


Tank Section: Barrel
Quadrant: D

Row: 16
Plate #: 15

Flaw # - Type - Remaining:

#69 - WL(APP) - 0.187"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

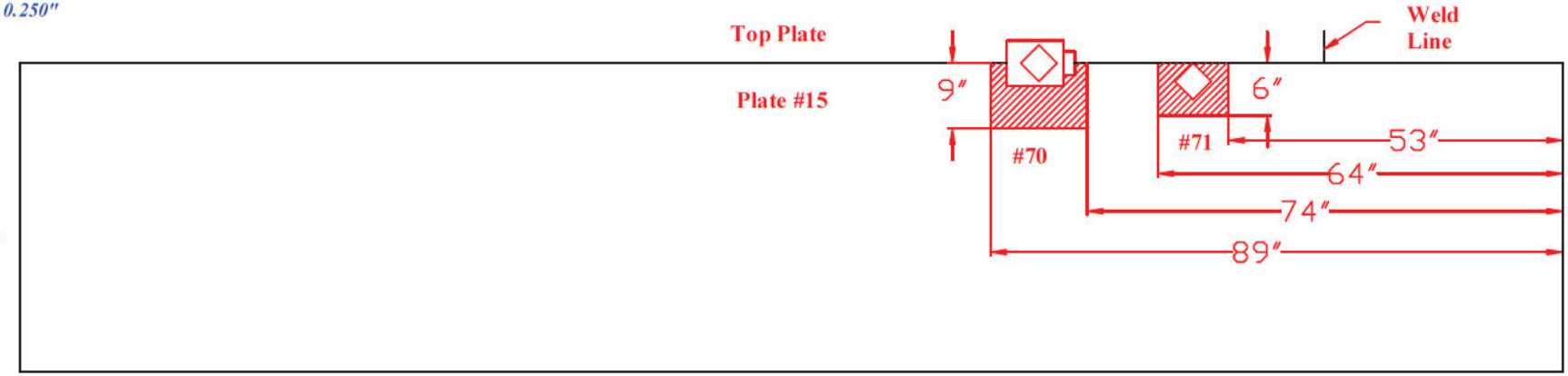
TANK # 5 - QUADRANT D
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: D

Row: 26
Plate #: 15

Flaw # - Type - Remaining:

#70 - WL(APP) - 0.186"
#71 - WL(APP) - 0.177"

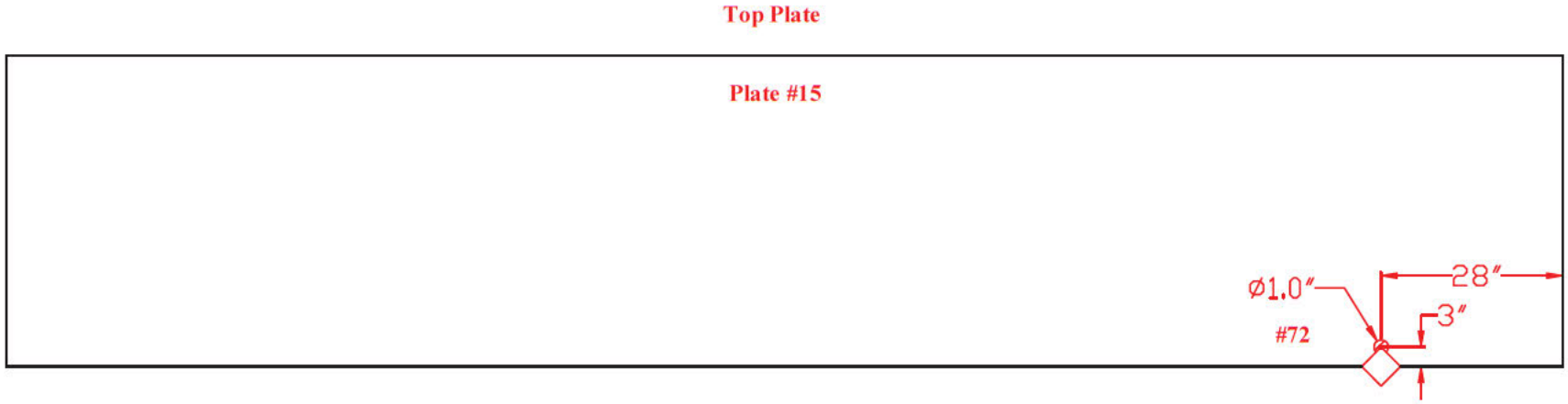


Tank Section: Barrel
Quadrant: D

Row: 22
Plate #: 15

Flaw # - Type - Remaining:

#72 - WL(APP) - 0.208"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

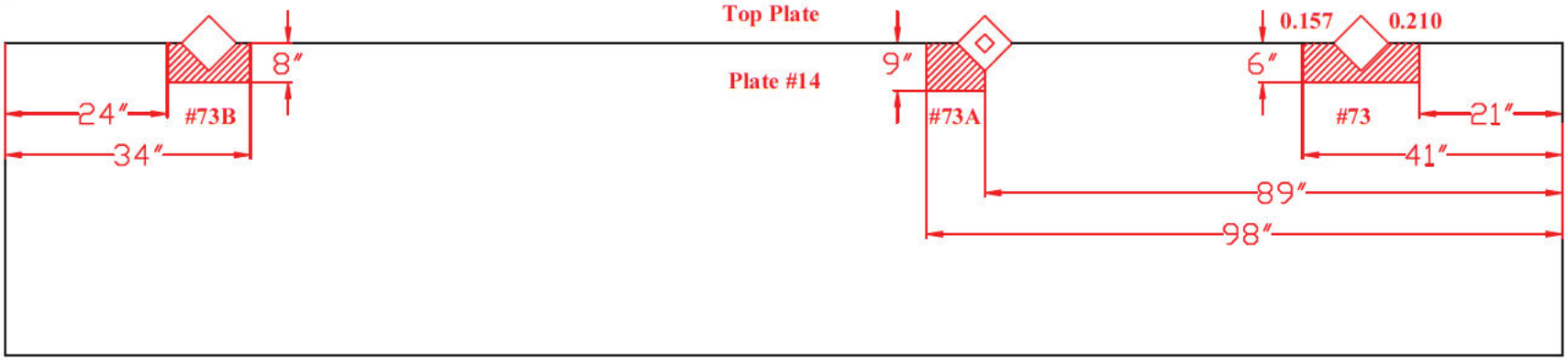
TANK # 5 - QUADRANT D
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: D

Row: 27
Plate #: 14

Flaw # - Type - Remaining:

#73 - WL(APP) - (0.157"-0.210")
#73A - WL(APP) - 0.115"
#73B - WL(APP) - 0.230"

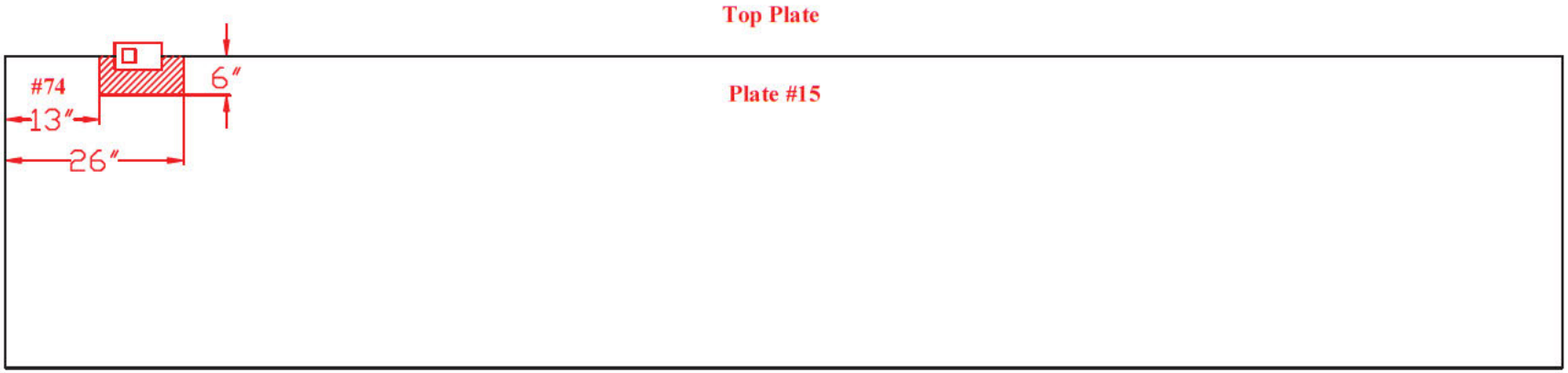


Tank Section: Barrel
Quadrant: D

Row: 27
Plate #: 15

Flaw # - Type - Remaining:

#74 - WL(APP) - 0.186"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

TANK # 5 - QUADRANT D
Nominal Plate Thickness: 0.250"

Top Plate

Tank Section: Barrel
Quadrant: D

Row: 10
Plate #: 16

Flaw # - Type - Remaining:

#75 - WL(APP) - 0.208"
#76 - WL(APP) - (0.178"-0.186")

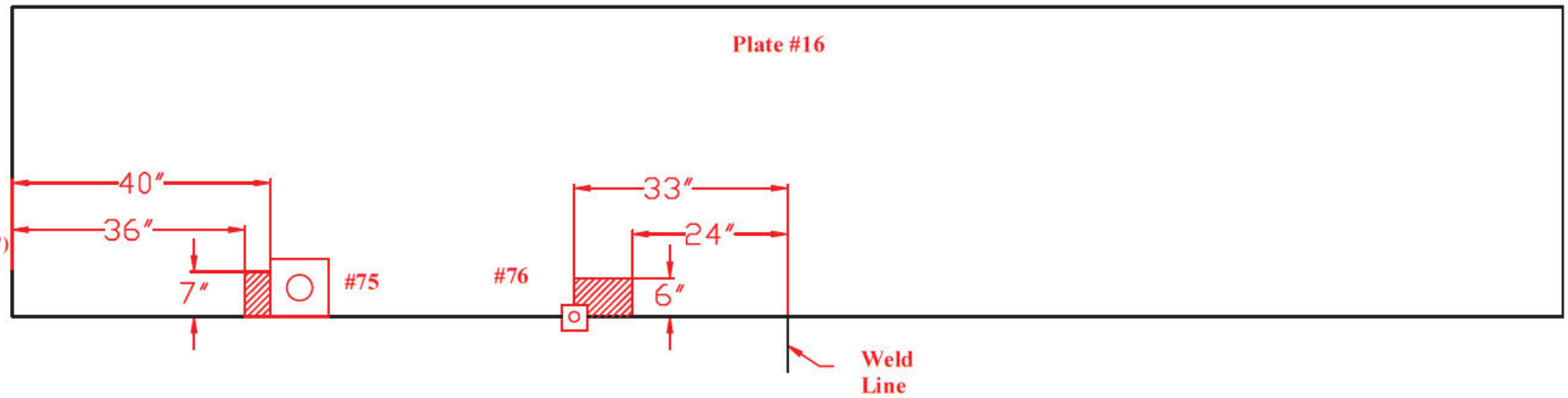


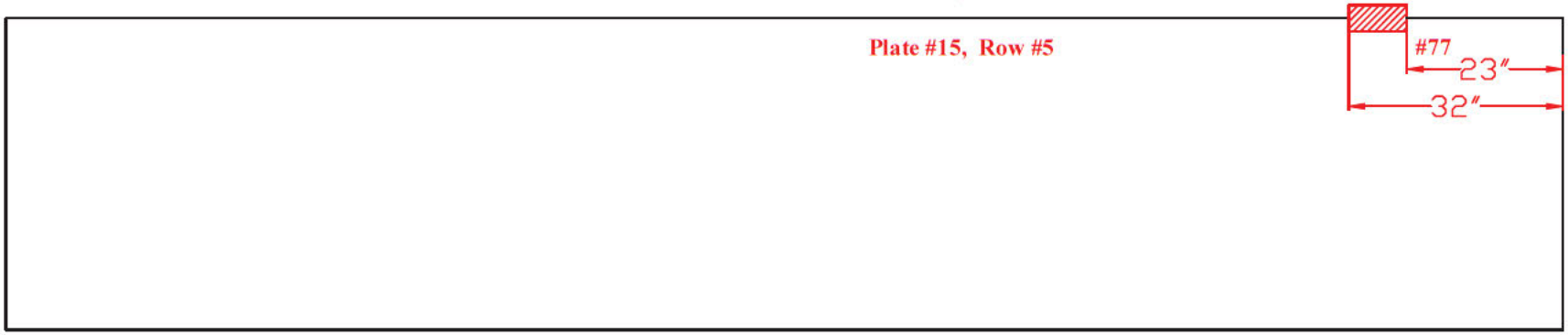
Plate #16, Row #6

Tank Section: Barrel
Quadrant: D

Row: 6/5
Plate #: 16/15

Flaw # - Type - Remaining:

#77 - WL(OPP) - 0.190"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

TESTEX
WWW.TESTEX-NDT.COM

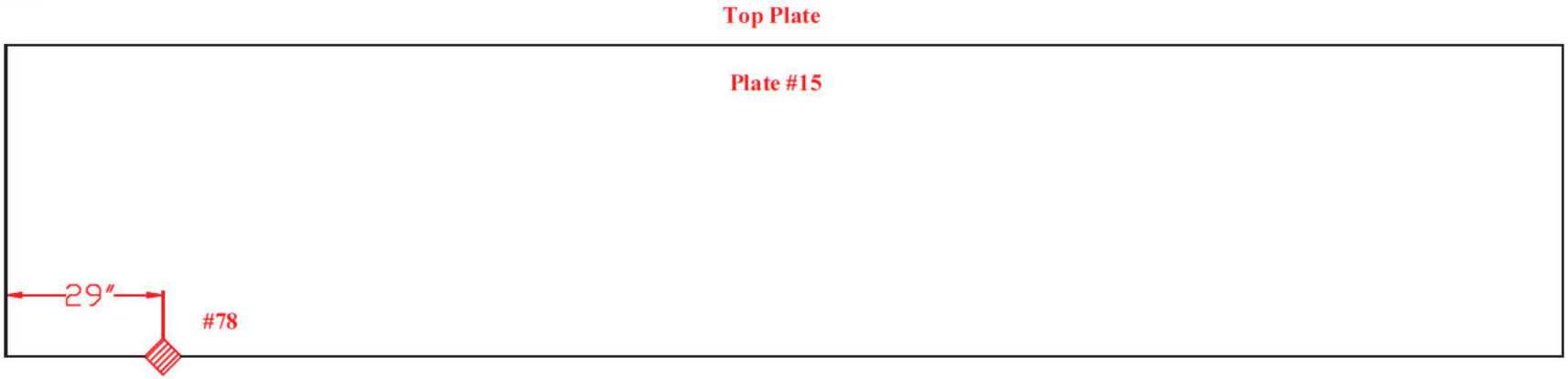
TANK # 5 - QUADRANT D
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: D

Row: 20
Plate #: 15

Flaw # - Type - Remaining:

#78 - WL(OPP) - 0.198"

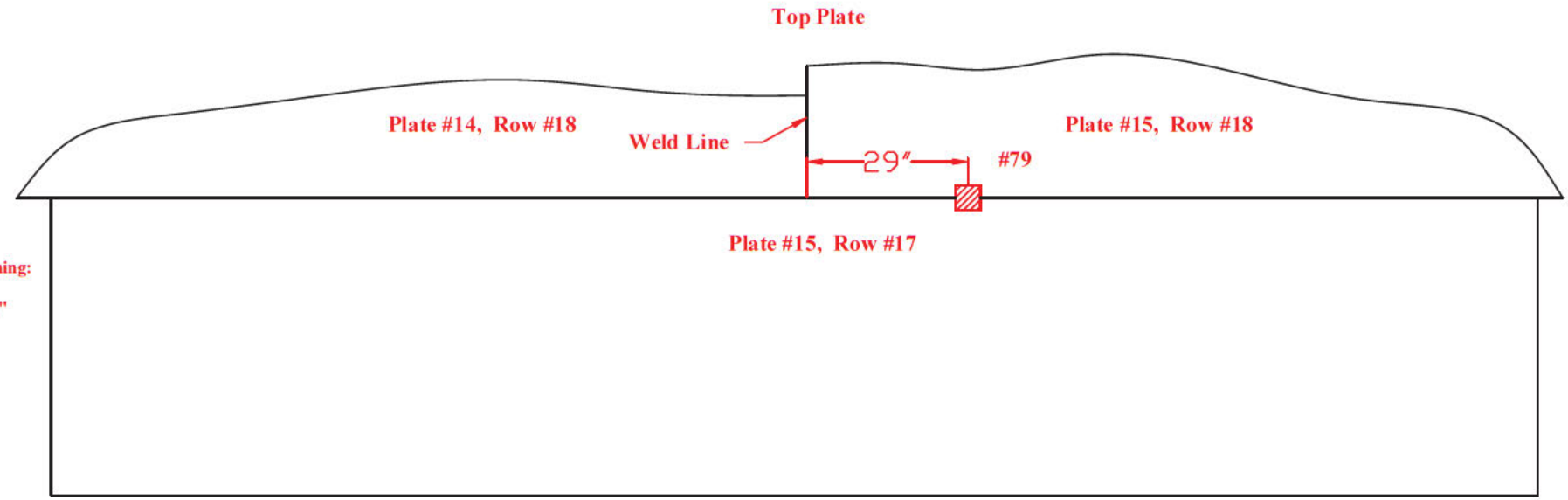


Tank Section: Barrel
Quadrant: D

Row: 17/18
Plate #: 15

Flaw # - Type - Remaining:

#79 - WL(OPP) - 0.190"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

Weld Line

TesTex
WWW.TESTEX-NDT.COM

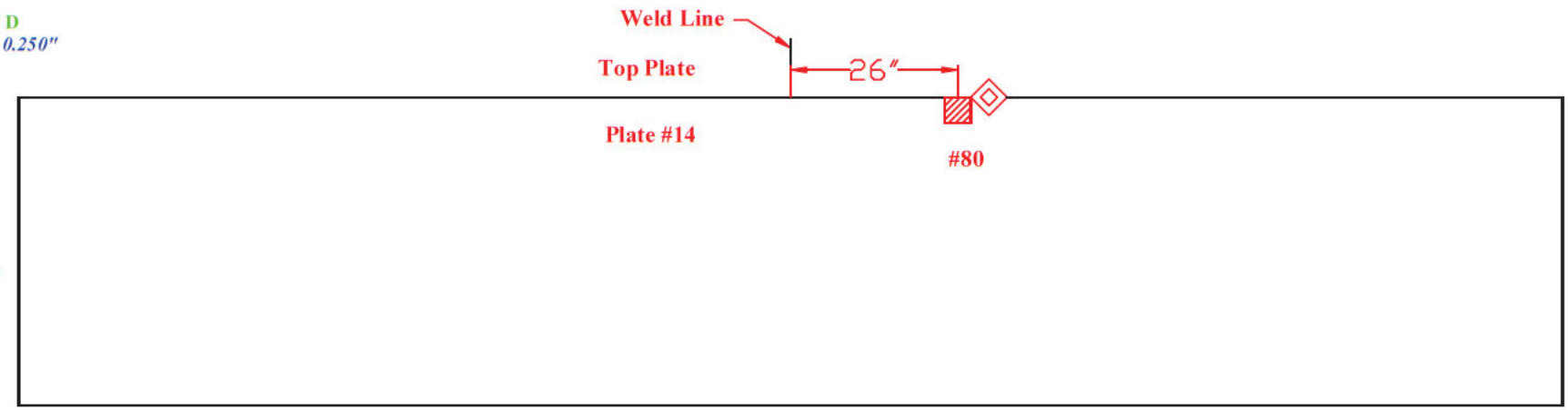
TANK # 5 - QUADRANT D
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: D

Row: 7
Plate #: 14

Flaw # - Type - Remaining:

#80 - WL(OPP) - 0.208"

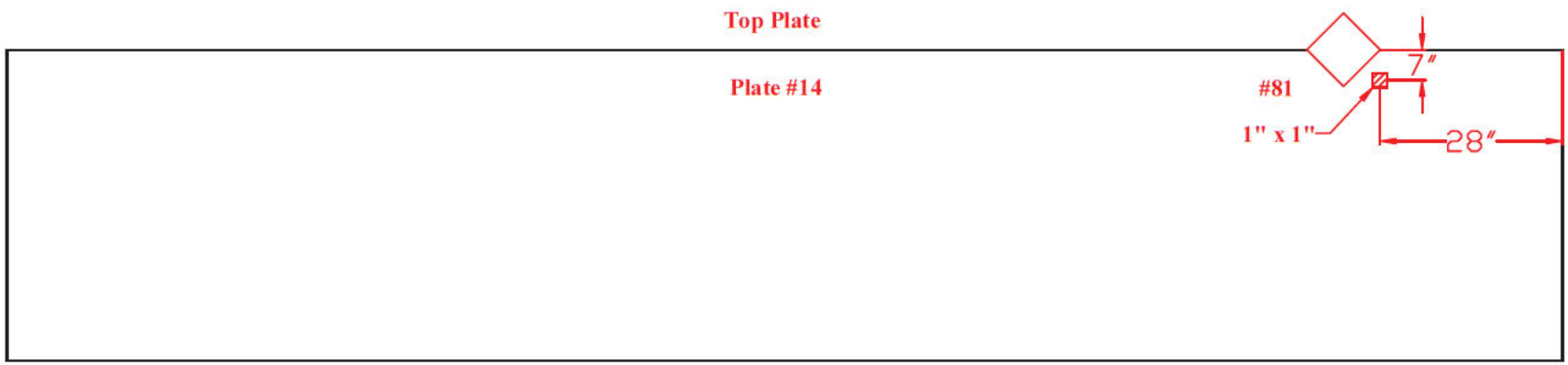


Tank Section: Barrel
Quadrant: D

Row: 11
Plate #: 14

Flaw # - Type - Remaining:

#81 - WL(APP) - 0.186"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D/A

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT D/A
Nominal Plate Thickness: 0.250"

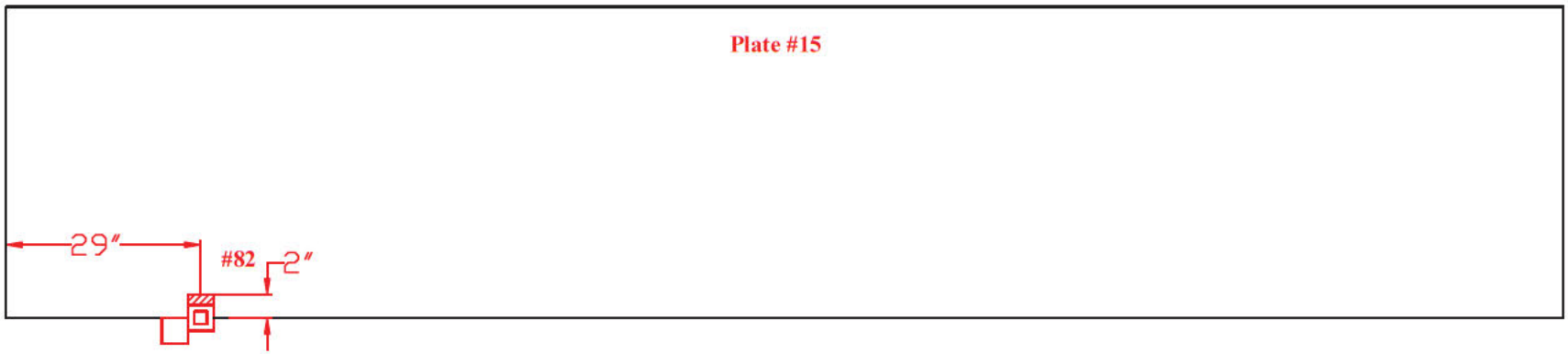
Top Plate

Tank Section: Barrel
Quadrant: D

Row: 10
Plate #: 15

Flaw # - Type - Remaining:

#82 - WL(APP) - 0 209"



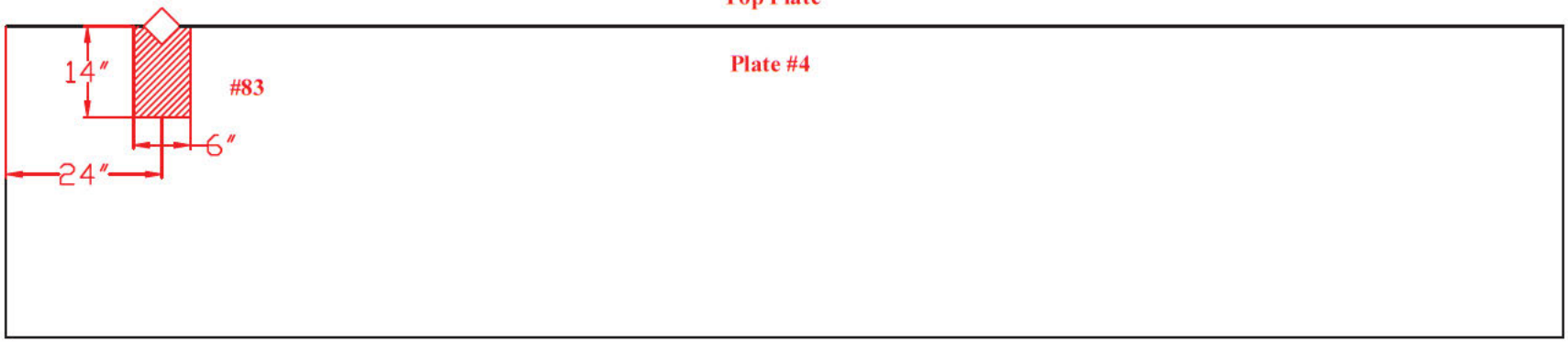
Top Plate

Tank Section: Barrel
Quadrant: A

Row: 26
Plate #: 4

Flaw # - Type - Remaining:

#83 - WL(APP) - 0 239"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

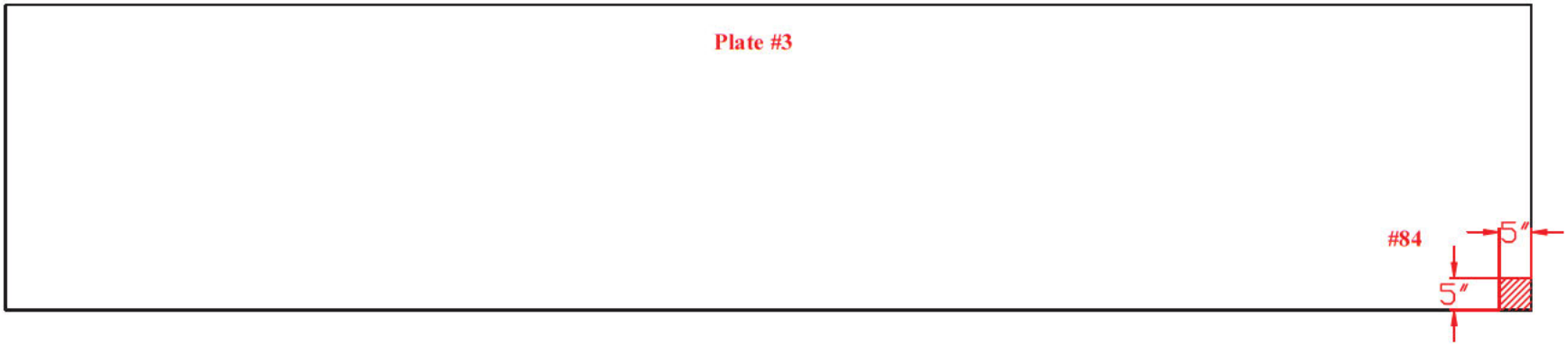
Top Plate

Tank Section: Barrel
Quadrant: A

Row: 28
Plate #: 3

Flaw # - Type - Remaining:

#84 - WL - 0.180"



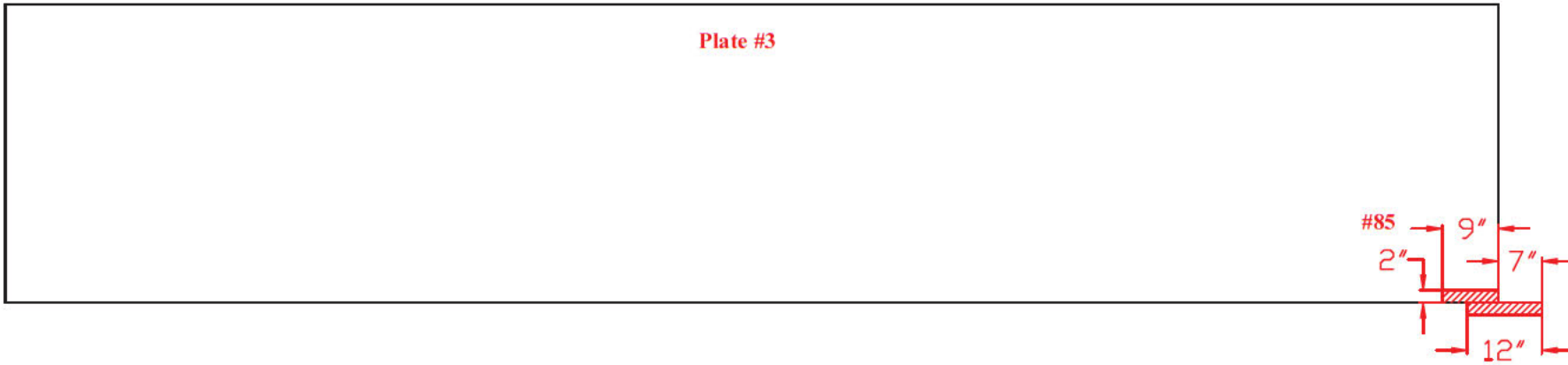
Top Plate

Tank Section: Barrel
Quadrant: A

Row: 10
Plate #: 3

Flaw # - Type - Remaining:

#85 - WL - 0.238"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

TESTEX
WWW.TESTEX-NDT.COM

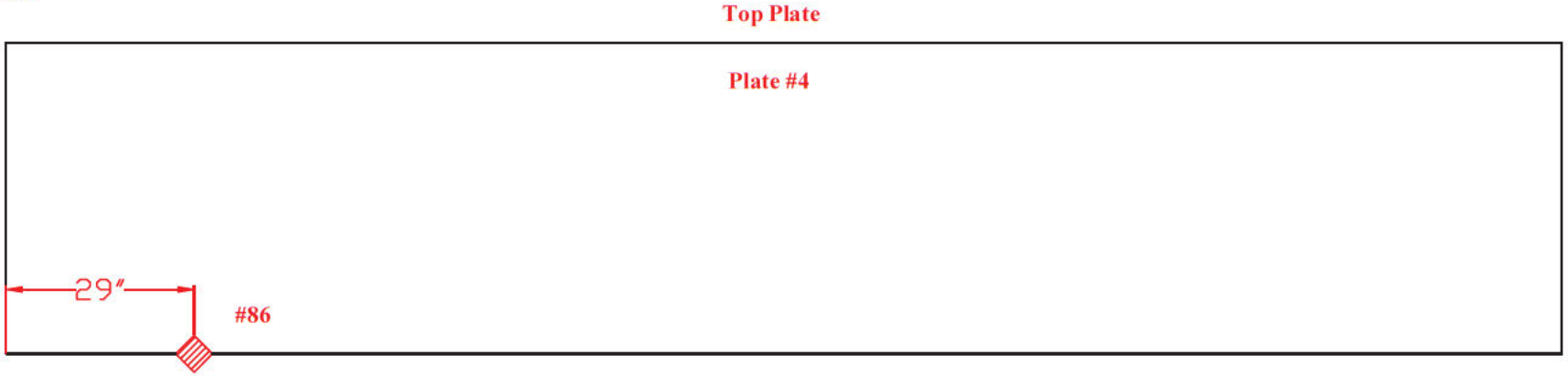
TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: A

Row: 24
Plate #: 4

Flaw # - Type - Remaining:

#86 - WL(OPP) - 0.241"

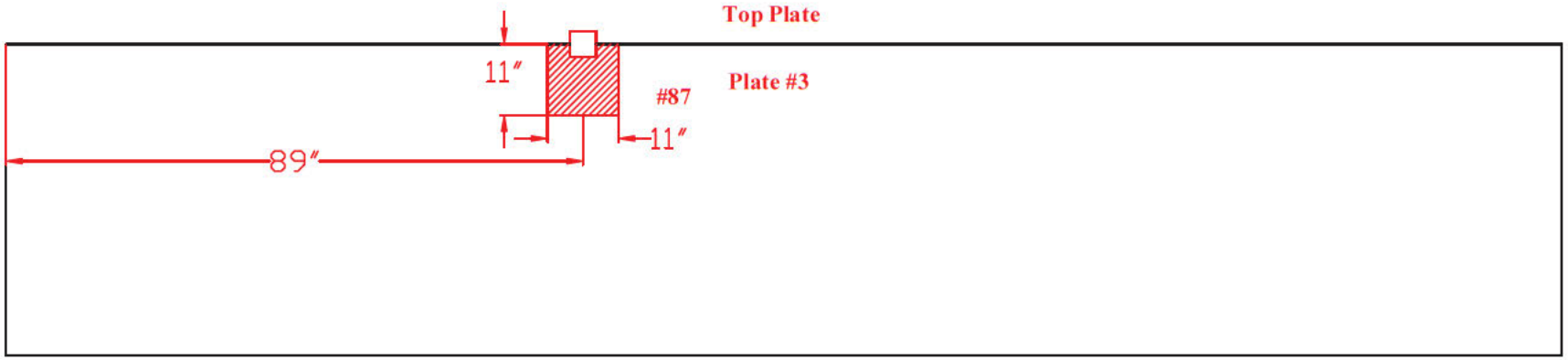


Tank Section: Barrel
Quadrant: A

Row: 7
Plate #: 3

Flaw # - Type - Remaining:

#87 - WL(APP) - 0.246"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: A

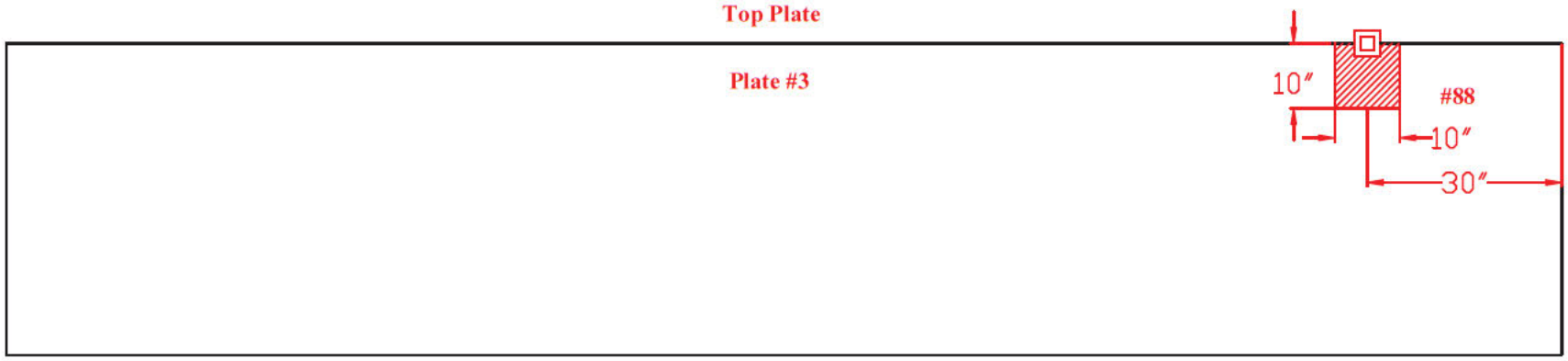
Row: 8
Plate #: 3

Flaw # - Type - Remaining:

#88 - WL(APP) - 0.233"

Top Plate

Plate #3



Tank Section: Barrel
Quadrant: A

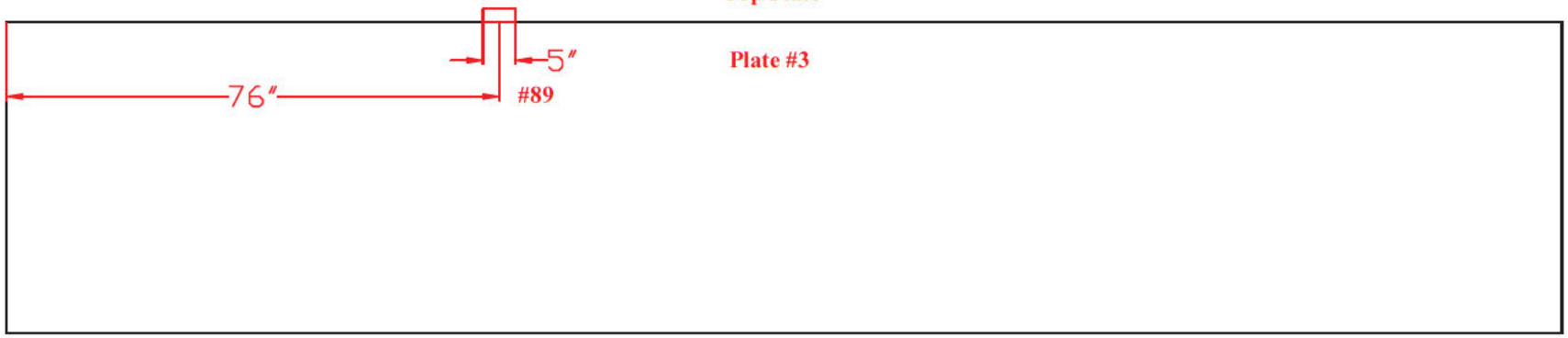
Row: 3
Plate #: 3

Flaw # - Type - Remaining:

#89 - Surface Indication
0.040" Deep, 5.0" Long

Top Plate

Plate #3



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/D

TESTEX
WWW.TESTEX-NDT.COM

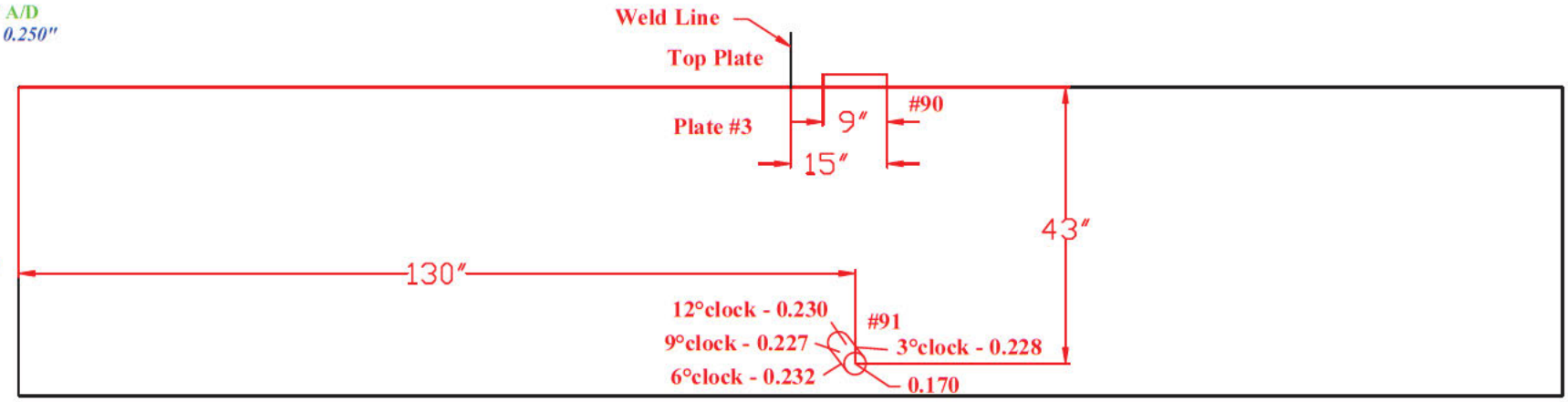
TANK # 5 - QUADRANT A/D
**Nominal Plate Thickness: 0.250"*

Tank Section: Barrel
Quadrant: A

Row: 5
Plate #: 3

Flaw # - Type - Remaining:

#90 - Surface Indication
0.030" Deep, 9.0" Long
#91 - GN - 0.170"
(0.227"-0.232")

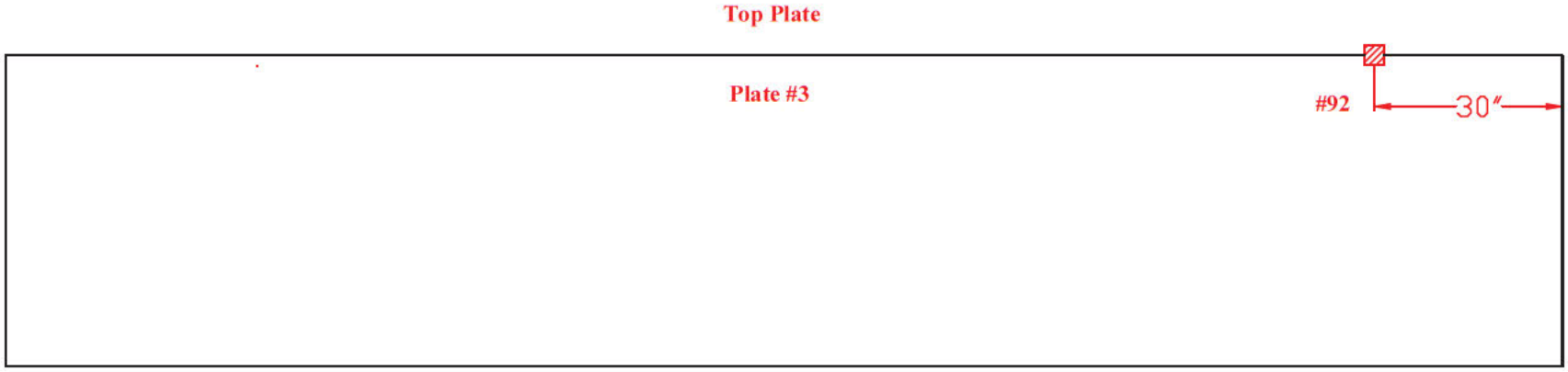


Tank Section: Barrel
Quadrant: D

Row: 2
Plate #: 3

Flaw # - Type - Remaining:

#92 - WL(OPP) - 0.238"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D/A

TESTEX
WWW.TESTEX-NDT.COM

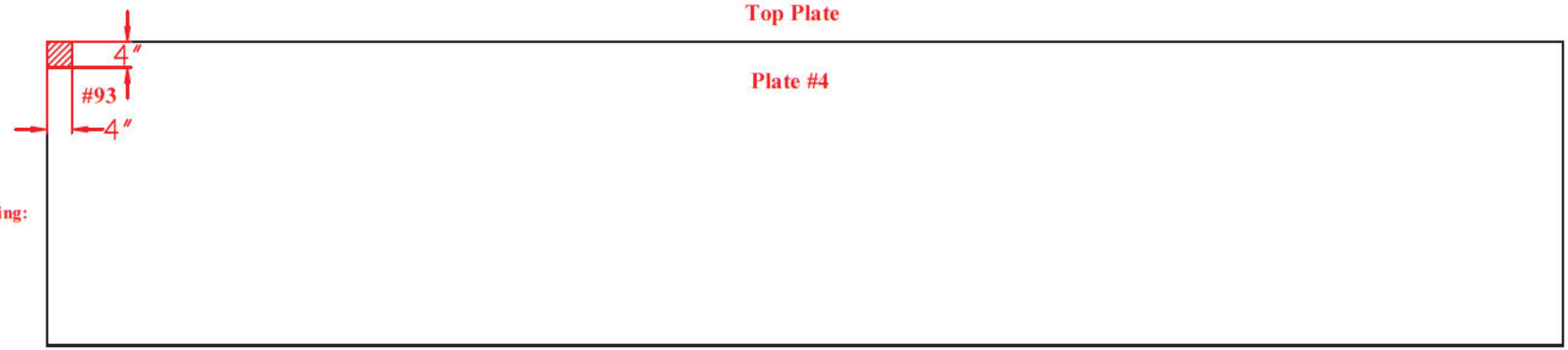
TANK # 5 - QUADRANT D/A
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: D

Row: 2
Plate #: 4

Flaw # - Type - Remaining:

#93 - WL - 0 240"

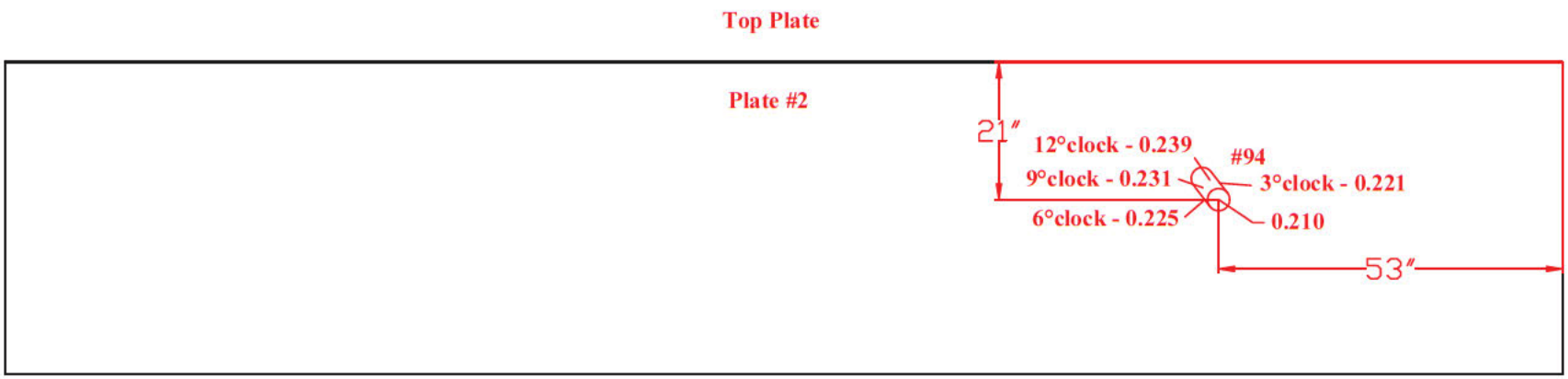


Tank Section: Barrel
Quadrant: A

Row: 27
Plate #: 2

Flaw # - Type - Remaining:

#94 - GN - 0.210"
(0.221"-0.239")



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

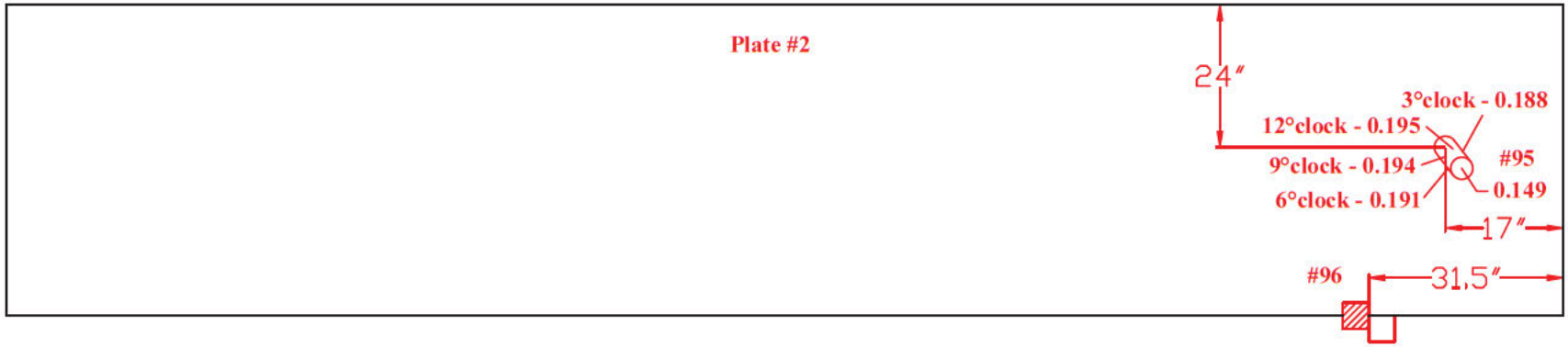
Top Plate

Tank Section: Barrel
Quadrant: A

Row: 19
Plate #: 2

Flaw # - Type - Remaining:

#95 - GN - 0 149"
(0 188"-0.195")
#96 - WL(OPP) - 0.190"



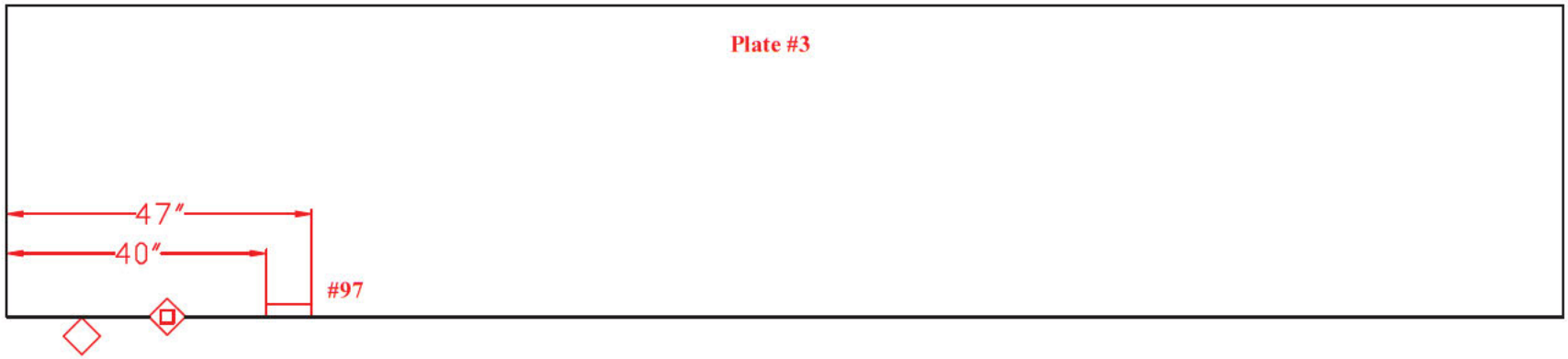
Top Plate

Tank Section: Barrel
Quadrant: A

Row: 18
Plate #: 3

Flaw # - Type - Remaining:

#97 - Surface Indication
7.0" Long



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

TANK # 5 - QUADRANT A
**Nominal Plate Thickness: 0.250"*

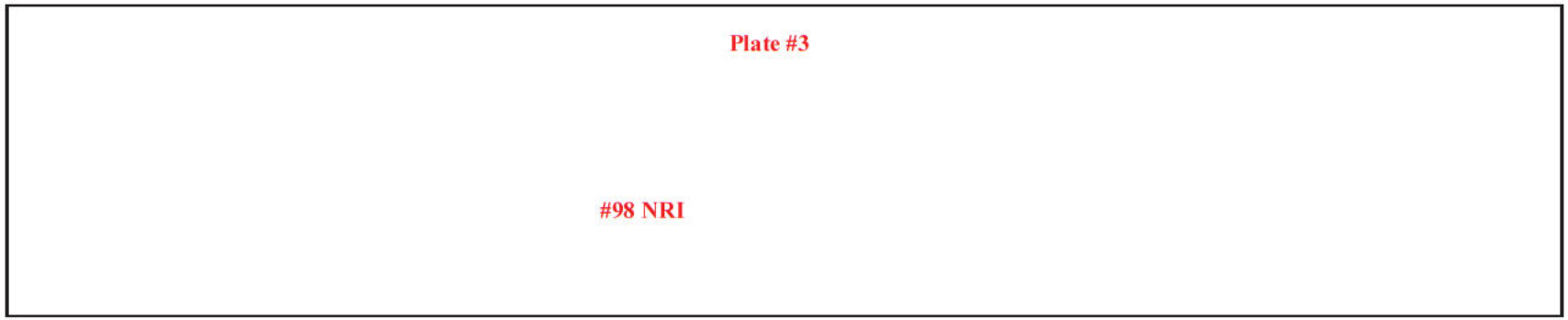
Tank Section: Barrel
Quadrant: A

Row: 12
Plate #: 3

Flaw # - Type - Remaining:

#98 - NRI

Top Plate



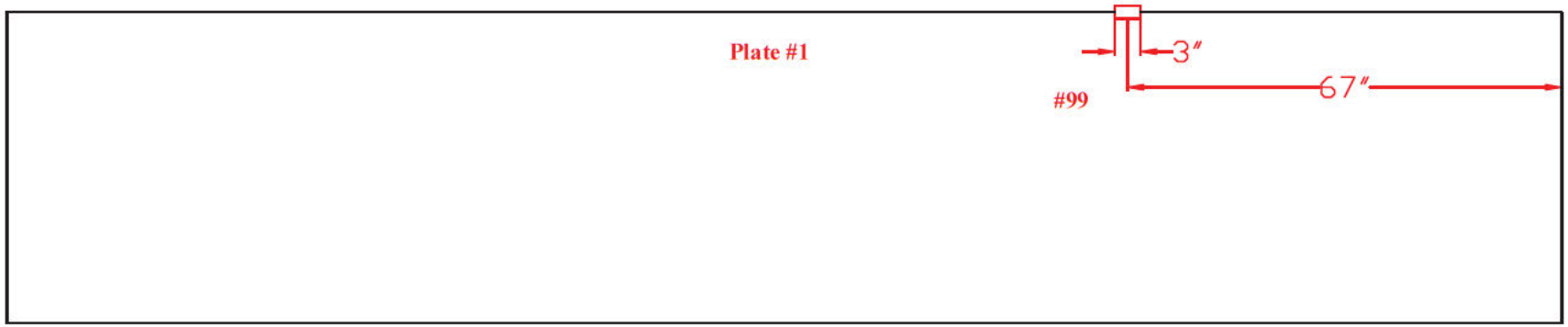
Tank Section: Barrel
Quadrant: A

Row: 21
Plate #: 1

Flaw # - Type - Remaining:

#99 - Surface Indication
0.050" Deep, 3.0" Long

Top Plate



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A /D

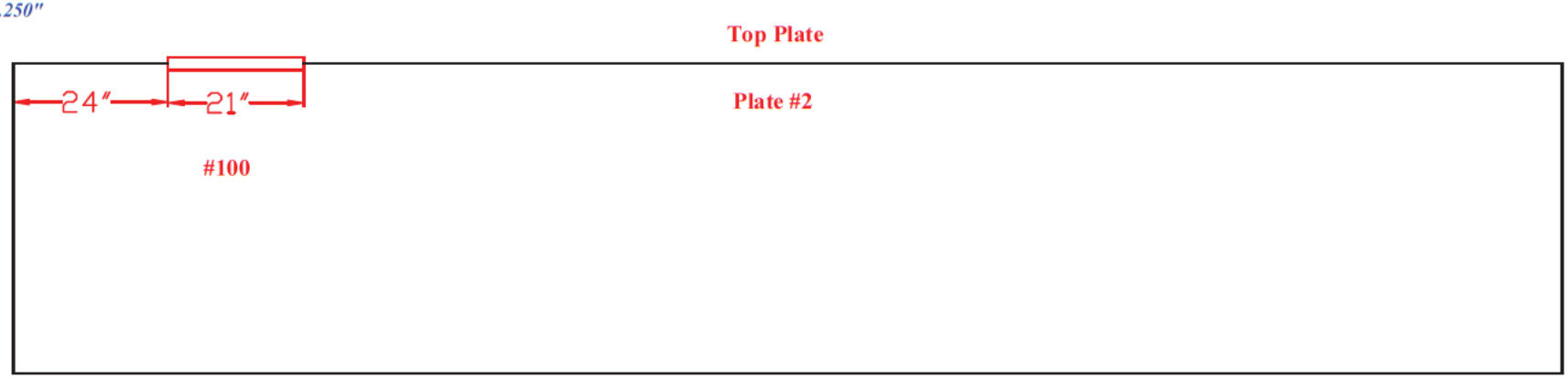
TANK # 5 - QUADRANT A/D
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: A

Row: 25
Plate #: 2

Flaw # - Type - Remaining:

#100 - Surface Indication
21.0" Long, No Depth

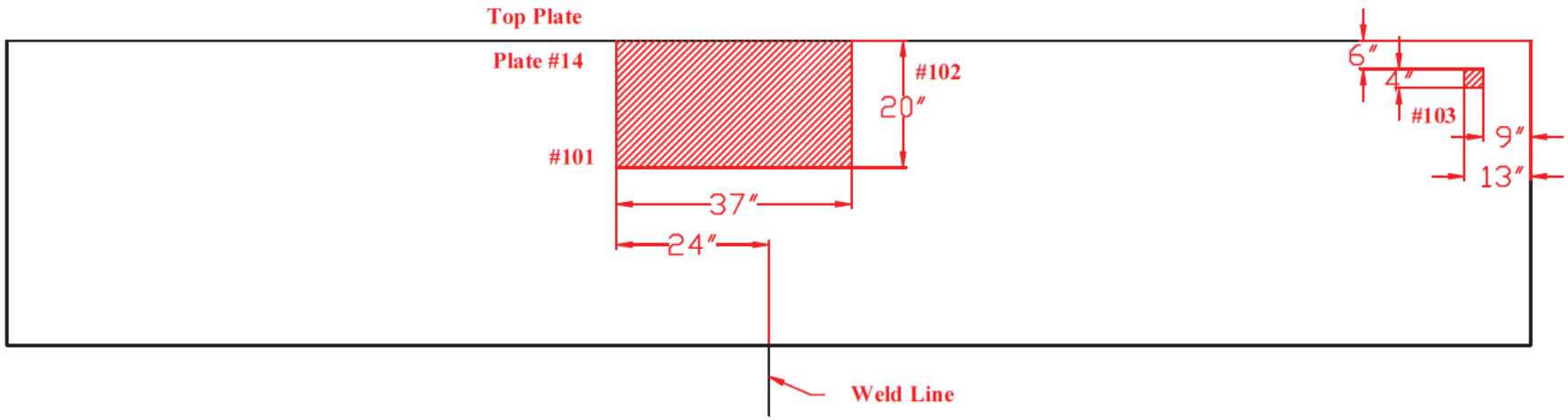


Tank Section: Barrel
Quadrant: D

Row: 28
Plate #: 14

Flaw # - Type - Remaining:

#101, 102 - WL - (0.167-0.174")
#103 - WL - 0.208"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT D

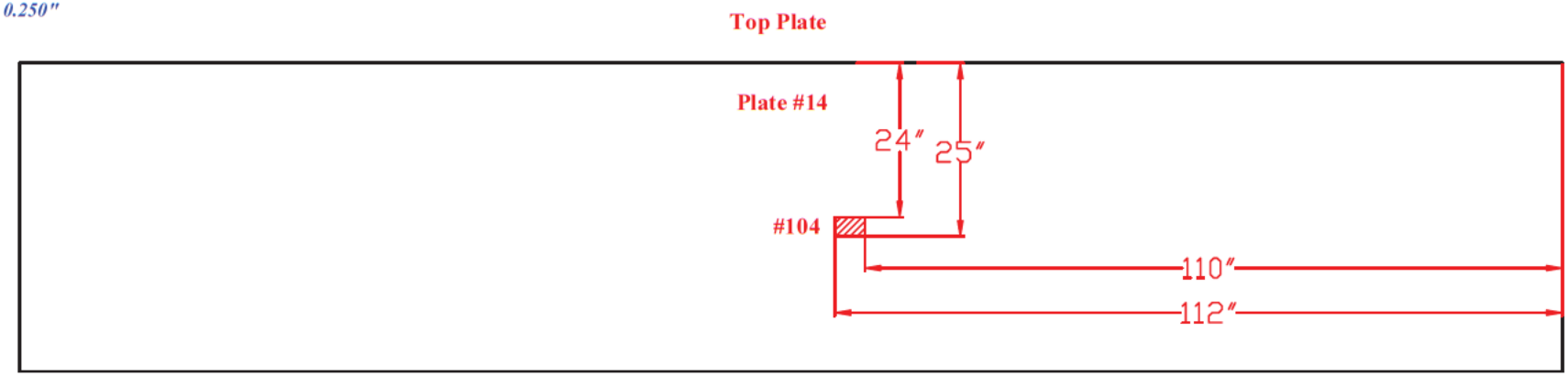
**Nominal Plate Thickness: 0.250"*

Tank Section: Barrel
Quadrant: D

Row: 22
Plate #: 14

Flaw # - Type - Remaining:

#104 - WL - 0.137"

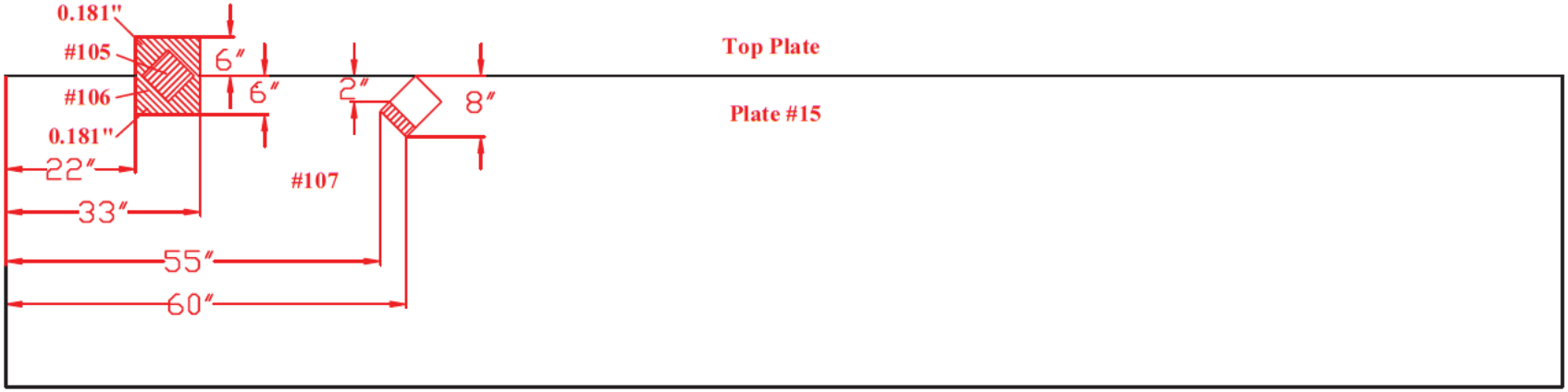


Tank Section: Barrel
Quadrant: D

Row: 26
Plate #: 15

Flaw # - Type - Remaining:

#105 - WL(OPP) - 0.186"
#106 - WL(OPP) - 0.181"
#107 - WL(APP) - 0.203"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D/A

TESTEX
WWW.TESTEX-NDT.COM

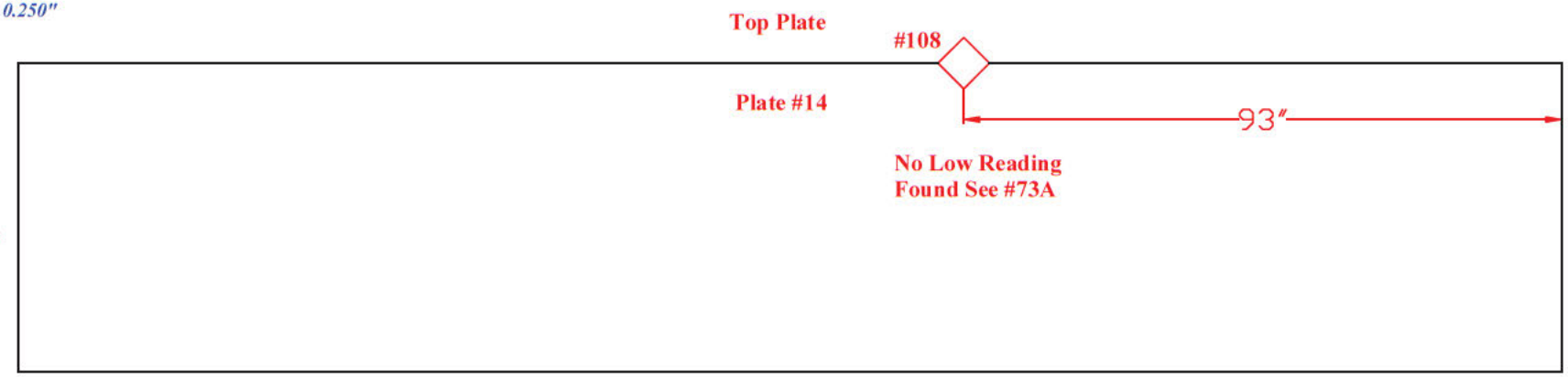
TANK # 5 - QUADRANT D/A
**Nominal Plate Thickness: 0.250"*

Tank Section: Barrel
Quadrant: D

Row: 1
Plate #: 14

Flaw # - Type - Remaining:

#108 - No Low Reading (Rough Surface)

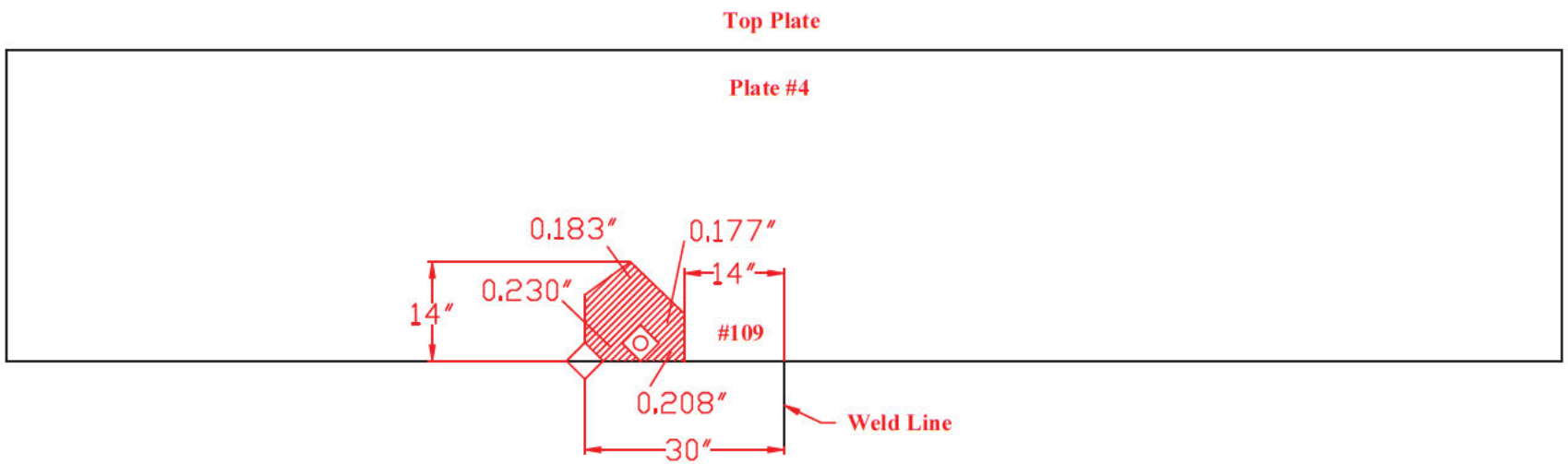


Tank Section: Barrel
Quadrant: A

Row: 4
Plate #: 4

Flaw # - Type - Remaining:

#109 - WL(APP) - 0.177"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

TESTEX
WWW.TESTEX-NDT.COM

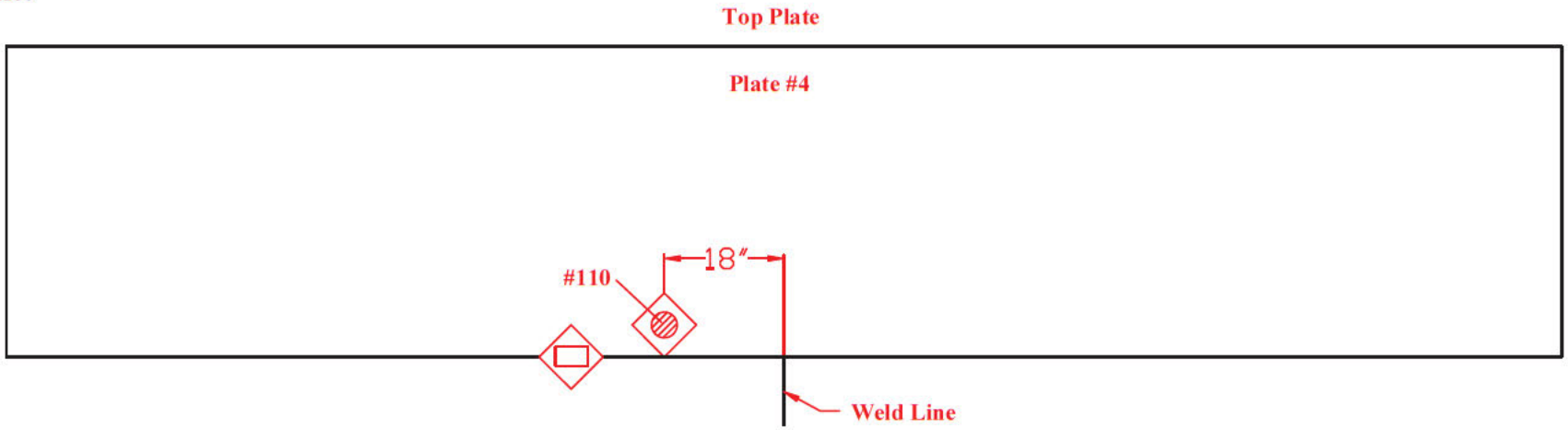
TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: A

Row: 16
Plate #: 4

Flaw # - Type - Remaining:

#110 - WL(OPP) - 0.240"
Also See #128

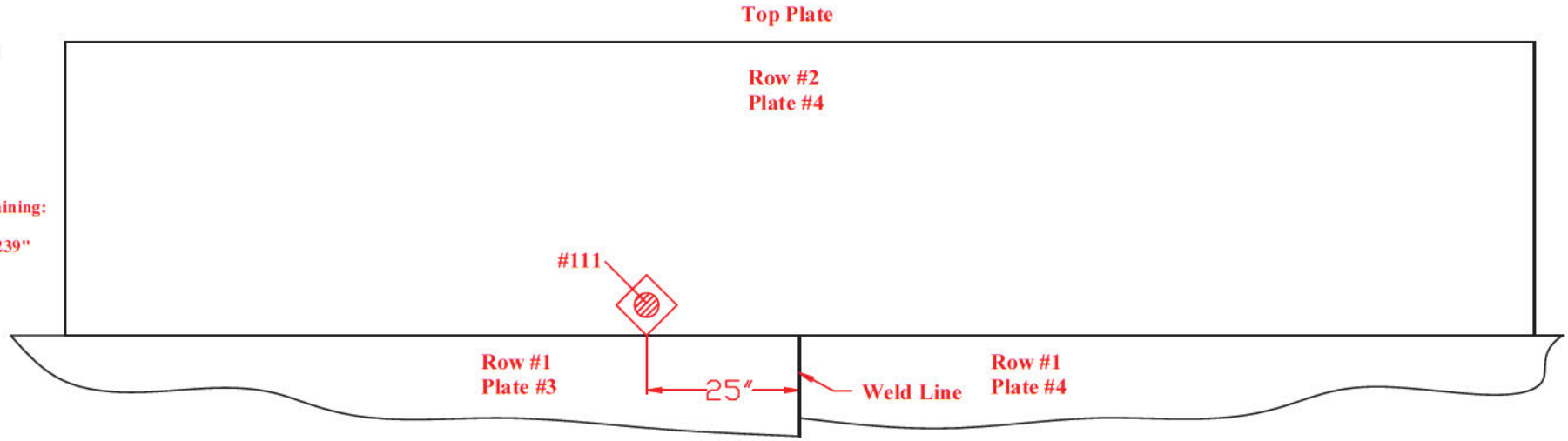


Tank Section: Barrel
Quadrant: A

Row: 2
Plate #: 4

Flaw # - Type - Remaining:

#111 - WL(OPP) - 0.239"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A /B

TANK # 5 - QUADRANT A/B
Nominal Plate Thickness: 0.250"

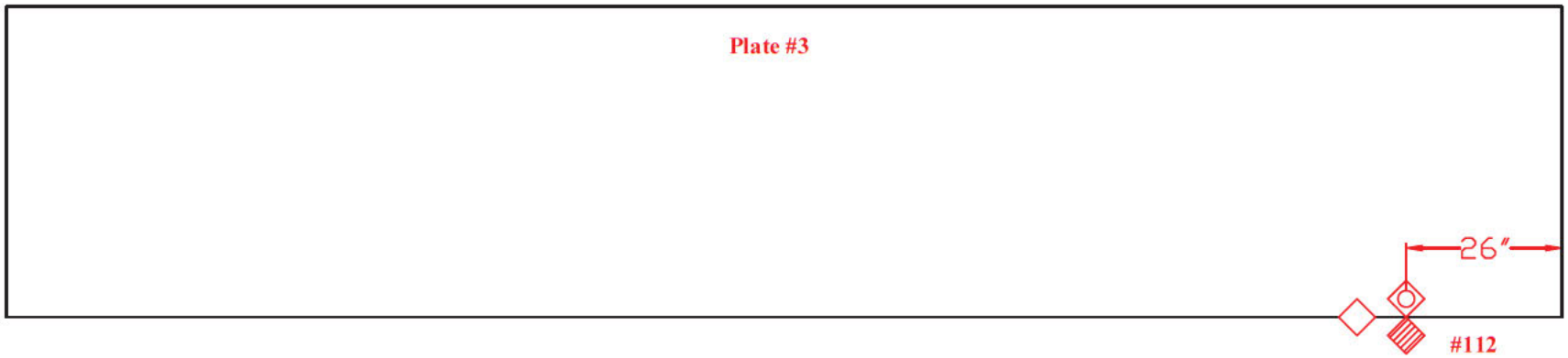
Tank Section: Barrel
Quadrant: A

Row: 3
Plate #: 3

Flaw # - Type - Remaining:

#112 - WL(OPP) - 0.195"

Top Plate



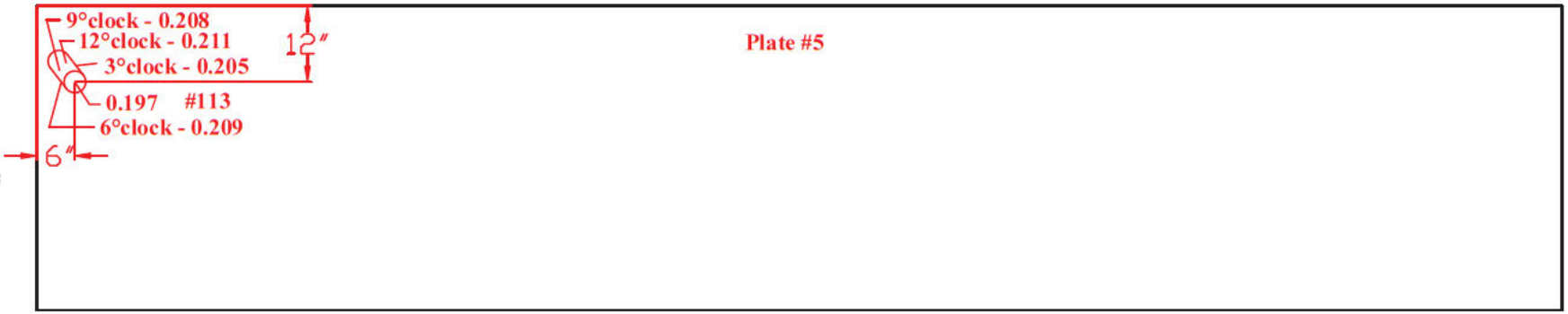
Top Plate

Tank Section: Barrel
Quadrant: B

Row: 12
Plate #: 5

Flaw # - Type - Remaining:

#113 - GN - 0.197"
(0.205"-0.211")



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/B

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT A/B
Nominal Plate Thickness: 0.250"

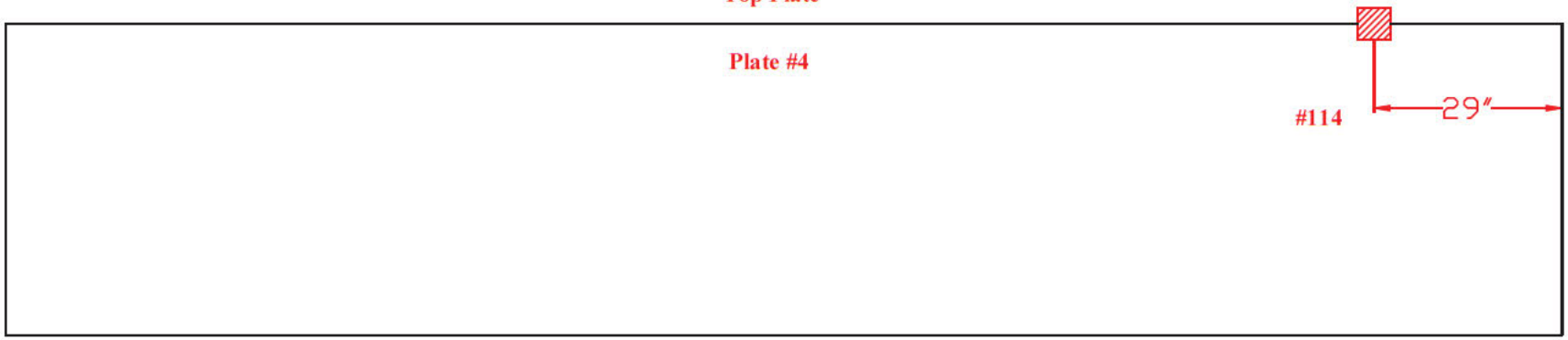
Tank Section: Barrel
Quadrant: A

Row: 15
Plate #: 4

Flaw # - Type - Remaining:

#114 - WL(OPP) - 0.157"

Top Plate



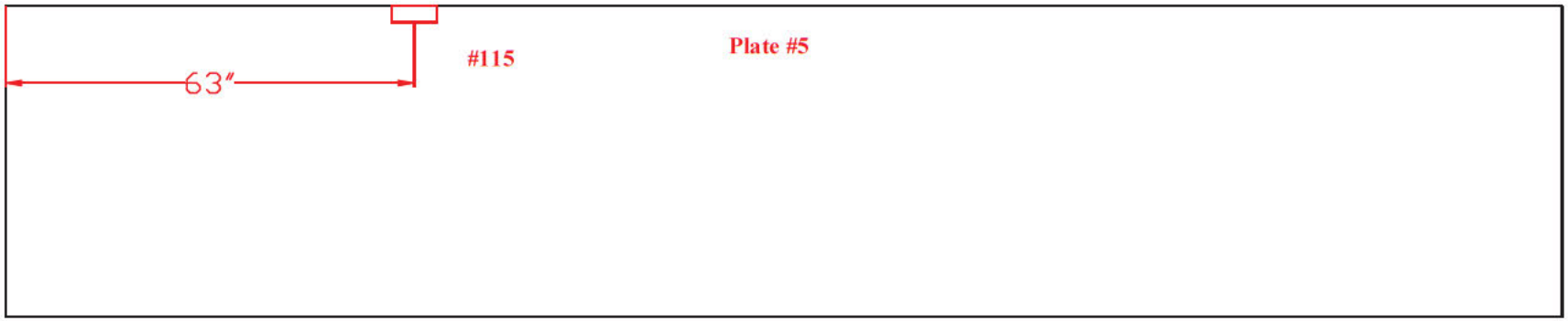
Top Plate

Tank Section: Barrel
Quadrant: B

Row: 8
Plate #: 5

Flaw # - Type - Remaining:

#115 - Surface Indication
(No U.T. Indication)



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/B

TESTEX
WWW.TESTEX-NDT.COM

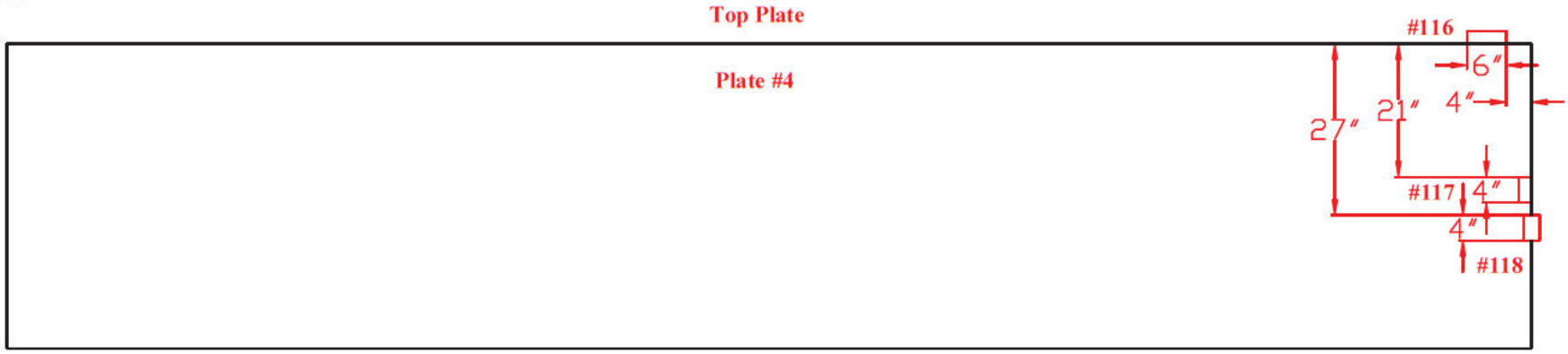
TANK # 5 - QUADRANT A/B
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: A/B

Row: 26
Plate #: 4

Flaw # - Type - Remaining:

#116 - Surface Indication
6.0" Long
#117 - Surface Indication
0.020" Deep, 4.0" Long
#118 - Surface Indication
0.020" Deep, 4.0" Long

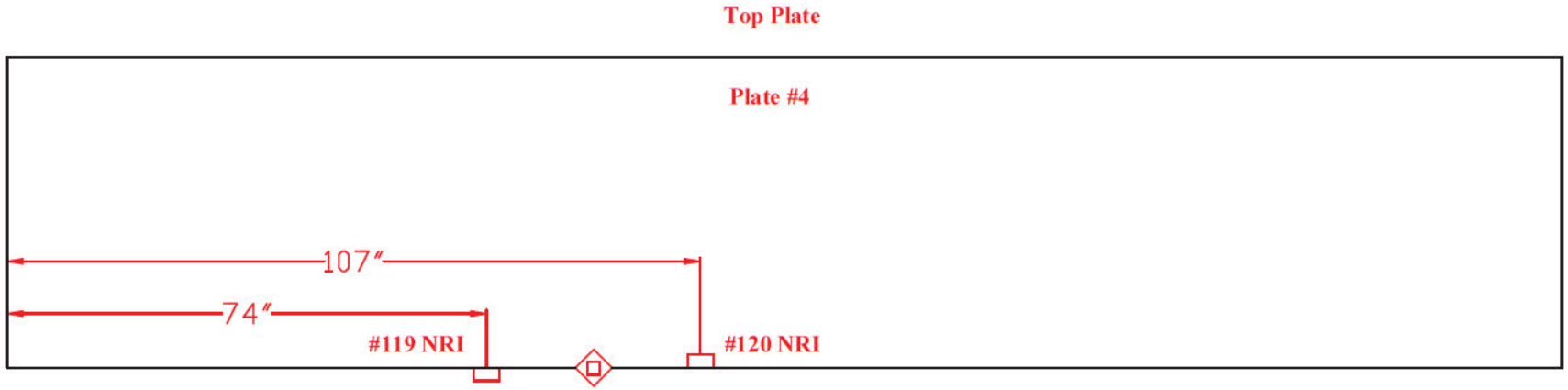


Tank Section: Barrel
Quadrant: A/B

Row: 25
Plate #: 4

Flaw # - Type - Remaining:

#119 - NRI
#120 - NRI



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/B

WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT A/B
Nominal Plate Thickness: 0.250"

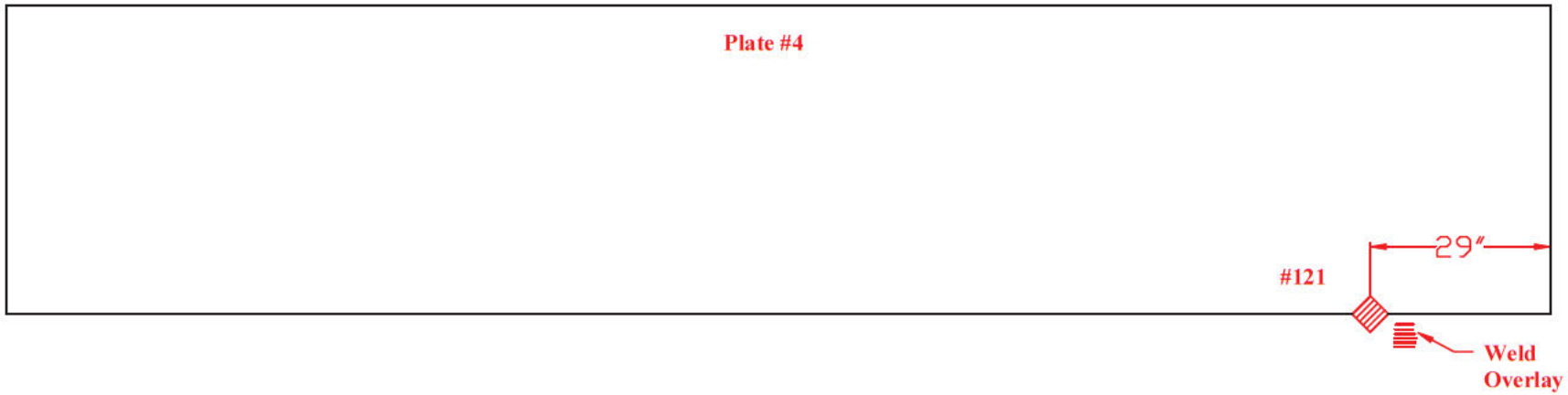
Top Plate

Tank Section: Barrel
Quadrant: A/B

Row: 23
Plate #: 4

Flaw # - Type - Remaining:

#121 - WL(OPP) - 0.233"

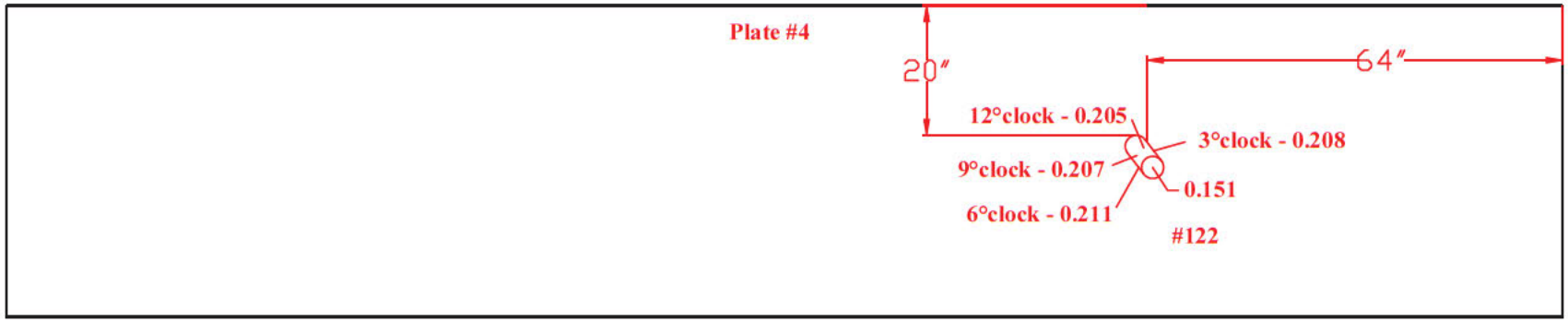


Top Plate

Tank Section: Barrel
Quadrant: A/B

Row: 19
Plate #: 4

Flaw # - Type - Remaining:
#122 - GN - 0.151"
(0.205"-0 211")



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A /B

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT A/B
Nominal Plate Thickness: 0.250"

Top Plate

Tank Section: Barrel
Quadrant: A/B

Row: 5
Plate #: 4

Flaw # - Type - Remaining:

#123 - GN - 0.206"
(0.201"-0.211")

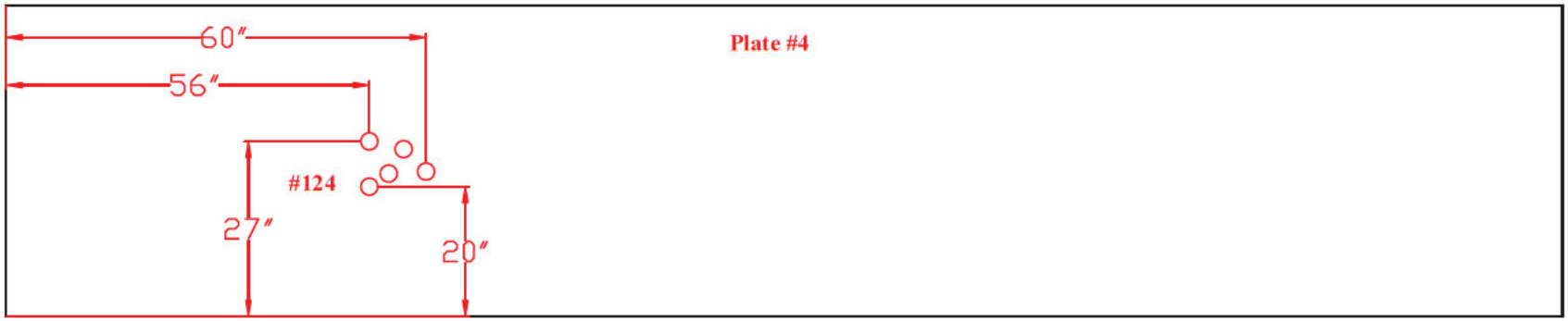
Top Plate

Tank Section: Barrel
Quadrant: A/B

Row: 17
Plate #: 4

Flaw # - Type - Remaining:

#124 - SP - 0.040" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A /B

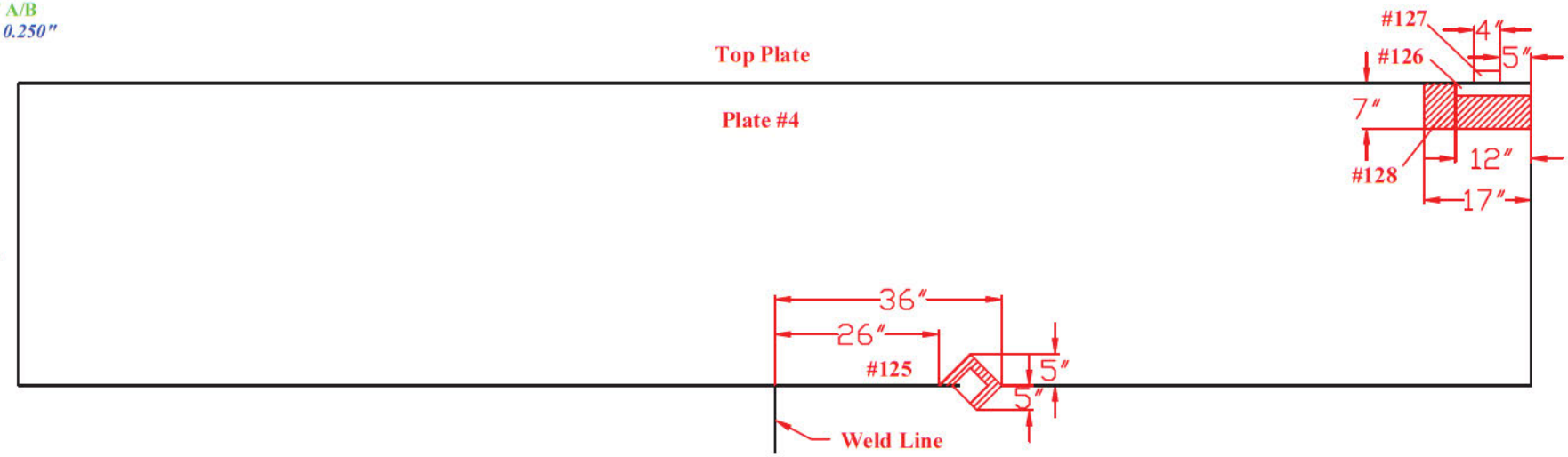
TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT A/B
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: A

Row: 16
Plate #: 4

Flaw # - Type - Remaining:
#125 - WL(APP) - 0.230"
#126 - WD - Surface Indication
0.030" Deep, 12.0" Long
#127 - WD - Surface Indication
0.030" Deep, 4.0" Long
#128 - WL - 0 237"

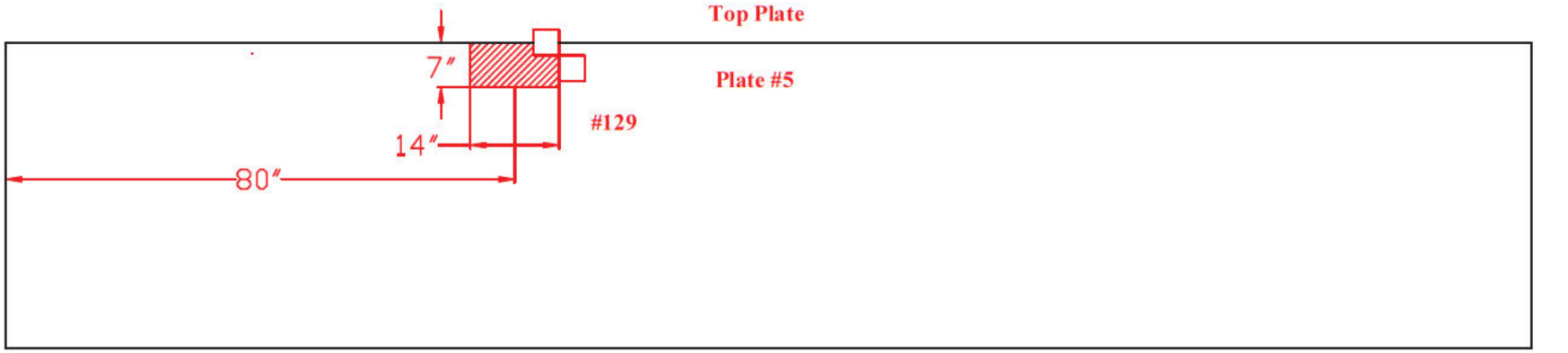


Tank Section: Barrel
Quadrant: B

Row: 4
Plate #: 5

Flaw # - Type - Remaining:

#129 - WL(APP) - 0.230"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/B, D

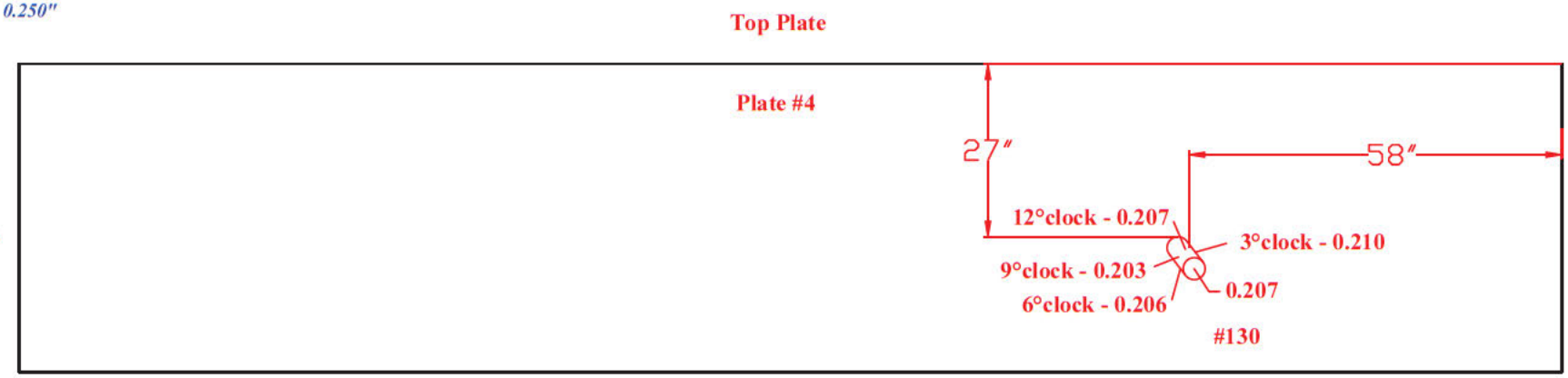
TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT A/B, D
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: A/B

Row: 27
Plate #: 4

Flaw # - Type - Remaining:
#130 - GN - 0.207"
(0.203"-0.210")

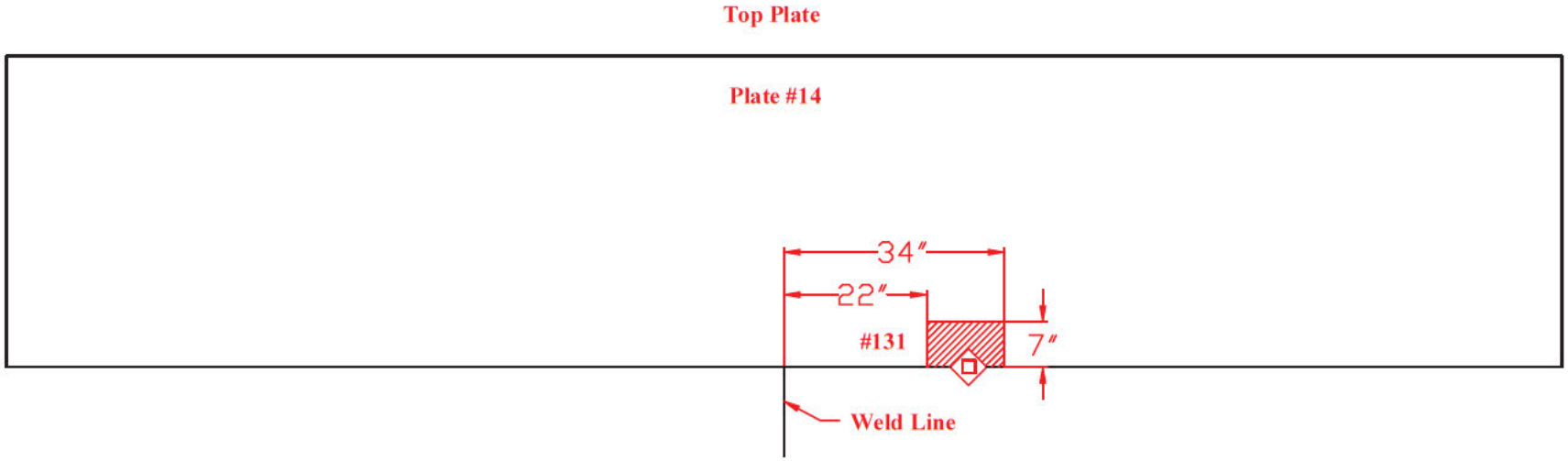


Tank Section: Barrel
Quadrant: D

Row: 24
Plate #: 14

Flaw # - Type - Remaining:

#131 - WL(APP) - 0.139"
Also See #139



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

TESTEX
WWW.TESTEX-NDT.COM

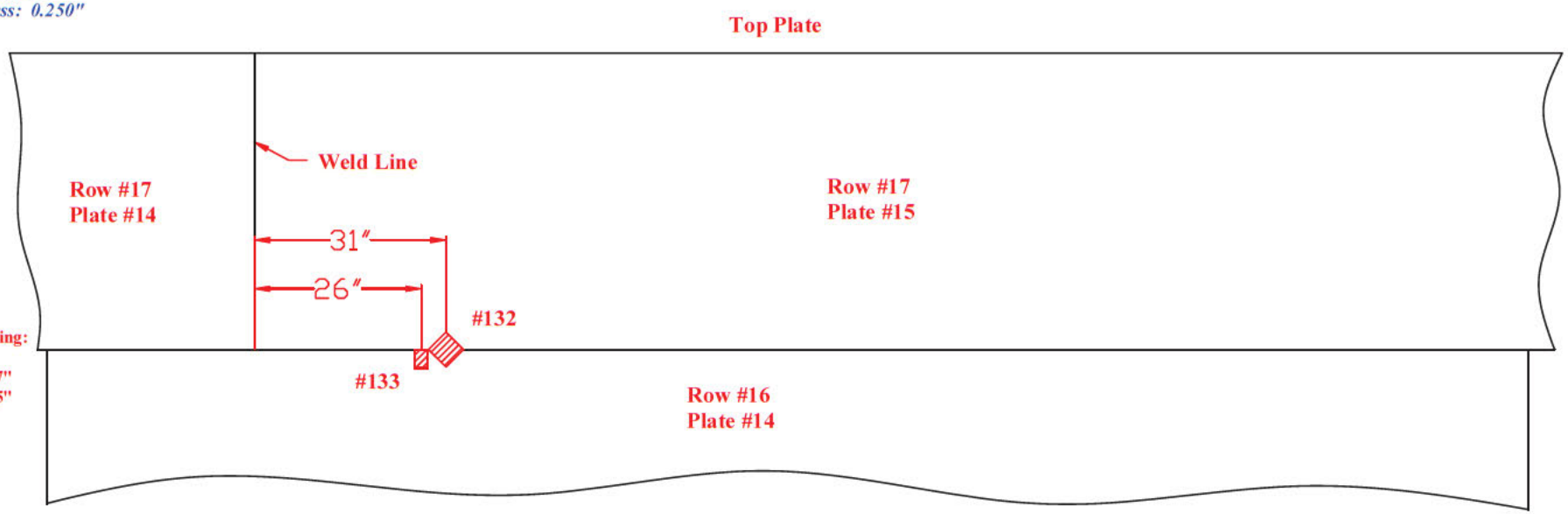
TANK # 5 - QUADRANT D
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: D

Row: 17/16
Plate #: 14/15

Flaw # - Type - Remaining:

#132 - WL(OPP) - 0.177"
#133 - WL(OPP) - 0.185"

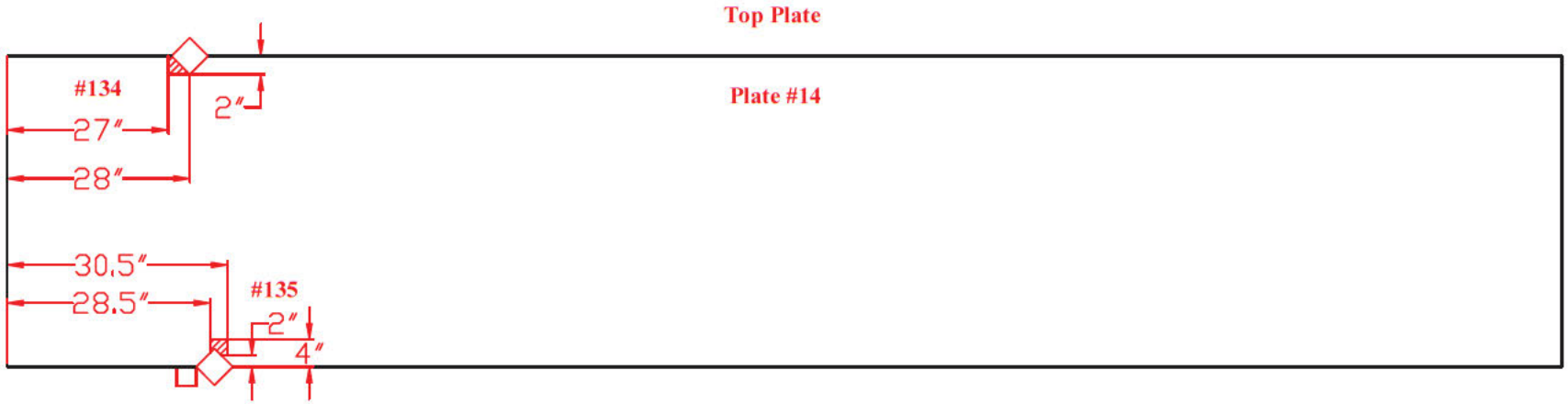


Tank Section: Barrel
Quadrant: D

Row: 2
Plate #: 14

Flaw # - Type - Remaining:

#134 - WL(APP) - 0 171"
#135 - WL(APP) - 0 220"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

TESTEX
WWW.TESTEX-NDT.COM

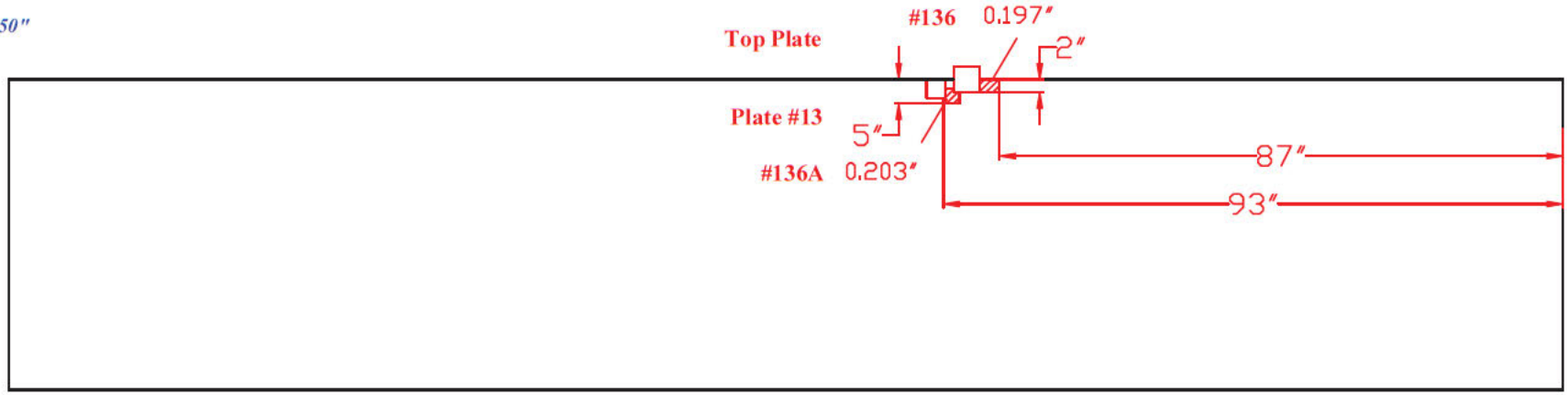
TANK # 5 - QUADRANT D
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: D

Row: 5
Plate #: 13

Flaw # - Type - Remaining:

#136 - WL(APP) - 0.197"
#136A - WL(APP) - 0 203"

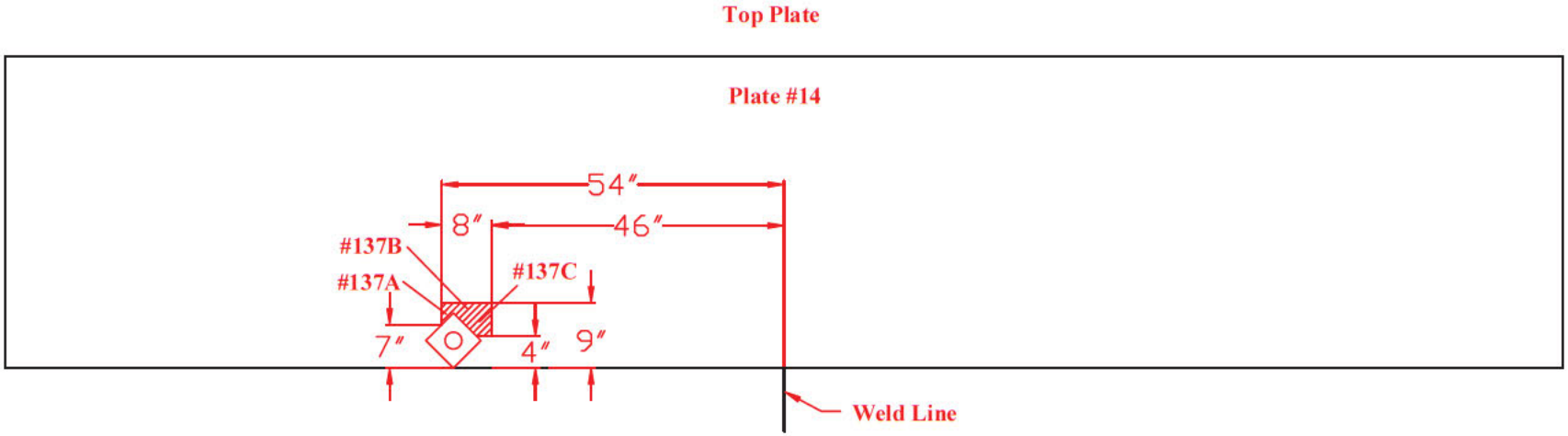


Tank Section: Barrel
Quadrant: D

Row: 10
Plate #: 14

Flaw # - Type - Remaining:

#137A - WL(APP) - 0 196"
#137B - WL(APP) - 0.203"
#137C - WL(APP) - 0 205"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT D
Nominal Plate Thickness: 0.250"

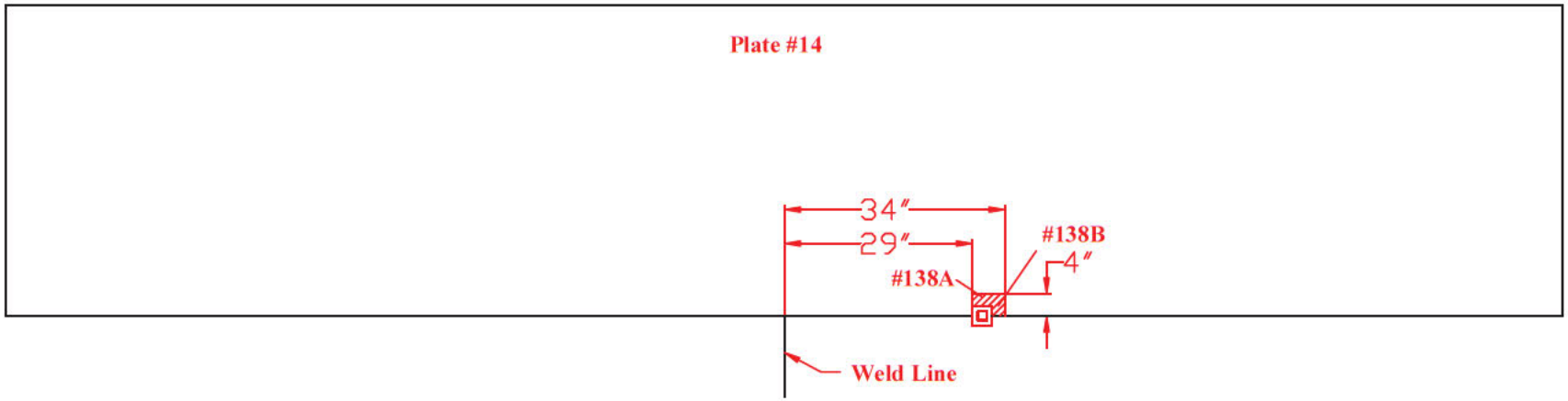
Top Plate

Tank Section: Barrel
Quadrant: D

Row: 23
Plate #: 14

Flaw # - Type - Remaining:

#138A - WL(APP) - 0.188"
#138B - WL(APP) - 0 216"



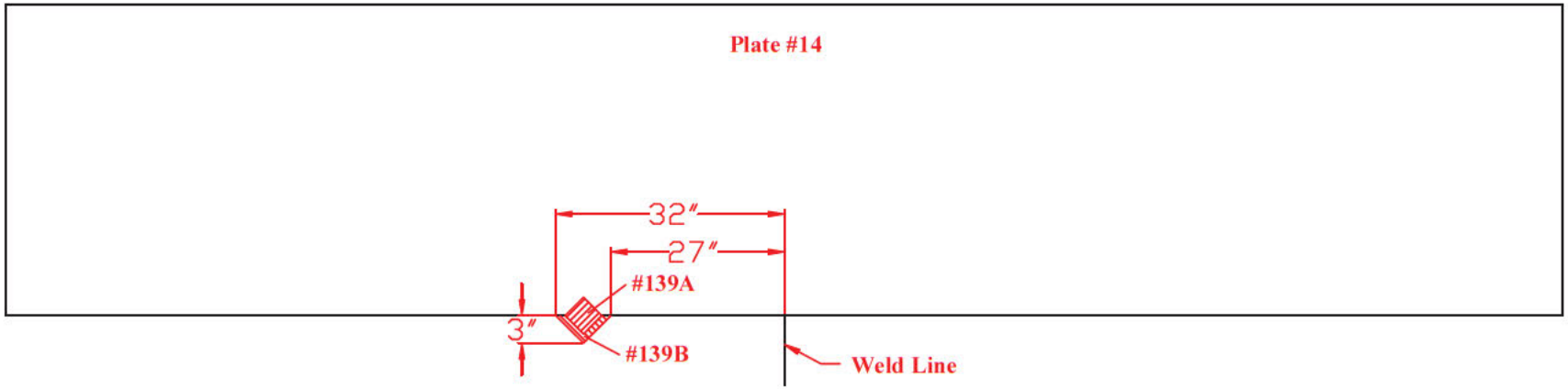
Top Plate

Tank Section: Barrel
Quadrant: D

Row: 24
Plate #: 14

Flaw # - Type - Remaining:

#139A - WL(OPP) - 0.172"
#139B - WL(APP) - 0 200"
Also See #131



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

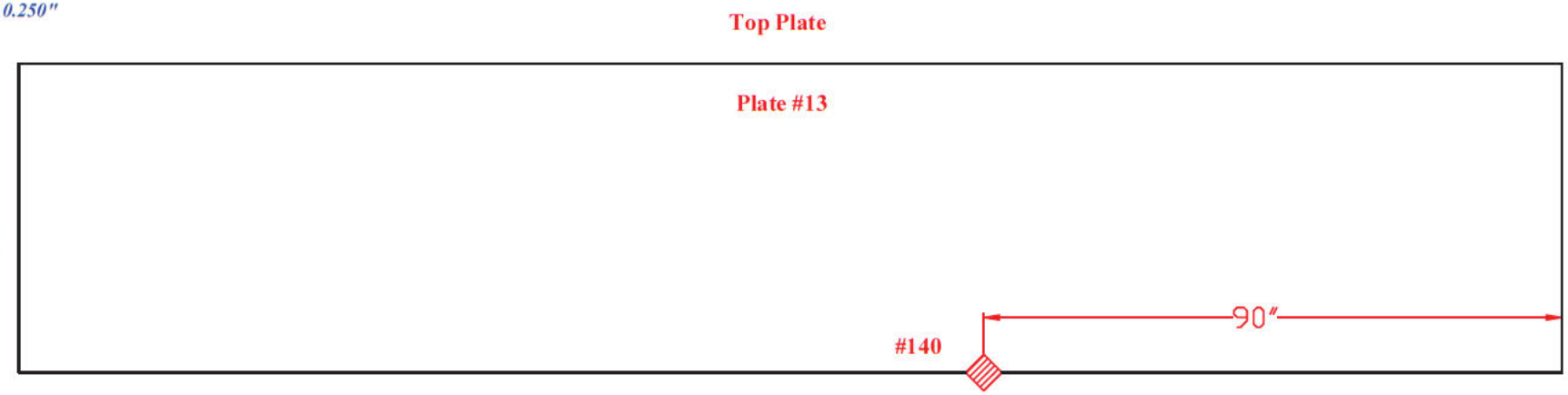
TANK # 5 - QUADRANT D
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: D

Row: 2
Plate #: 13

Flaw # - Type - Remaining:

#140 - WL(OPP) - 0.180"

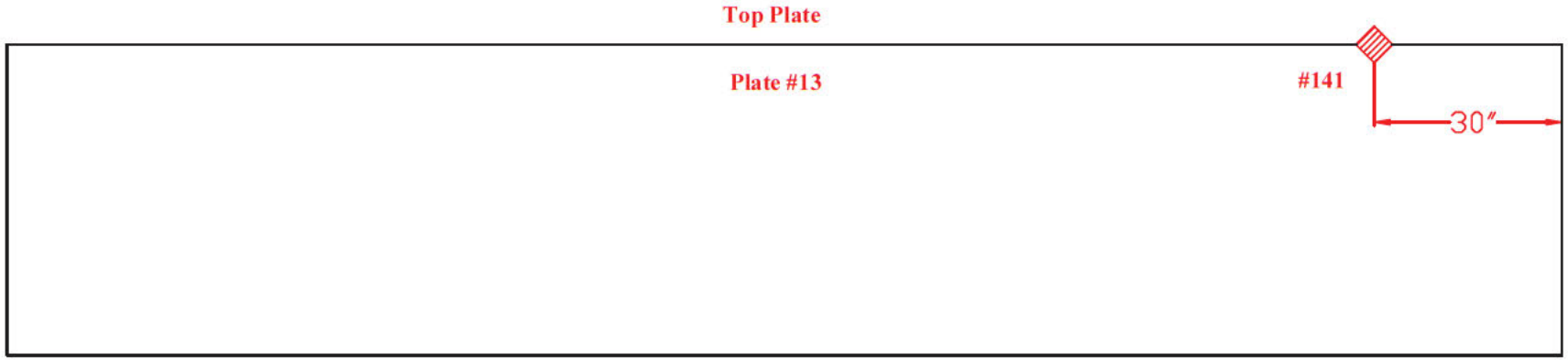


Tank Section: Barrel
Quadrant: D

Row: 22
Plate #: 13

Flaw # - Type - Remaining:

#141 - WL(OPP) - 0.141"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D/B

TESTEX
WWW.TESTEX-NDT.COM

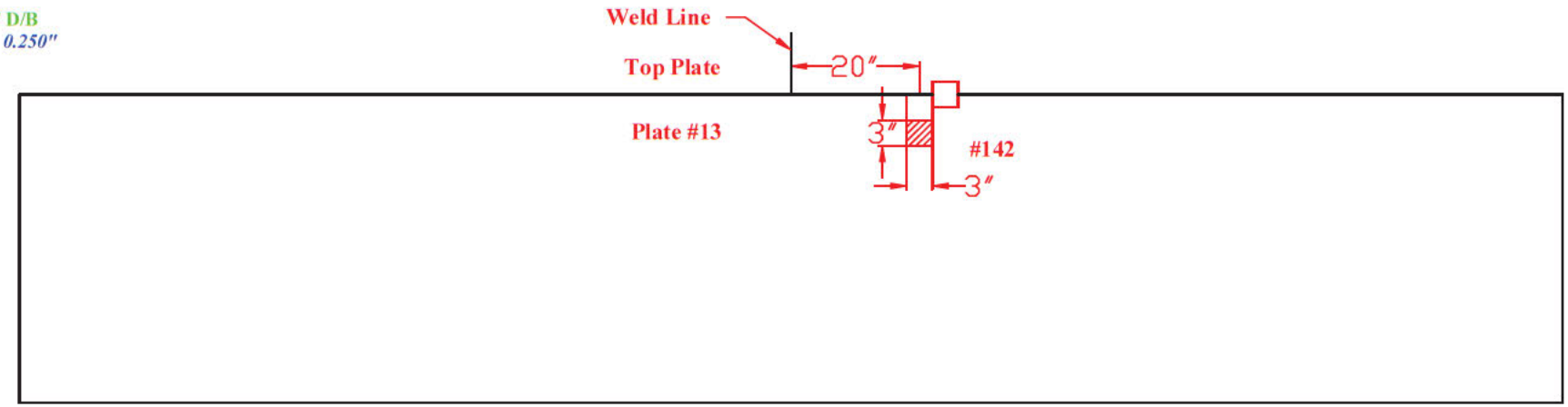
TANK # 5 - QUADRANT D/B
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: D

Row: 16
Plate #: 13

Flaw # - Type - Remaining:

#142 - WL(APP) - 0.189"

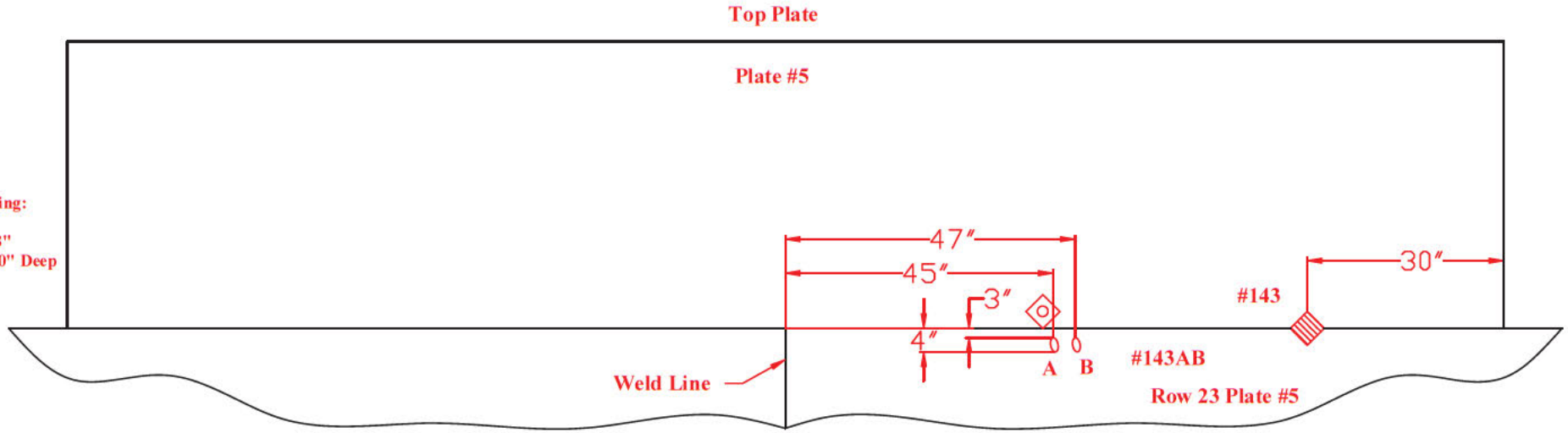


Tank Section: Barrel
Quadrant: B

Row: 24
Plate #: 5

Flaw # - Type - Remaining:

#143 - WL(OPP) - 0.238"
#143AB - Gouges - 0.050" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

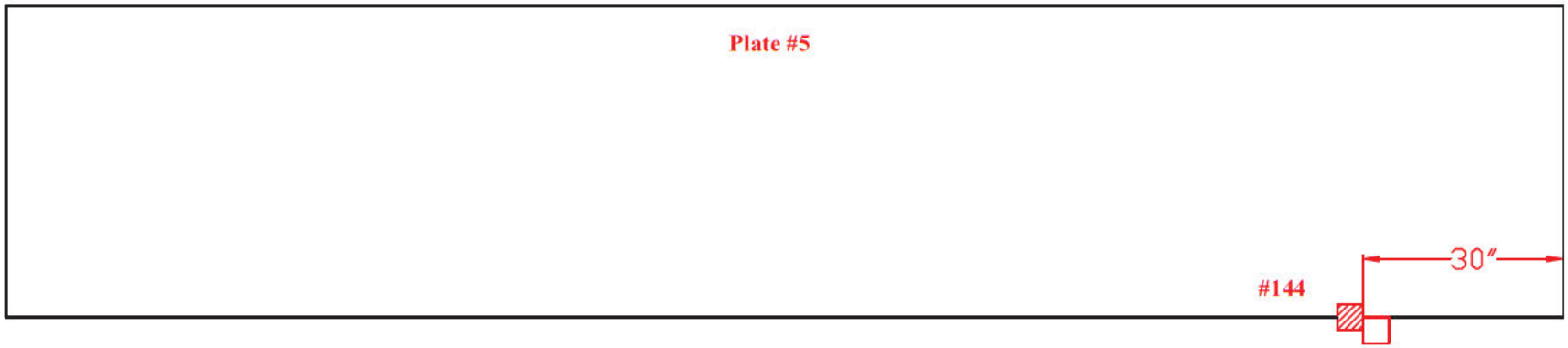
Tank Section: Barrel
Quadrant: B

Row: 22
Plate #: 5

Flaw # - Type - Remaining:

#144 - WL(OPP) - 0.241"

Top Plate



Tank Section: Barrel
Quadrant: B

Row: 10
Plate #: 5

Flaw # - Type - Remaining:

#145A - Not Valid
Due To #145B
#145B - WL - Entire Plate
(0.240"-0.253")

Top Plate

Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

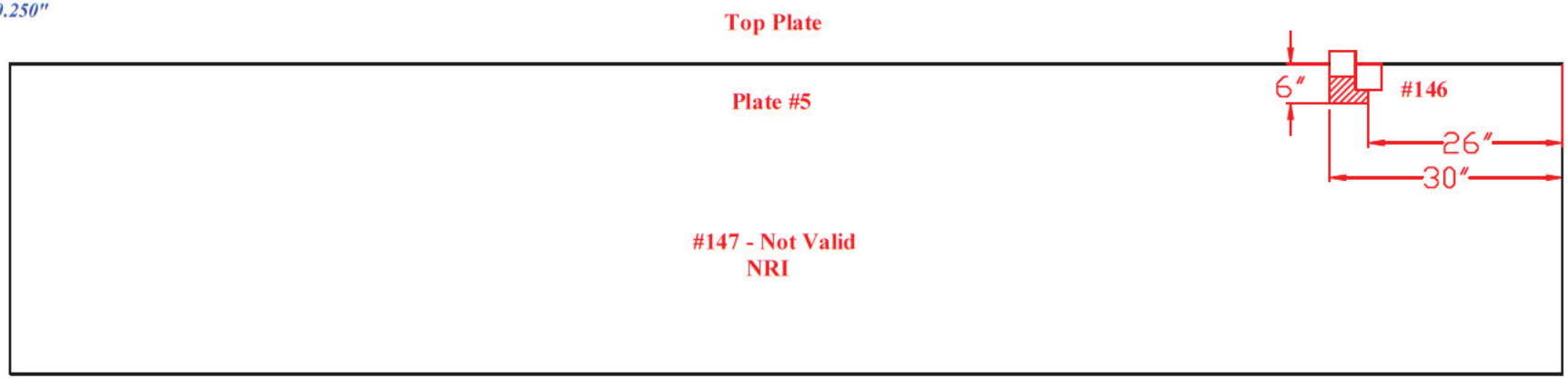
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: B

Row: 19
Plate #: 5

Flaw # - Type - Remaining:

#146 - WL(APP) - 0.240"
#147 - Not Valid NRI

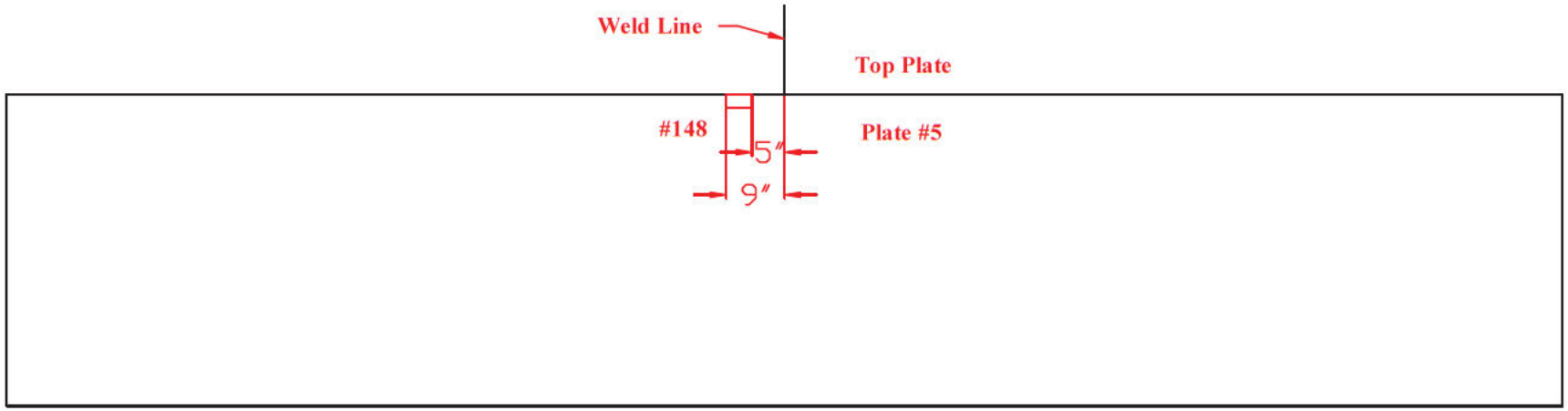


Tank Section: Barrel
Quadrant: B

Row: 15
Plate #: 5

Flaw # - Type - Remaining:

#148 - Surface Indication
4.0" Long, No Depth



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

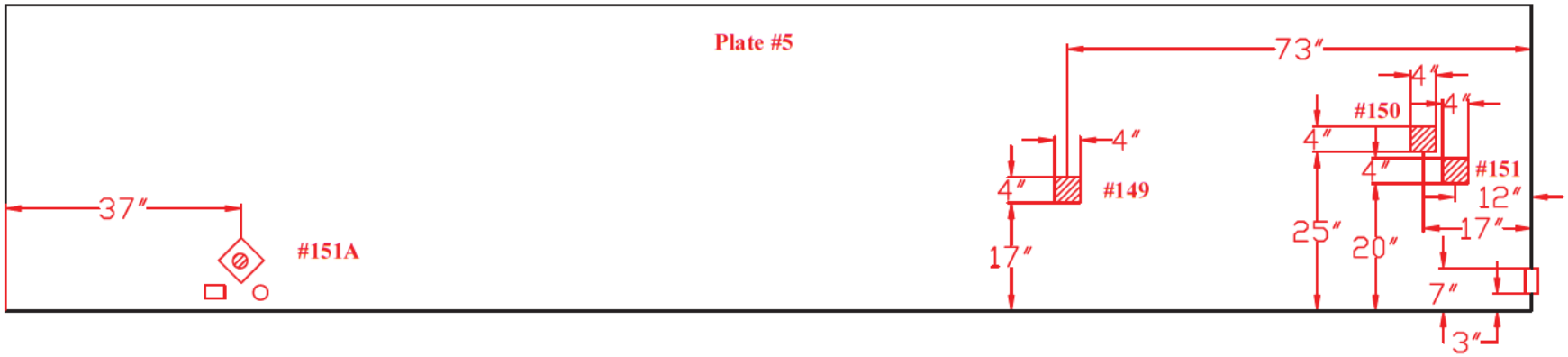
Top Plate

Tank Section: Barrel
Quadrant: B

Row: 1
Plate #: 5

Flaw # - Type - Remaining:

#149 -WL - 0.240"
#150 -WL - 0.240"
#151 -WL - 0.240"
#151A - WL(OPP) - 0.235"

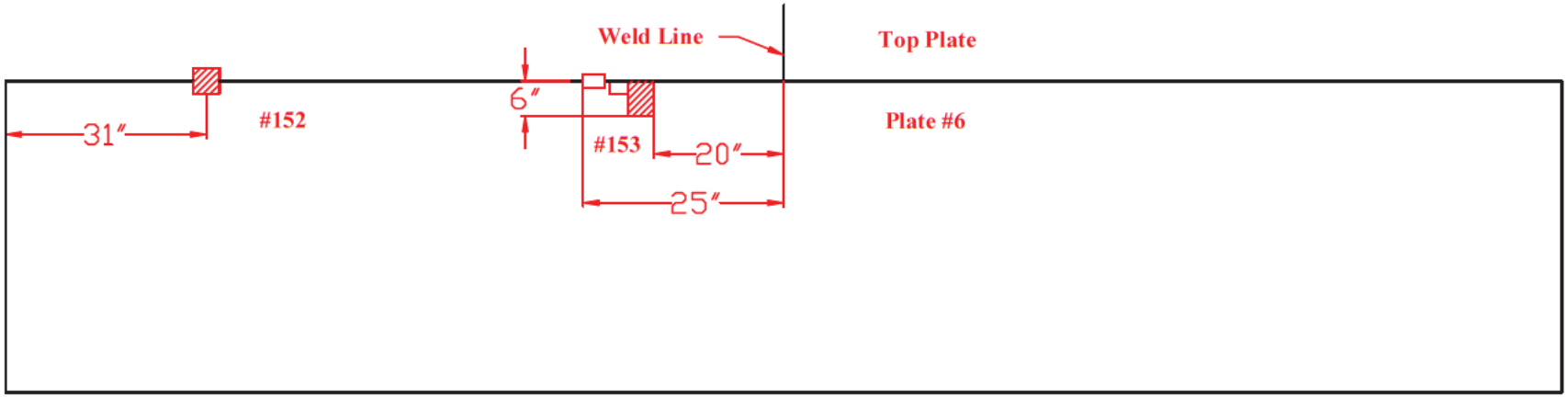


Tank Section: Barrel
Quadrant: B

Row: 8
Plate #: 6

Flaw # - Type - Remaining:

#152 -WL(OPP) - 0.239"
#153 -WL(APP) - 0.186"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

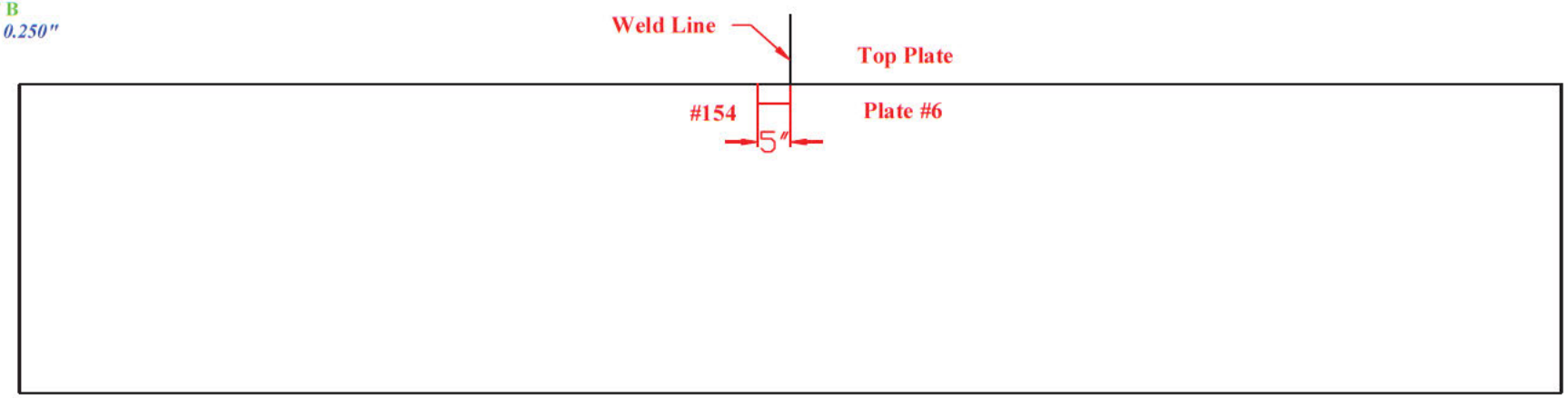
TANK # 5 - QUADRANT B
**Nominal Plate Thickness: 0.250"*

Tank Section: Barrel
Quadrant: B

Row: 6
Plate #: 6

Flaw # - Type - Remaining:

#154 -Surface Indication
5.0" Long

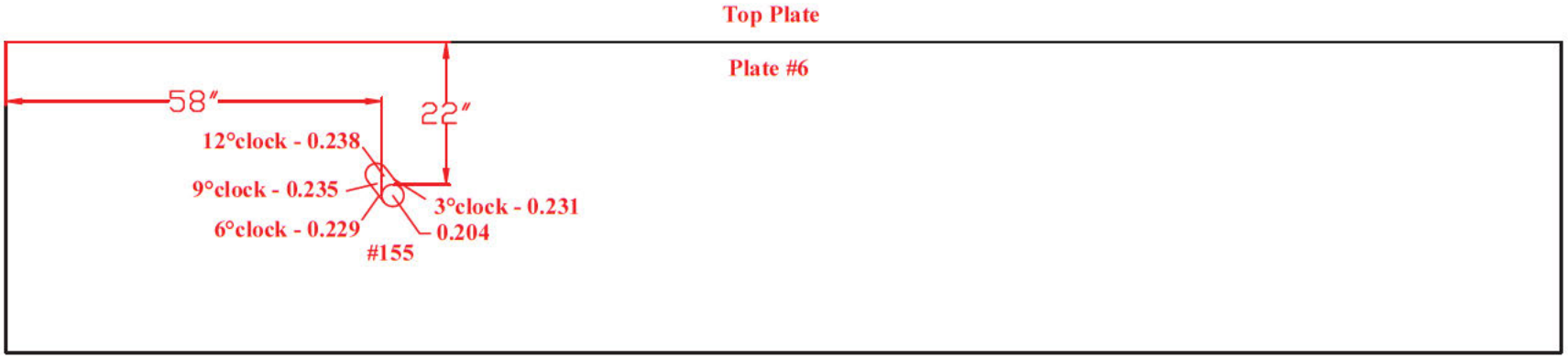


Tank Section: Barrel
Quadrant: B

Row: 12
Plate #: 6

Flaw # - Type - Remaining:

#155 -GN - 0 204"
(0.229"-0.238")



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

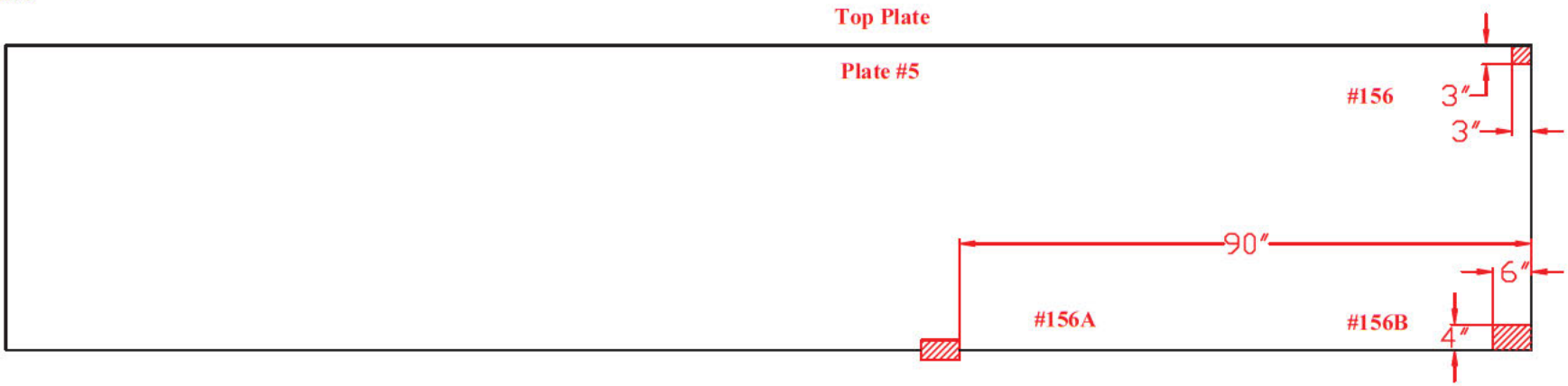
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: B

Row: 9
Plate #: 5

Flaw # - Type - Remaining:

#156 -WL - 0.235"
#156A - WL(OPP) - 0.239"
#156B - WL - 0.240"

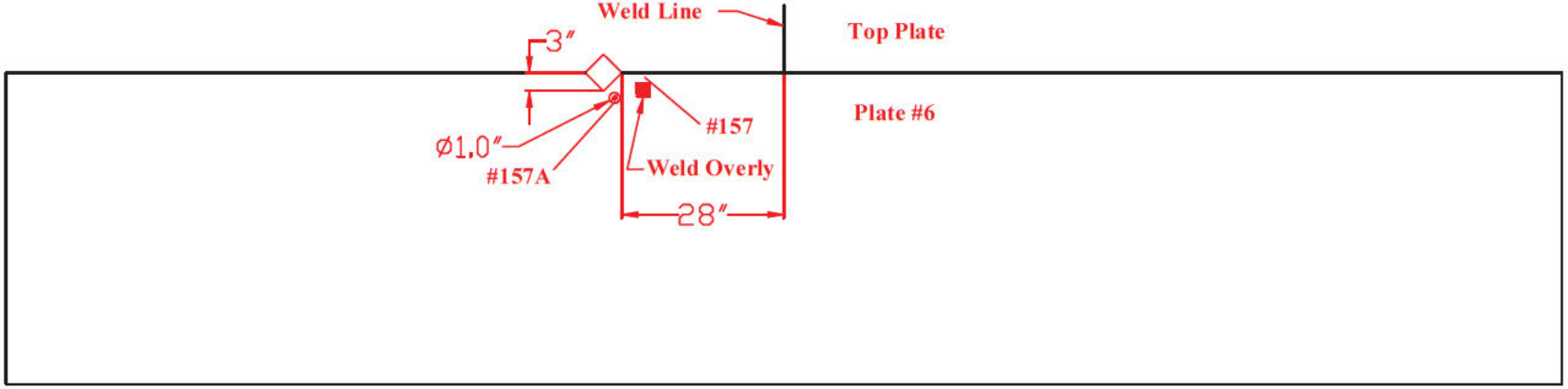


Tank Section: Barrel
Quadrant: B

Row: 26
Plate #: 6

Flaw # - Type - Remaining:

#157 -WD - Undercutting 0.045" Deep
#157A - WL(APP) - 0.207"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B/C

WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT B/C
**Nominal Plate Thickness: 0.250"*

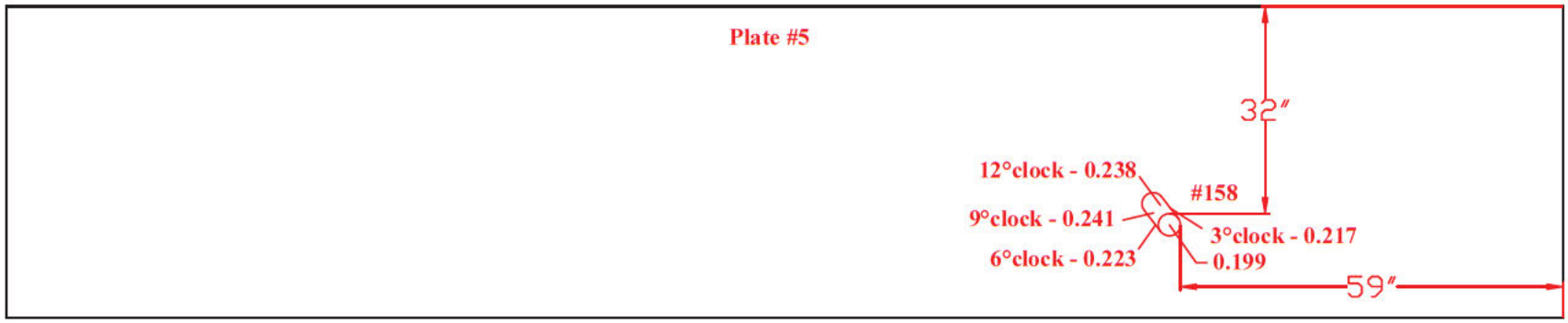
Top Plate

Tank Section: Barrel
Quadrant: B

Row: 19
Plate #: 5

Flaw # - Type - Remaining:

#158 -GN - 0.199"
(0.217"-0.241")



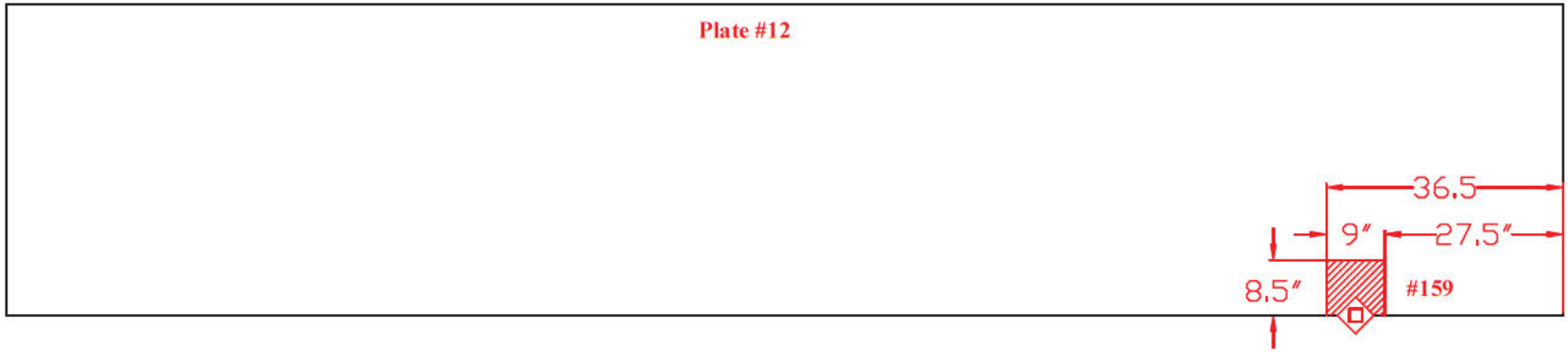
Top Plate

Tank Section: Barrel
Quadrant: C

Row: 27
Plate #: 12

Flaw # - Type - Remaining:

#159 -WL(APP)
(0.170"-0.230")



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D/C

TESTEX
WWW.TESTEX-NDT.COM

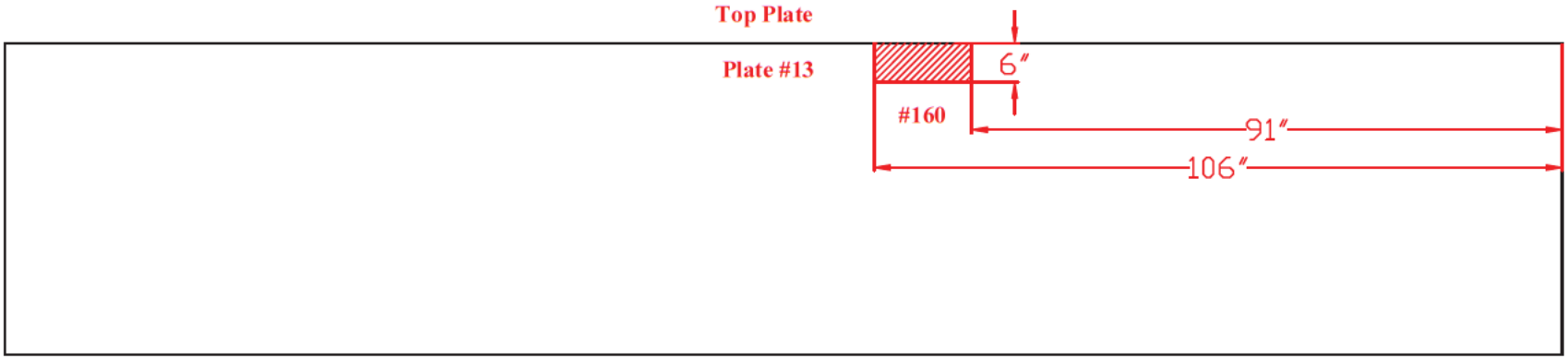
TANK # 5 - QUADRANT D/C
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: D

Row: 28
Plate #: 13

Flaw # - Type - Remaining:

#160 -WL - 0.083"

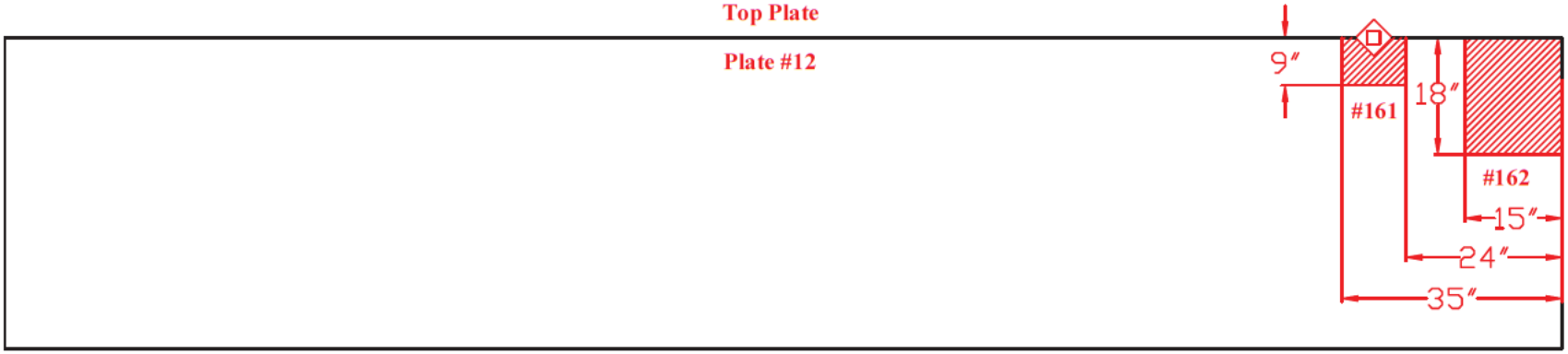


Tank Section: Barrel
Quadrant: C

Row: 27
Plate #: 12

Flaw # - Type - Remaining:

#161 -WL(APP) - 0.164"
#162 -WL - 0.230"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT D
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: D

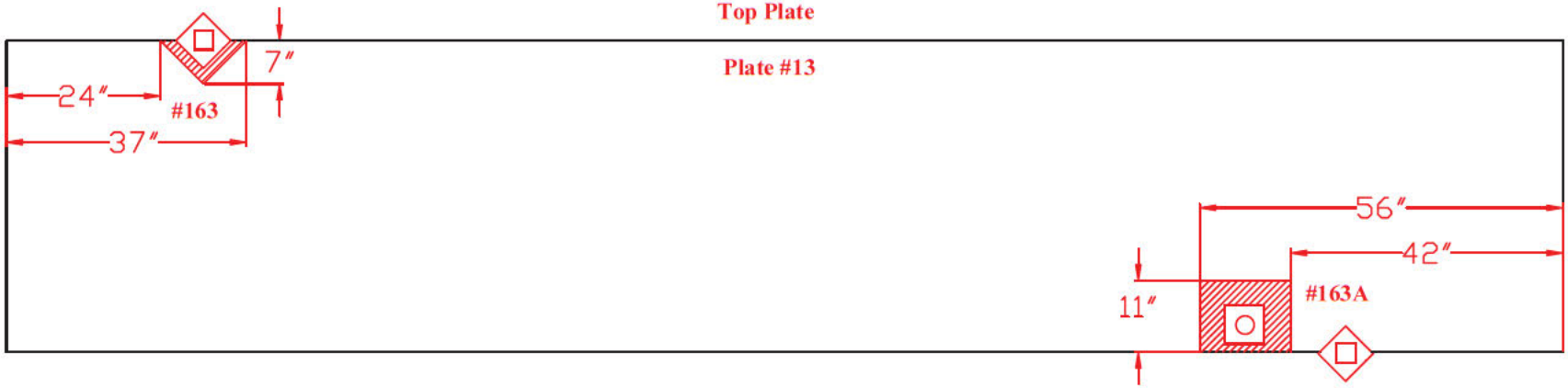
Row: 27
Plate #: 13

Flaw # - Type - Remaining:

#163 -WL(APP) - 0.172"
#163A - WL(APP) - 0.180"

Top Plate

Plate #13



Tank Section: Barrel
Quadrant: D

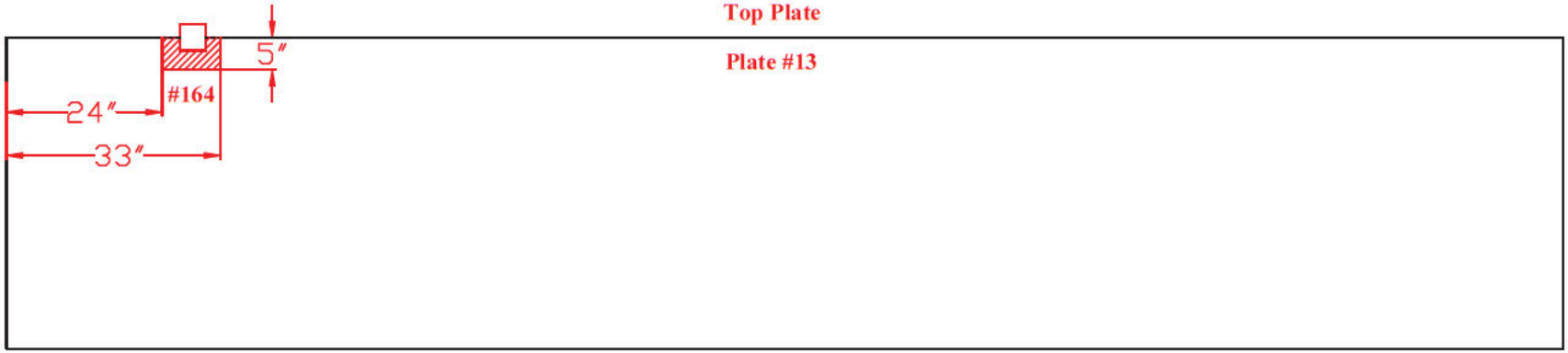
Row: 25
Plate #: 13

Flaw # - Type - Remaining:

#164 -WL(APP)
(0.175"-0.225")

Top Plate

Plate #13



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C

TESTEX
WWW.TESTEX-NDT.COM

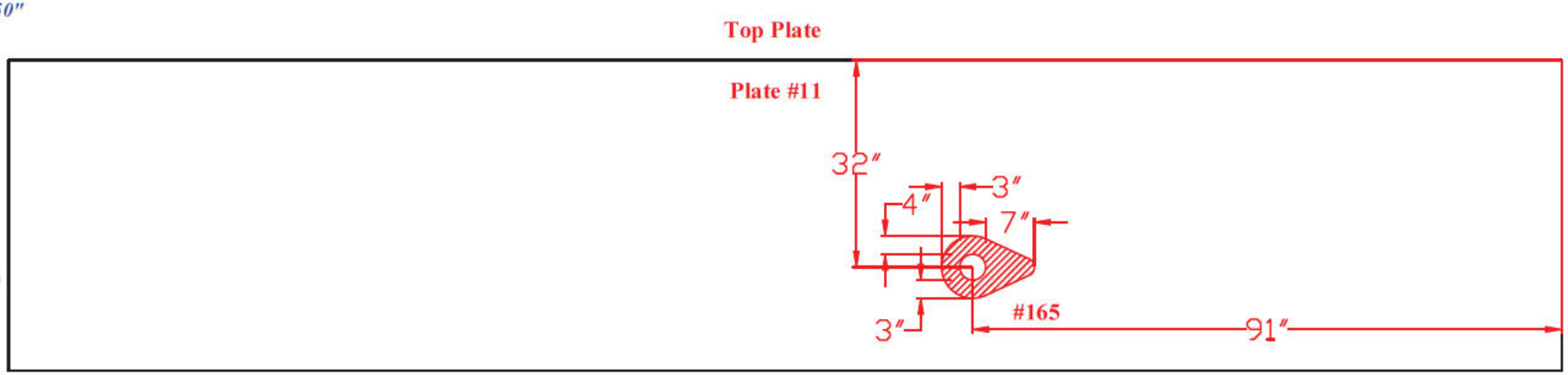
TANK # 5 - QUADRANT C
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: C

Row: 9
Plate #: 11

Flaw # - Type - Remaining:

#165 -WL(APP) - (0.093"-0.196")

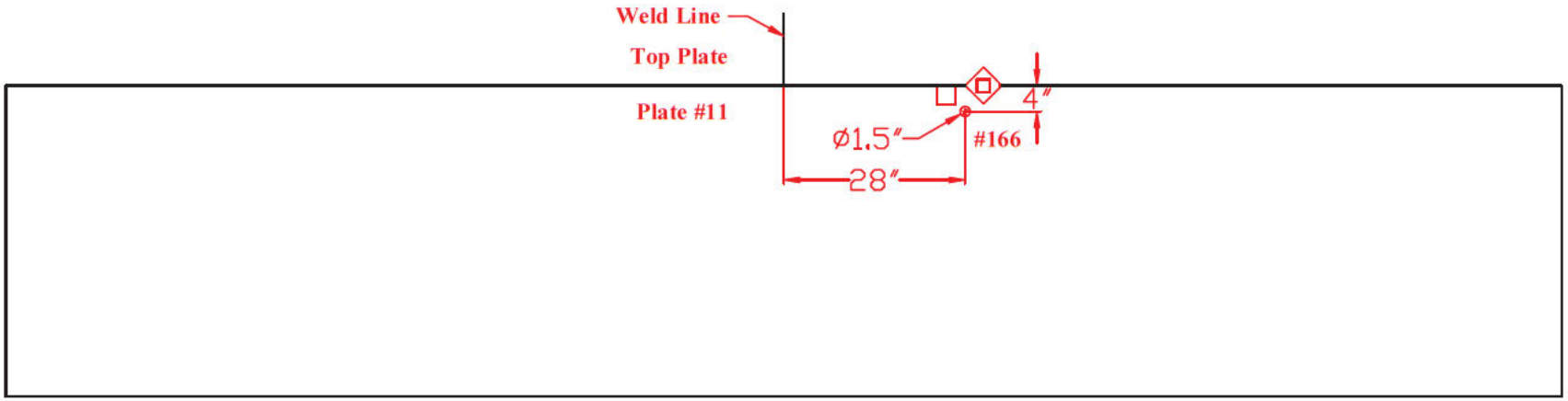


Tank Section: Barrel
Quadrant: C

Row: 7
Plate #: 11

Flaw # - Type - Remaining:

#166 -WL(APP) - 0.205"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C

TESTEX
WWW.TESTEX-NDT.COM

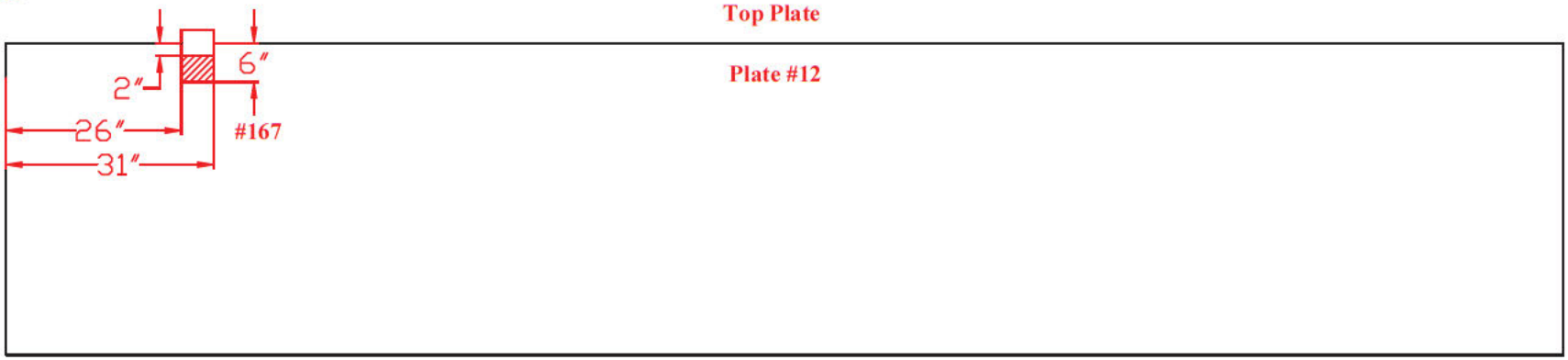
TANK # 5 - QUADRANT C
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: C

Row: 8
Plate #: 12

Flaw # - Type - Remaining:

#167 -WL(APP) - 0.153"

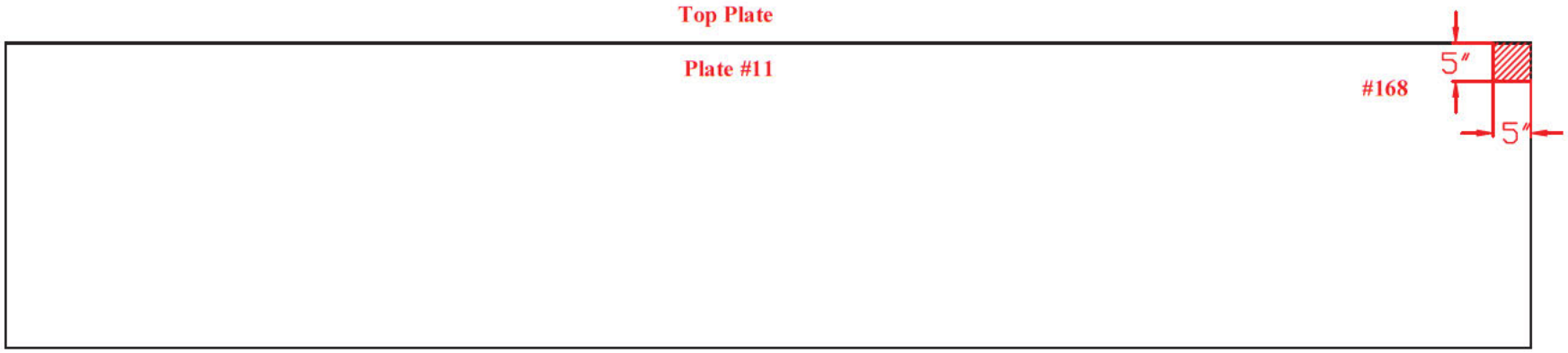


Tank Section: Barrel
Quadrant: C

Row: 1
Plate #: 11

Flaw # - Type - Remaining:

#168 -WL - 0.236"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C

TANK # 5 - QUADRANT C
Nominal Plate Thickness: 0.250"

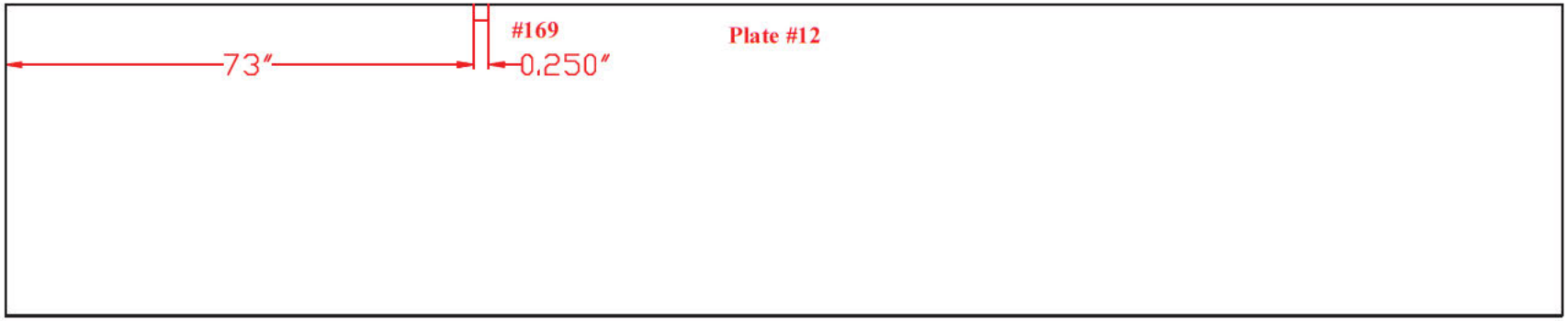
Tank Section: Barrel
Quadrant: C

Row: 1
Plate #: 12

Flaw # - Type - Remaining:

#169 -WD - Surface Indication
0.060" Deep, 0.250" Long

Top Plate



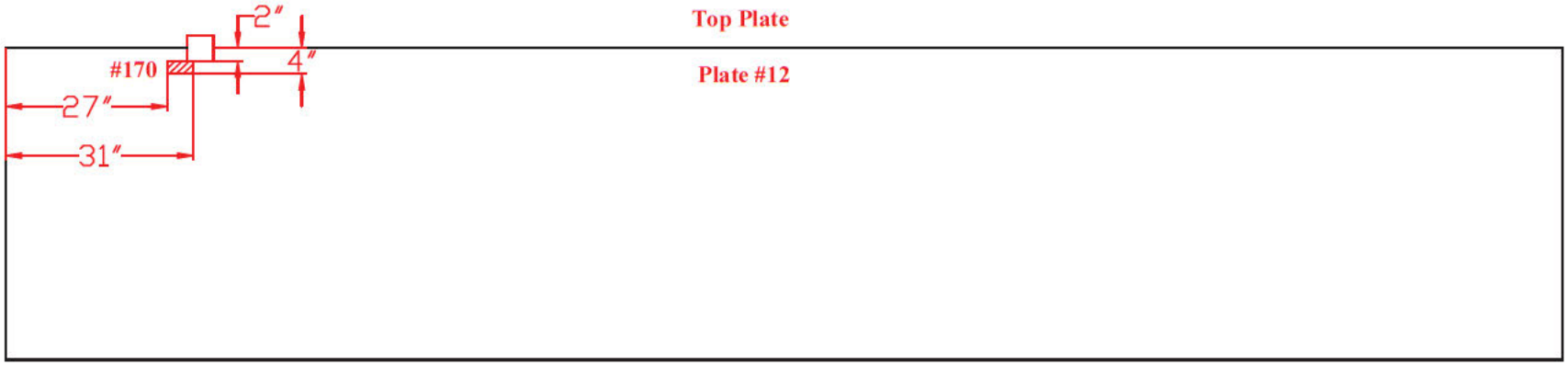
Tank Section: Barrel
Quadrant: C

Row: 2
Plate #: 12

Flaw # - Type - Remaining:

#170 -WL(APP) - 0.205"

Top Plate



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

WWW.TESTEX-NDT.COM

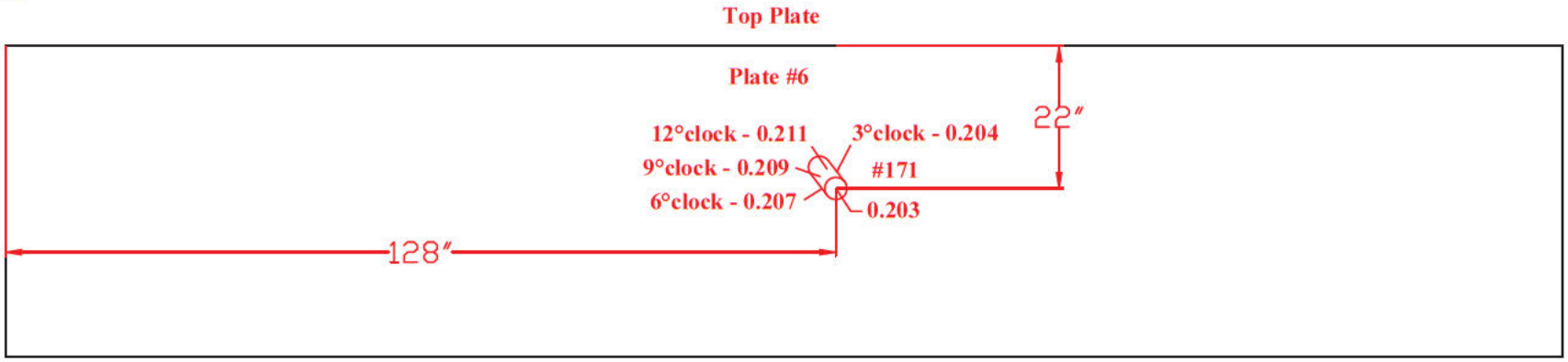
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: B

Row: 27
Plate #: 6

Flaw # - Type - Remaining:

#171 -GN - 0.203"
(0 204"-0.211")

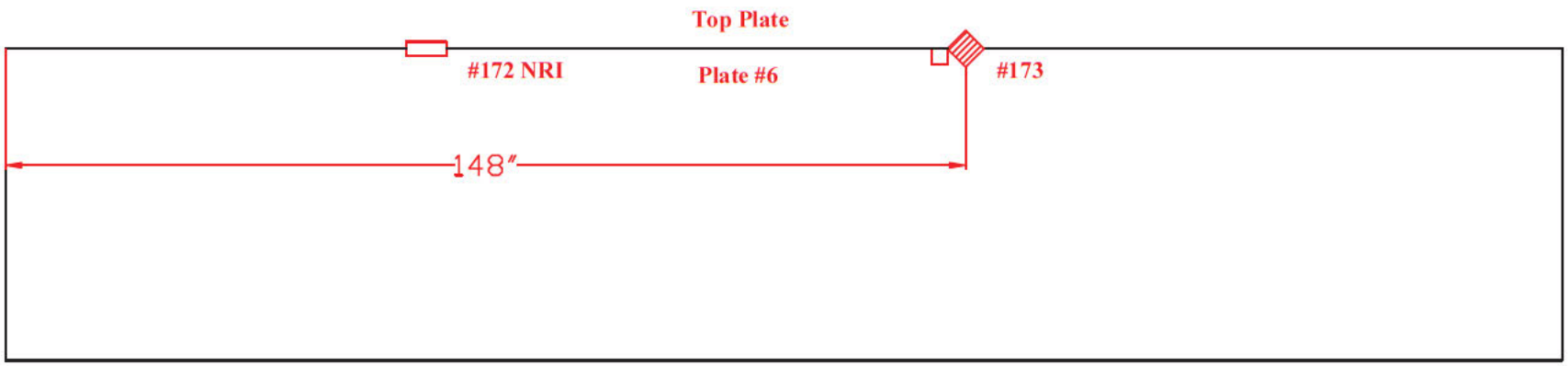


Tank Section: Barrel
Quadrant: B

Row: 23
Plate #: 6

Flaw # - Type - Remaining:

#172 - NRI
#173 -WL(OPP) - 0.240"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

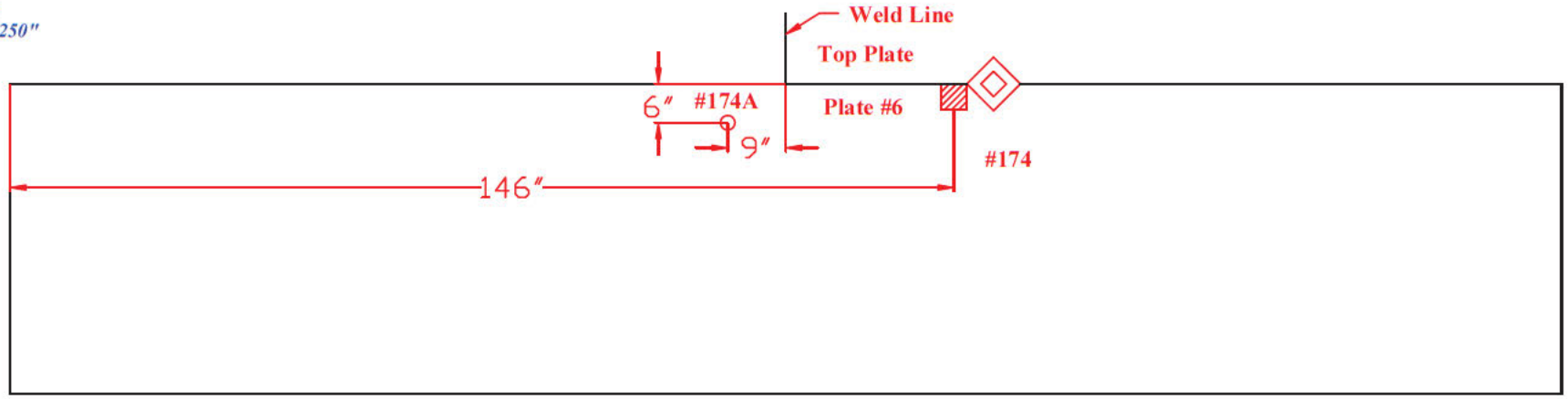
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: B

Row: 19
Plate #: 6

Flaw # - Type - Remaining:

#174 -WL(OPP) - 0.242"
#174A - SP - 0.050" Deep

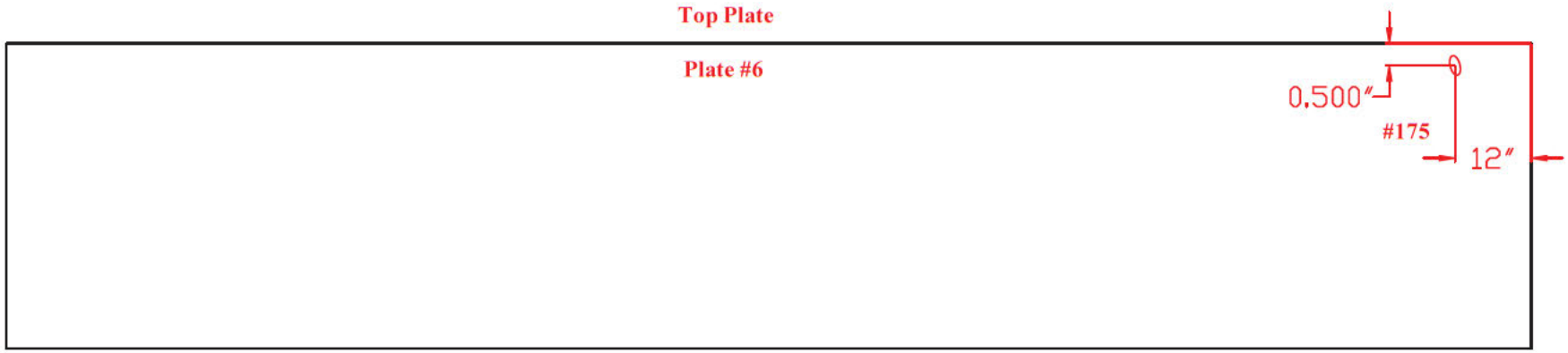


Tank Section: Barrel
Quadrant: B

Row: 18
Plate #: 6

Flaw # - Type - Remaining:

#175 -SP - Gouge - 0.080" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

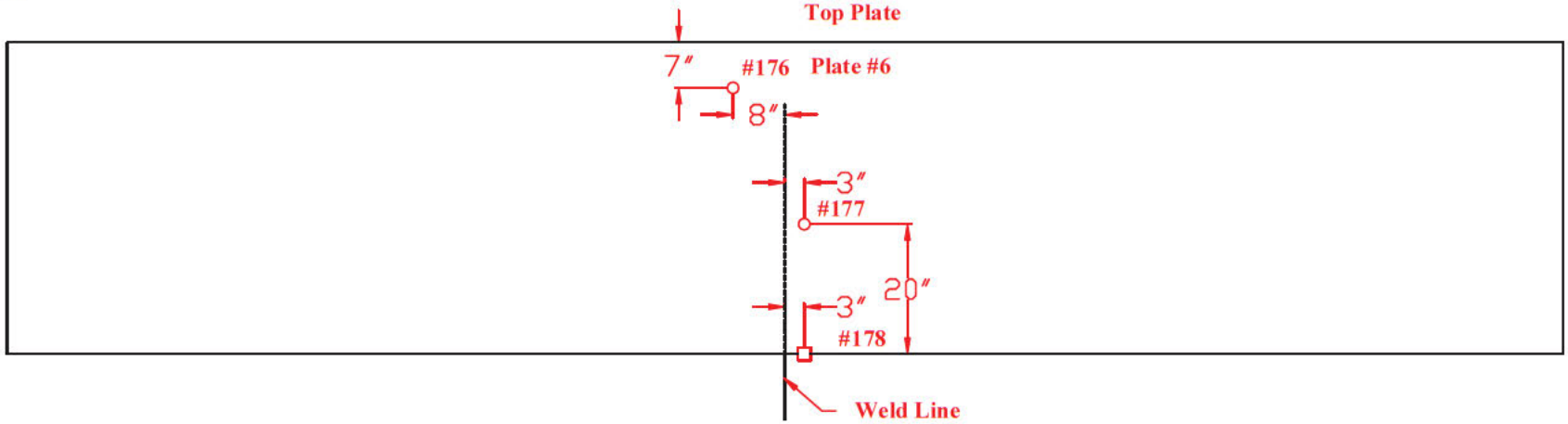
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: B

Row: 17
Plate #: 6

Flaw # - Type - Remaining:

#176 -SP - Gouge 0.070" Deep
#177 -SP - Gouge 0.070" Deep
#178 -WD - Porosity

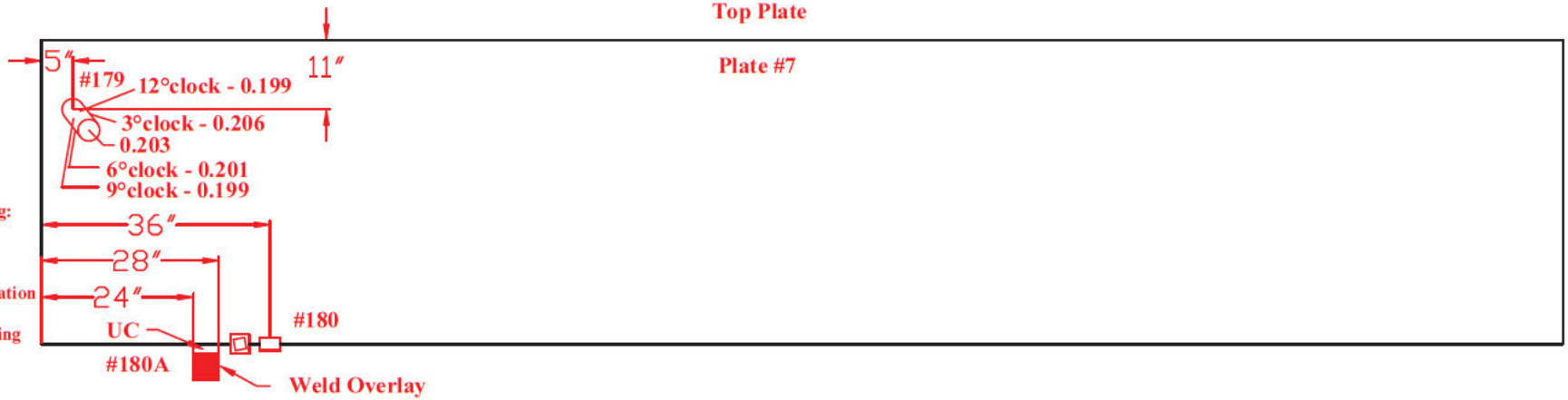


Tank Section: Barrel
Quadrant: B

Row: 12
Plate #: 7

Flaw # - Type - Remaining:

#179 -GN - 0.203"
(0.199"-0.206")
#180 -WD - Surface Indication
0.060" Deep
#180A - WD - Undwercuting
(On Weldoverlay)



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TANK # 5 - QUADRANT B
**Nominal Plate Thickness: 0.250"*

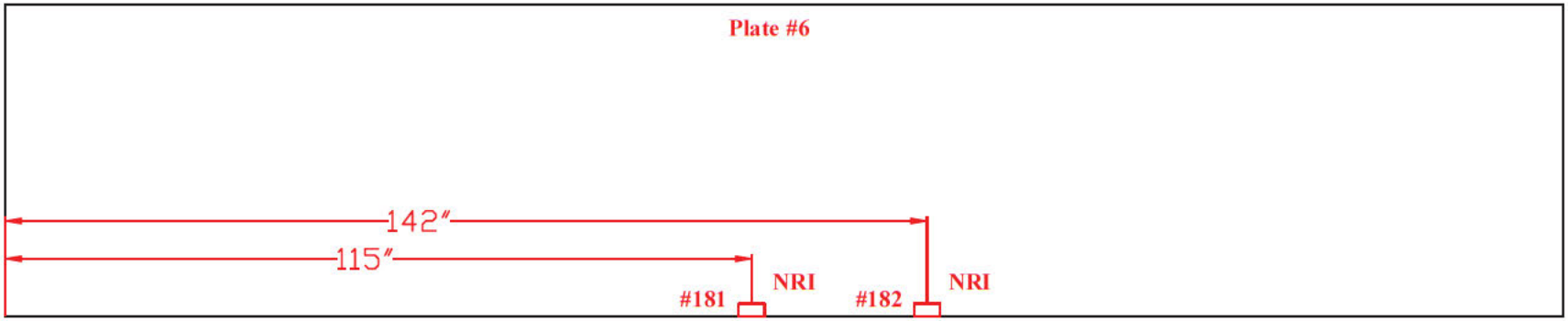
Top Plate

Tank Section: Barrel
Quadrant: B

Row: 11
Plate #: 6

Flaw # - Type - Remaining:

#181 -WD - NRI
#182 -WD - NRI



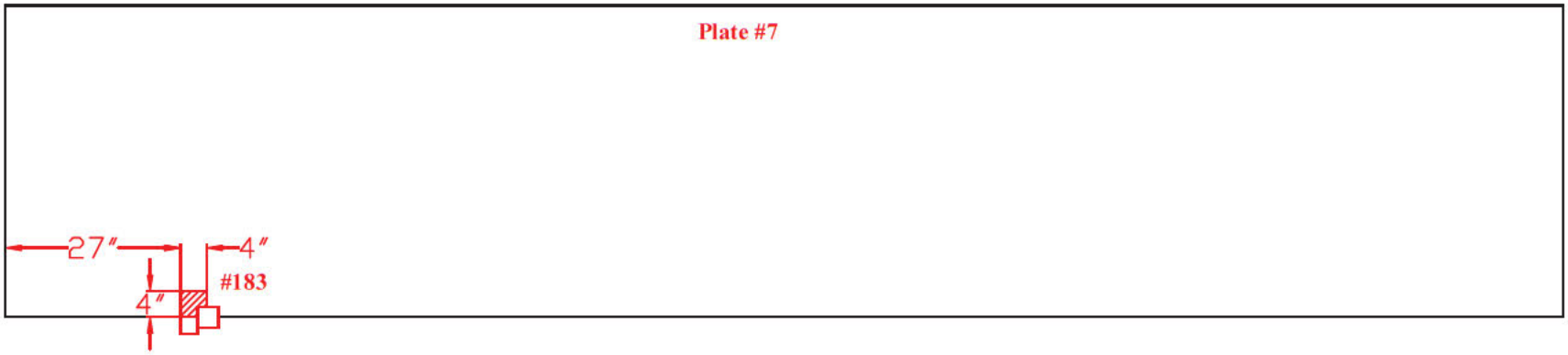
Top Plate

Tank Section: Barrel
Quadrant: B

Row: 8
Plate #: 7

Flaw # - Type - Remaining:

#183 -WL(APP) - 0.240"
Also See #191



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

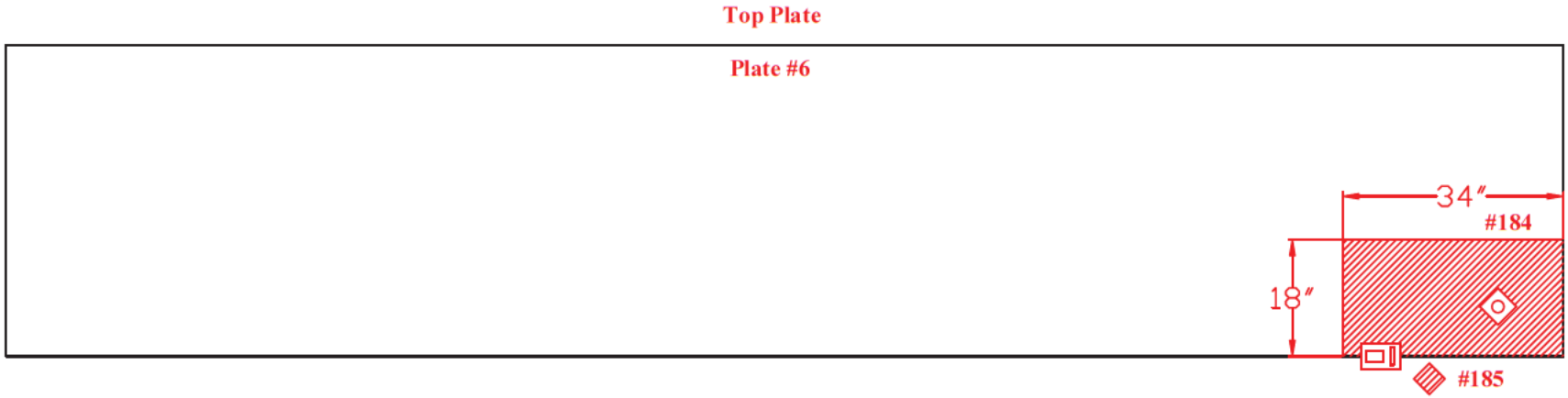
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: B

Row: 4
Plate #: 6

Flaw # - Type - Remaining:

#184 -WL - 0.240"
#185 -WL(OPP) - 0.240"

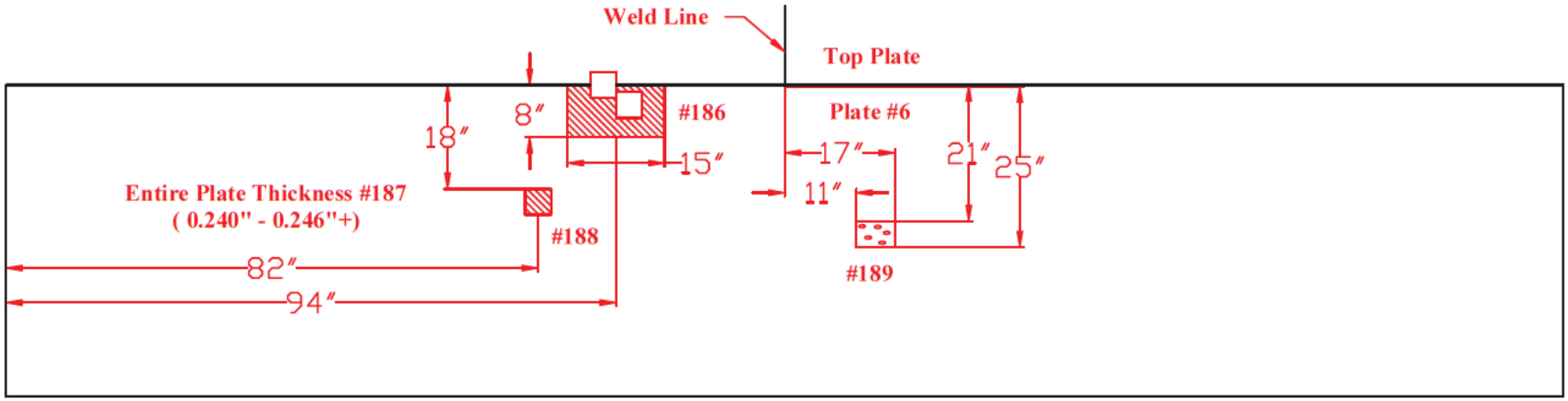


Tank Section: Barrel
Quadrant: B

Row: 1
Plate #: 6

Flaw # - Type - Remaining:

#186 -WL(APP) - 0.240"
#187 -WL - Entier Plate (0.240-0.246"+)
#188 -WL(OPP) - 0.240"
#189 -SP - 0.040"-0.050" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT B
**Nominal Plate Thickness: 0.250"*

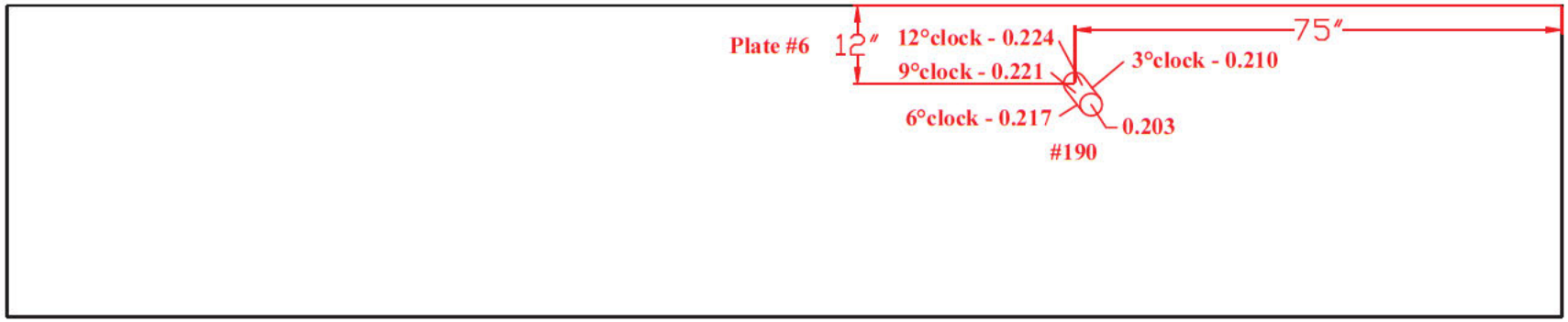
Top Plate

Tank Section: Barrel
Quadrant: B

Row: 5
Plate #: 6

Flaw # - Type - Remaining:

#190 - GN - 0.203"
(0.210"-0.224")



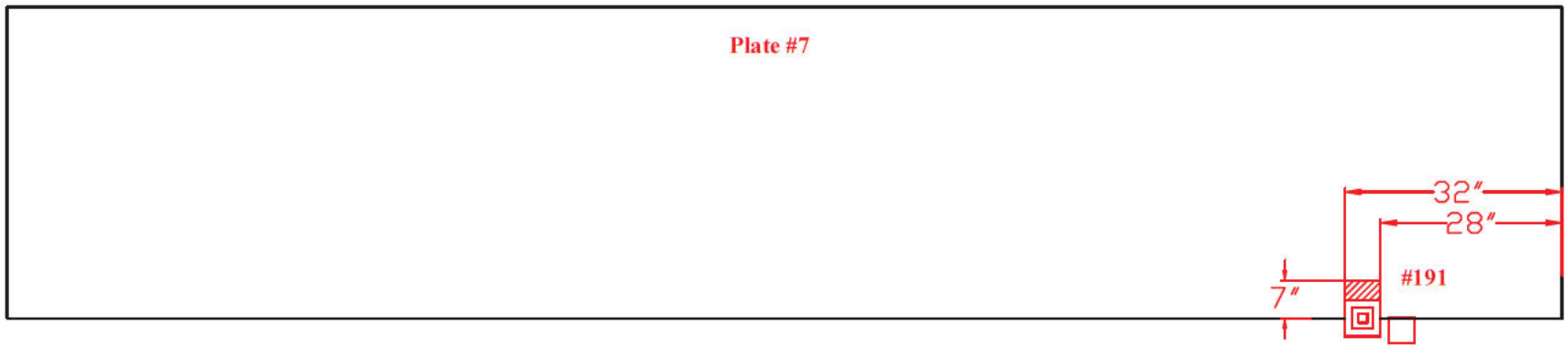
Top Plate

Tank Section: Barrel
Quadrant: B

Row: 8
Plate #: 7

Flaw # - Type - Remaining:

#191 - WL(APP) - 0.238"
Also See #183



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

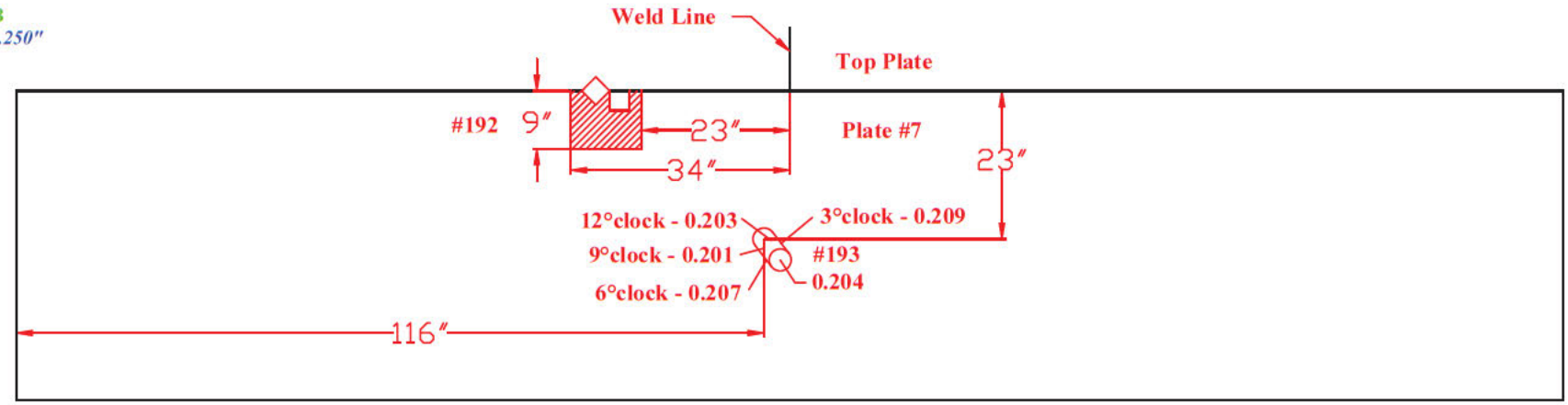
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: B

Row: 5
Plate #: 7

Flaw # - Type - Remaining:

#192 - WL(APP) - 0.240"
#193 - GN - 0.204"
(0 201"-0.209")

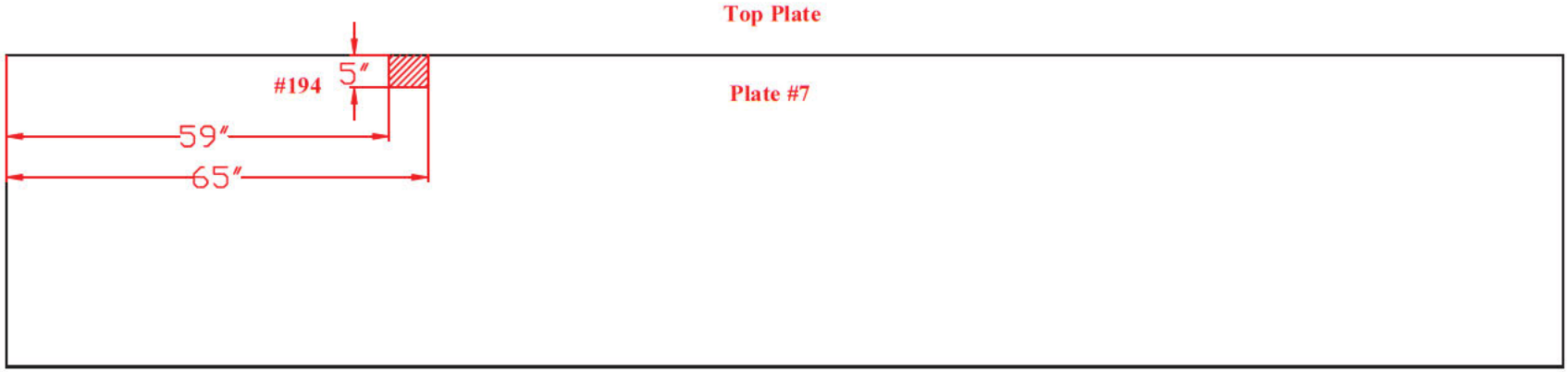


Tank Section: Barrel
Quadrant: B

Row: 25
Plate #: 7

Flaw # - Type - Remaining:

#194 - WL - 0.178"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

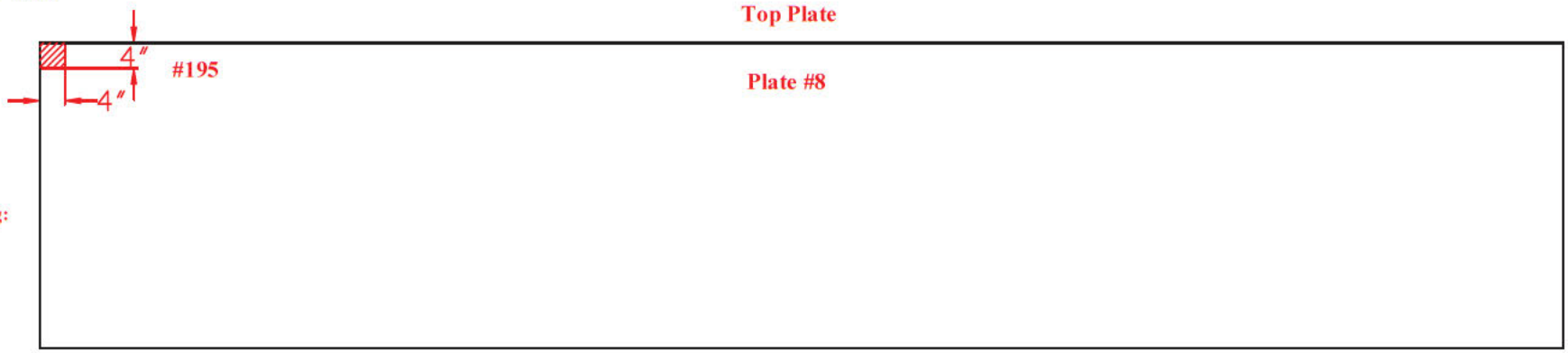
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: B

Row: 10
Plate #: 8

Flaw # - Type - Remaining:

#195 - WL - 0.240"

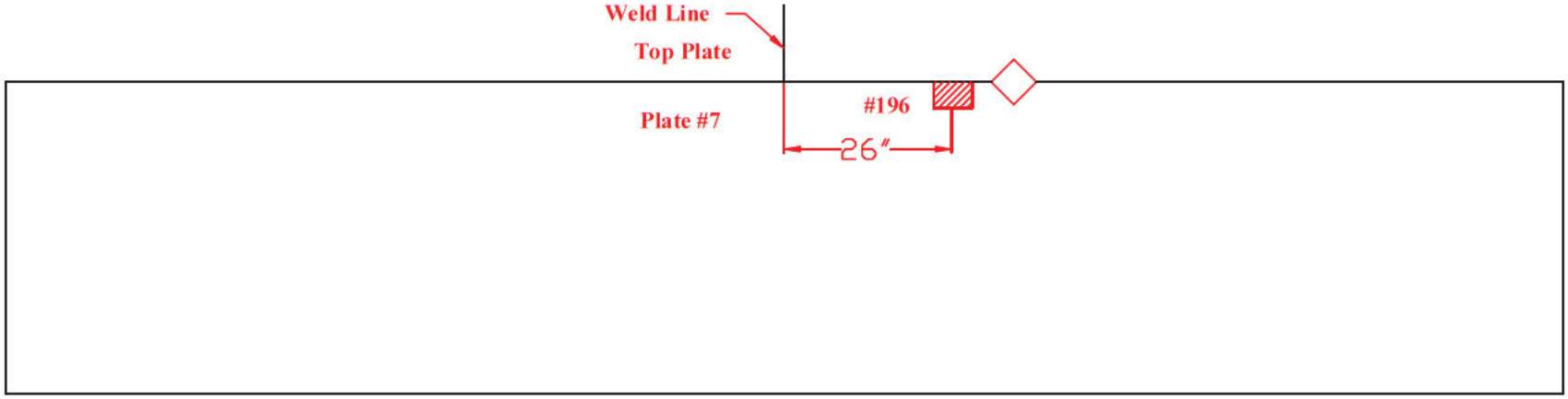


Tank Section: Barrel
Quadrant: B

Row: 26
Plate #: 7

Flaw # - Type - Remaining:

#196 - WL(OPP) - 0.229"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

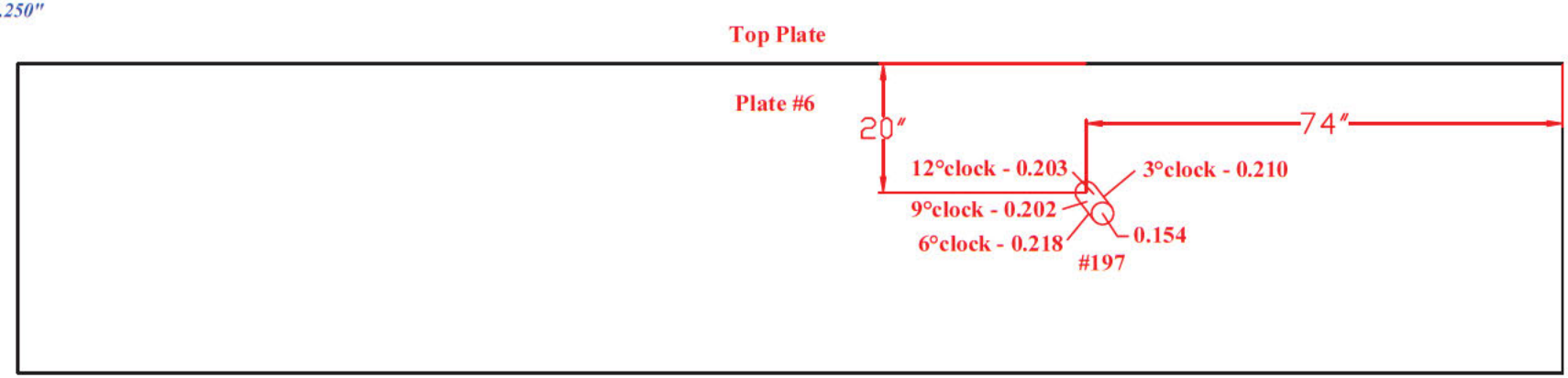
TANK # 5 - QUADRANT B
**Nominal Plate Thickness: 0.250"*

Tank Section: Barrel
Quadrant: B

Row: 19
Plate #: 6

Flaw # - Type - Remaining:

#197 - GN - 0.154"
(0.202"-0.218")

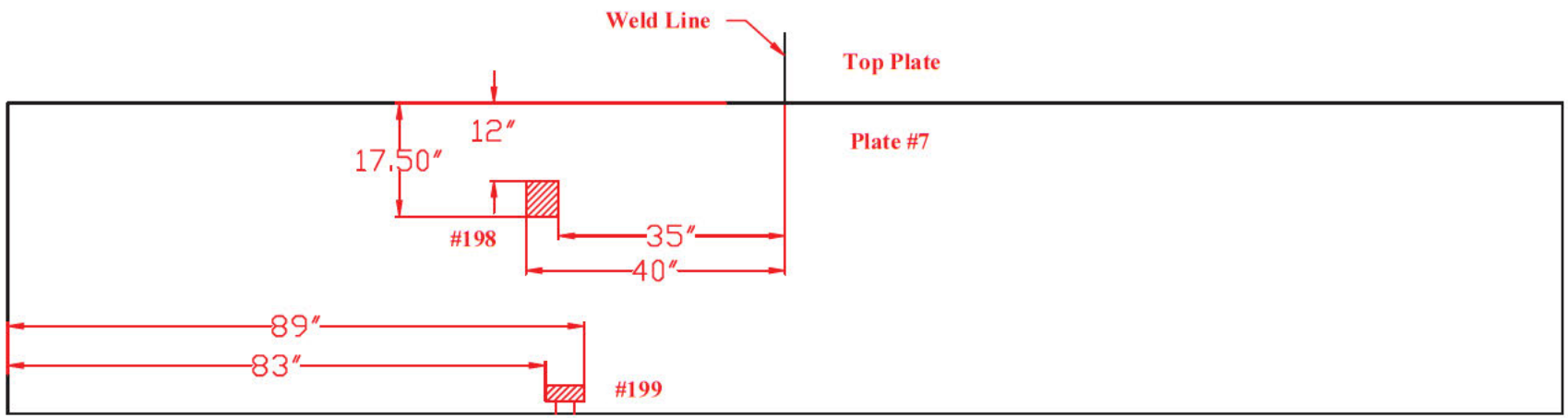


Tank Section: Barrel
Quadrant: B

Row: 1
Plate #: 7

Flaw # - Type - Remaining:

#198 - WL - 0 240"
#199 - WL (APP)- 0.239"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C

TESTEX
WWW.TESTEX-NDT.COM

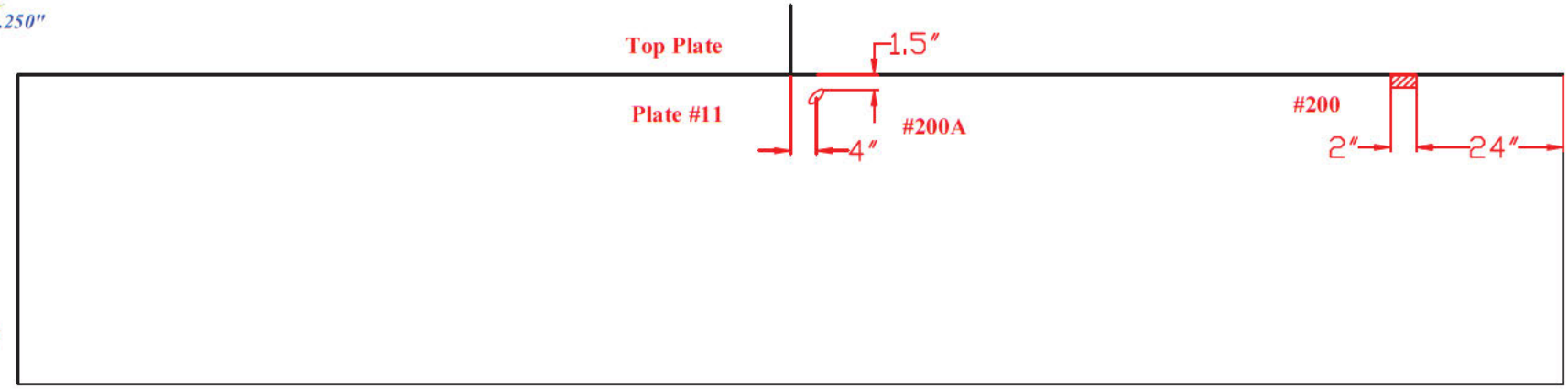
TANK # 5 - QUADRANT C
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: C

Row: 15
Plate #: 11

Flaw # - Type - Remaining:

#200 - WD - Undercutting
0.025" Deep, 2.0" Long
#200A - Gouge - 0.070" Deep

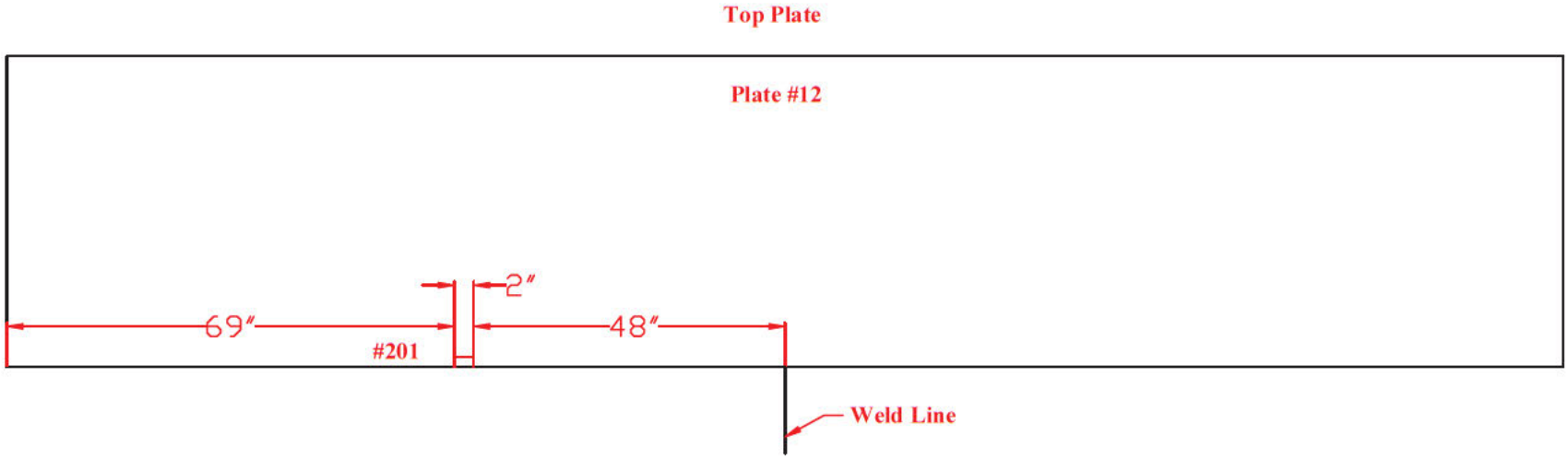


Tank Section: Barrel
Quadrant: C

Row: 20
Plate #: 12

Flaw # - Type - Remaining:

#201 - WD - I.D. & O.D. Indication
0.110" Deep, 1.0" Long
0.050" Deep, 2.0" Long



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C

TESTEX
WWW.TESTEX-NDT.COM

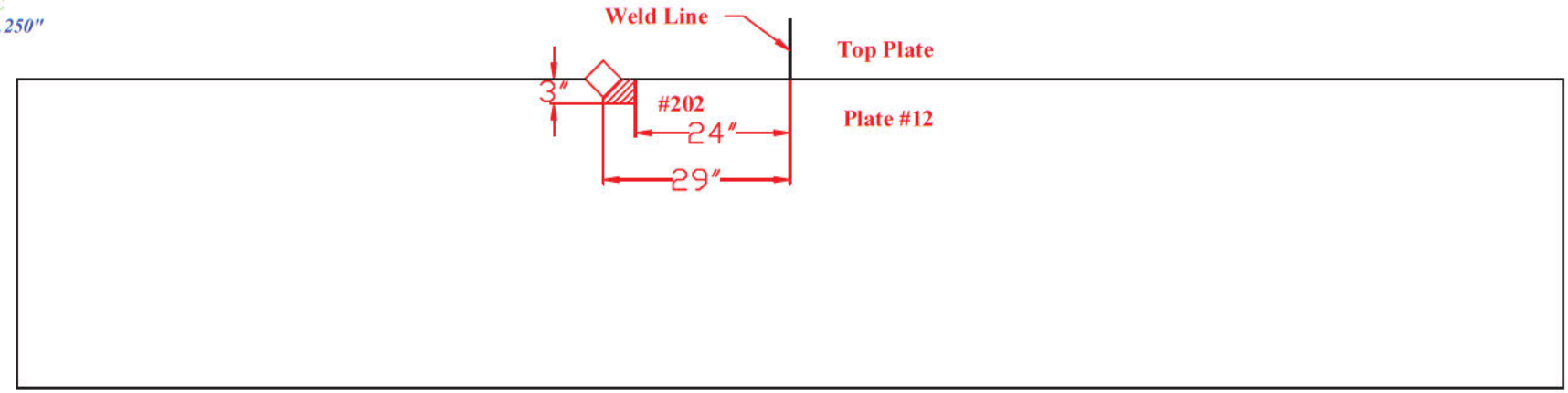
TANK # 5 - QUADRANT C
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: C

Row: 26
Plate #: 12

Flaw # - Type - Remaining:

#202 - WL(APP) - 0.212"

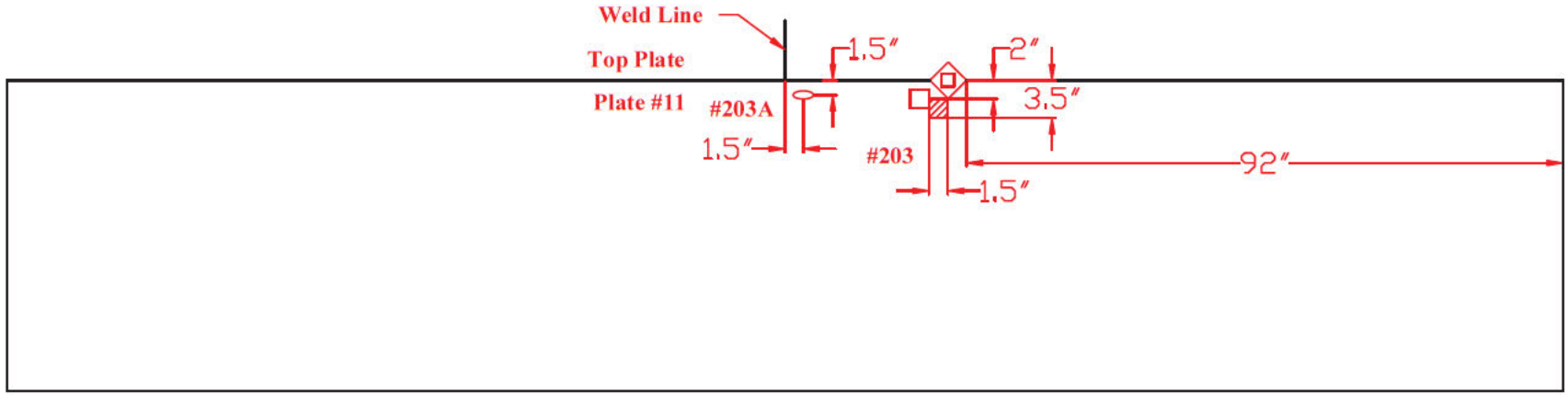


Tank Section: Barrel
Quadrant: C

Row: 26
Plate #: 11

Flaw # - Type - Remaining:

#203 - WL(APP) - 0.181"
#203A - Gouge 0.020" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT C
Nominal Plate Thickness: 0.250"

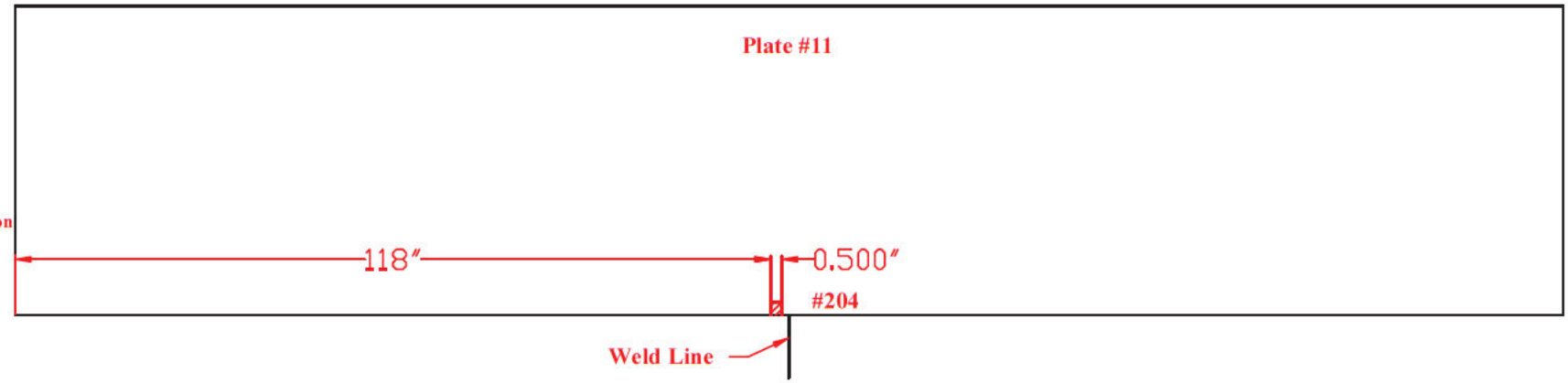
Top Plate

Tank Section: Barrel
Quadrant: C

Row: 17
Plate #: 11

Flaw # - Type - Remaining:

#204 - WD - Surface Indication
0.035" Deep, 0.500" Long



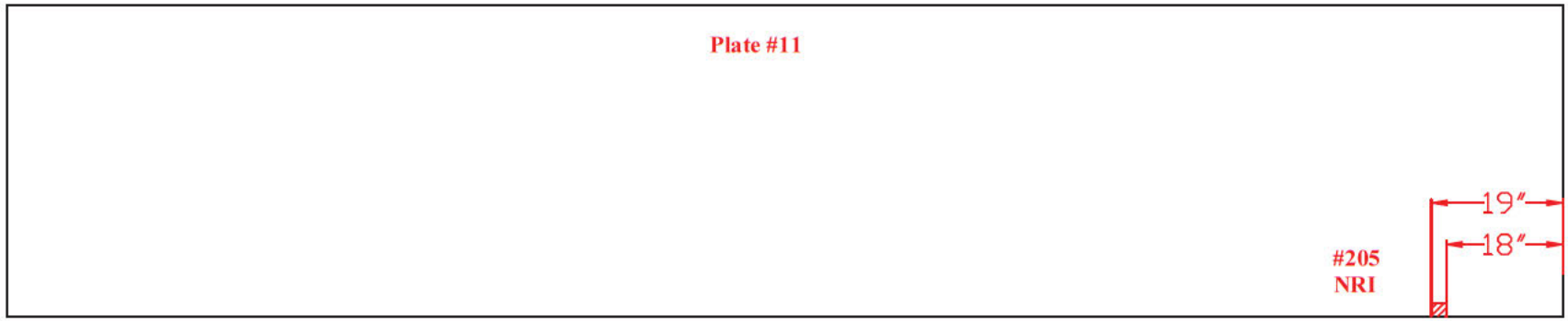
Top Plate

Tank Section: Barrel
Quadrant: C

Row: 16
Plate #: 11

Flaw # - Type - Remaining:

#205 - WD - NRI



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C

TESTEX
WWW.TESTEX-NDT.COM

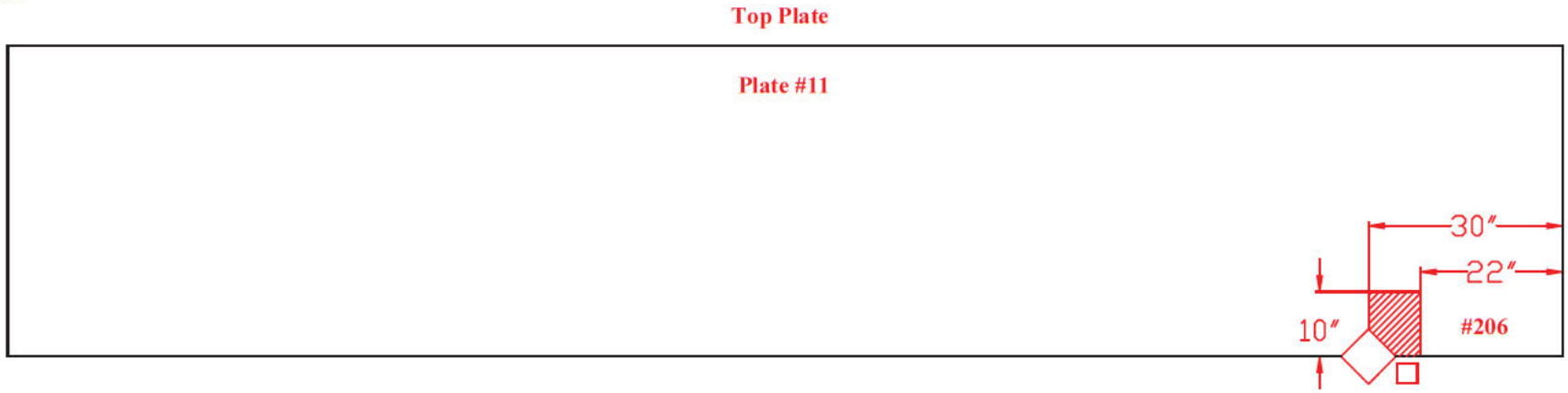
TANK # 5 - QUADRANT C
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: C

Row: 10
Plate #: 11

Flaw # - Type - Remaining:

#206 - WL - 0.238"-0.240"

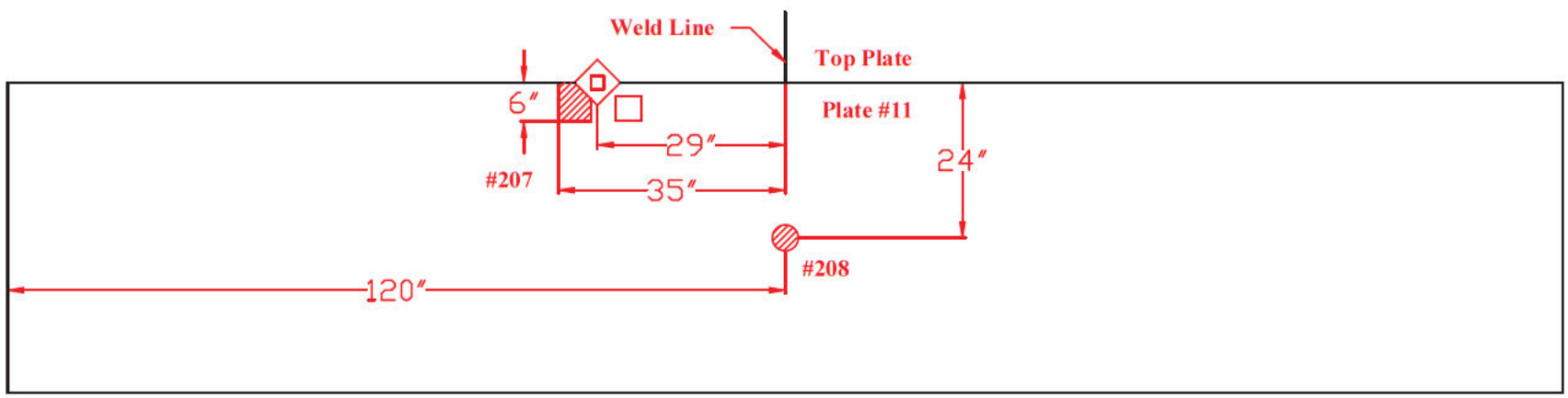


Tank Section: Barrel
Quadrant: C

Row: 5
Plate #: 11

Flaw # - Type - Remaining:

#207 - WL - 0.209"-0.212"
#208 - WL(OPP) - 0.212"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C

TESTEX
WWW.TESTEX-NDT.COM

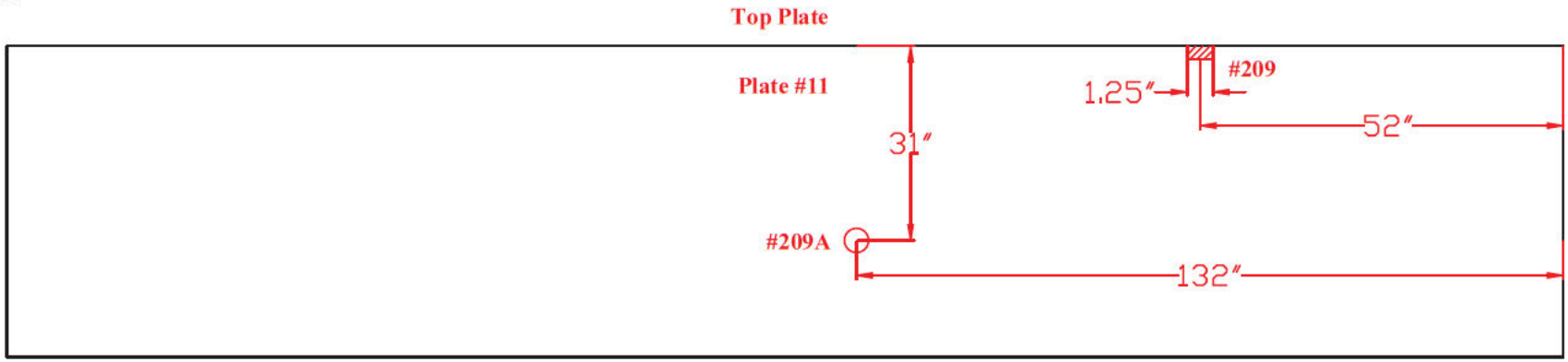
TANK # 5 - QUADRANT C
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: C

Row: 2
Plate #: 11

Flaw # - Type - Remaining:

#209 - WD - Undercut
0.060" Deep, 1.25" Long
#209A - Gouge - 0.045" Deep

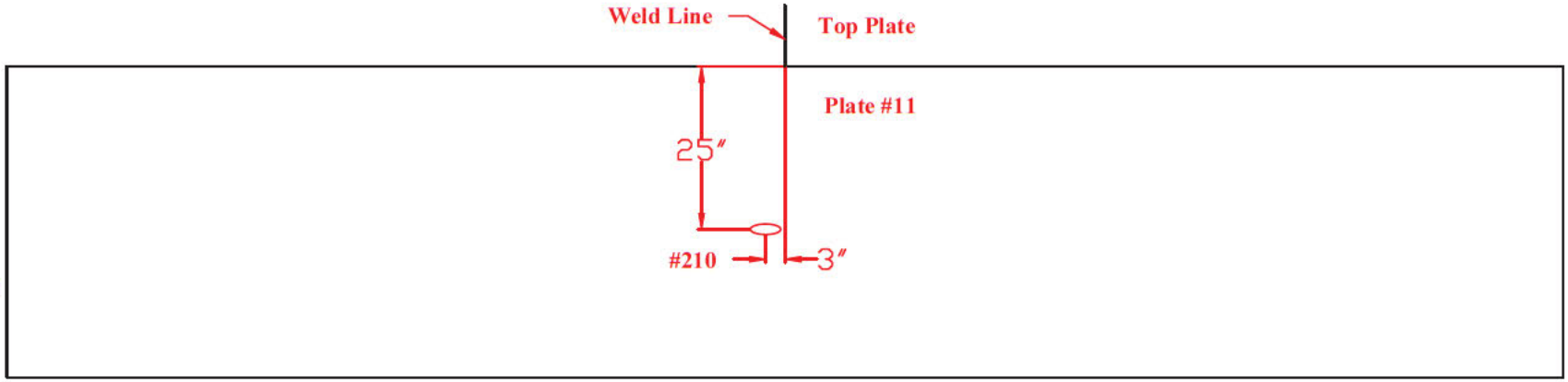


Tank Section: Barrel
Quadrant: C

Row: 1
Plate #: 11

Flaw # - Type - Remaining:

#210 - Gouging - 0.050" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C

TESTEX
WWW.TESTEX-NDT.COM

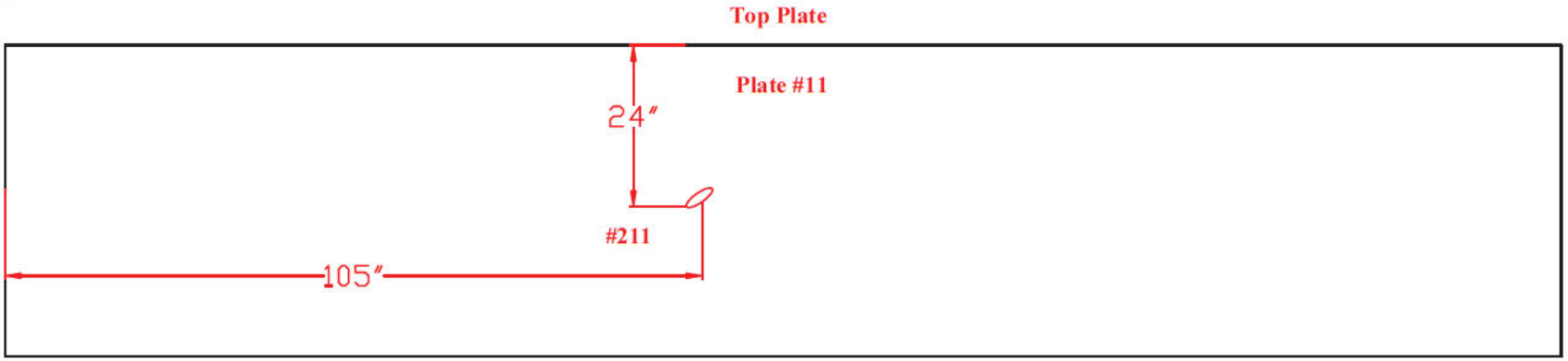
TANK # 5 - QUADRANT C
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: C

Row: 6
Plate #: 11

Flaw # - Type - Remaining:

#211 - SP - Gouging
0.035" Deep

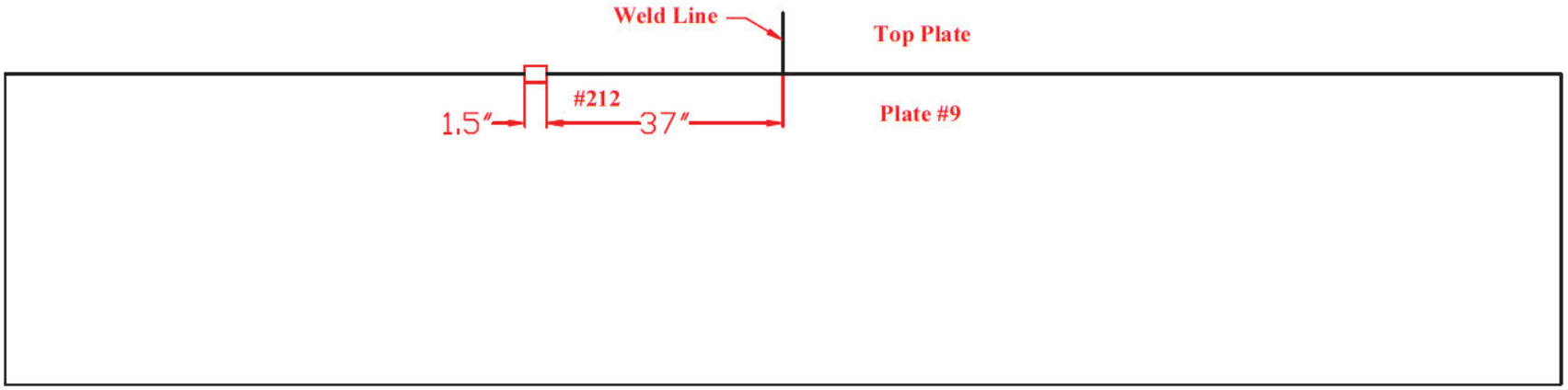


Tank Section: Barrel
Quadrant: C

Row: 4
Plate #: 9

Flaw # - Type - Remaining:

#212 - WD - Undercut
0.100" Deep, 1.5" Long,
0.110" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C

TESTEX
WWW.TESTEX-NDT.COM

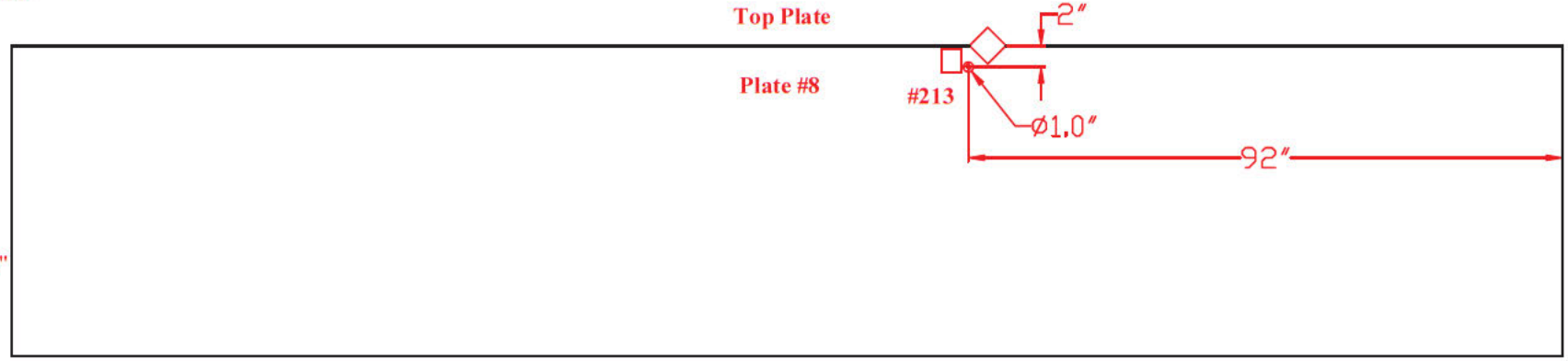
TANK # 5 - QUADRANT C
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: C

Row: 5
Plate #: 8

Flaw # - Type - Remaining:

#213 - WL(APP) - 0.202"-0.210"

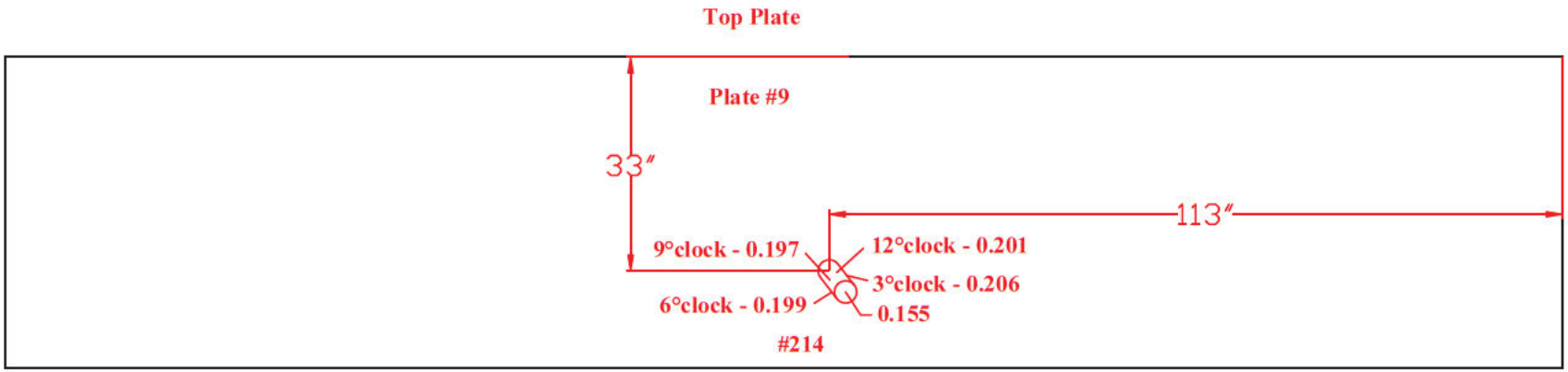


Tank Section: Barrel
Quadrant: C

Row: 19
Plate #: 9

Flaw # - Type - Remaining:

#214 - GN - 0.155"
(0.197"-0.206")



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C/B , B

TANK # 5 - QUADRANT C/B, B
Nominal Plate Thickness: 0.250"

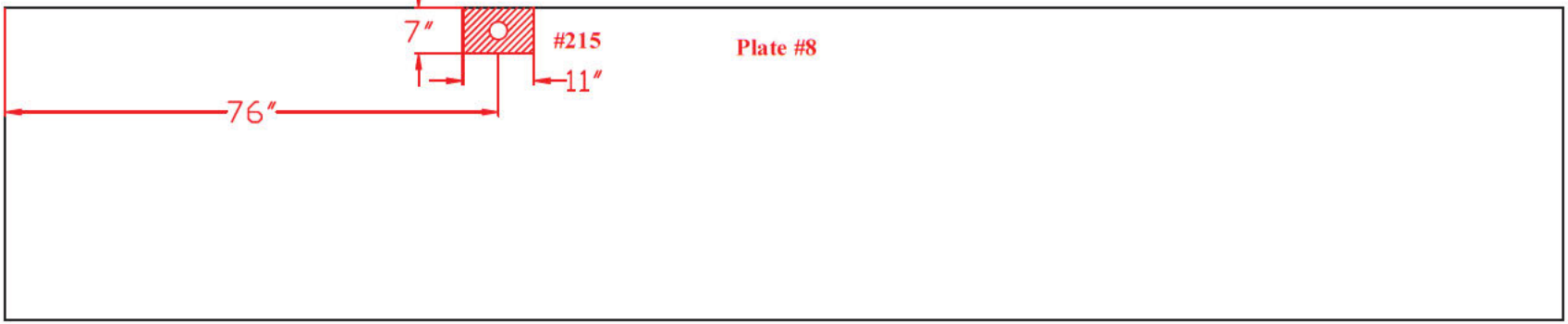
Tank Section: Barrel
Quadrant: C

Row: 13
Plate #: 8

Flaw # - Type - Remaining:

#215 - WL(APP) - 0.221"

Top Plate



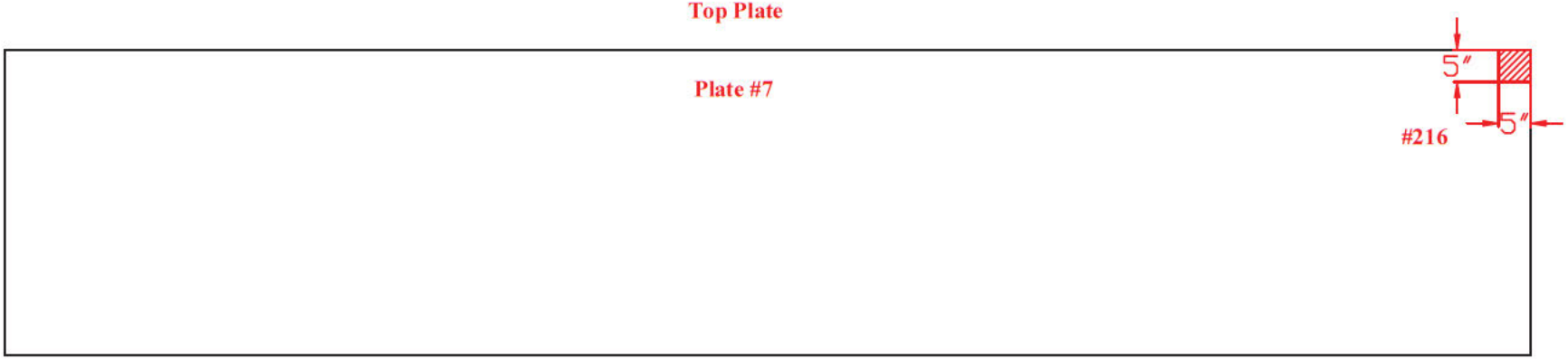
Tank Section: Barrel
Quadrant: B

Row: 21
Plate #: 7

Flaw # - Type - Remaining:

#216 - WL - 0.234"

Top Plate



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

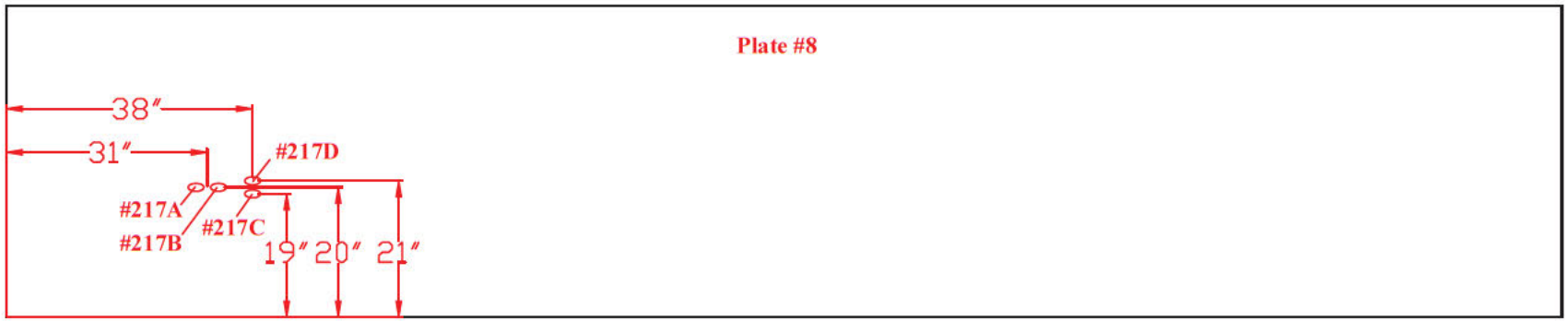
Top Plate

Tank Section: Barrel
Quadrant: B

Row: 21
Plate #: 8

Flaw # - Type - Remaining:

#217A - SP - 0.100" Deep
#217B - SP - 0.100" Deep
#217C - SP - 0.050" Deep
#217D - SP - 0.050" Deep



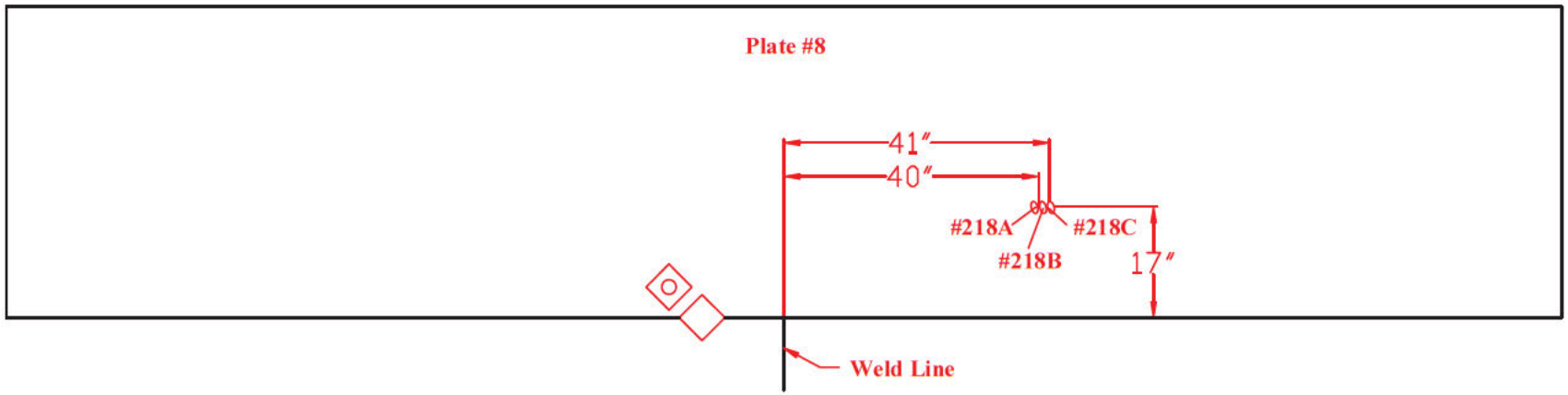
Top Plate

Tank Section: Barrel
Quadrant: B

Row: 20
Plate #: 8

Flaw # - Type - Remaining:

#218A - SP - 0.060" Deep
#218B - SP - 0.060" Deep
#218C - SP - 0.060" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

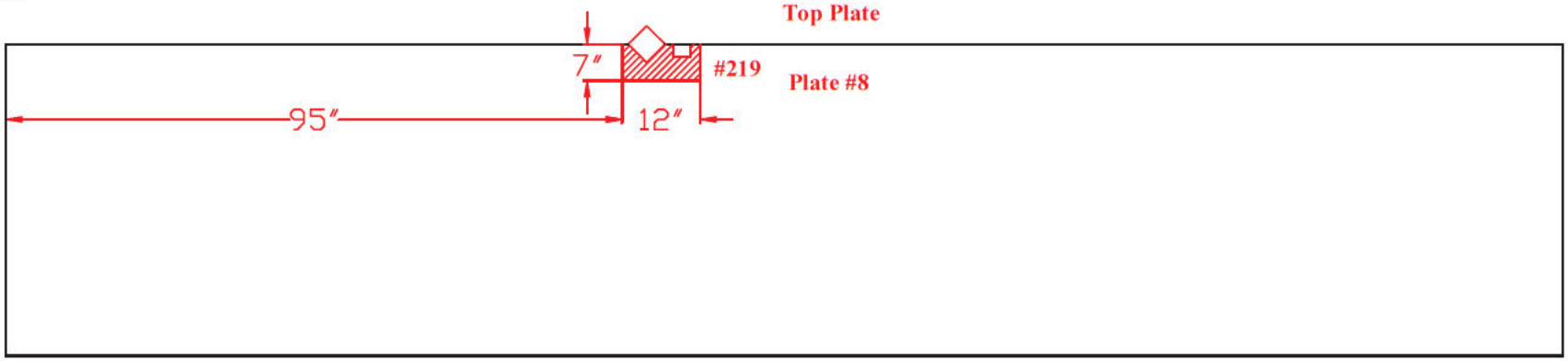
TANK # 5 - QUADRANT B
**Nominal Plate Thickness: 0.250"*

Tank Section: Barrel
Quadrant: B

Row: 14
Plate #: 8

Flaw # - Type - Remaining:

#219 - WL(APP) - 0.210"

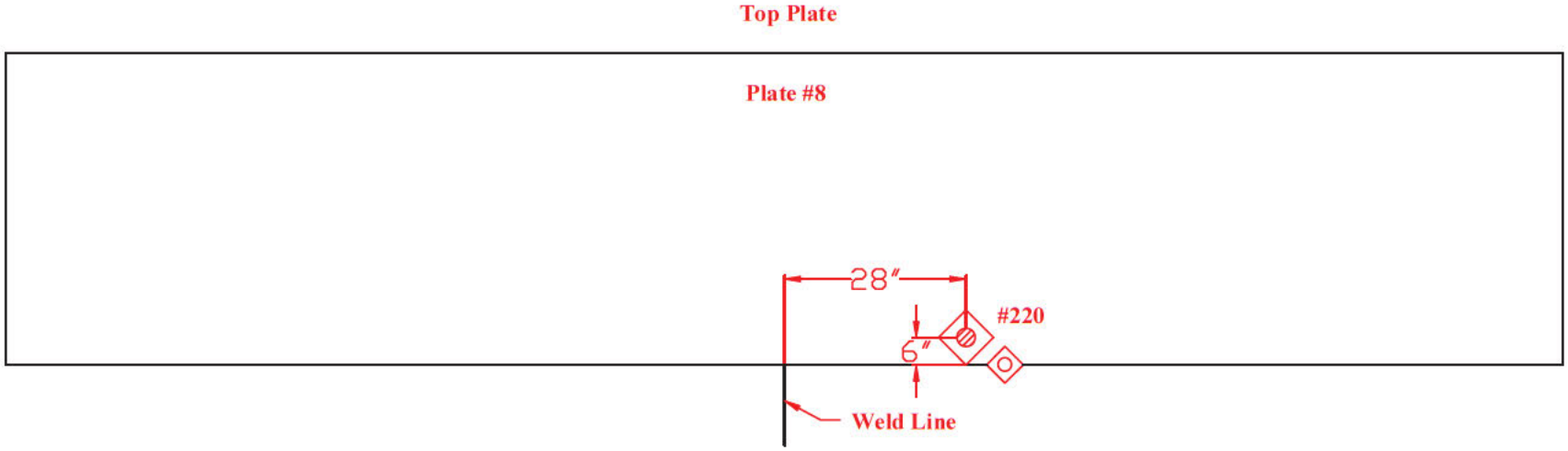


Tank Section: Barrel
Quadrant: B

Row: 8
Plate #: 8

Flaw # - Type - Remaining:

#220 - WL(OPP) - 0.244"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

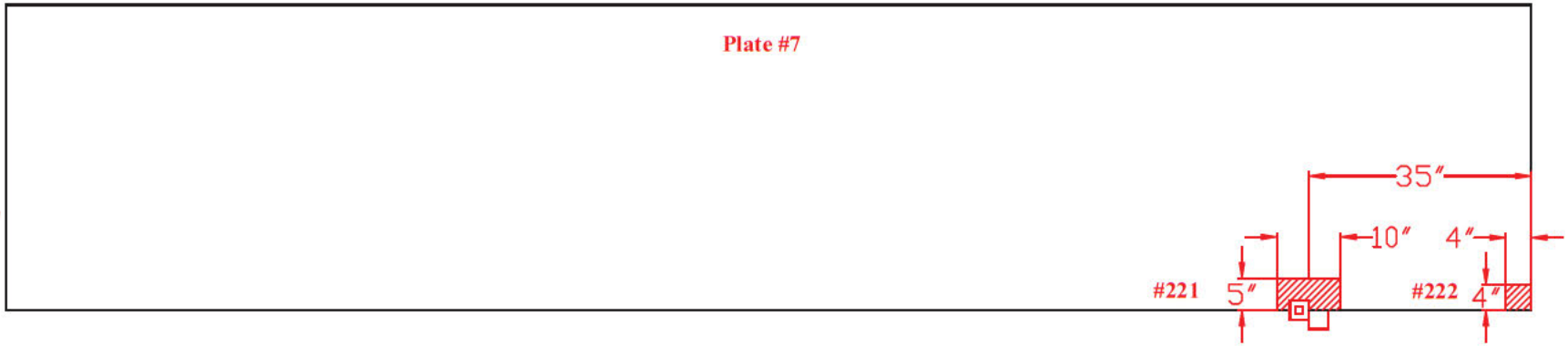
Top Plate

Tank Section: Barrel
Quadrant: B

Row: 7
Plate #: 7

Flaw # - Type - Remaining:

#221 - WL(APP) - 0.238"-0.240"
#222 - WL - 0.238"



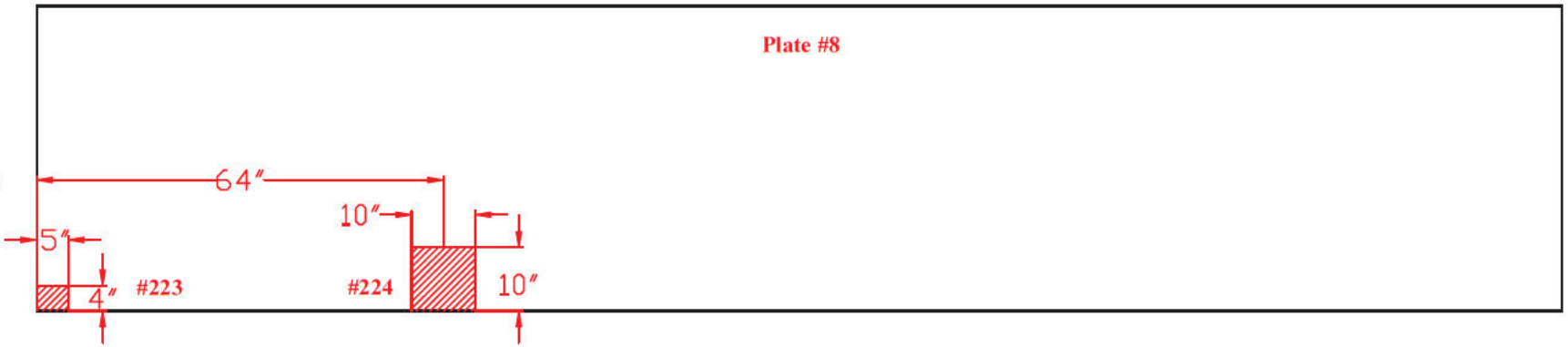
Top Plate

Tank Section: Barrel
Quadrant: B

Row: 7
Plate #: 8

Flaw # - Type - Remaining:

#223 - WL - 0.238"
#224 - WL - 0.238"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C /B

TESTEX
WWW.TESTEX-NDT.COM

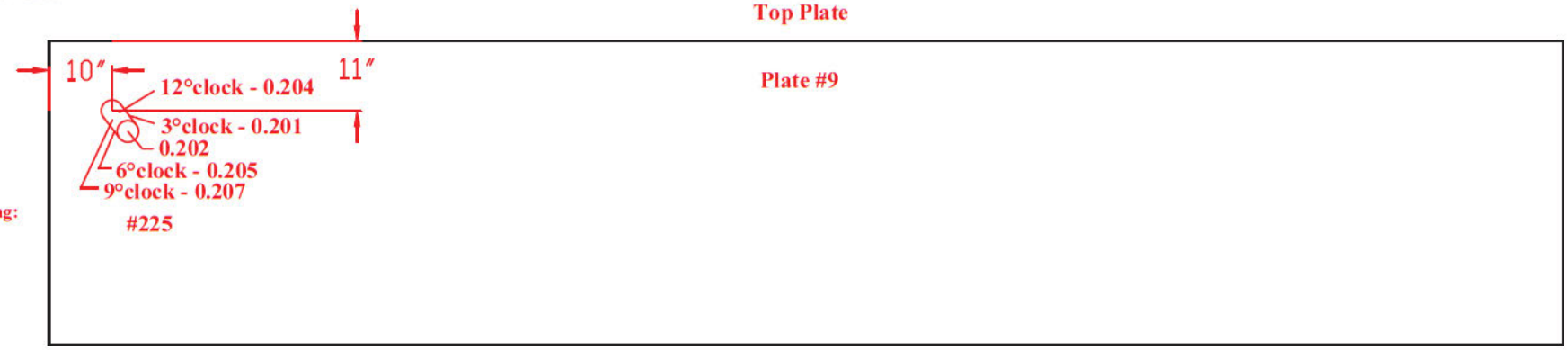
TANK # 5 - QUADRANT C/B
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: C

Row: 12
Plate #: 9

Flaw # - Type - Remaining:

#225 - GN - 0.202"
(0 201"-0.207")

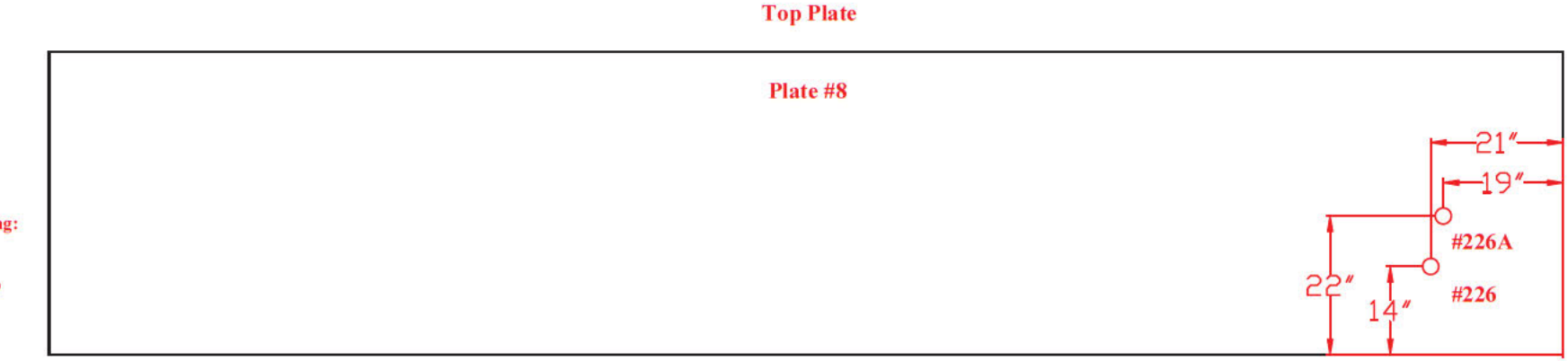


Tank Section: Barrel
Quadrant: B

Row: 2
Plate #: 8

Flaw # - Type - Remaining:

#226 - SP - 0.050" Deep
#226A - SP - 0.050" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C, C/B

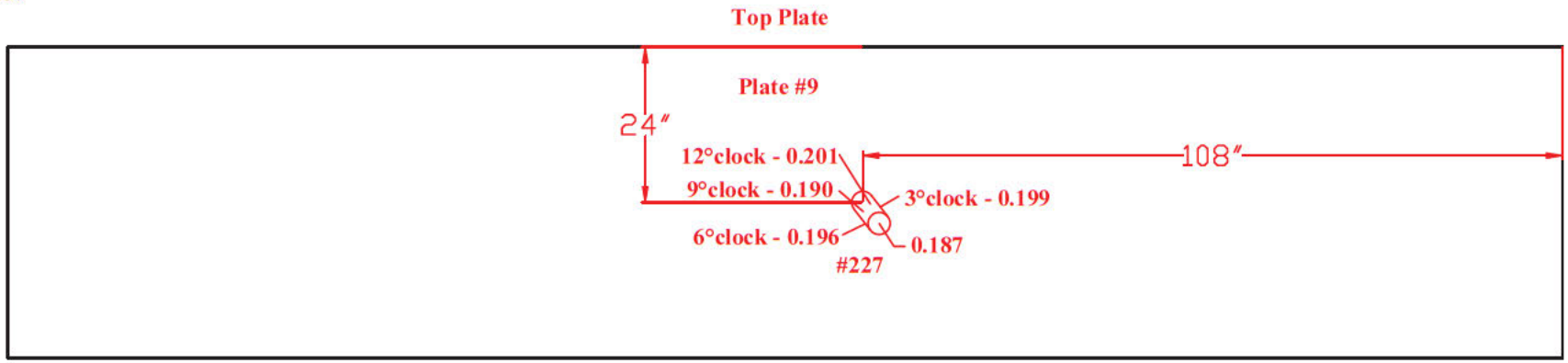
TANK # 5 - QUADRANT C, C/B
Nominal Plate Thickness: 0.250"

Tank Section: Barrel
Quadrant: C

Row: 27
Plate #: 9

Flaw # - Type - Remaining:

#227 - GN - 0.187"
(0.190"-0.201")

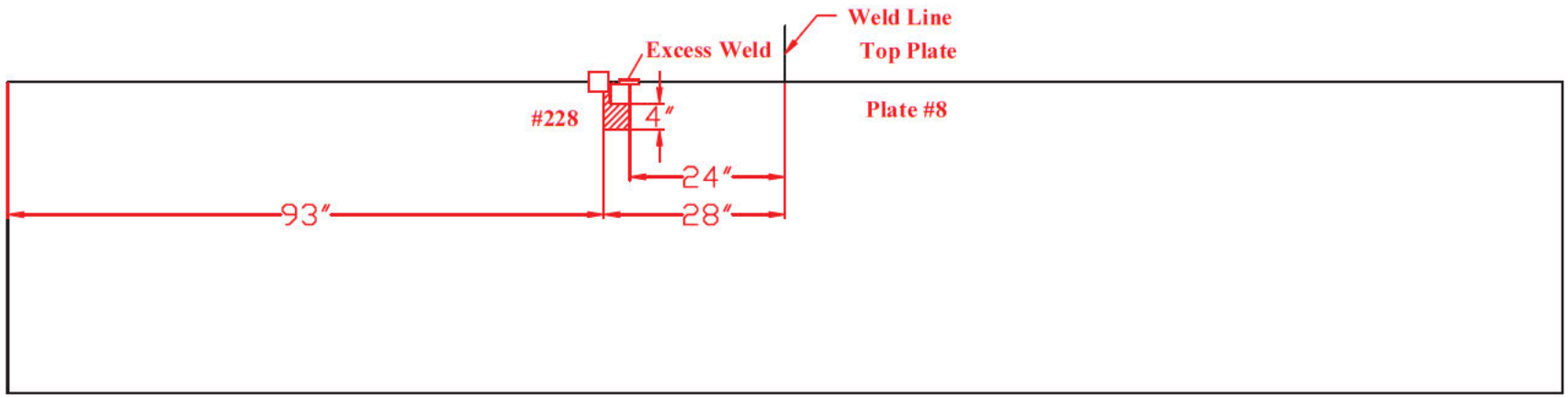


Tank Section: Barrel
Quadrant: C/B

Row: 23
Plate #: 8

Flaw # - Type - Remaining:

#228 - WL(APP) - 0.220"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/D

TESTEX
WWW.TESTEX-NDT.COM

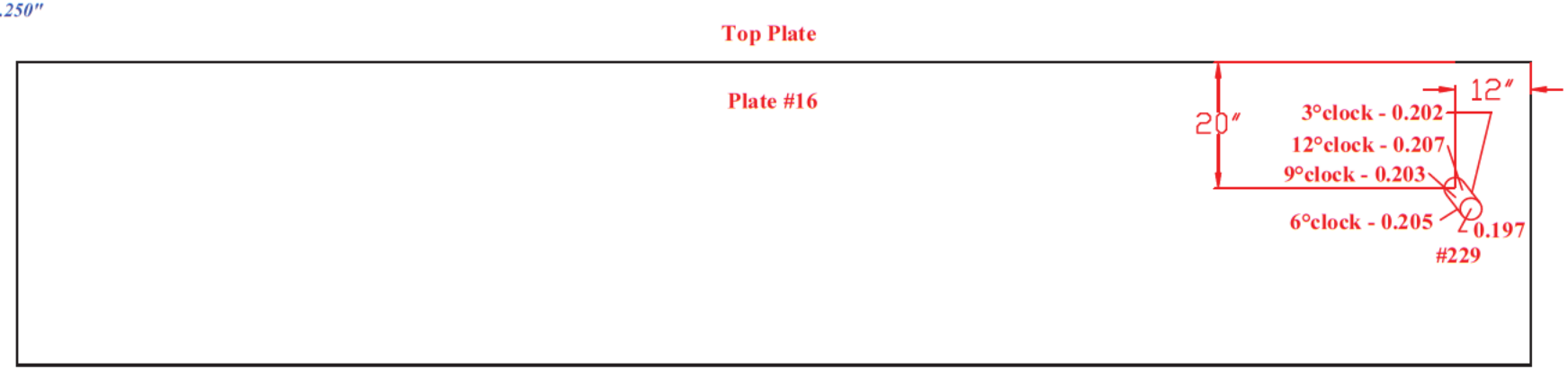
TANK # 5 - QUADRANT A/D
**Nominal Plate Thickness: 0.250"*

Tank Section: Barrel (U/C)
Quadrant: A/D

Row: 19
Plate #: 16

Flaw # - Type - Remaining:

#229 - GN - 0.197"
(0.202"-0.207")

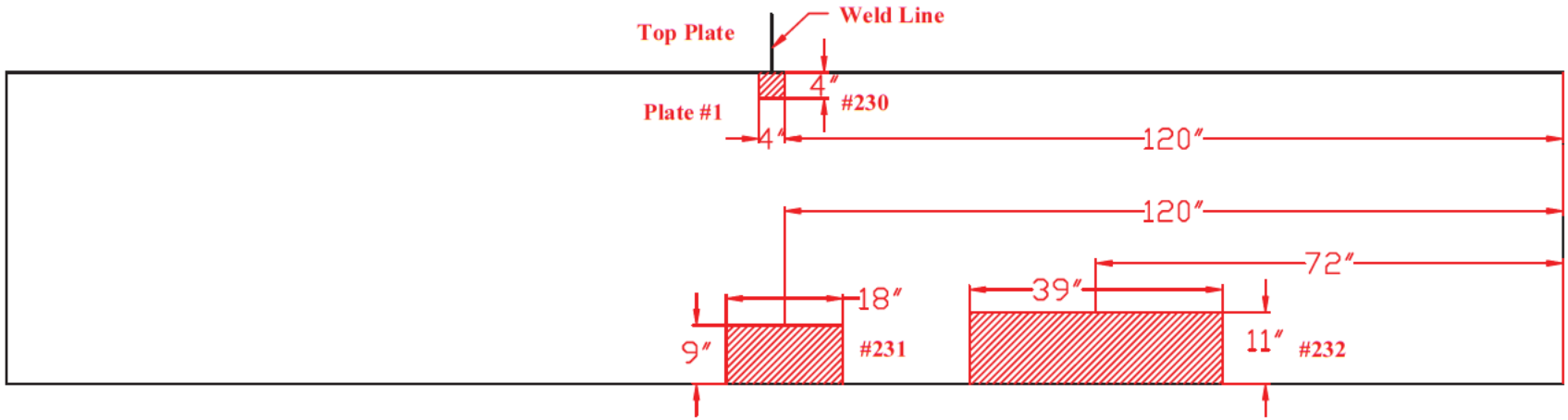


Tank Section: Barrel (U/C)
Quadrant: A/D

Row: 10
Plate #: 1

Flaw # - Type - Remaining:

#230 - WL - 0.238"
#231 - WL - 0.237"
#232 - WL - 0.235"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/D

TESTEX
WWW.TESTEX-NDT.COM

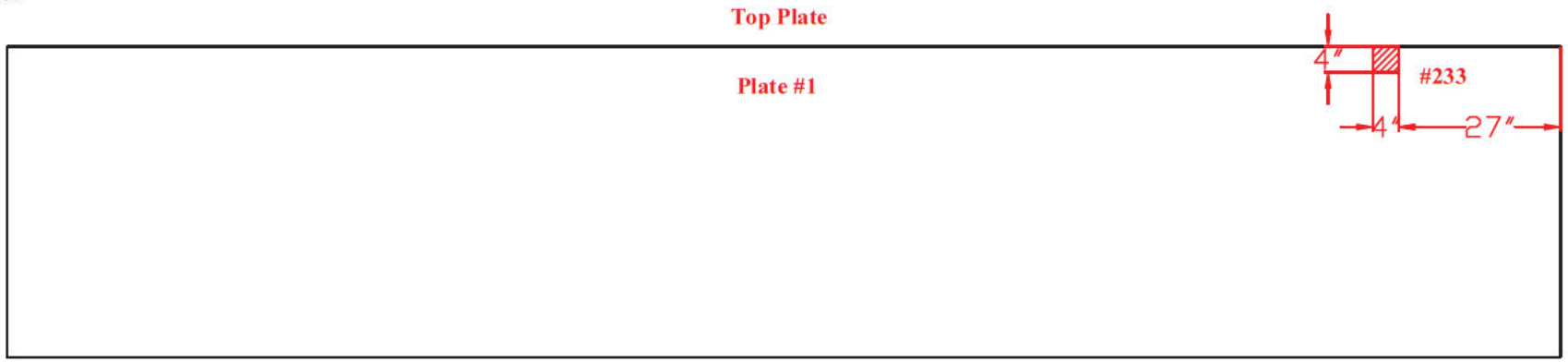
TANK # 5 - QUADRANT A/D
Nominal Plate Thickness: 0.250"

Tank Section: Barrel (U/C)
Quadrant: A/D

Row: 2
Plate #: 1

Flaw # - Type - Remaining:

#233 - WL - 0.240"

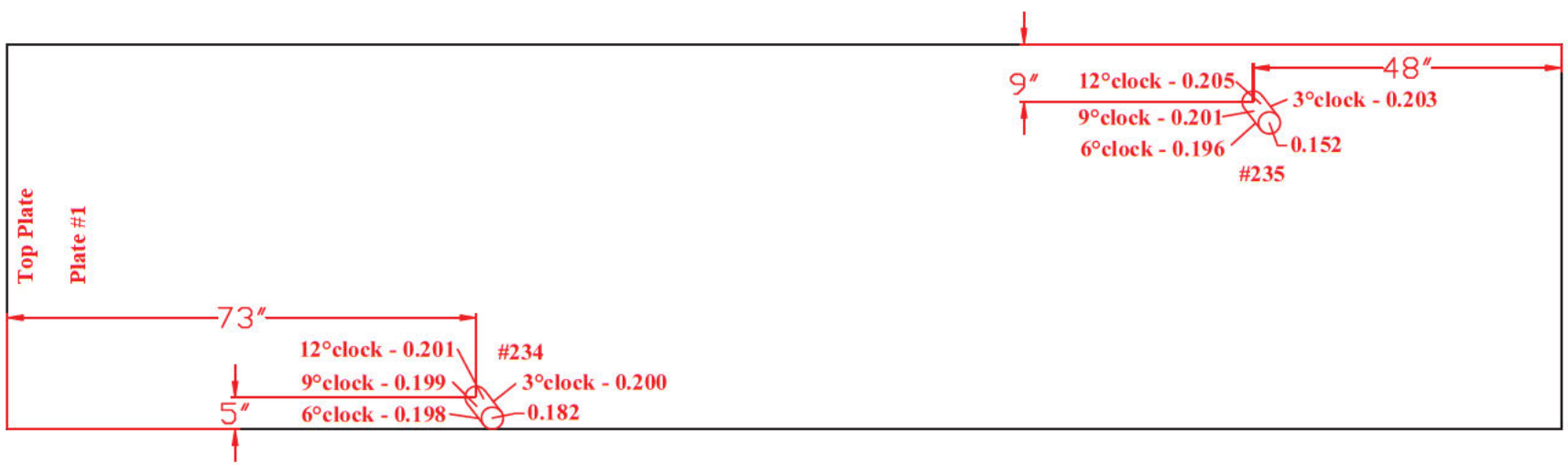


Tank Section: Lower Dome
Quadrant: A/D

Course: 3
Plate #: 1

Flaw # - Type - Remaining:

#234 - GN - 0.187"
(0.198"-0.201")
#235 - GN - 0.152"
(0.196"-0.205")



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/D

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT A/D
Nominal Plate Thickness: 0.250"

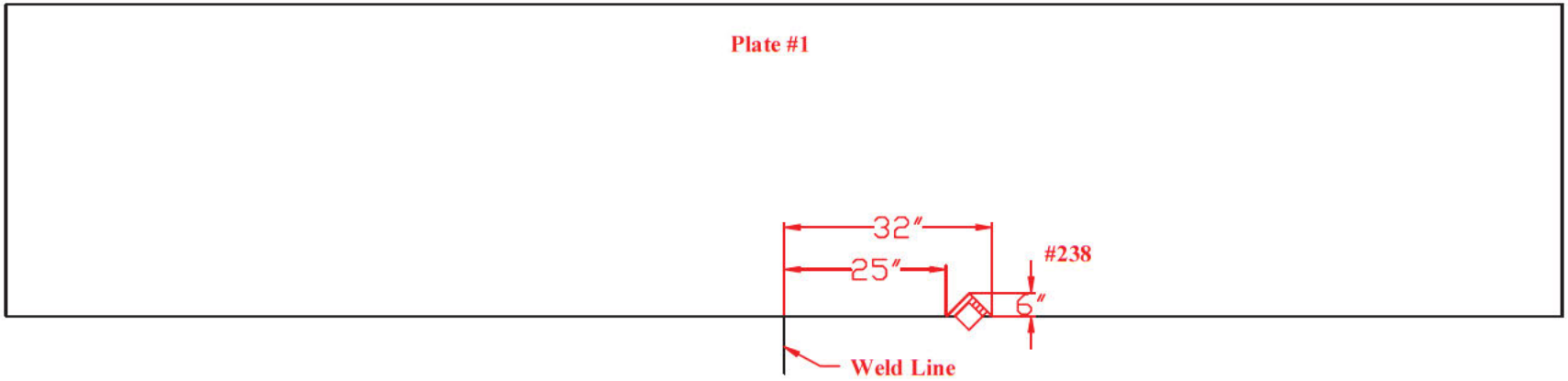
Top Plate

Tank Section: Barrel (UC)
Quadrant: A/D

Row: 24
Plate #: 1

Flaw # - Type - Remaining:

#238 - WL(APP) - 0.240"



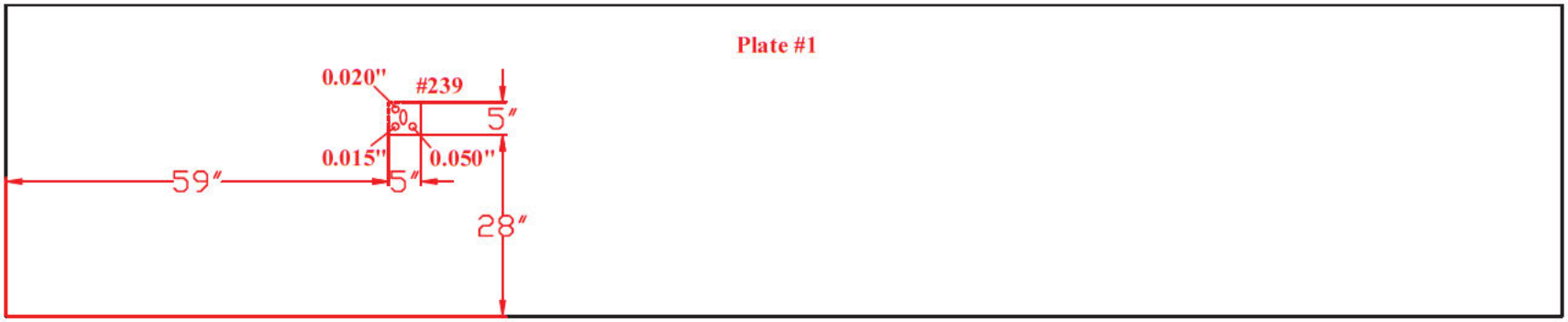
Top Plate

Tank Section: Barrel (UC)
Quadrant: A/D

Row: 21
Plate #: 1

Flaw # - Type - Remaining:

#239 - SP/Gouges
(0.015" - 0.050")



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/D

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT A/D
Nominal Plate Thickness: 0.250"

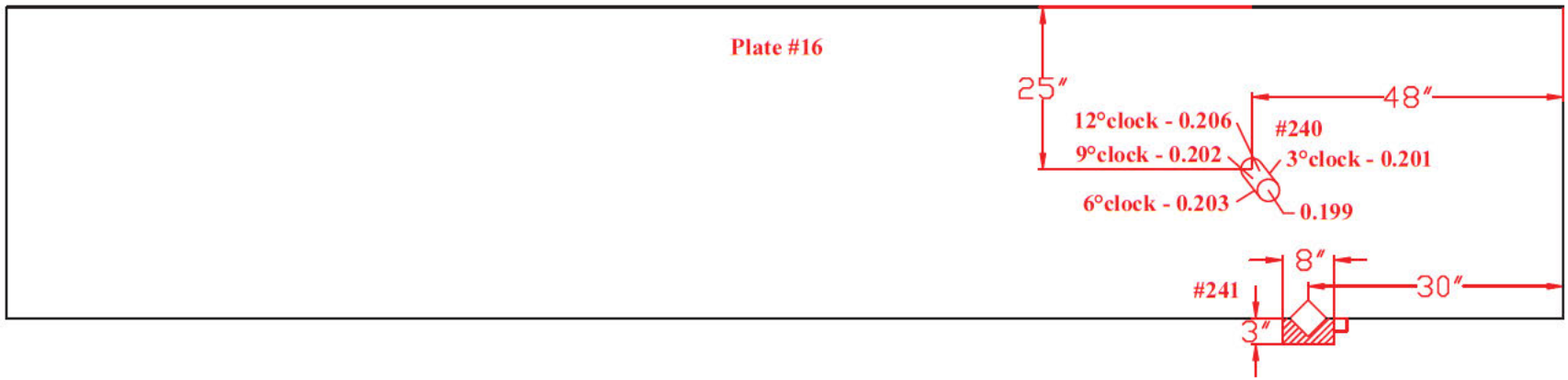
Tank Section: Barrel (UC)
Quadrant: A/D

Row: 27
Plate #: 16

Flaw # - Type - Remaining:

#240 - GN - 0.199"
(0.201"-0.206")
#241 - WL(APP) - 0.229"

Top Plate



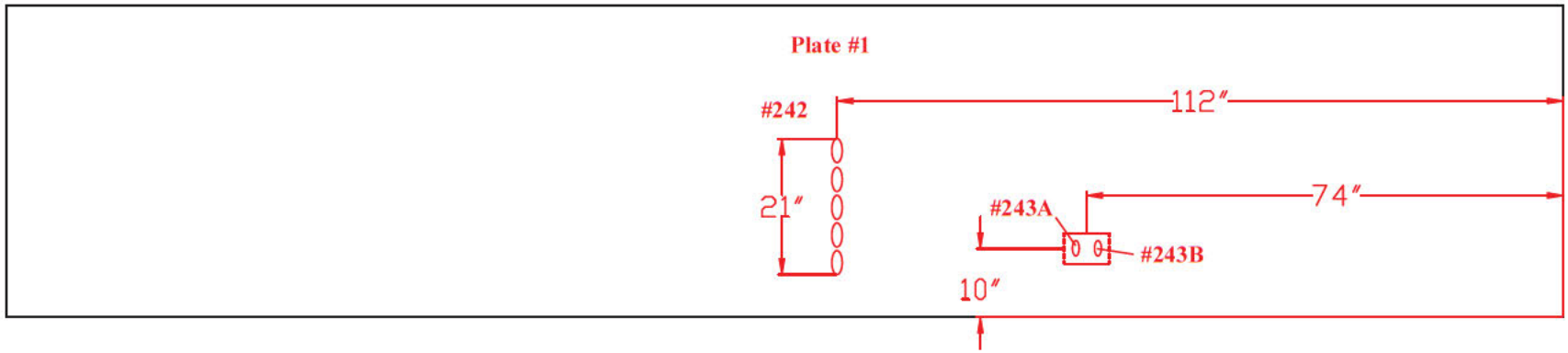
Tank Section: Barrel (UC)
Quadrant: A/D

Row: 26
Plate #: 1

Flaw # - Type - Remaining:

#242 - SP - Gouges 0.030" Deep
#243A - SP - 0.050" Deep
#243B - SP - 0.050" Deep

Top Plate



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B/C

TESTEX
WWW.TESTEX-NDT.COM

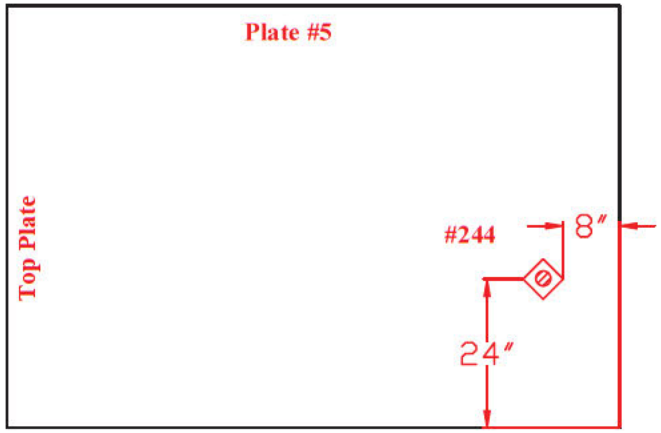
TANK # 5 - QUADRANT B/C
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: B

Course: 4
Plate #: 34

Flaw # - Type - Remaining:

#244 - WL(OPP) - 0.240"

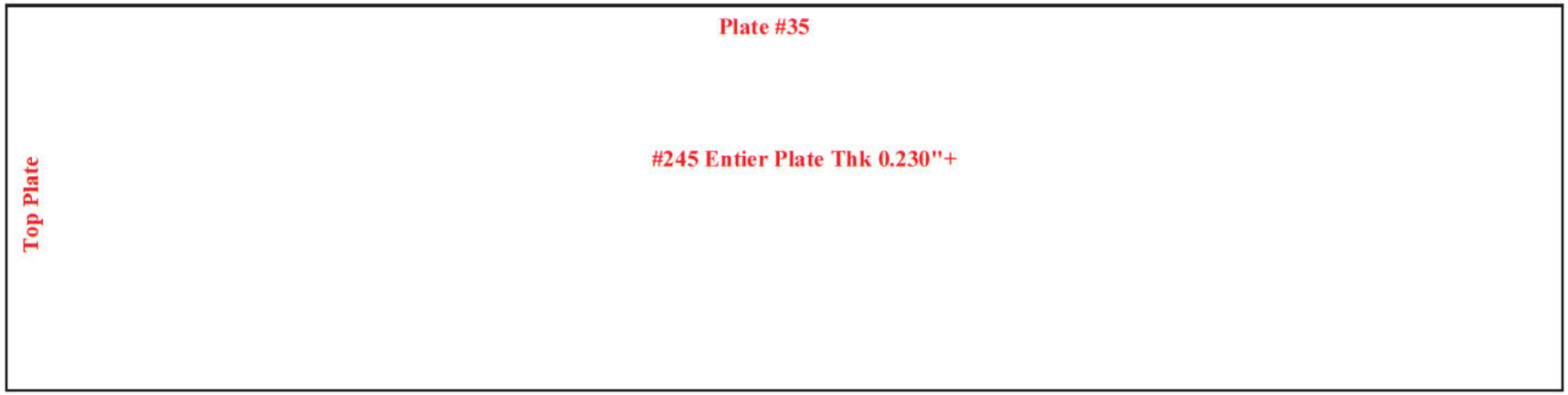


Tank Section: Lower Dome
Quadrant: C

Course: 3
Plate #: 35

Flaw # - Type - Remaining:

#245 - WL - 0.230"+
(Entire Plate)



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C

TESTEX
WWW.TESTEX-NDT.COM

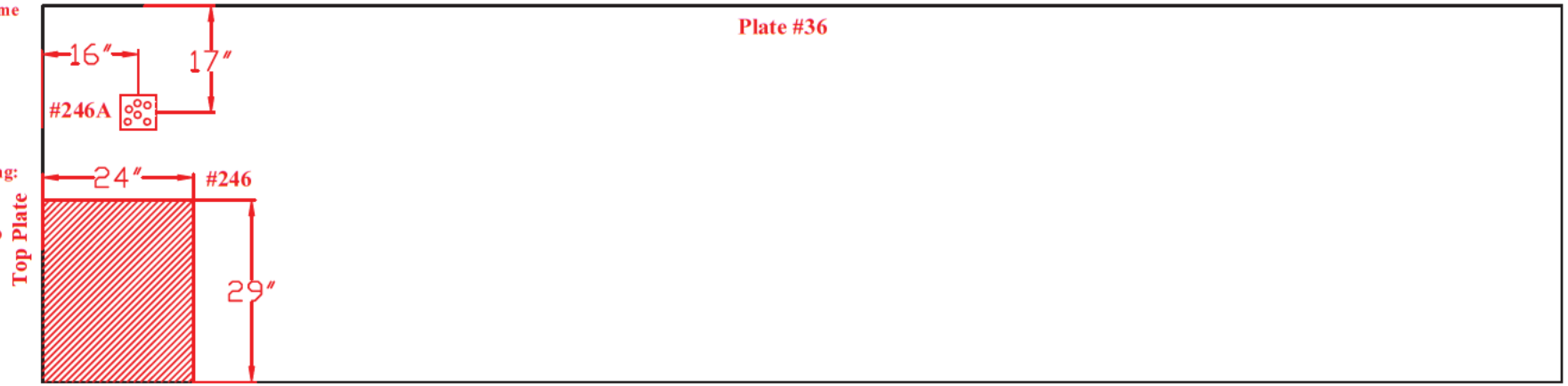
TANK # 5 - QUADRANT C
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: C

Course: 4
Plate #: 36

Flaw # - Type - Remaining:

#246 - WL - 0.240"
#246A - SP - 0.040" Deep

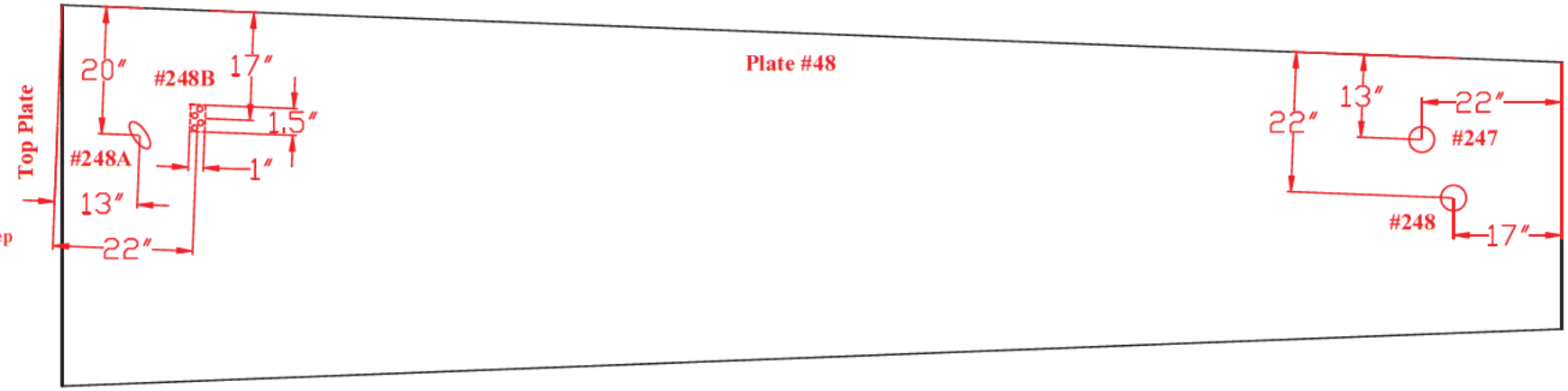


Tank Section: Lower Dome
Quadrant: C

Course: 2
Plate #: 48

Flaw # - Type - Remaining:

#247 - Dent - 0.030" Deep
#248 - Dent - 0.030" Deep
#248A - Gouge - 0.120" Deep
#248B - SP - 0.025" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C, A/D

TESTEX
WWW.TESTEX-NDT.COM

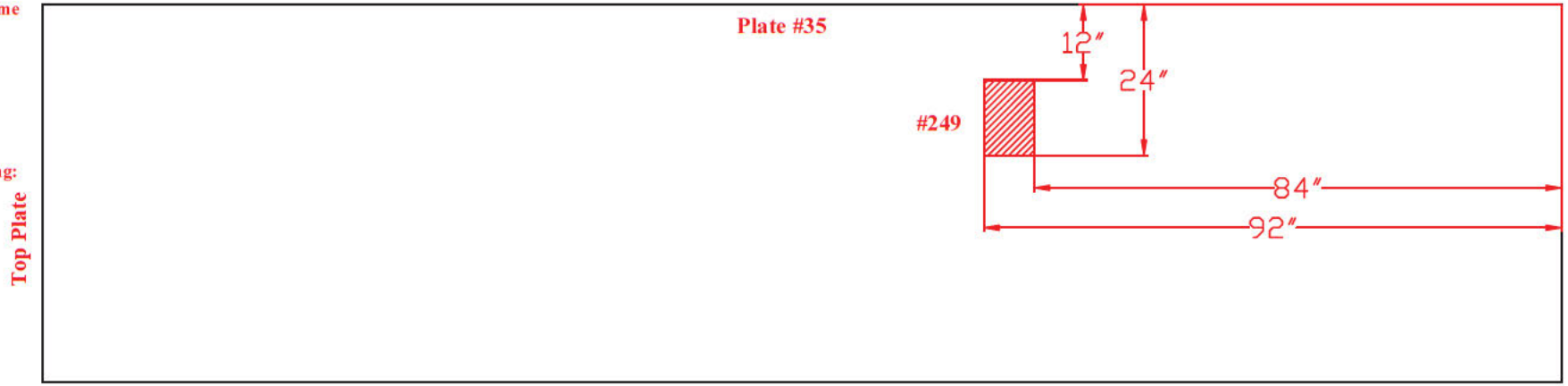
TANK # 5 - QUADRANT C, A/D
Nominal Plate Thickness: 0.250"

Tank Section: Lower Dome
Quadrant: C

Course: 3
Plate #: 35

Flaw # - Type - Remaining:

#249 - WL - 0.240"



Top Plate

Tank Section: Barrel (U/C)
Quadrant: A/D

Row: 10
Plate #: 16

Flaw # - Type - Remaining:

#250 - WL(OPP) - 0.236"
#251 - WL - 0.228"

Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/D

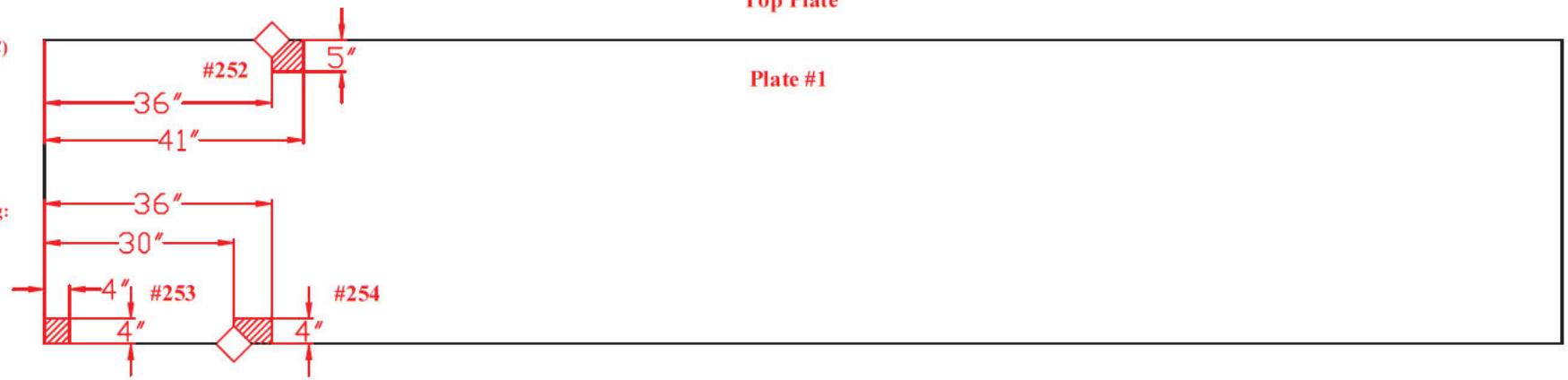
TANK # 5 - QUADRANT A/D
Nominal Plate Thickness: 0.250"

Tank Section: Barrel (U/C)
Quadrant: A/D

Row: 10
Plate #: 1

Flaw # - Type - Remaining:

#252 - WL(APP) - 0.238"
#253 - WL - 0.234"
#254 - WL(APP) - 0.236"
Also See #230



Tank Section: Barrel (U/C)
Quadrant: A/D

Row: 8
Plate #: 1

Flaw # - Type - Remaining:

#255 - SP - 0.060" Deep

Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/D

TESTEX
WWW.TESTEX-NDT.COM

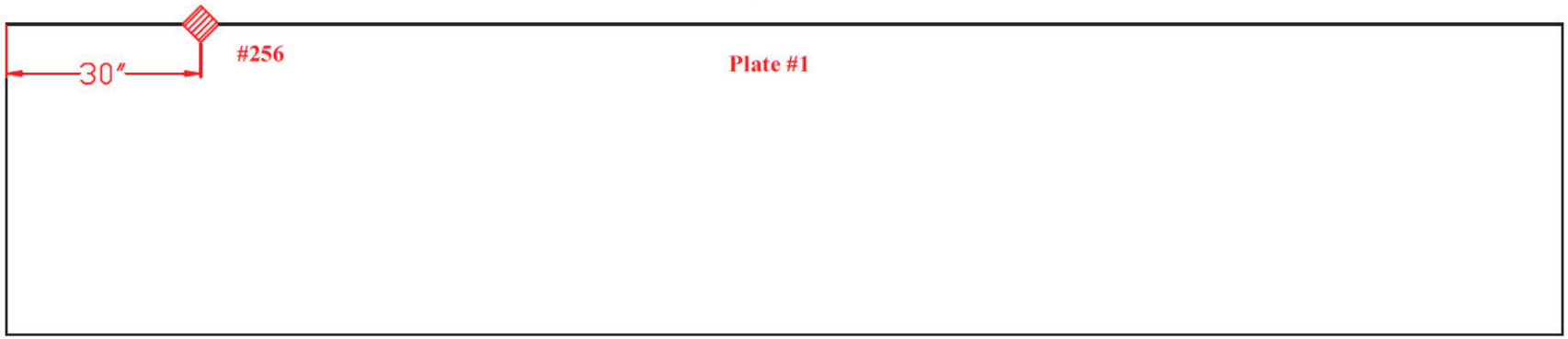
TANK # 5 - QUADRANT A/D
**Nominal Plate Thickness: 0.250"*

Tank Section: Barrel (U/C)
Quadrant: A/D

Row: 22
Plate #: 1

Flaw # - Type - Remaining:

#256 - WL(OPP) - 0.240"

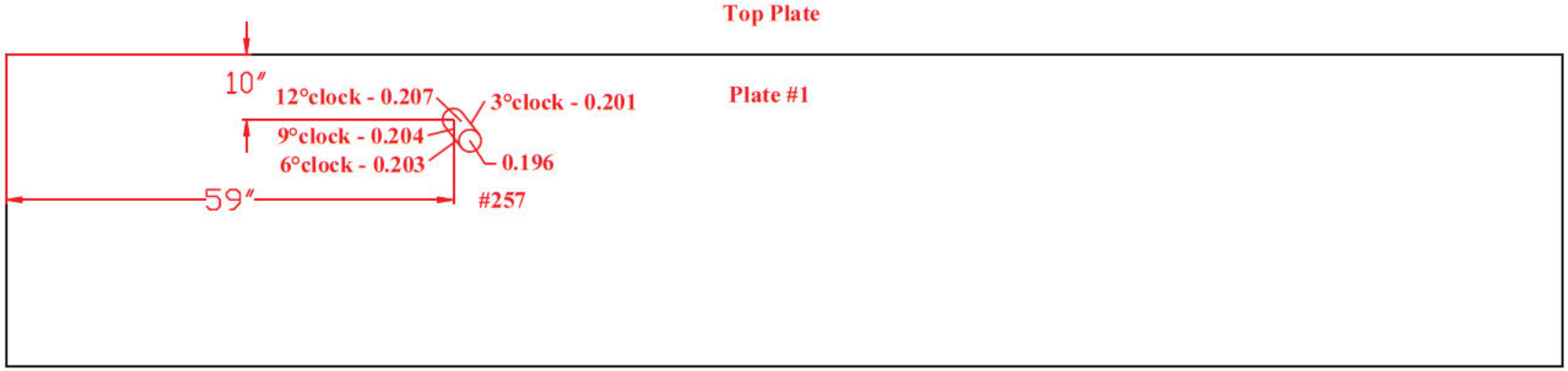


Tank Section: Barrel (U/C)
Quadrant: A/D

Row: 12
Plate #: 1

Flaw # - Type - Remaining:

#257 - GN - 0.196"
(0.201"-0.207")



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/D

TANK # 5 - QUADRANT A/D
Nominal Plate Thickness: 0.250"

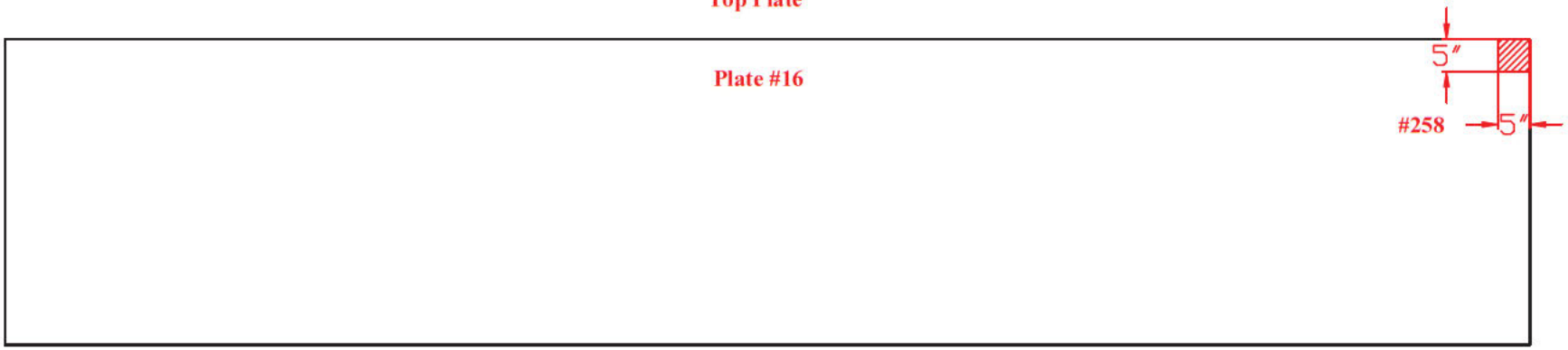
Tank Section: Barrel (U/C)
Quadrant: A/D

Row: 28
Plate #: 16

Flaw # - Type - Remaining:

#258 - WL - 0.237"

Top Plate



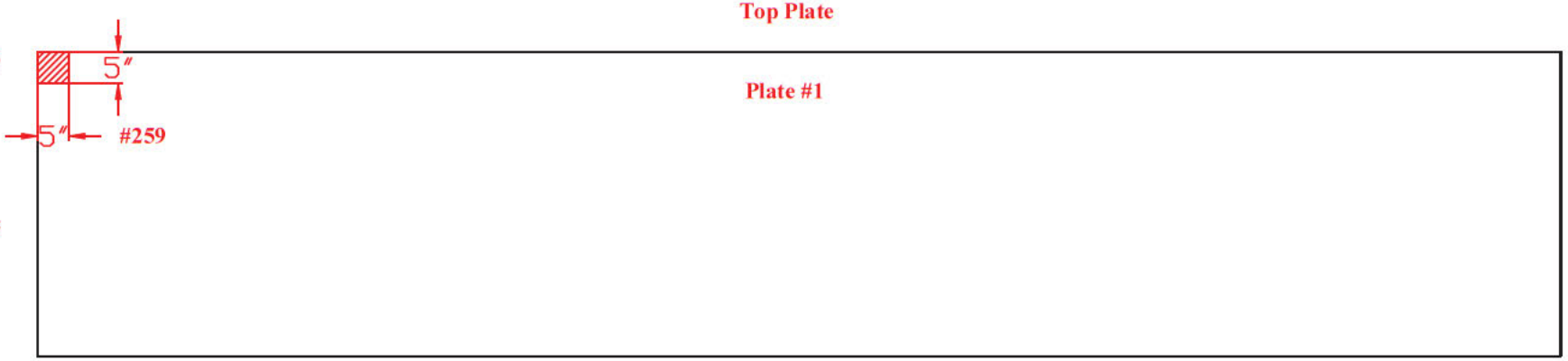
Tank Section: Barrel (U/C)
Quadrant: A/D

Row: 28
Plate #: 1

Flaw # - Type - Remaining:

#259 - WL - 0.237"

Top Plate



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/D

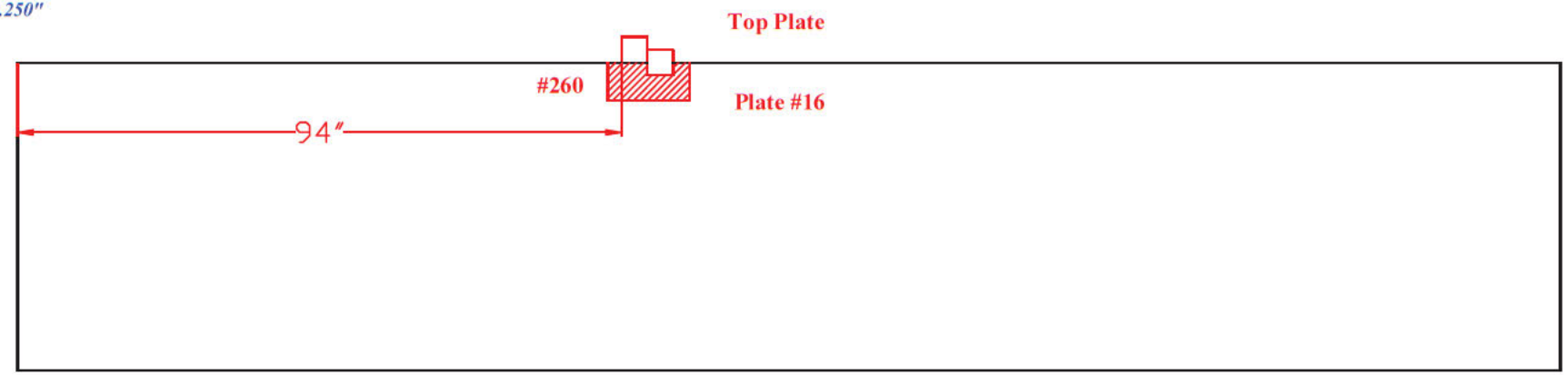
TANK # 5 - QUADRANT A/D
Nominal Plate Thickness: 0.250"

Tank Section: Barrel (U/C)
Quadrant: A/D

Row: 25
Plate #: 16

Flaw # - Type - Remaining:

#260 - WL(APP) - 0.237"

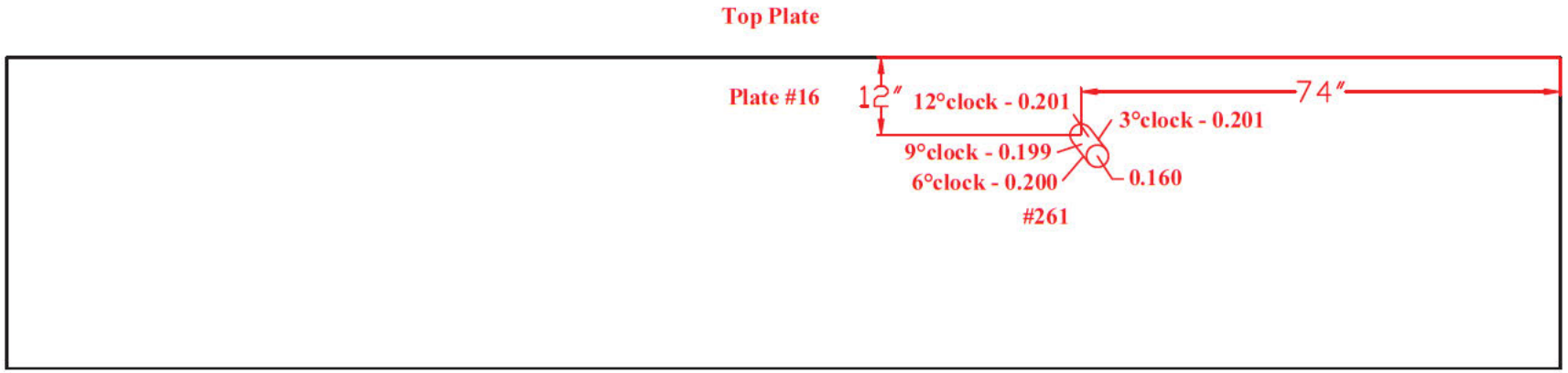


Tank Section: Barrel (U/C)
Quadrant: A/D

Row: 5
Plate #: 16

Flaw # - Type - Remaining:

#261 -GN - 0.160"
(0 199"-0.201")



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

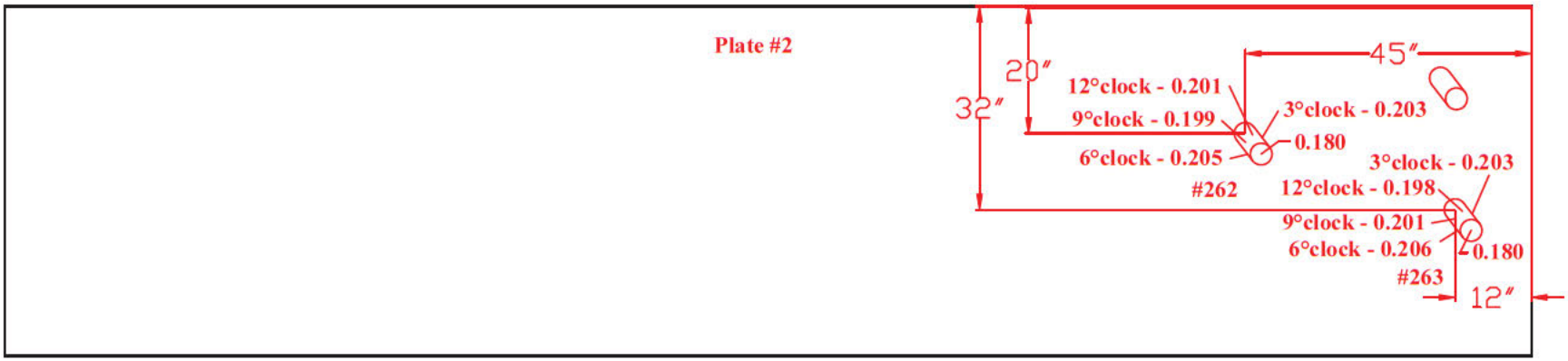
Top Plate

Tank Section: Extension
Quadrant: A

Row: E 2
Plate #: 2

Flaw # - Type - Remaining:

#262 - GN - 0.180"
(0 199"-0.205")
#263 - GN - 0.180"
(0 198"-0.206")



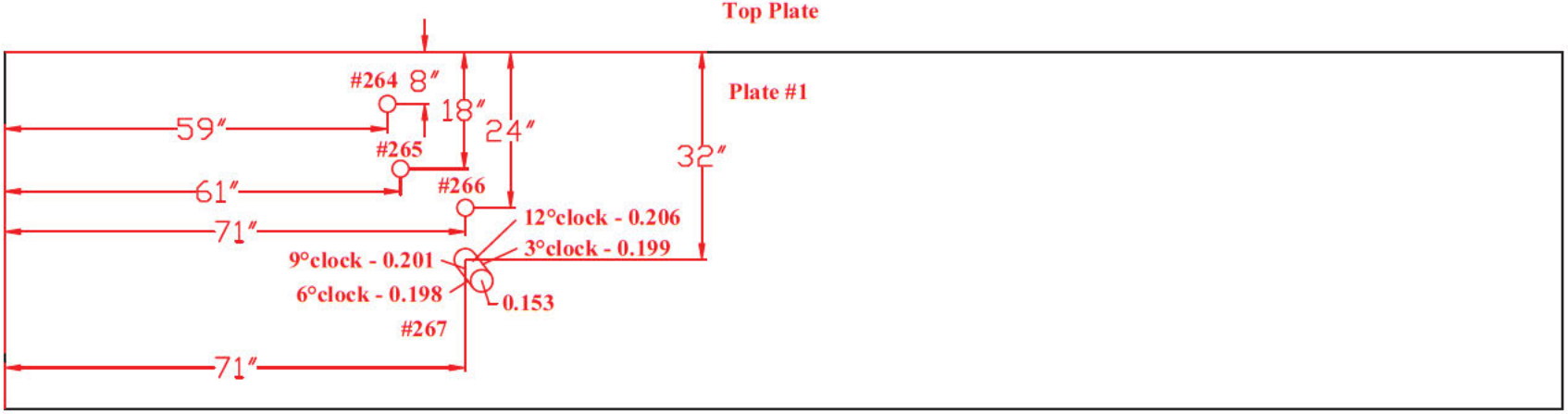
Top Plate

Tank Section: Extension
Quadrant: A

Row: E 2
Plate #: 3

Flaw # - Type - Remaining:

#264 - Dent - 0.200" Deep
#265 - Dent - 0.200" Deep
#266 - Dent - 0.240" Deep
#267 -GN - 0.153"
(0 198"-0.206")



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

Tank Section: Extension
Quadrant: A

Row: E 1
Plate #: 2

Flaw # - Type - Remaining:

#268 - GN - 0.198"
(0 199"-0.205")

Top Plate

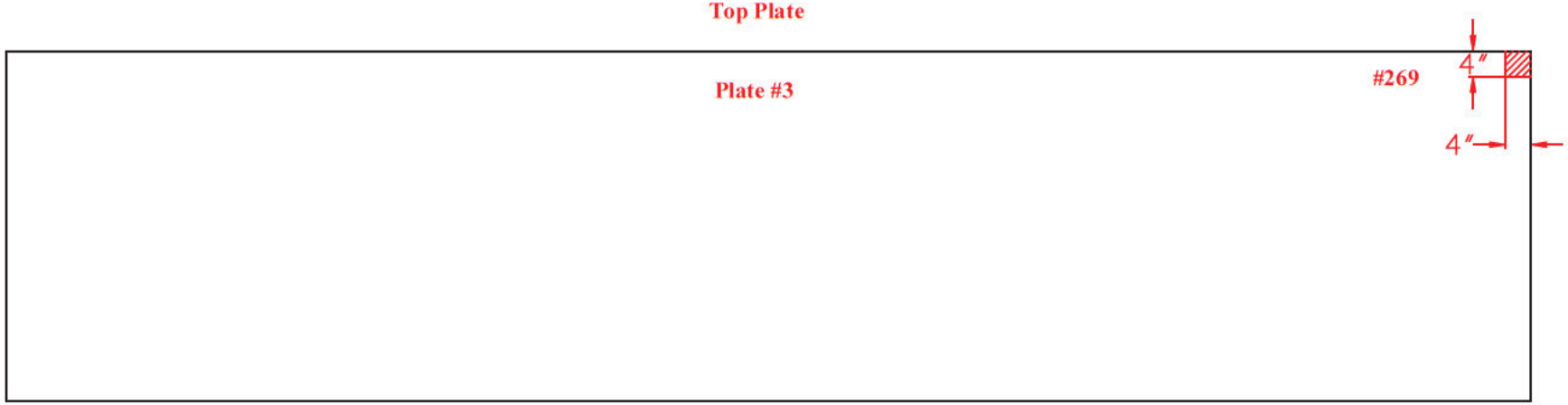
Tank Section: Extension
Quadrant: A

Row: E 3
Plate #: 3

Flaw # - Type - Remaining:

#269 -WL - 0.232"

Top Plate



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

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TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

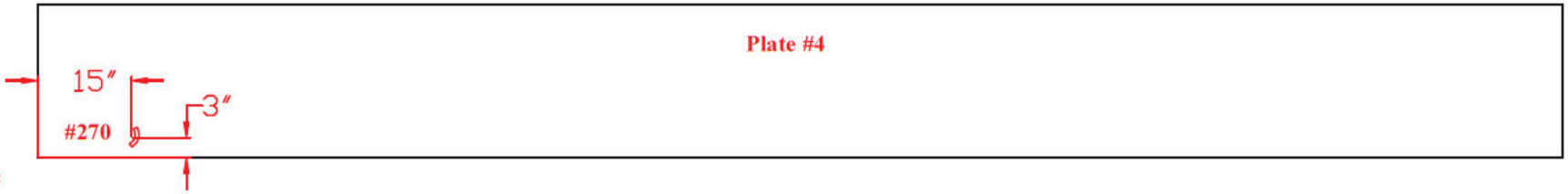
Top Plate

Tank Section: Extension
Quadrant: A

Row: E 4
Plate #: 4

Flaw # - Type - Remaining:

#270 - Gouge/Dent 0.120" Deep



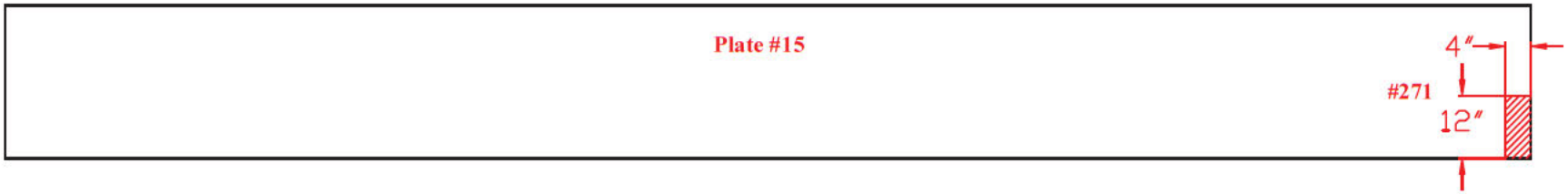
Top Plate

Tank Section: Extension
Quadrant: A

Row: E 4
Plate #: 15

Flaw # - Type - Remaining:

#271 -WL - 0.177"



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TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D/C

TANK # 5 - QUADRANT D/C
Nominal Plate Thickness: 0.250"

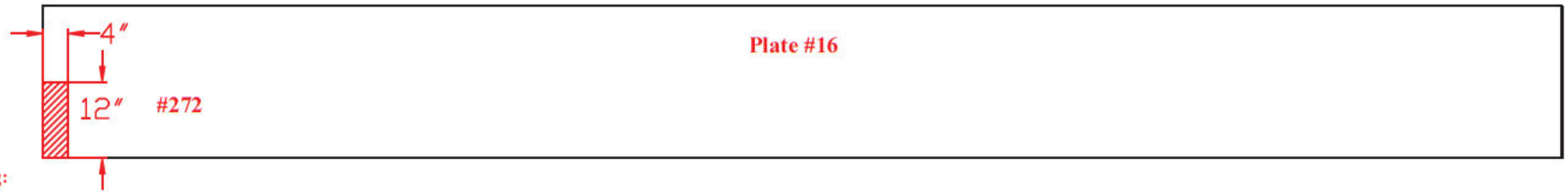
Top Plate

Tank Section: Extension
Quadrant: D

Row: E 4
Plate #: 16

Flaw # - Type - Remaining:

#272 - WL - 0.187"



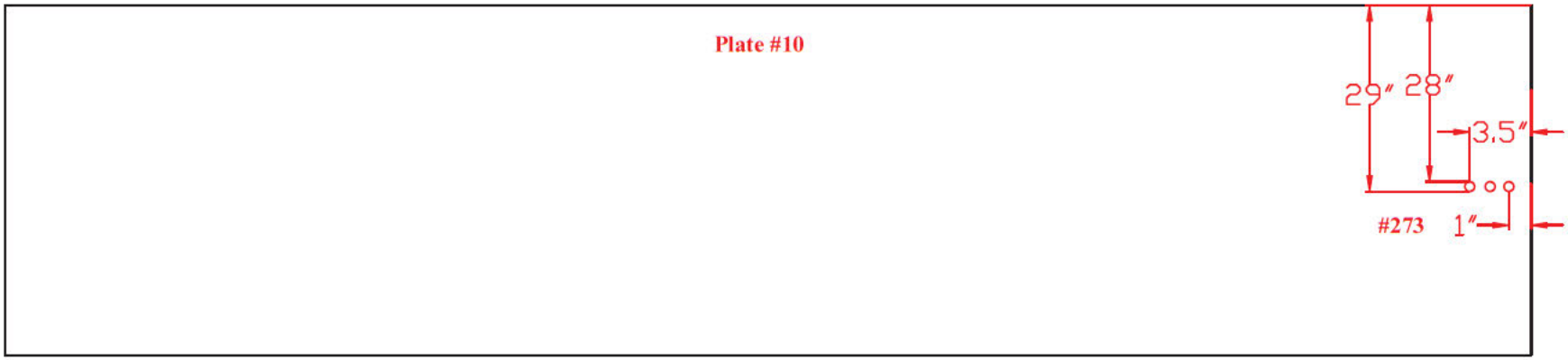
Top Plate

Tank Section: Extension
Quadrant: C

Row: E 2
Plate #: 10

Flaw # - Type - Remaining:

#273 -SP - Gouging
0.160" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

TANK # 5 - QUADRANT D
Nominal Plate Thickness: 0.250"

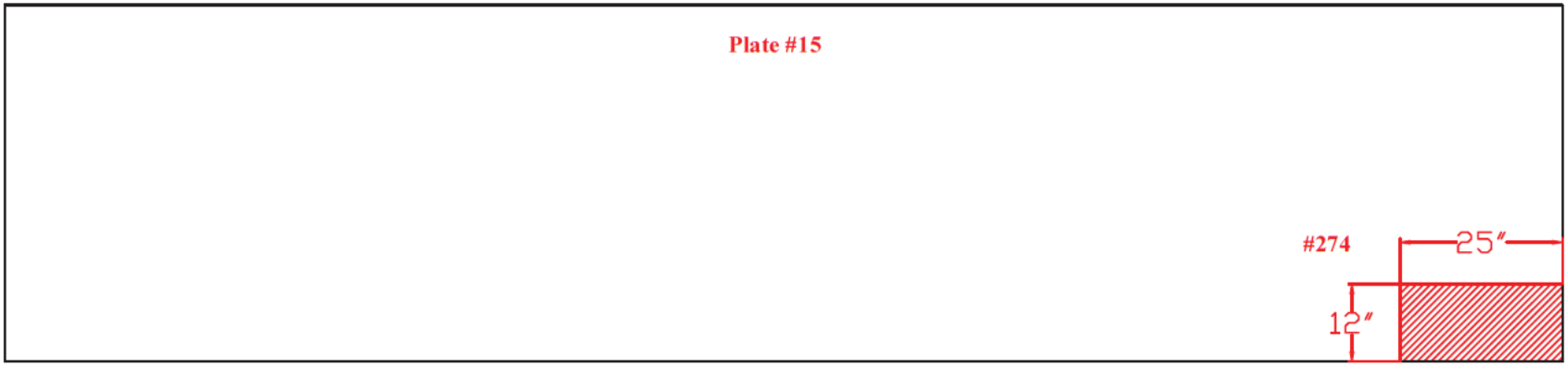
Top Plate

Tank Section: Extension
Quadrant: D

Row: E 3
Plate #: 15

Flaw # - Type - Remaining:

#274 - WL - 0.141"



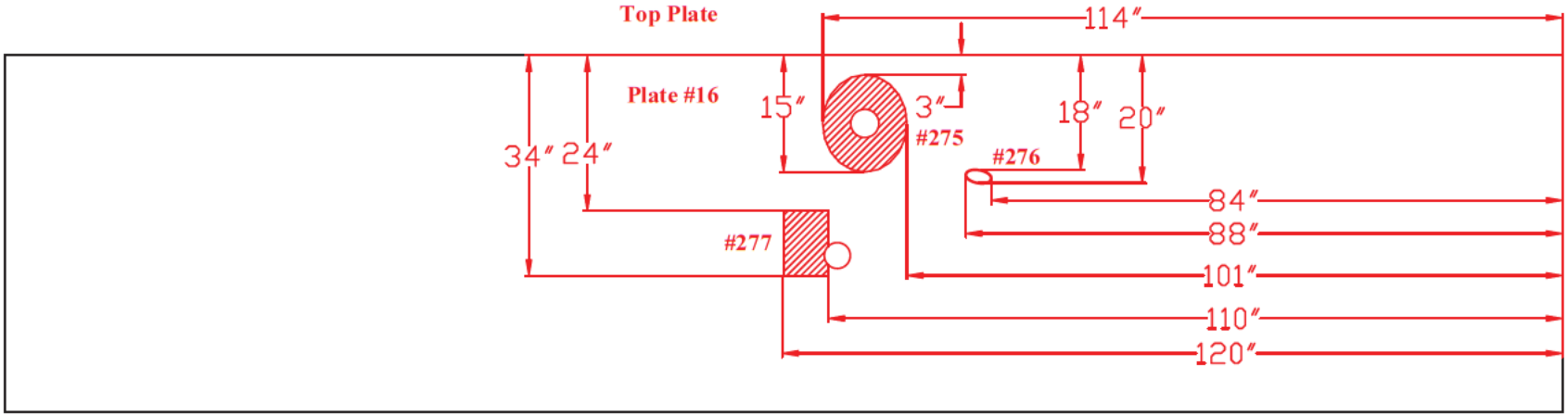
Top Plate

Tank Section: Extension
Quadrant: D

Row: E 2
Plate #: 16

Flaw # - Type - Remaining:

#275 - WL(APP) - 0.150"
#276 - Dent - 0.150" Deep
#277 -WL(APP) - 0.171"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

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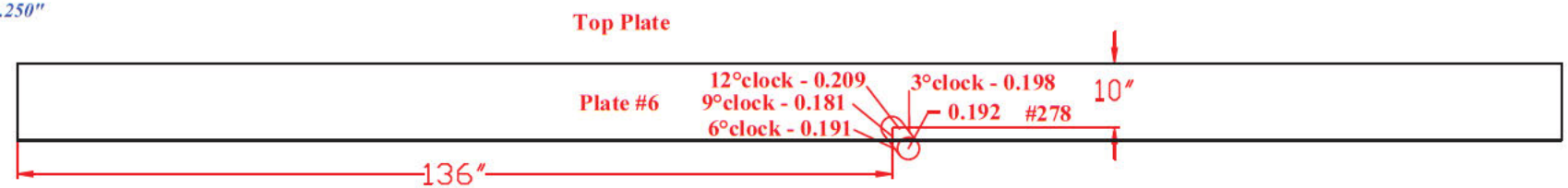
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Extension
Quadrant: B

Row: E 1
Plate #: 6

Flaw # - Type - Remaining:

#278 - GN - 0.192"
(0.181"-0.209")



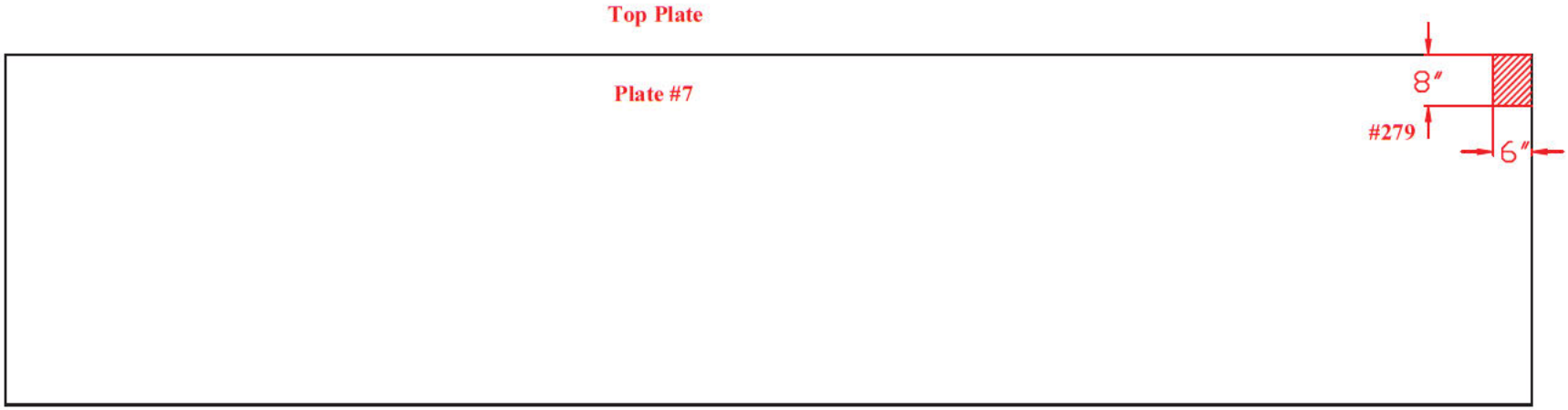
Tank Section: Extension
Quadrant: B

Row: E 2
Plate #: 7

Flaw # - Type - Remaining:

#279 - WL - 0.236"

Also See #284



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

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TANK # 5 - QUADRANT B
**Nominal Plate Thickness: 0.250"*

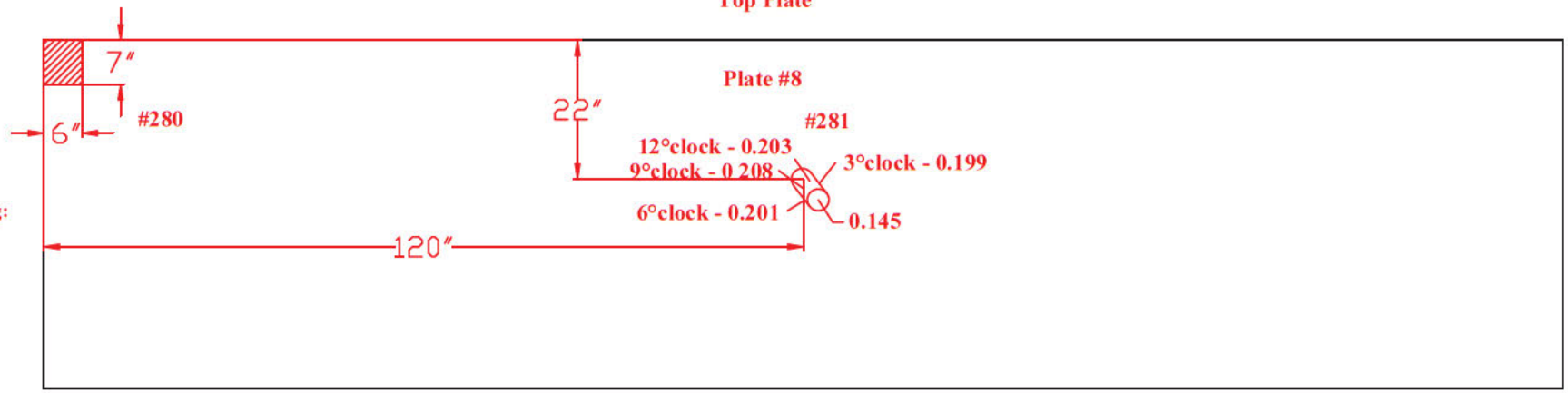
Top Plate

Tank Section: Extension
Quadrant: B

Row: E 2
Plate #: 8

Flaw # - Type - Remaining:

#280 - WL - 0.238"
#281 - GN - 0.145"
(0.199"-0.208")



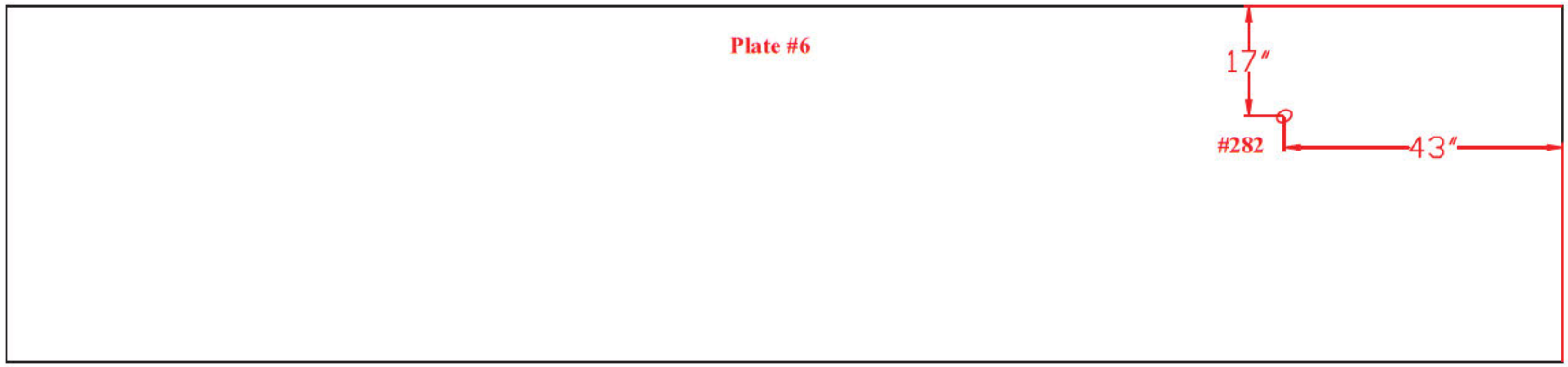
Top Plate

Tank Section: Extension
Quadrant: B

Row: E 3
Plate #: 6

Flaw # - Type - Remaining:

#282 -Dent - 0.150" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

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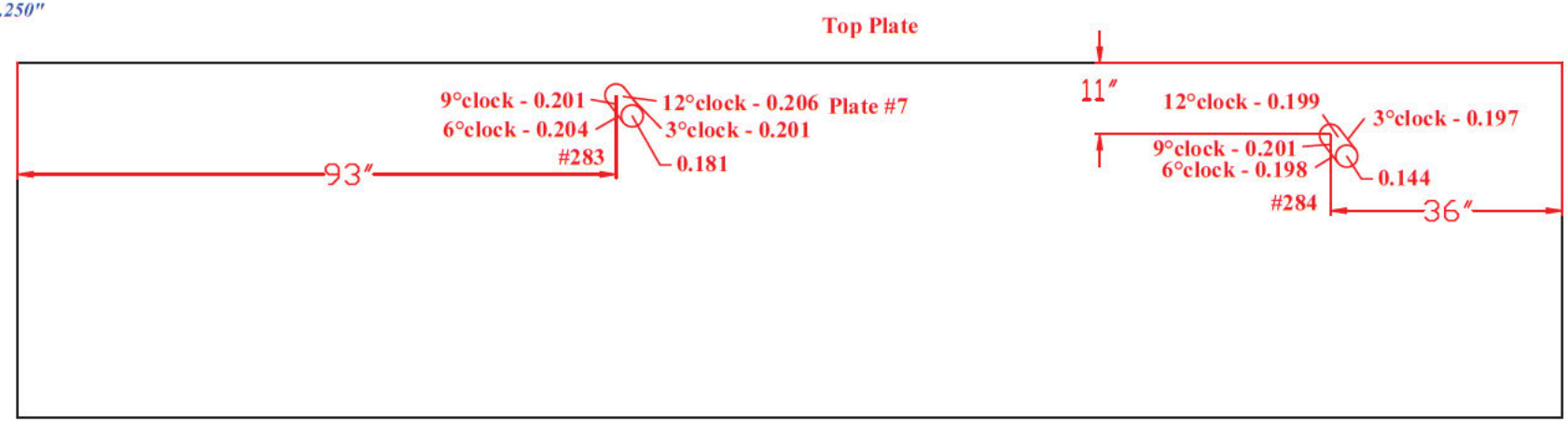
TANK # 5 - QUADRANT B
**Nominal Plate Thickness: 0.250"*

Tank Section: Extension
Quadrant: B

Row: E 2
Plate #: 7

Flaw # - Type - Remaining:

#283 - GN - 0.181"
(0.201"-0.206")
#284 - GN - 0.144"
(0.197"-0.201")
Also See #279

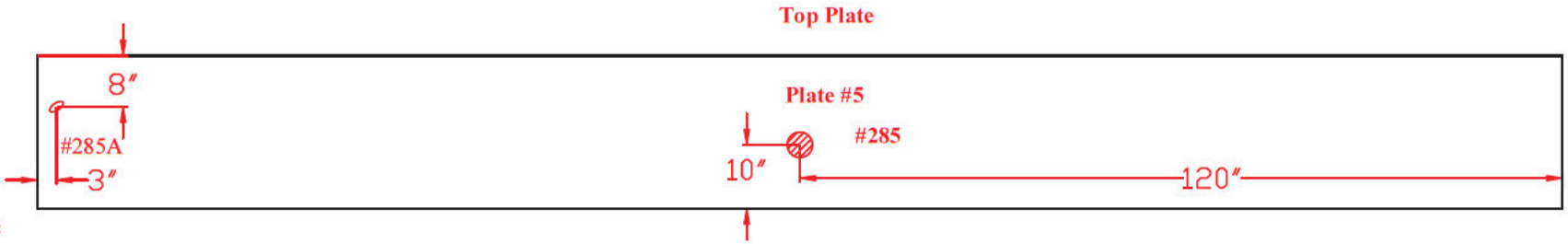


Tank Section: Extension
Quadrant: B

Row: E 4
Plate #: 5

Flaw # - Type - Remaining:

#285 - WL(OPP) - 0.237"
#285A -Dent - 0.150" Deep



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TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

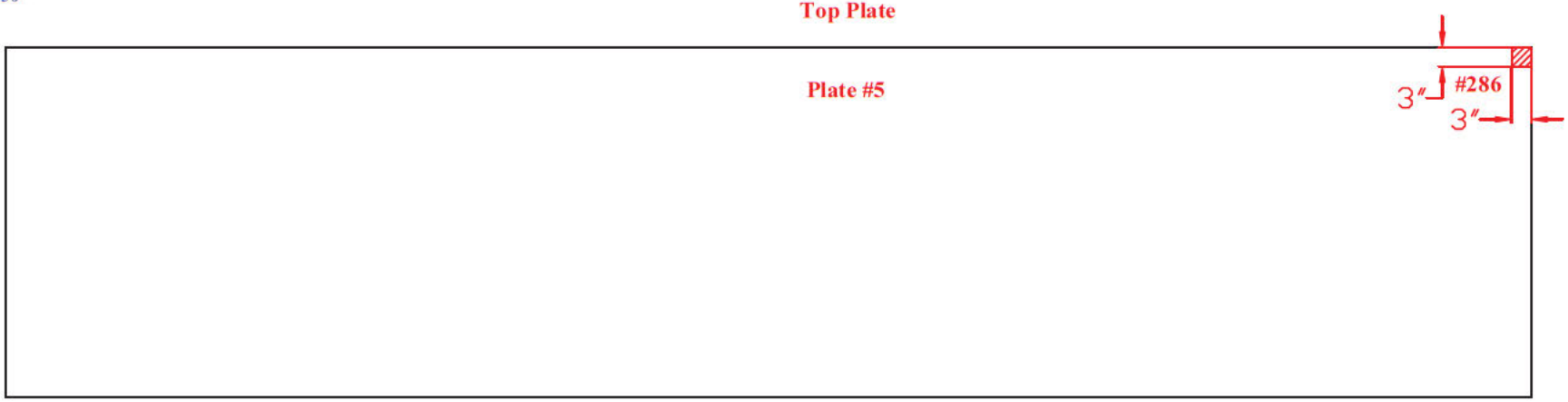
Top Plate

Tank Section: Extension
Quadrant: B

Row: E 3
Plate #: 5

Flaw # - Type - Remaining:

#286 - WL - 0.232"



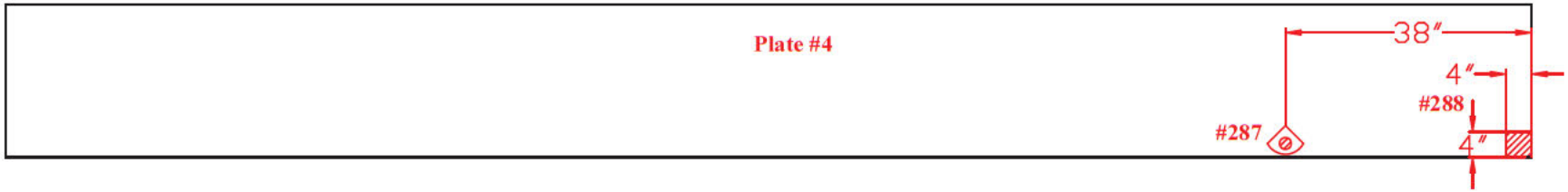
Top Plate

Tank Section: Extension
Quadrant: B

Row: E 4
Plate #: 4

Flaw # - Type - Remaining:

#287 - WL(OPP) - 0.231"
#288 - WL - 0.236"



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TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

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TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

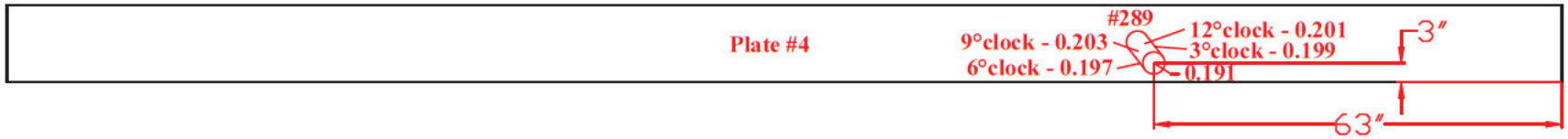
Tank Section: Extension
Quadrant: B

Row: E 1
Plate #: 4

Flaw # - Type - Remaining:

#289 - GN - 0.191"
(0.197"-0.203")

Top Plate



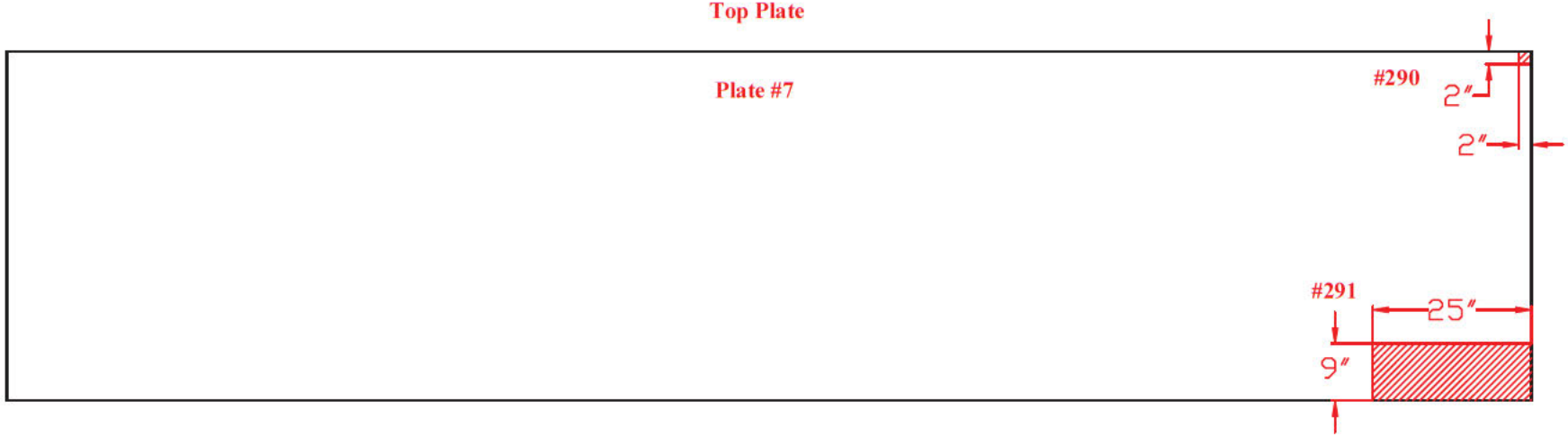
Tank Section: Extension
Quadrant: B

Row: E 3
Plate #: 7

Flaw # - Type - Remaining:

#290 -WL - 0.231"
#291 -WL - 0.233"-0.237"

Top Plate



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TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D/A

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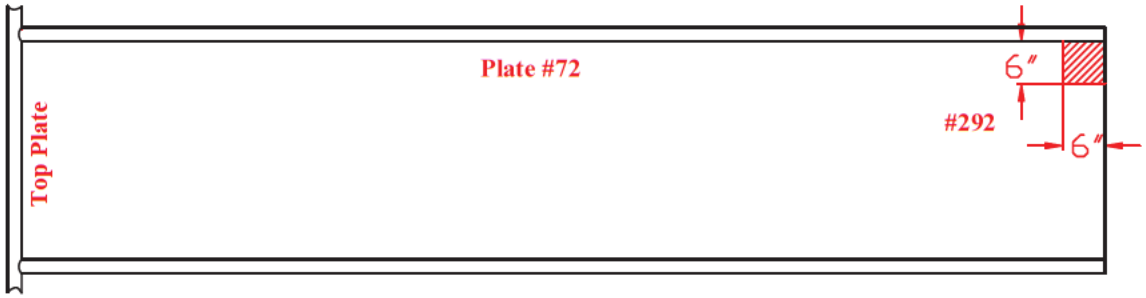
TANK # 5 - QUADRANT D/A
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: D

Course: A
Plate #: 72

Flaw # - Type - Remaining:

#292 - WL - 0.196"

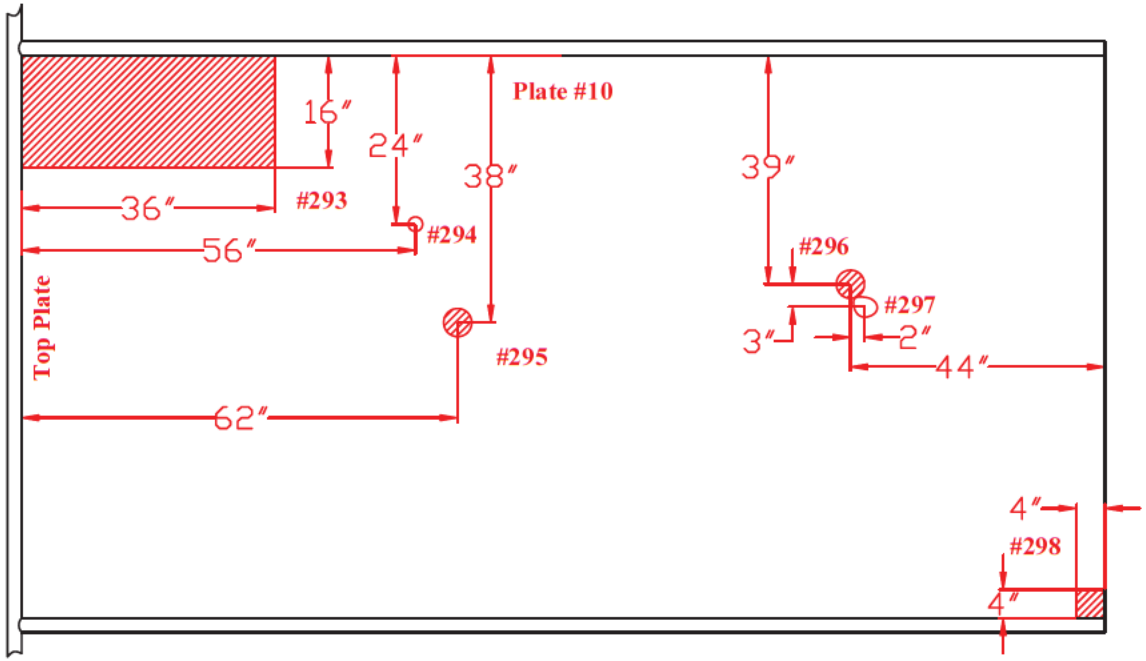


Tank Section: Upper Dome
Quadrant: A

Course: A
Plate #: 10

Flaw # - Type - Remaining:

#293 - WL - 0.234"
#294 - SP - 0.080" Deep
#295 - WL(OPP) - 0.233"
#296 - WL(OPP) - 0.233"
#297 - Dent - 0.150" Deep
#298 - WL - 0.198"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

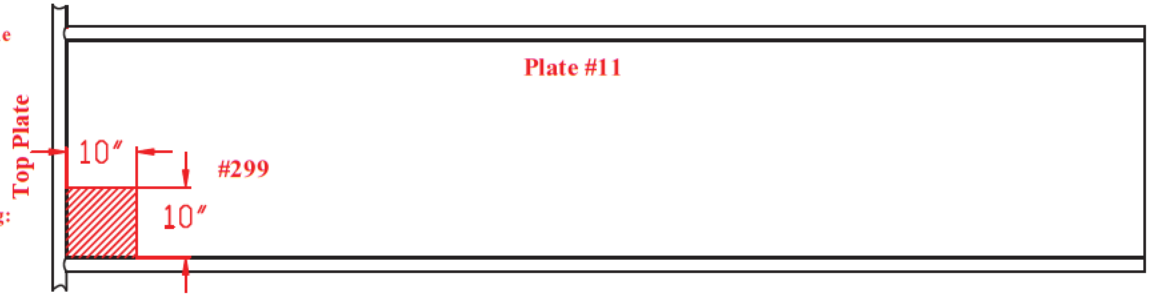
TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: A

Course: A
Plate #: 11

Flaw # - Type - Remaining:

#299 - WL - 0.236"

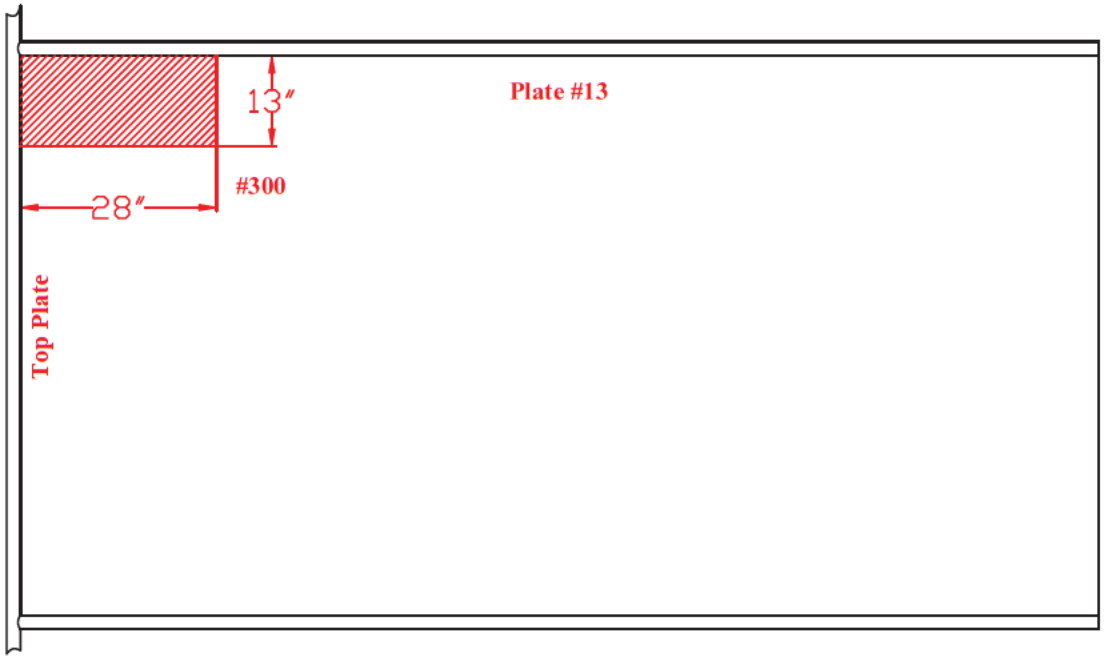


Tank Section: Upper Dome
Quadrant: A

Course: A
Plate #: 13

Flaw # - Type - Remaining:

#300 - WL - 0.230"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/B

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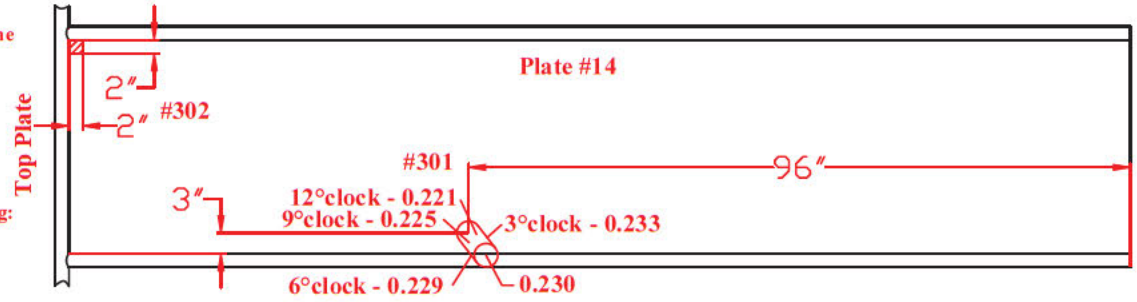
TANK # 5 - QUADRANT A/B
**Nominal Plate Thickness: 0.250"*

Tank Section: Upper Dome
Quadrant: A

Course: A
Plate #: 14

Flaw # - Type - Remaining:

#301 - GN- 0.230"
(0.221"-0.233")
#302 - WL - 0.239"

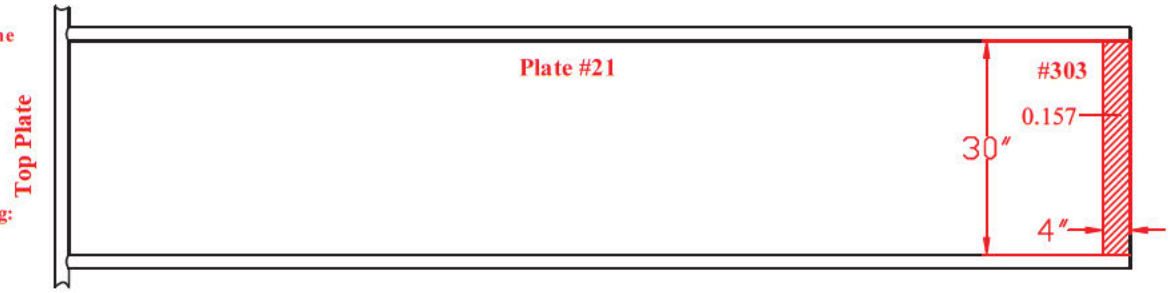


Tank Section: Upper Dome
Quadrant: B

Course: A
Plate #: 21

Flaw # - Type - Remaining:

#303 - WL - 0.157"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

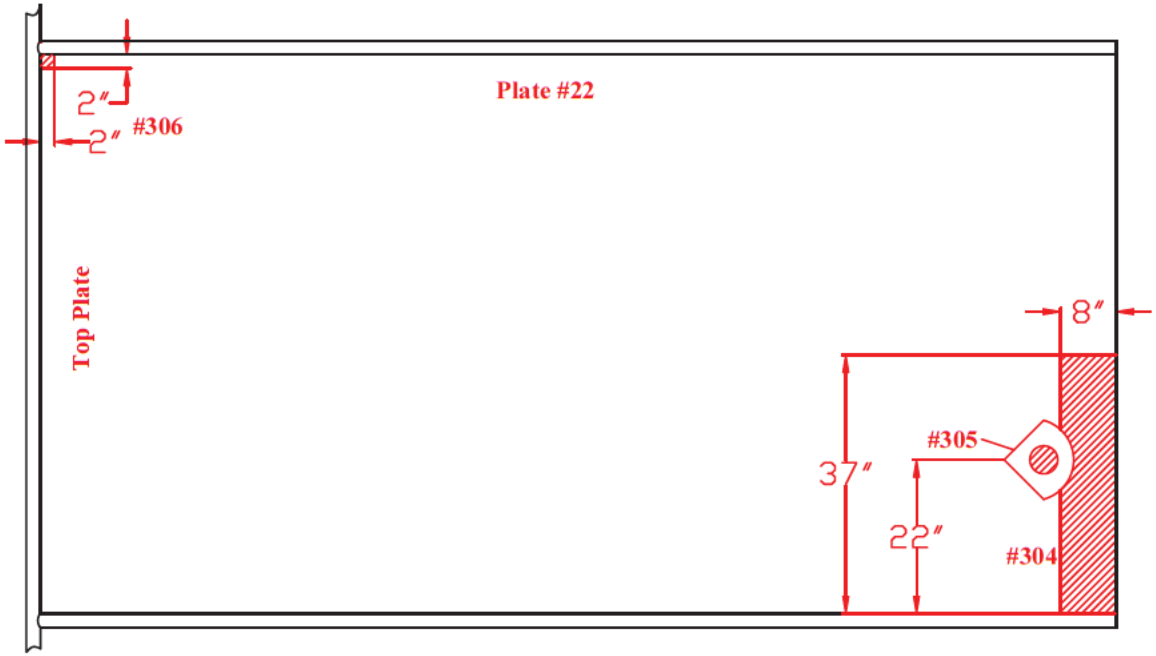
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: B

Course: A
Plate #: 22

Flaw # - Type - Remaining:

#304 - WL - 0.180"
#305 - WL(OPP) - 0.230"
#306 - WL - 0.239"

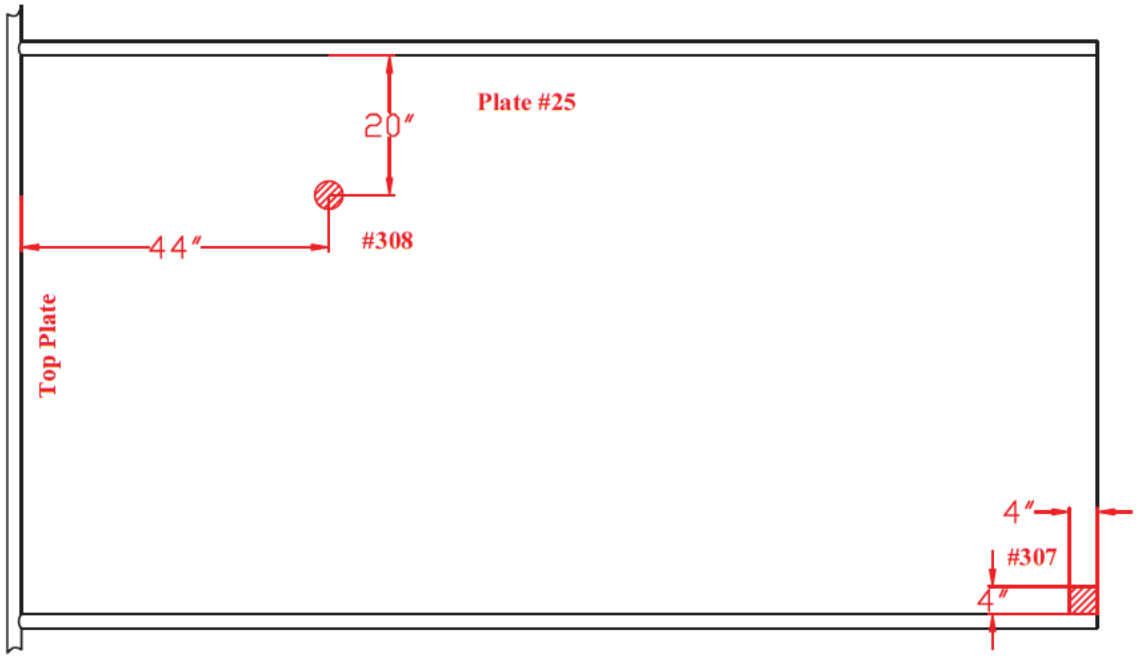


Tank Section: Upper Dome
Quadrant: B

Course: A
Plate #: 25

Flaw # - Type - Remaining:

#307 - WL - 0.236"
#308 - WL(OPP) - 0.238"



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TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

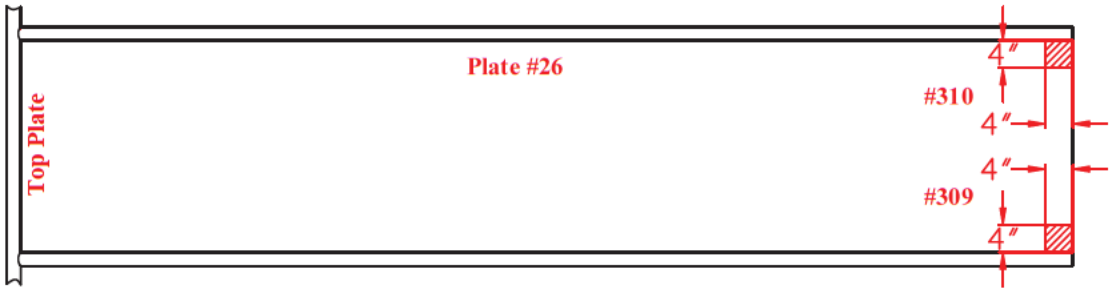
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: B

Course: A
Plate #: 26

Flaw # - Type - Remaining:

#309 - WL - 0.220"
#310 - WL - 0.231"

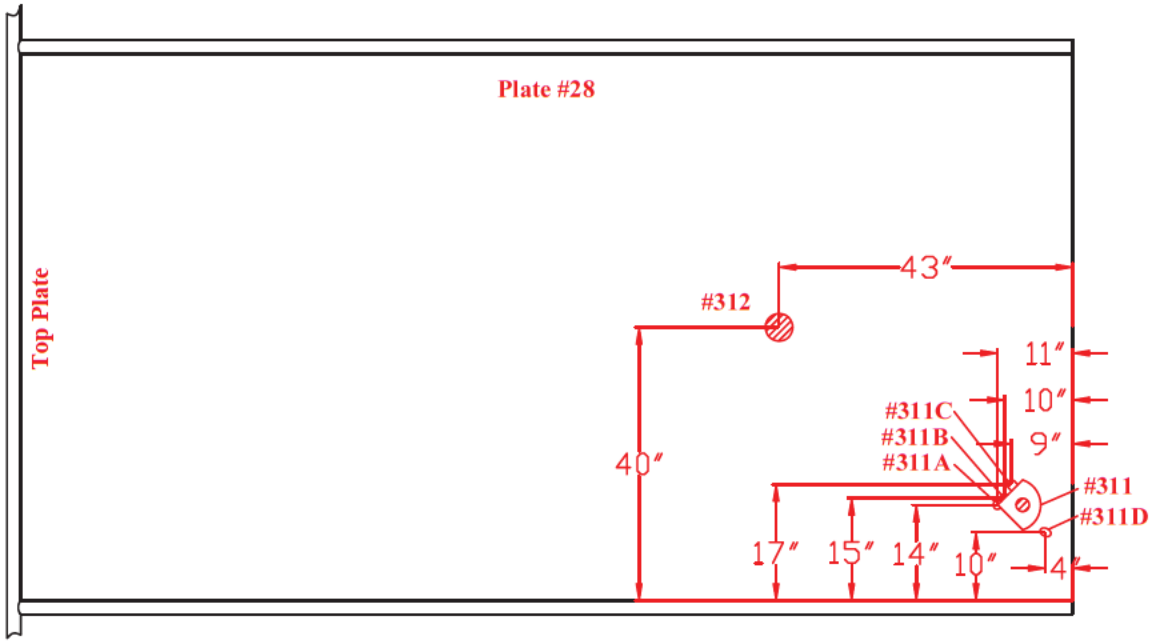


Tank Section: Upper Dome
Quadrant: B

Course: A
Plate #: 28

Flaw # - Type - Remaining:

#311 - WL(OPP) - 0.238"
#311A - UC(APP)
#311B - UC(APP)
#311C - UC(APP)
#311D - Gouge - 0.120" Deep
#312 - WL(OPP) - 0.240"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B/A

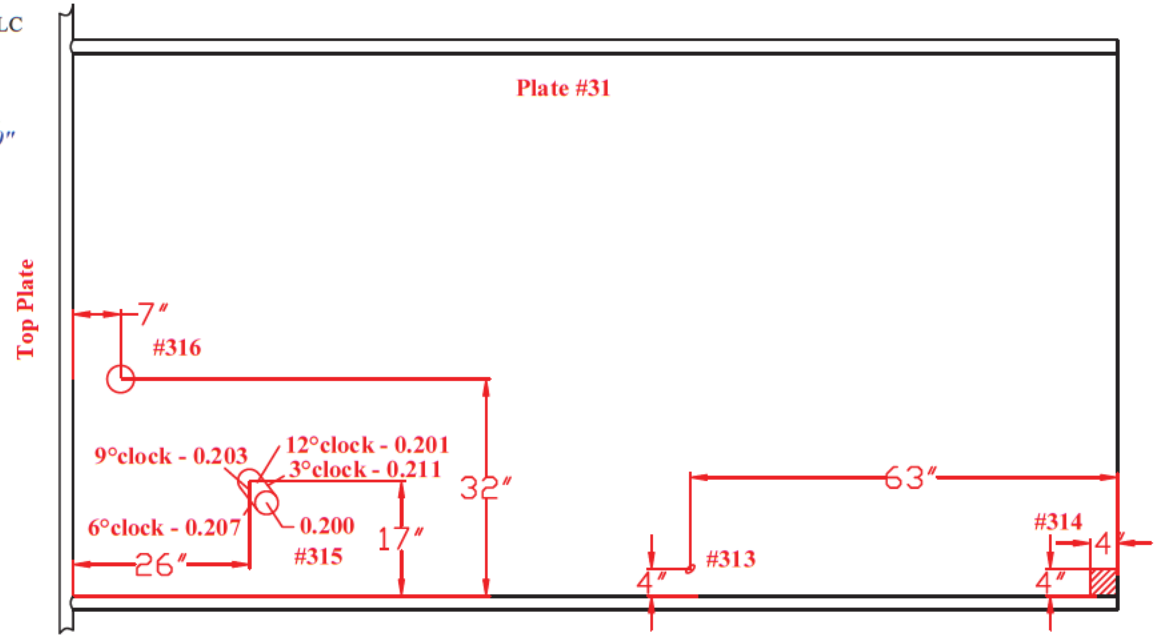
TANK # 5 - QUADRANT B/A
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: B

Course: A
Plate #: 31

Flaw # - Type - Remaining:

#313 - Gouge - 0.100" Deep
#314 - WL - 0.240"
#315 - GN - 0.200" (0.201"-0.211")
#316 - Dent - 0.160" Deep

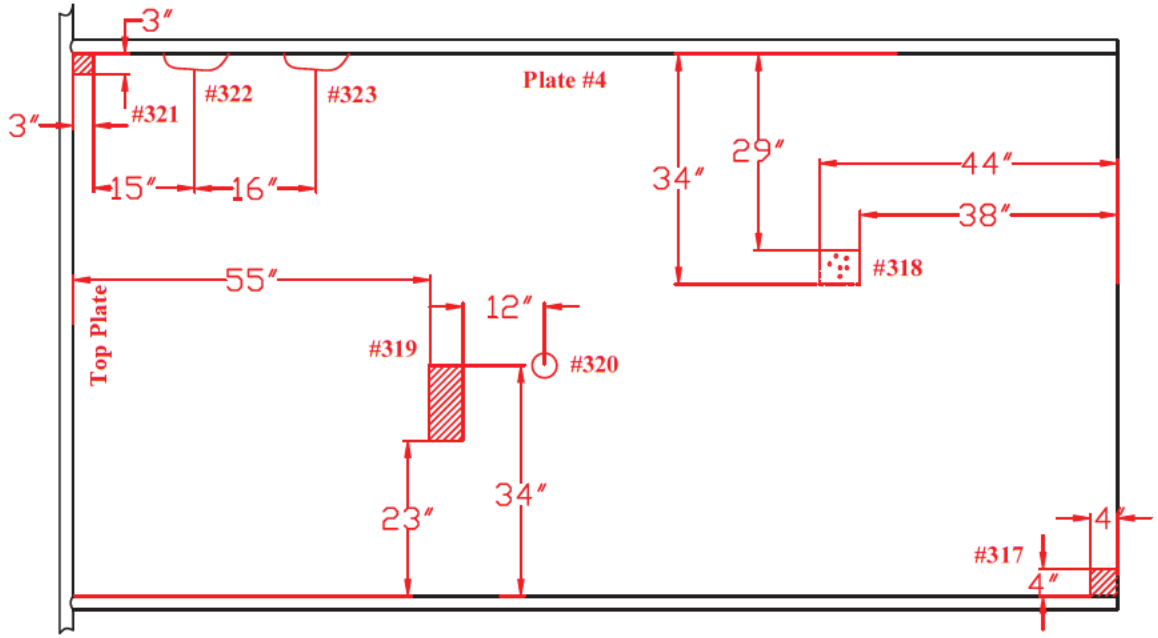


Tank Section: Upper Dome
Quadrant: A

Course: A
Plate #: 4

Flaw # - Type - Remaining:

#317 - WL - 0.181"
#318 - SP - 0.100" Deep
#319 - WL - 0.240"
#320 - SP - 0.070" Deep
#321 - WL - 0.220"
#322 - SP - 0.070" Deep
#323 - SP - 0.070" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A /C

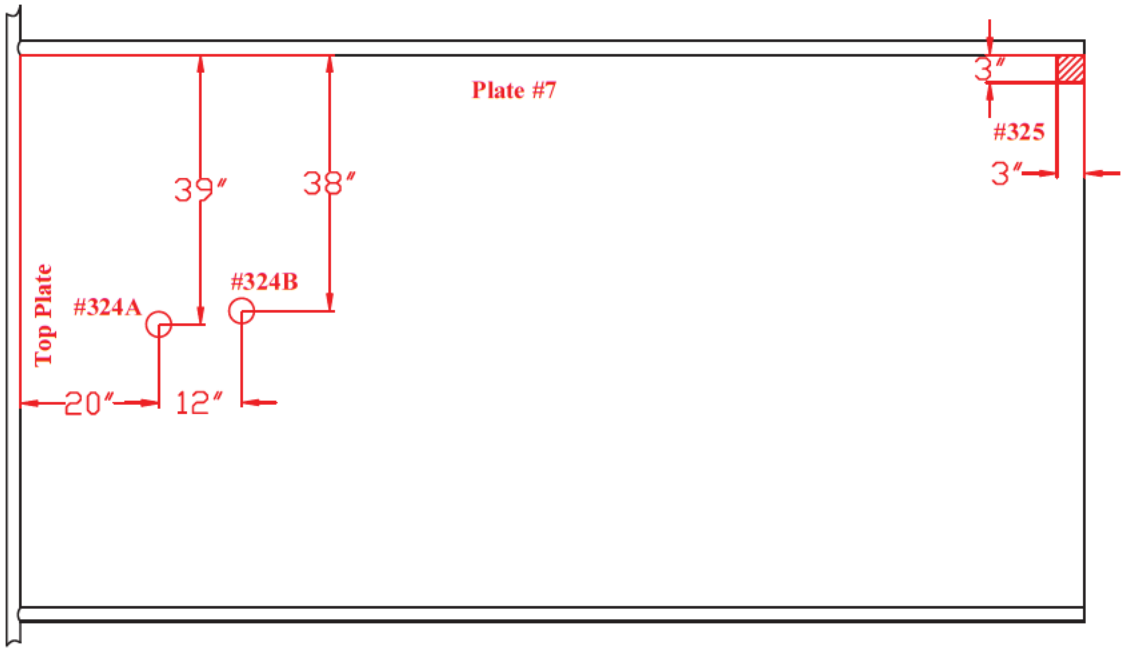
TANK # 5 - QUADRANT A/C
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: A

Course: A
Plate #: 7

Flaw # - Type - Remaining:

#324A - Dent - 0.160" Deep
#324B - Dent - 0.240" Deep
#325 - WL - 0.226"



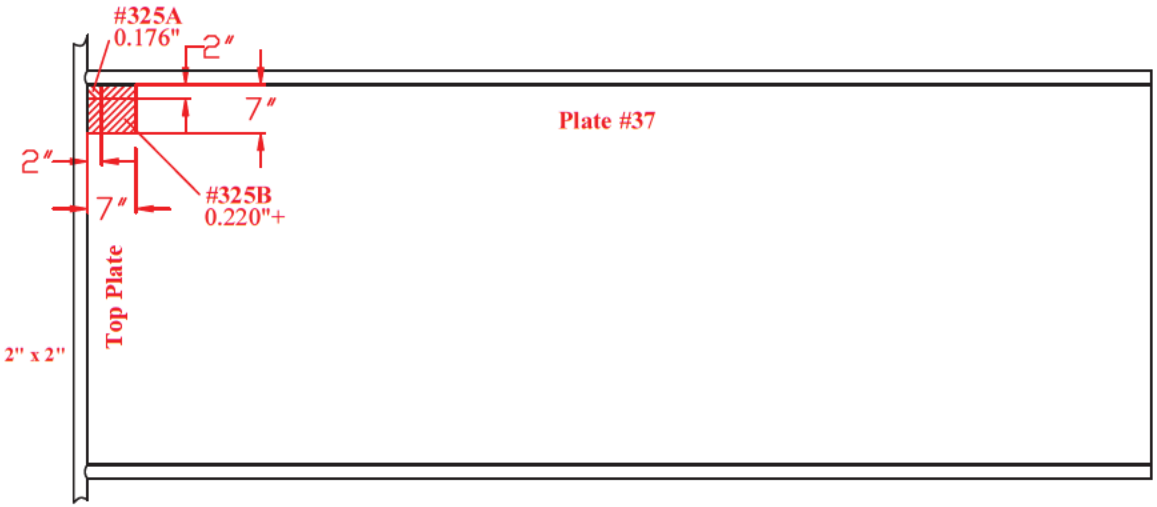
Tank Section: Upper Dome
Quadrant: C

Course: B
Plate #: 37

Flaw # - Type - Remaining:

#325A - WL - 0.176"

#325B - WL - 0.220"+
7" x 7"



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TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C

TESTEX
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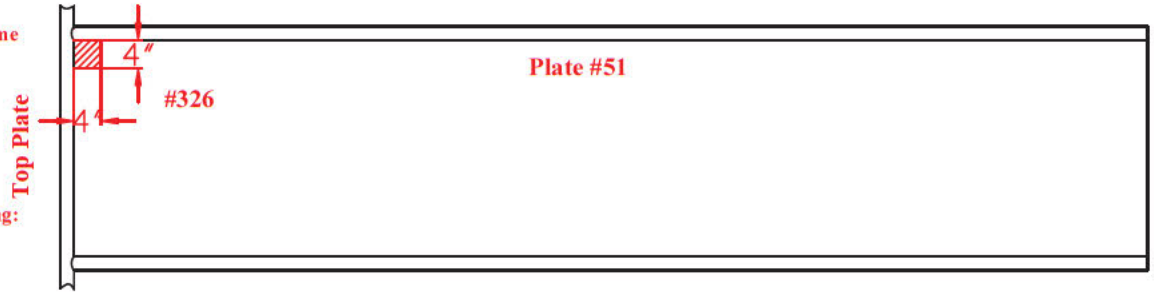
TANK # 5 - QUADRANT C
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: C

Course: A
Plate #: 51

Flaw # - Type - Remaining:

#326 - WL - 0.145"

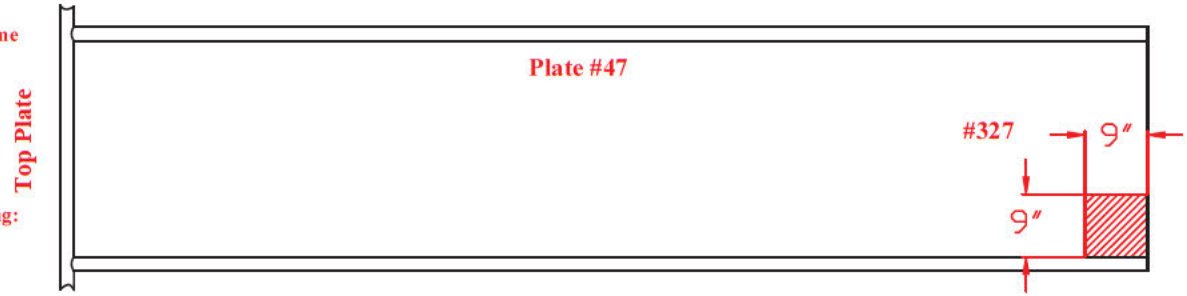


Tank Section: Upper Dome
Quadrant: C

Course: A
Plate #: 47

Flaw # - Type - Remaining:

#327 - WL - 0.170"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

TESTEX
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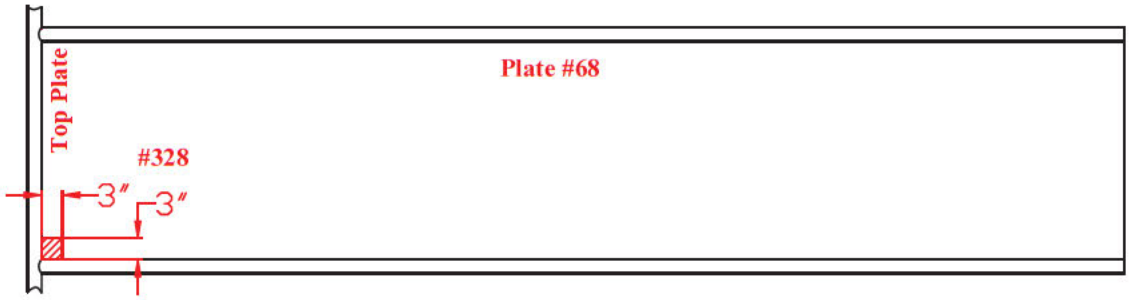
TANK # 5 - QUADRANT D
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: D

Course: A
Plate #: 68

Flaw # - Type - Remaining:

#328 - WL - 0.194"



Tank Section: Upper Dome
Quadrant: D

Course: A
Plate #: 67

Flaw # - Type - Remaining:

#329 - WL - 0.191"
#330 - WL - 0.174"

Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

TESTEX
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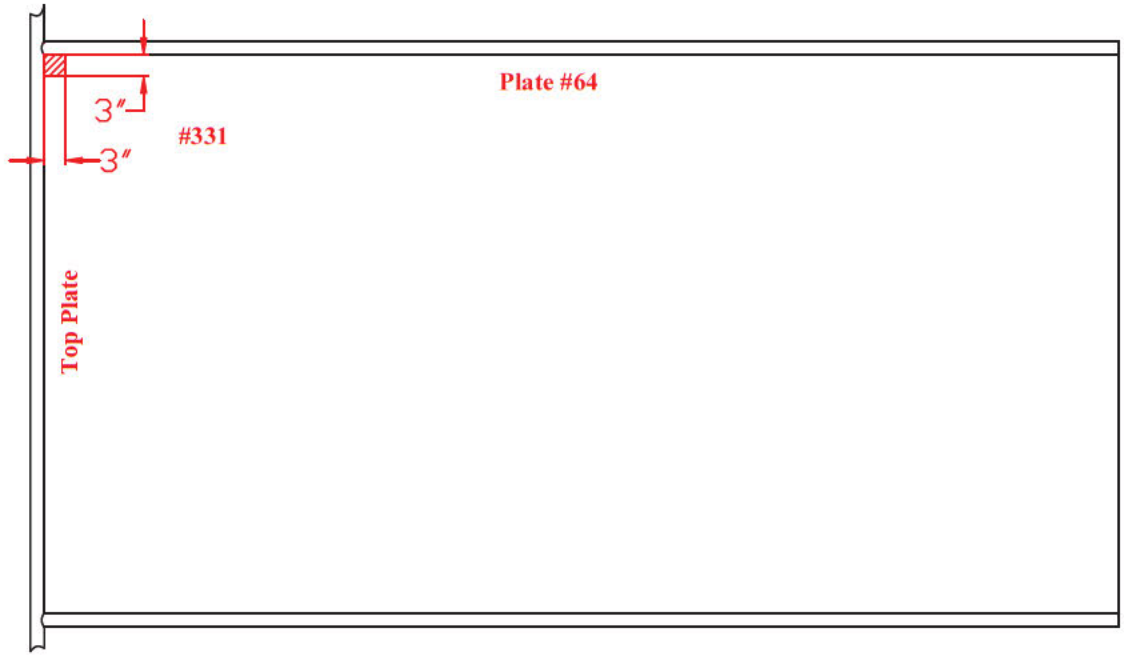
TANK # 5 - QUADRANT D/A
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: D

Course: A
Plate #: 64

Flaw # - Type - Remaining:

#331 - WL - 0.131"



Tank Section: Upper Dome
Quadrant: A

Course: B
Plate #: 3

Flaw # - Type - Remaining:

#332 - WL(OPP) - 0.230"

Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

TESTEX
WWW.TESTEX-NDT.COM

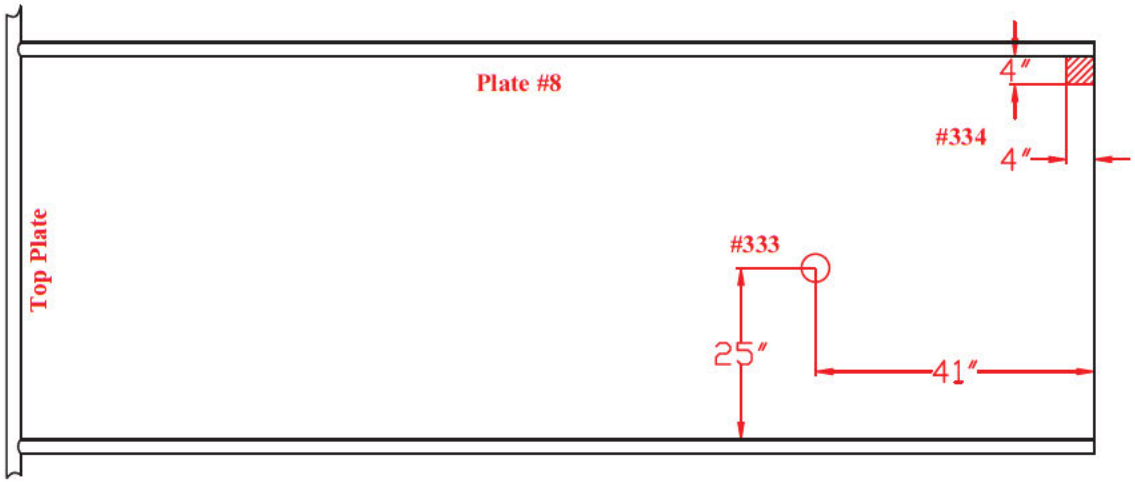
TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: A

Course: B
Plate #: 8

Flaw # - Type - Remaining:

#333 - Dent - 0.120" Deep
#334 - WL - 0.231"

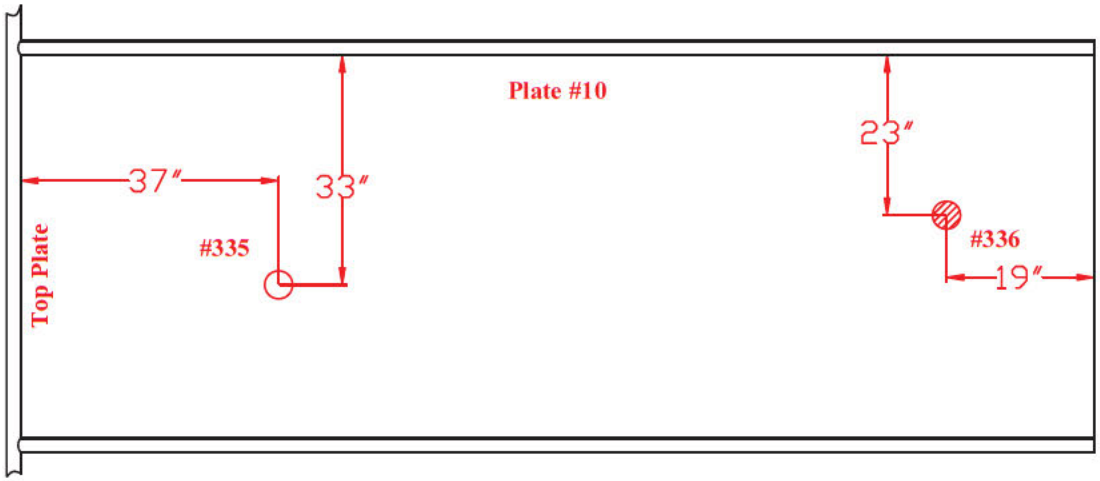


Tank Section: Upper Dome
Quadrant: A

Course: B
Plate #: 10

Flaw # - Type - Remaining:

#335 - Dent - 0.150" Deep
#336 - WL(OPP) - 0.239"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

TESTEX
WWW.TESTEX-NDT.COM

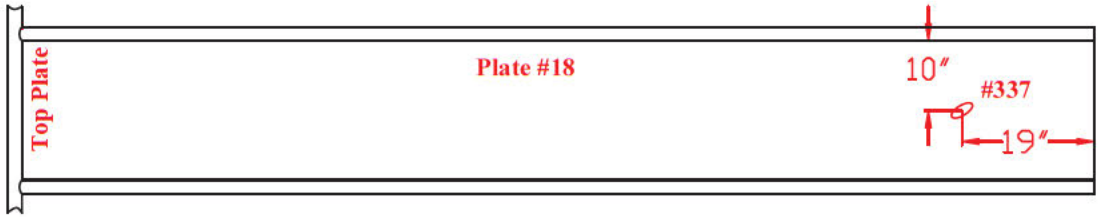
TANK # 5 - QUADRANT A
**Nominal Plate Thickness: 0.250"*

Tank Section: Upper Dome
Quadrant: A

Course: B
Plate #: 18

Flaw # - Type - Remaining:

#337 - Dent - 0.075" Deep

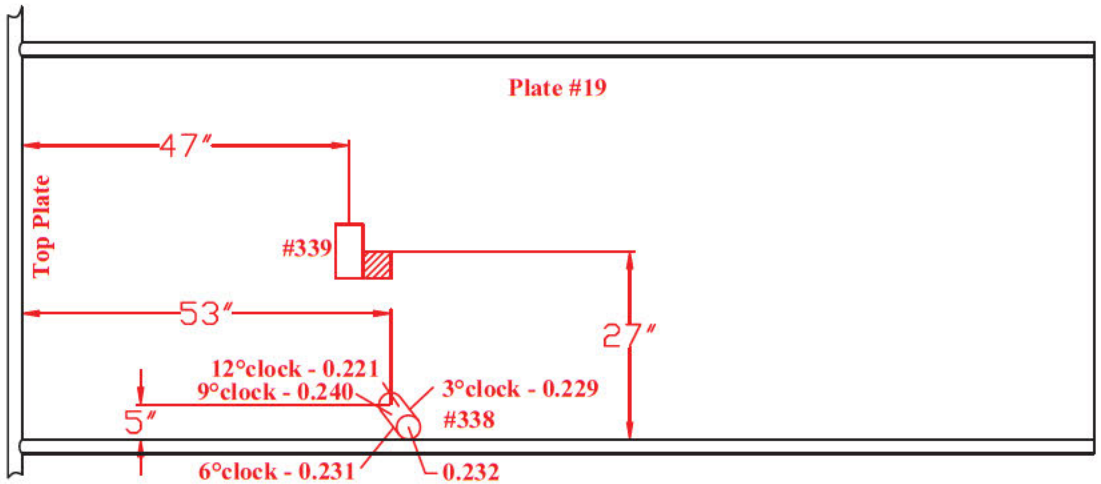


Tank Section: Upper Dome
Quadrant: A

Course: B
Plate #: 19

Flaw # - Type - Remaining:

#338 - GN - 0.232"
(0.221"-0.240")
#339 - WL (APP) - 0.136"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

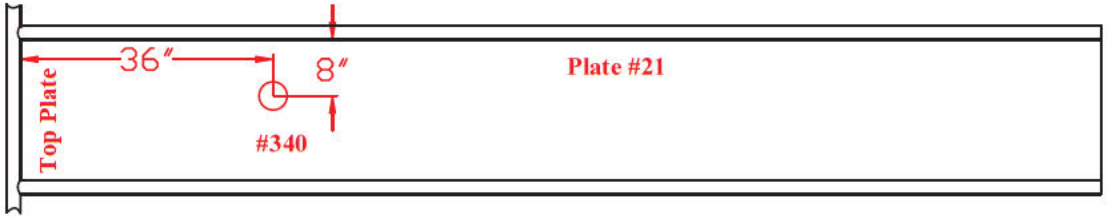
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: B

Course: B
Plate #: 21

Flaw # - Type - Remaining:

#340 - Dent - 0 210" Deep

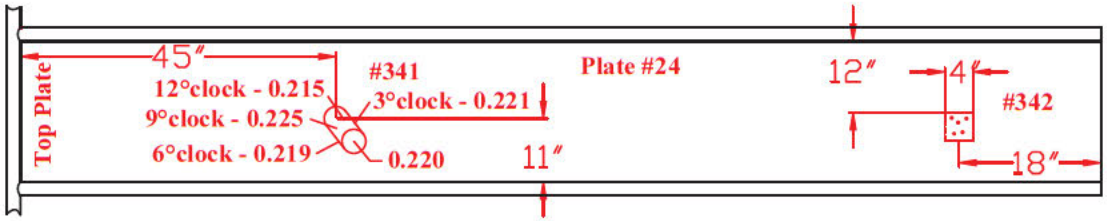


Tank Section: Upper Dome
Quadrant: B

Course: B
Plate #: 24

Flaw # - Type - Remaining:

#341 - GN- 0.220"
(0.215"-0.225")
#342 - SP - 0.100" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

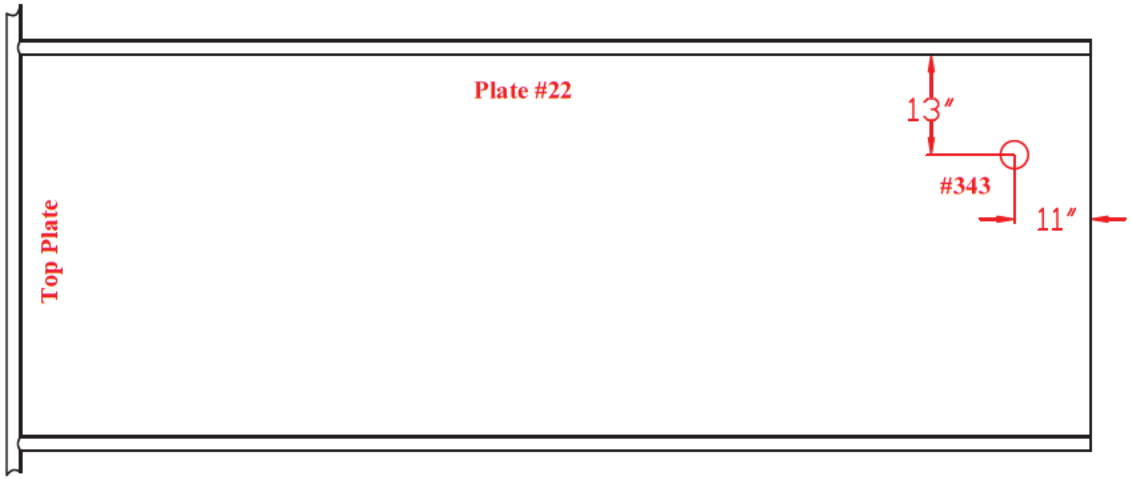
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: B

Course: B
Plate #: 22

Flaw # - Type - Remaining:

#343 - Dent - 0.250" Deep



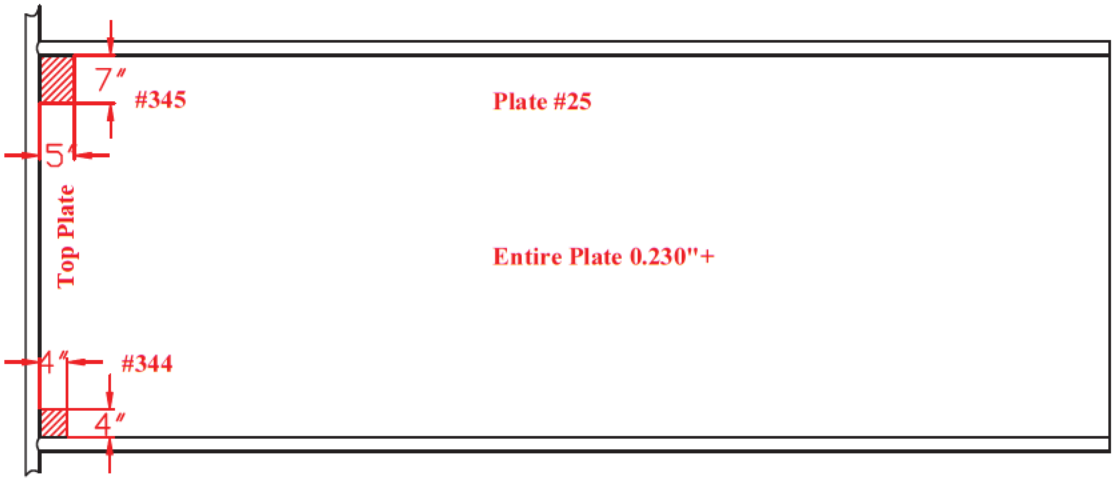
Tank Section: Upper Dome
Quadrant: B

Course: B
Plate #: 25

Flaw # - Type - Remaining:

#344 - WL - 0.232
#345 - WL - 0.235

***Note: Plate Thk 0.230"+**



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

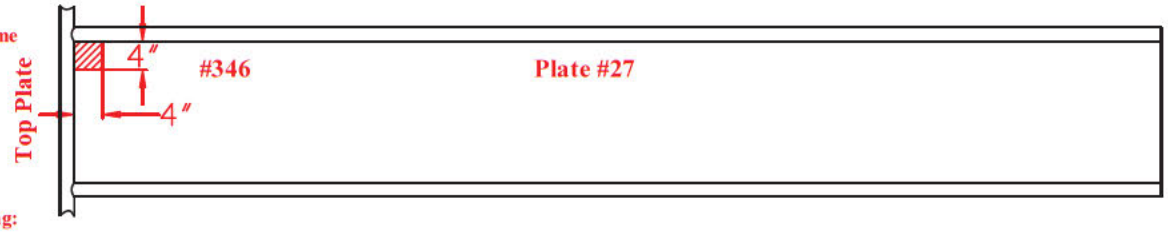
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: B

Course: B
Plate #: 27

Flaw # - Type - Remaining:

#346 - WL - 0.239"

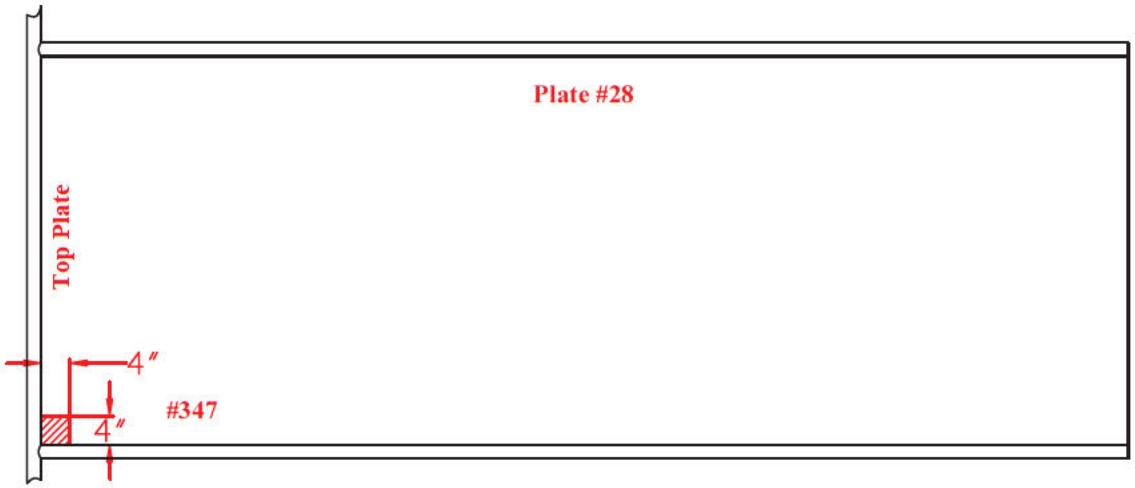


Tank Section: Upper Dome
Quadrant: B

Course: B
Plate #: 28

Flaw # - Type - Remaining:

#347 - WL - 0.231"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

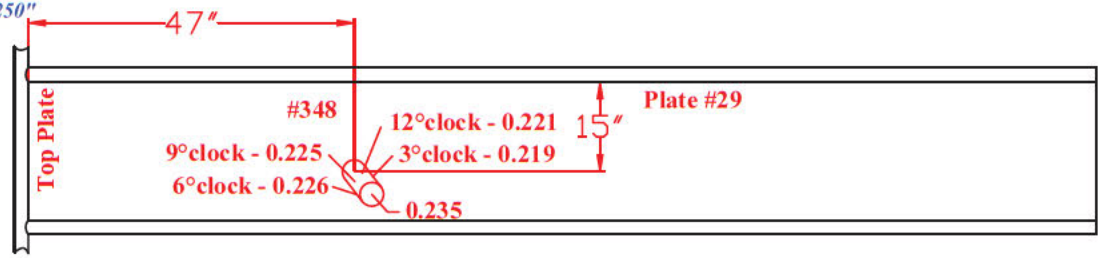
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: B

Course: B
Plate #: 29

Flaw # - Type - Remaining:

#348 - GN - 0.235"
(0.219"-0.226")

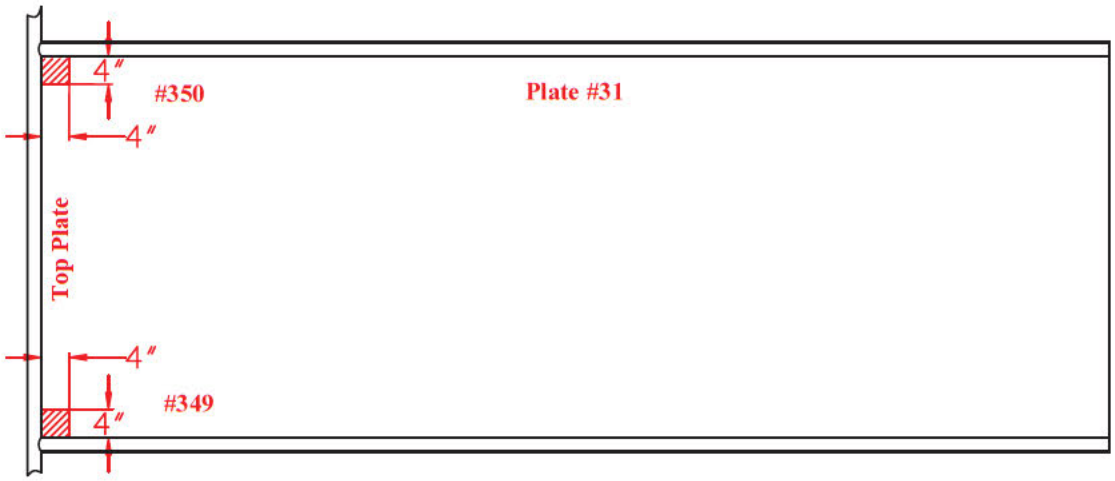


Tank Section: Upper Dome
Quadrant: B

Course: B
Plate #: 31

Flaw # - Type - Remaining:

#349 - WL - 0.234"
#350 - WL - 0.230"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

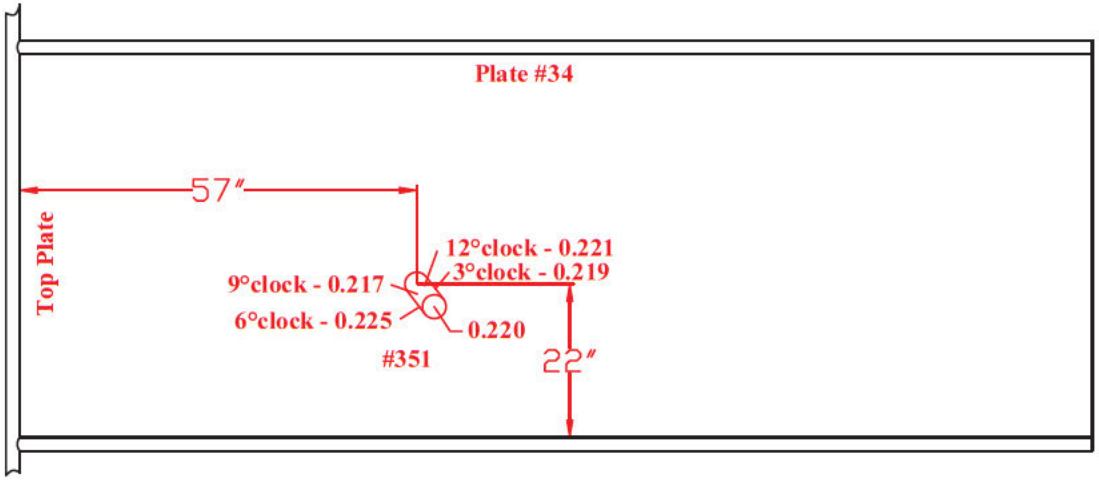
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: B

Course: B
Plate #: 34

Flaw # - Type - Remaining:

#351 - GN - 0.220"
(0.217"-0.225")

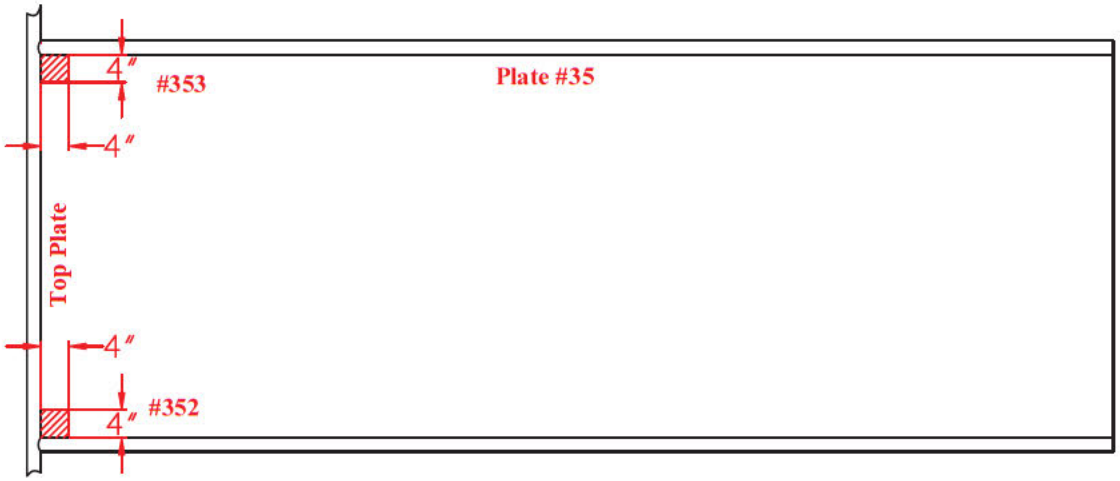


Tank Section: Upper Dome
Quadrant: B

Course: B
Plate #: 35

Flaw # - Type - Remaining:

#352 - WL - 0.235"
#353 - WL - 0.236"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C

TESTEX
WWW.TESTEX-NDT.COM

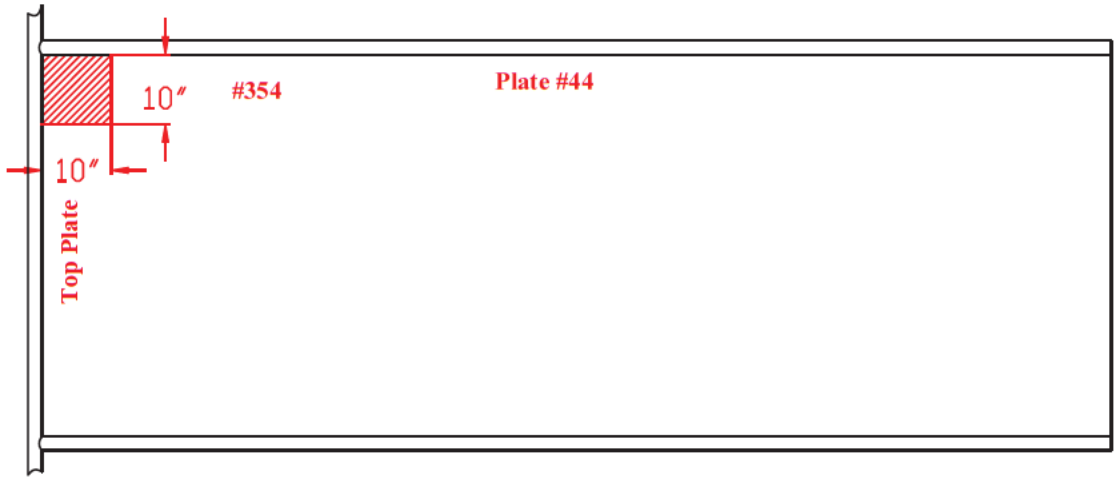
TANK # 5 - QUADRANT C
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: C

Course: B
Plate #: 44

Flaw # - Type - Remaining:

#354 - WL - 0.180"

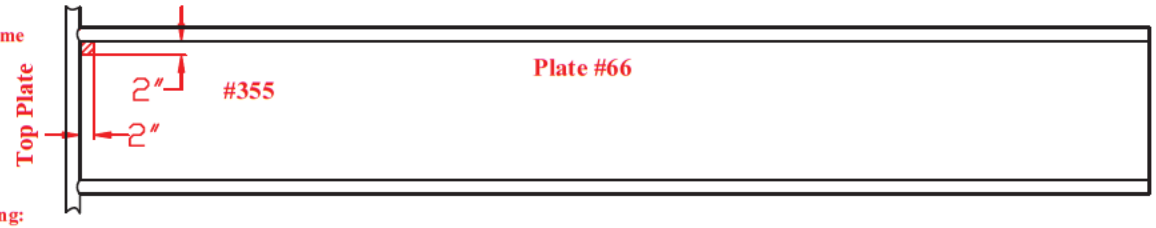


Tank Section: Upper Dome
Quadrant: D

Course: B
Plate #: 66

Flaw # - Type - Remaining:

#355 - WL- 0.187"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D/A

TESTEX
WWW.TESTEX-NDT.COM

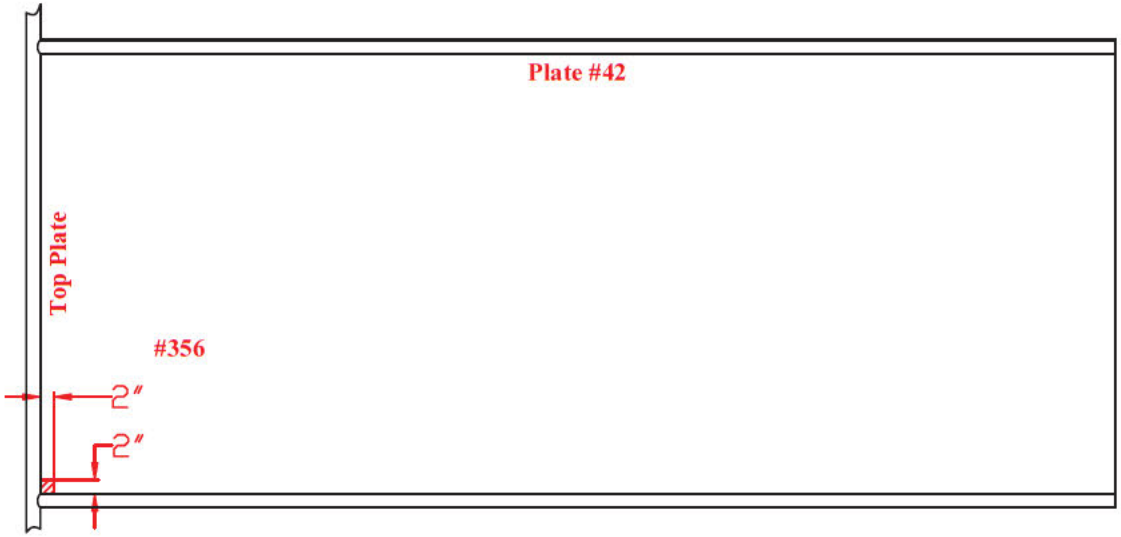
TANK # 5 - QUADRANT D/A
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: D

Course: C
Plate #: 42

Flaw # - Type - Remaining:

#356 - WL - 0.189"

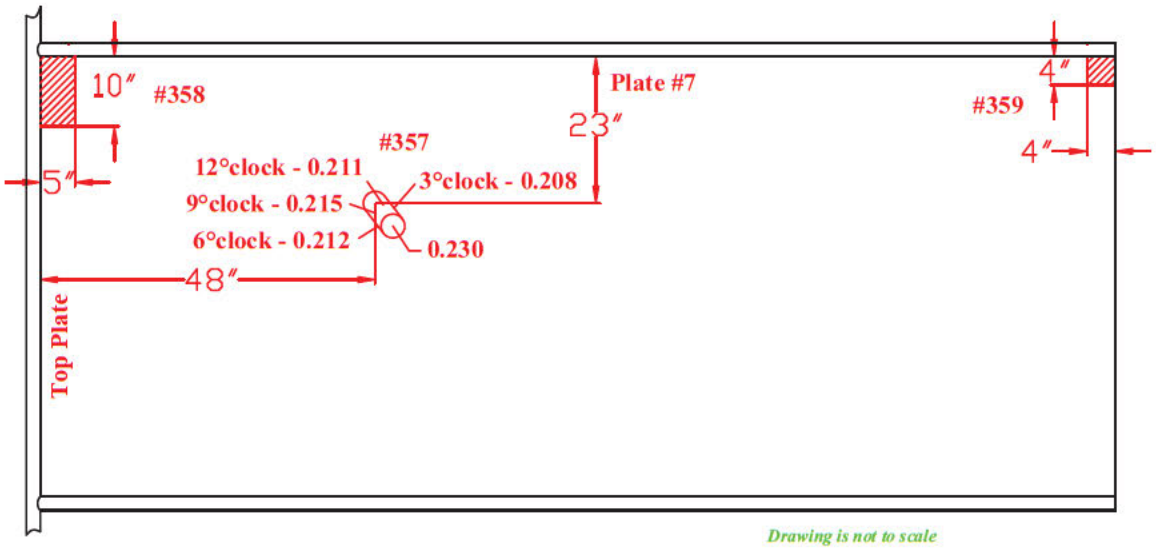


Tank Section: Upper Dome
Quadrant: A

Course: C
Plate #: 7

Flaw # - Type - Remaining:

#357 - GN - 0.230"
(0.208"-0.215")
#358 - WL - 0.236"
#359 - WL - 0.234"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/B

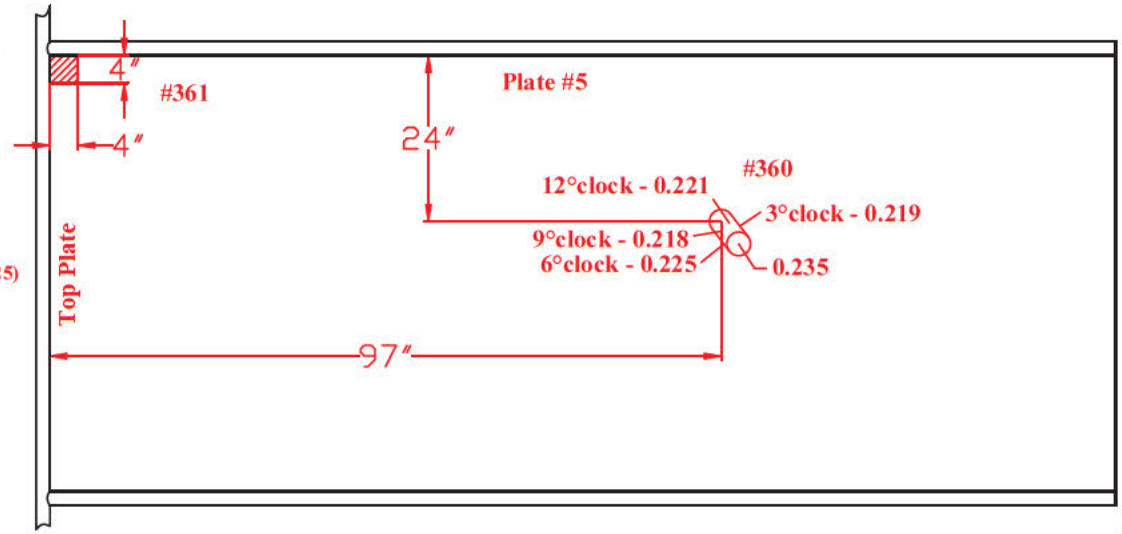
TANK # 5 - QUADRANT A/B
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: A

Course: C
Plate #: 5

Flaw # - Type - Remaining:

#360 - GN - 0.235(0.218-0.225)
#361 - WL - 0.235

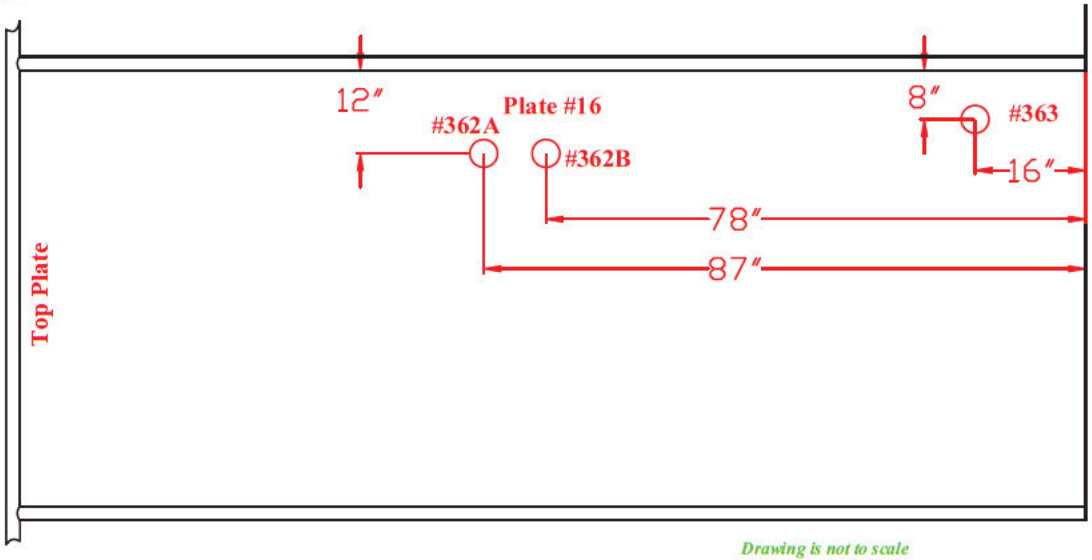


Tank Section: Upper Dome
Quadrant: B

Course: C
Plate #: 16

Flaw # - Type - Remaining:

#362A - SP - 0.042" Deep
#362B - SP - 0.115" Deep
#363 - SP - 0.100" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

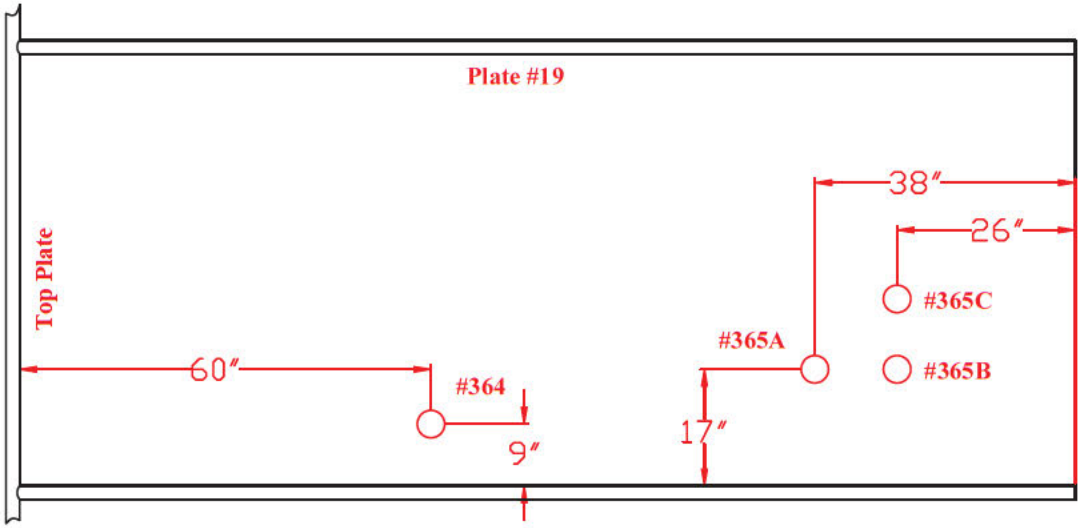
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: B

Course: C
Plate #: 19

Flaw # - Type - Remaining:

#364 - SP - 0.090" Deep
#365A - SP - 0.090" Deep
#365B - SP - 0.060" Deep
#365C - SP - 0.050" Deep

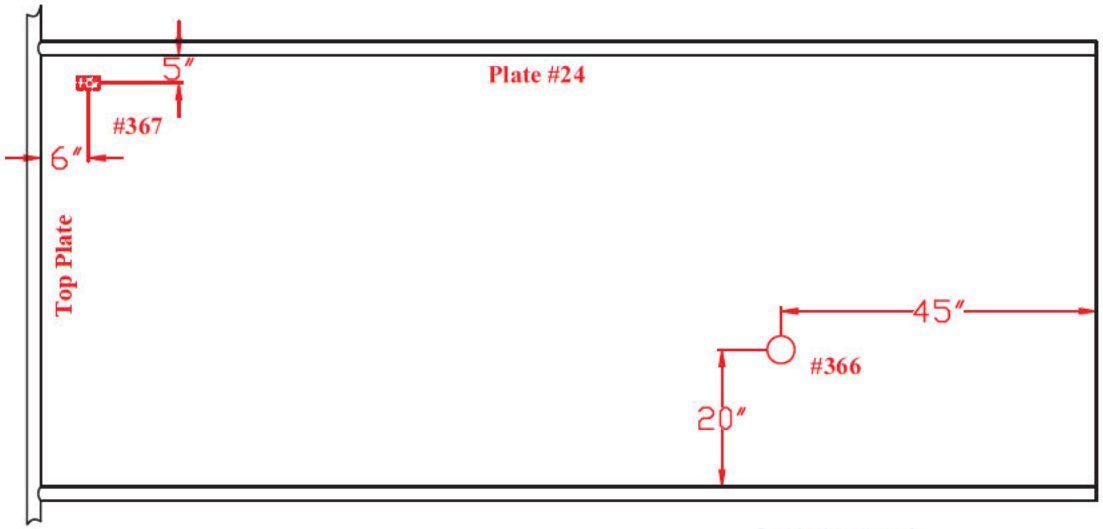


Tank Section: Upper Dome
Quadrant: B

Course: C
Plate #: 24

Flaw # - Type - Remaining:

#366 - SP - 0.090" Deep
#367 - SP - 0.100" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C/B

TESTEX
WWW.TESTEX-NDT.COM

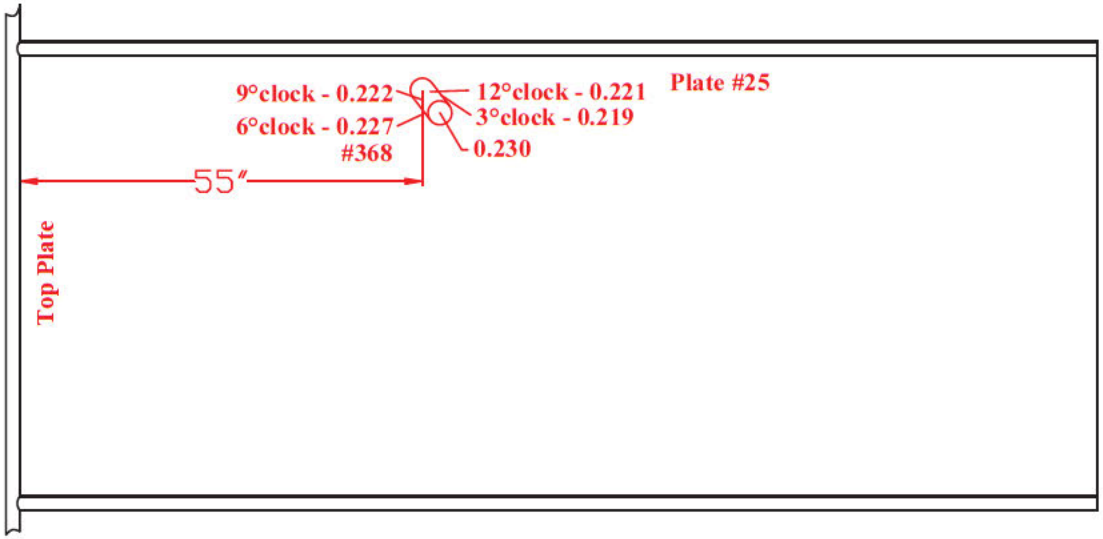
TANK # 5 - QUADRANT C/B
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: C

Course: C
Plate #: 25

Flaw # - Type - Remaining:

#368 - GN - 0.230"
(0.219"-0.227")

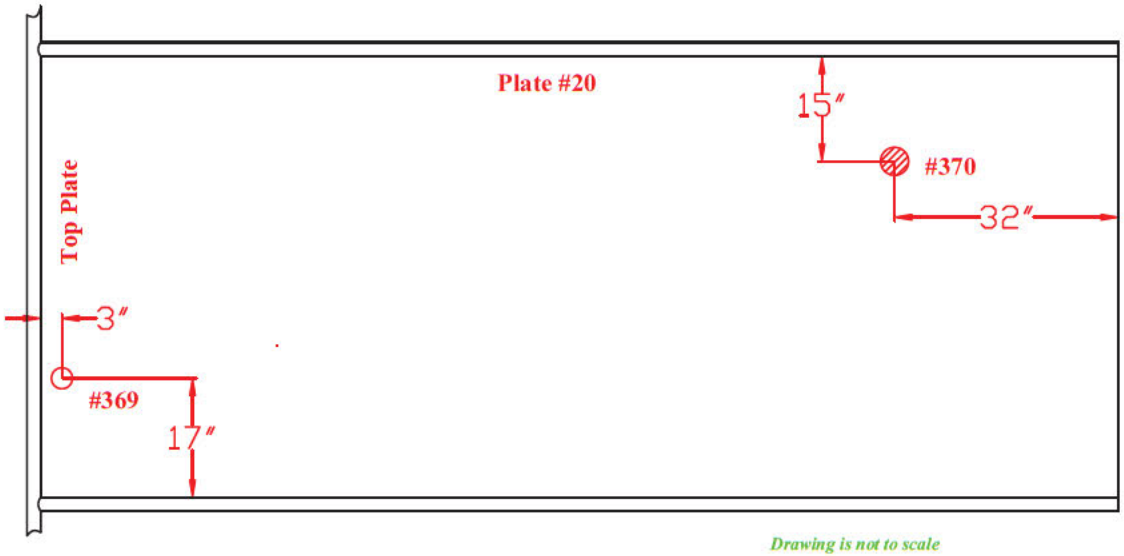


Tank Section: Upper Dome
Quadrant: B

Course: C
Plate #: 20

Flaw # - Type - Remaining:

#369 - SP - 0.125" Deep
#370 - WL(OPP) - 0.232"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

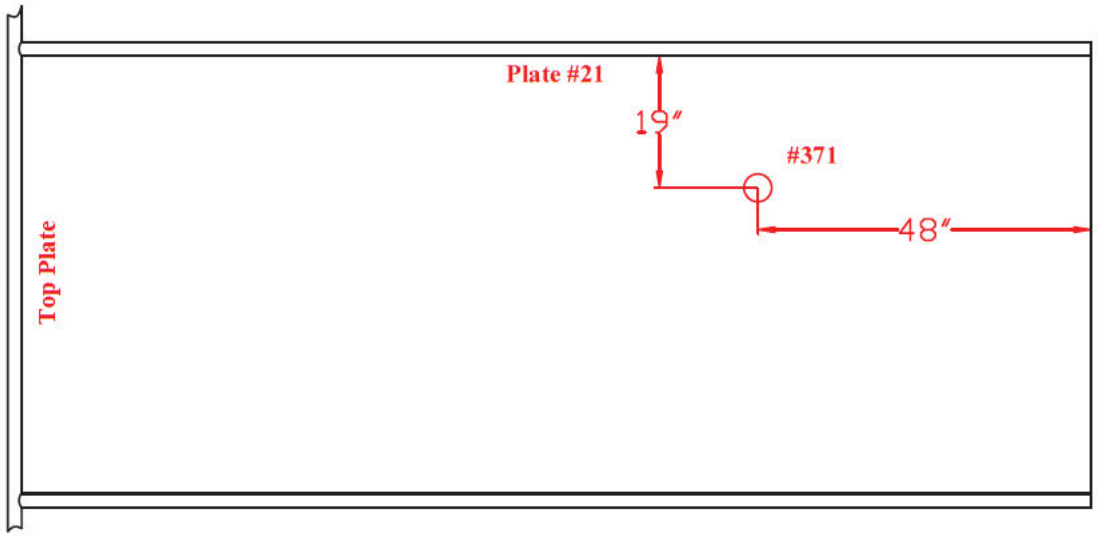
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: B

Course: C
Plate #: 21

Flaw # - Type - Remaining:

#371 - SP - Gouge-0.060" Deep

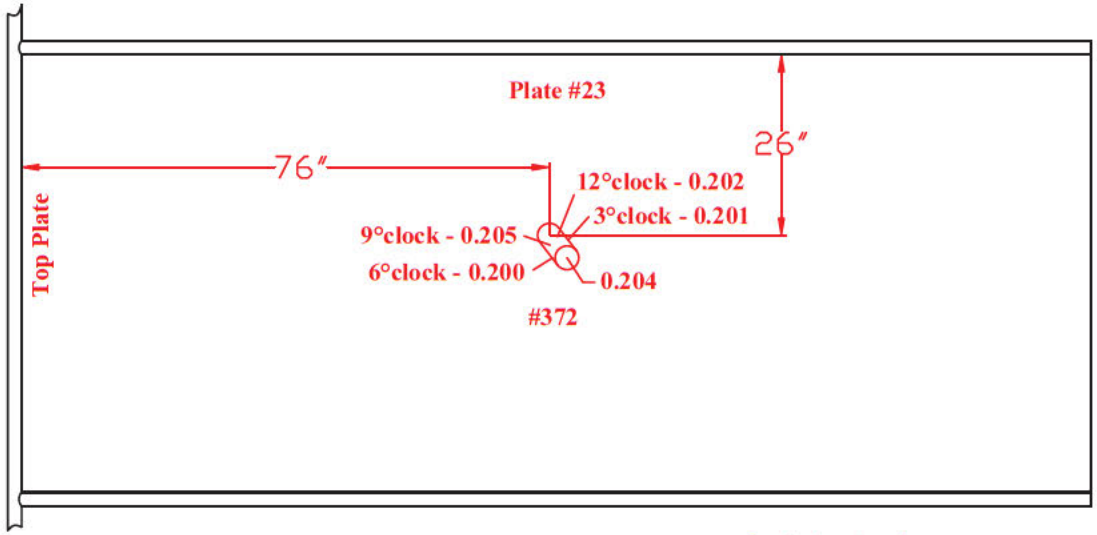


Tank Section: Upper Dome
Quadrant: B

Course: C
Plate #: 23

Flaw # - Type - Remaining:

#372 - GN - 0.204"
(0.200"-0.205")



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B/A

TESTEX
WWW.TESTEX-NDT.COM

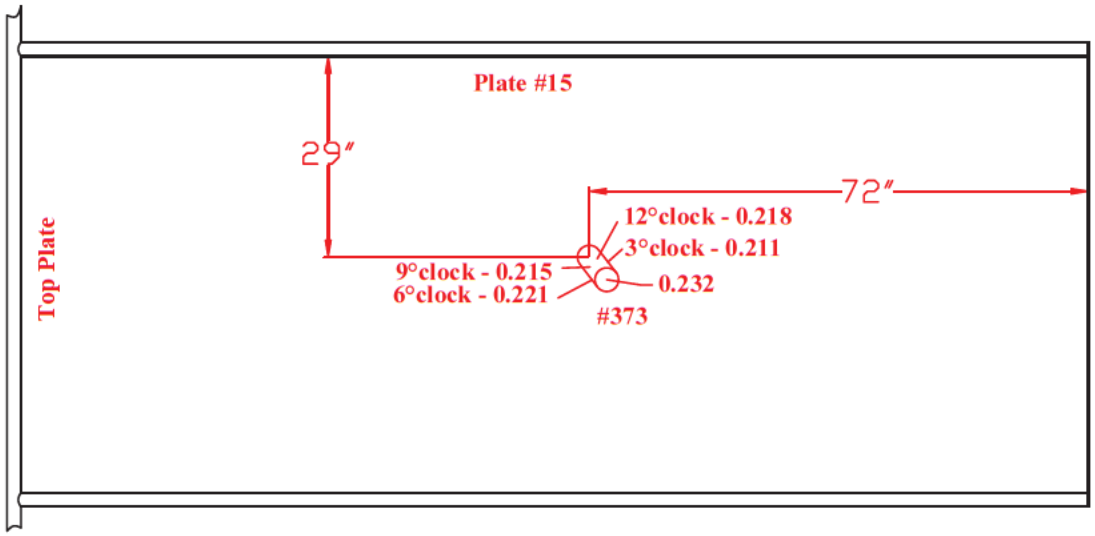
TANK # 5 - QUADRANT B/A
**Nominal Plate Thickness: 0.250"*

Tank Section: Upper Dome
Quadrant: B

Course: C
Plate #: 15

Flaw # - Type - Remaining:

#373 - GN- 0.232"
(0.211"-0.221")

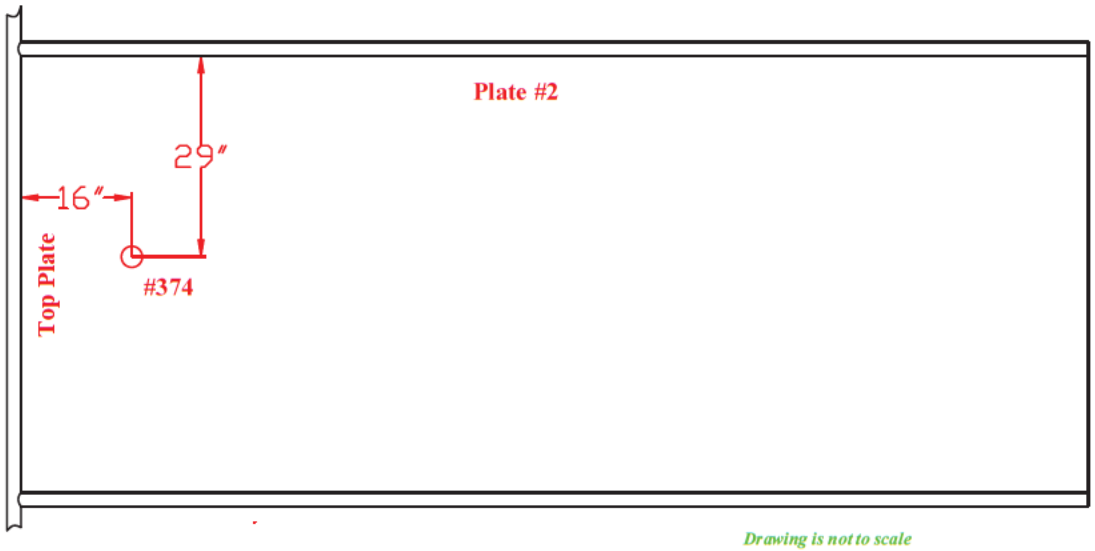


Tank Section: Upper Dome
Quadrant: A

Course: C
Plate #: 2

Flaw # - Type - Remaining:

#374 - Dent - 0.200" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

TESTEX
WWW.TESTEX-NDT.COM

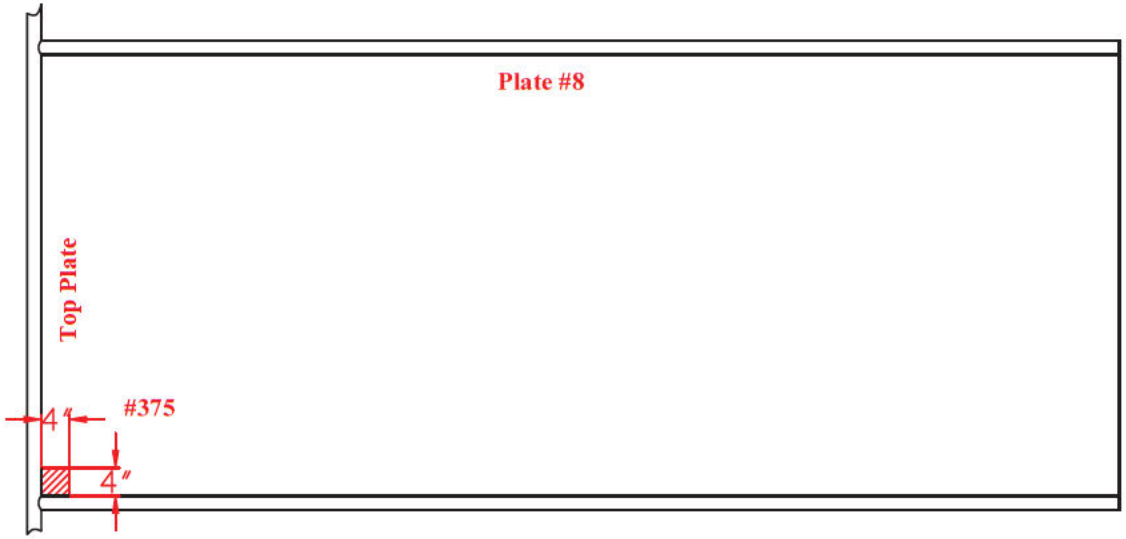
TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: A

Course: C
Plate #: 8

Flaw # - Type - Remaining:

#375 - WL- 0.240"

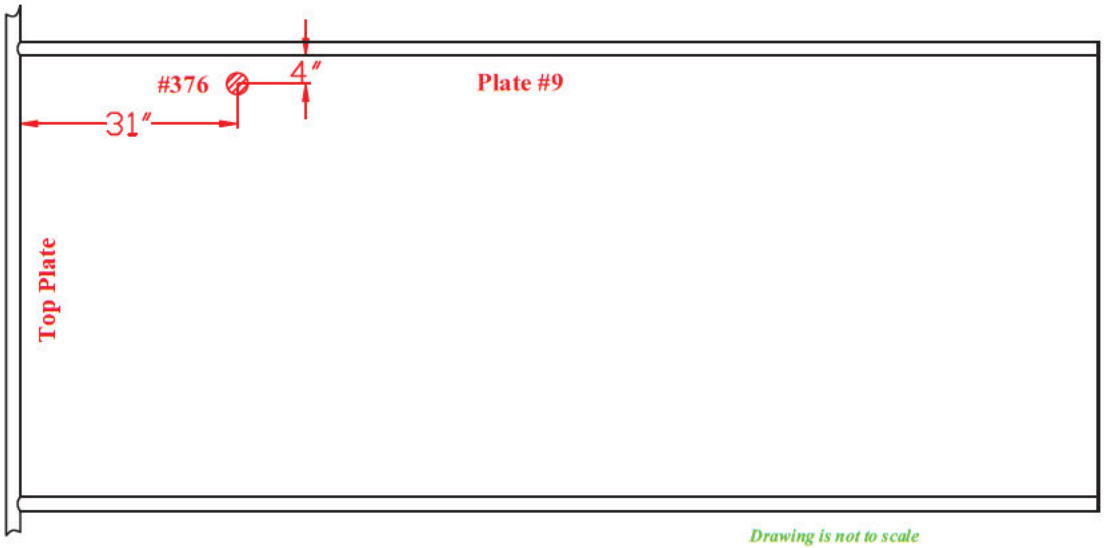


Tank Section: Upper Dome
Quadrant: A

Course: C
Plate #: 9

Flaw # - Type - Remaining:

#376 - WL(OPP) - 0.237"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/B

TESTEX
WWW.TESTEX-NDT.COM

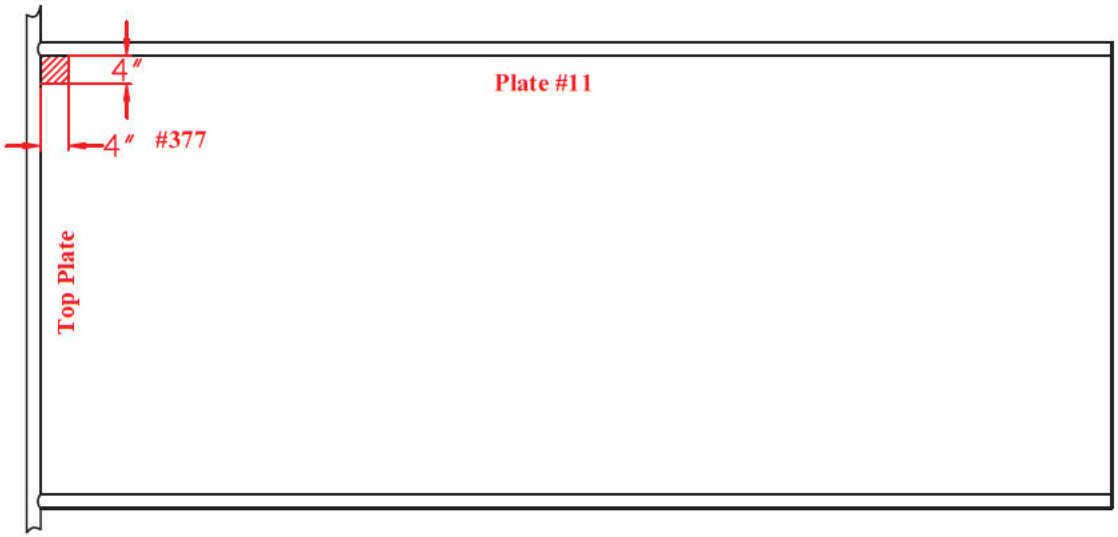
TANK # 5 - QUADRANT A/B
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: A

Course: C
Plate #: 11

Flaw # - Type - Remaining:

#377 - WL- 0.230"

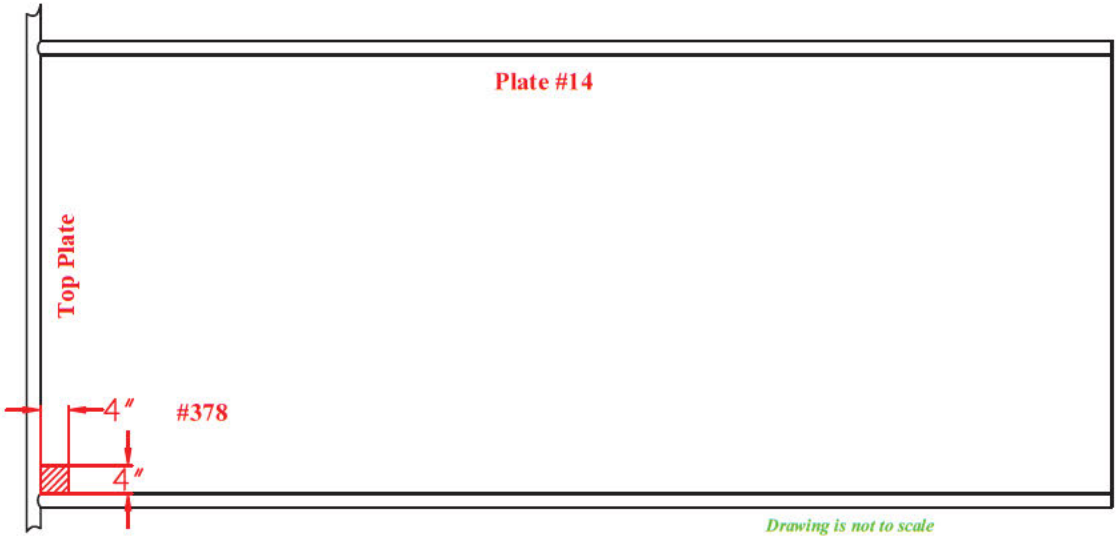


Tank Section: Upper Dome
Quadrant: B

Course: C
Plate #: 14

Flaw # - Type - Remaining:

#378 - WL - 0.230"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D/C

TESTEX
WWW.TESTEX-NDT.COM

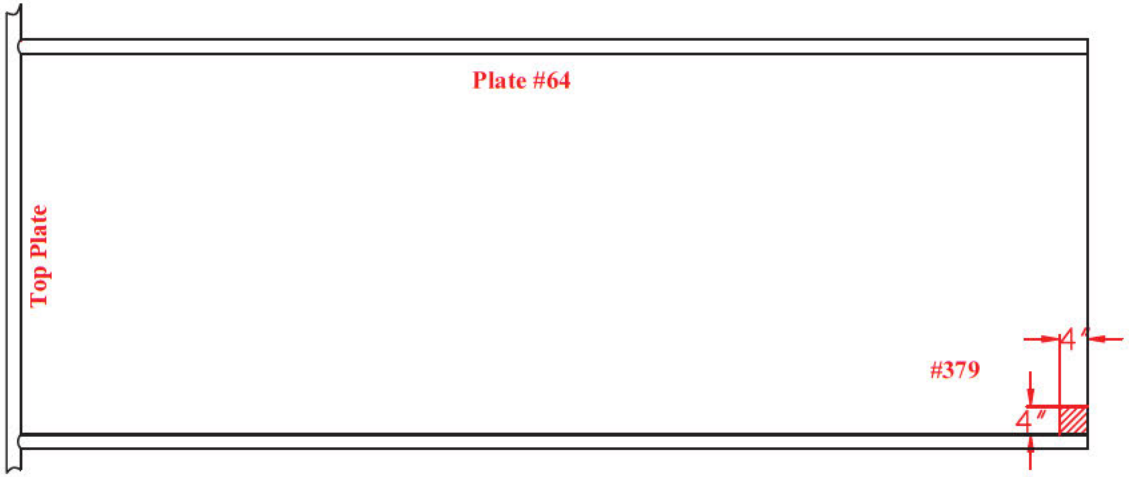
TANK # 5 - QUADRANT D/C
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: D

Course: B
Plate #: 64

Flaw # - Type - Remaining:

#379 - WL - 0.187"



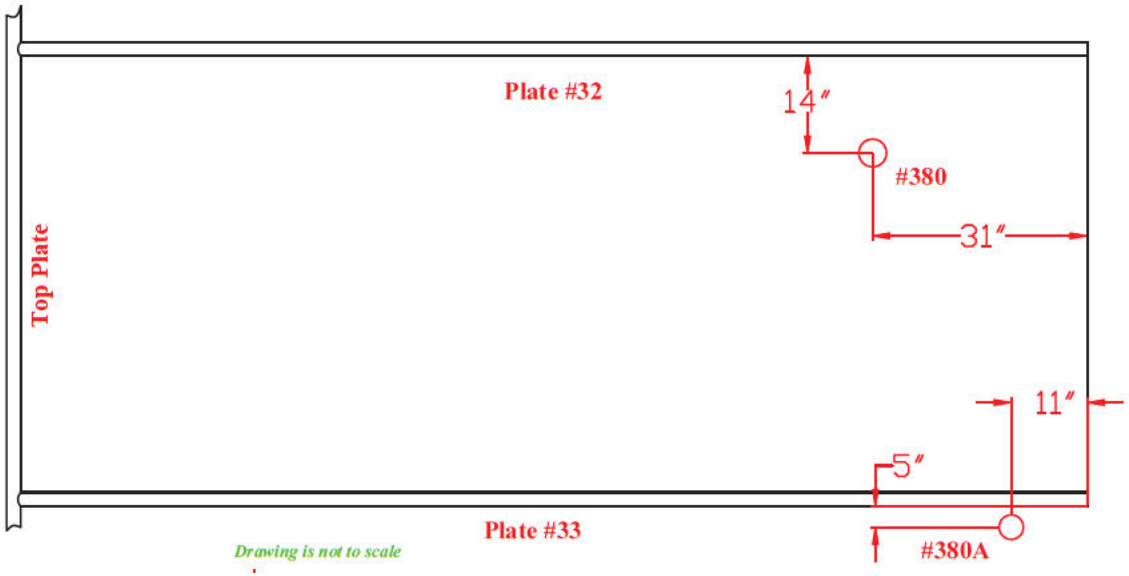
Tank Section: Upper Dome
Quadrant: C

Course: C
Plate #: 32

Flaw # - Type - Remaining:

#380 - SP - 0.125" Deep (P32)

#380A - SP - 0.090" Deep (P33)



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D/B

TESTEX
WWW.TESTEX-NDT.COM

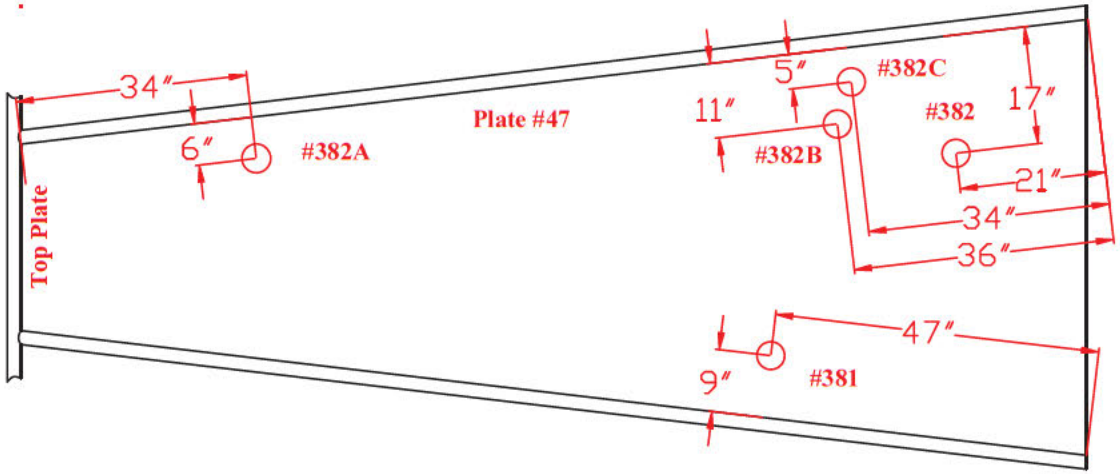
TANK # 5 - QUADRANT D/B
**Nominal Plate Thickness: 0.250"*

Tank Section: Upper Dome
Quadrant: D

Course: D
Plate #: 47

Flaw # - Type - Remaining:

#381 - SP - 0.150" Deep
#382 - SP - 0.125" Deep
#382A - Dent - 0.225" Deep
#382B - SP - 0.050" Deep
#382C - SP - 0.090" Deep

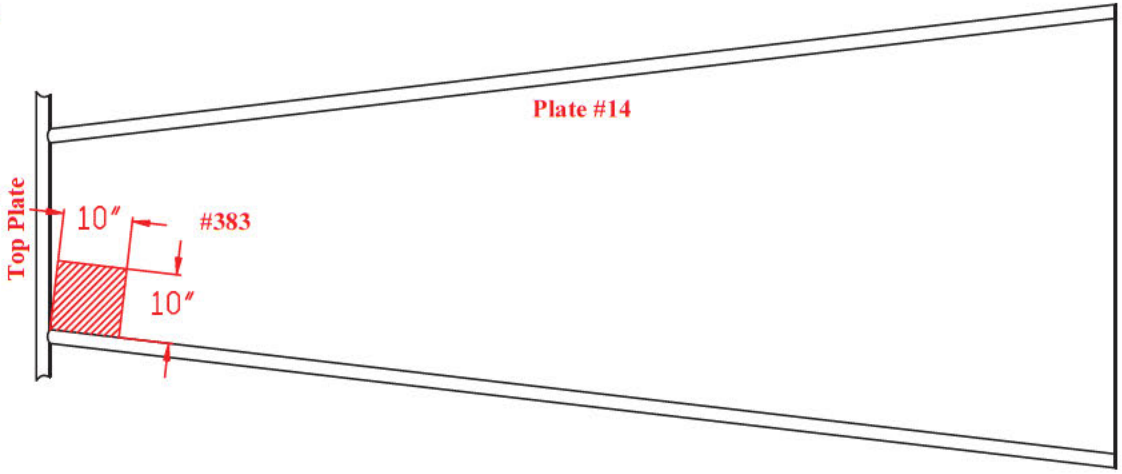


Tank Section: Upper Dome
Quadrant: B

Course: D
Plate #: 14

Flaw # - Type - Remaining:

#383- WL - 0.231"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A/B

TESTEX
WWW.TESTEX-NDT.COM

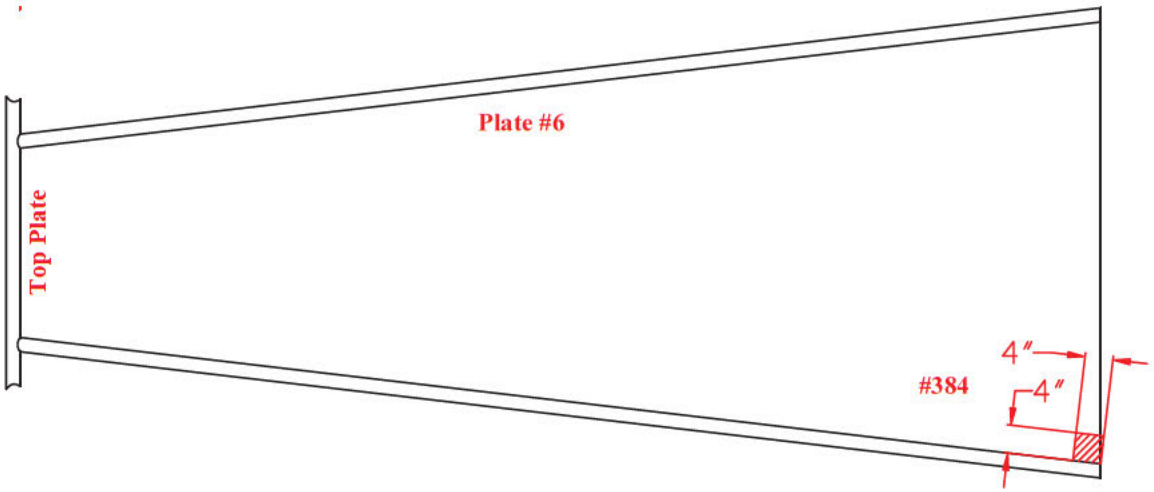
TANK # 5 - QUADRANT A/B
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: A

Course: D
Plate #: 6

Flaw # - Type - Remaining:

#384 - WL - 0.238"

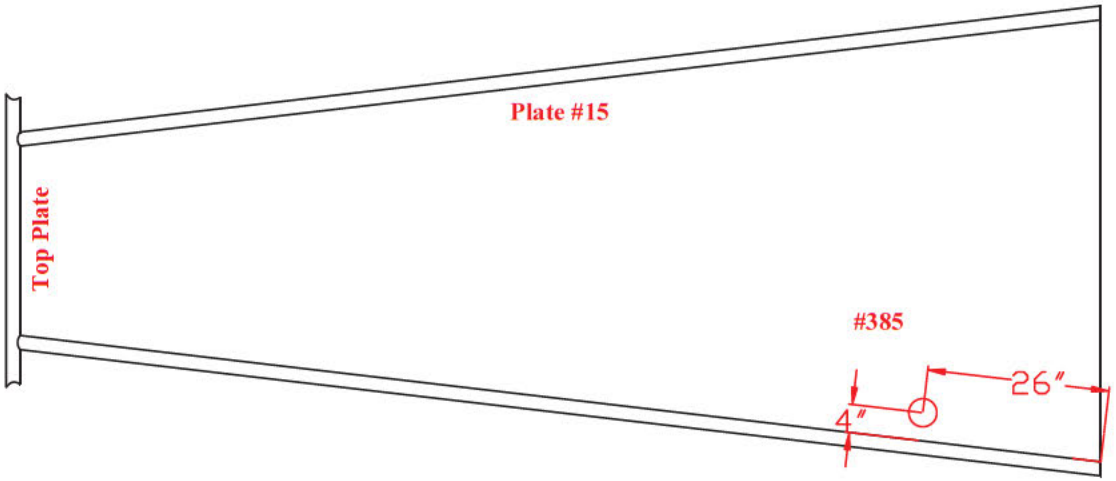


Tank Section: Upper Dome
Quadrant: B

Course: D
Plate #: 15

Flaw # - Type - Remaining:

#385 - Dent - 0.150" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant A

TESTEX
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT A
Nominal Plate Thickness: 0.250"

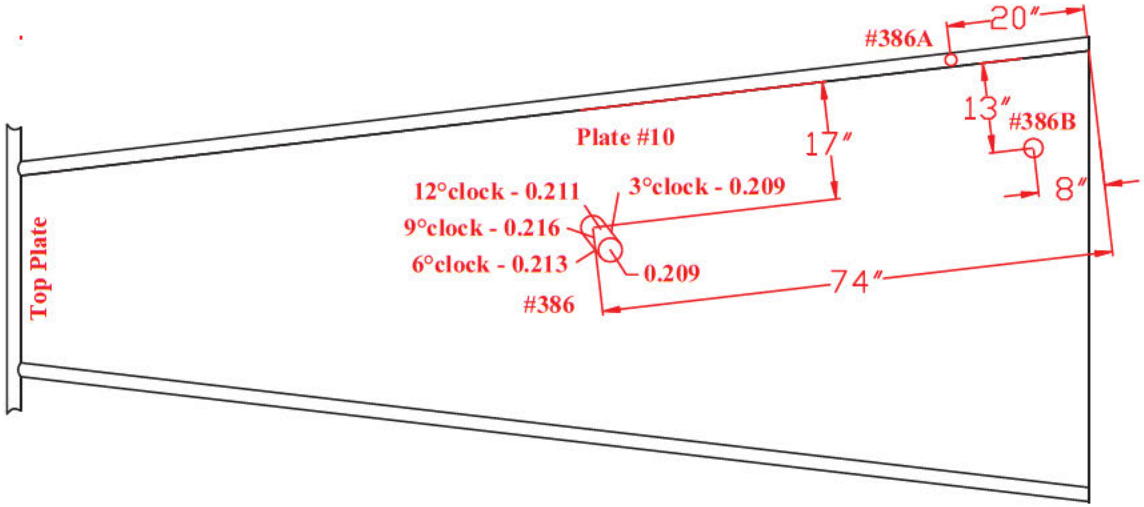
Tank Section: Upper Dome
Quadrant: A

Course: D
Plate #: 10

Flaw # - Type - Remaining:

#386 - GN - 0.209"
(0.209"-0.216")

#386A - Dent - 0.140" Deep
#386B - Dent - 0.100" Deep

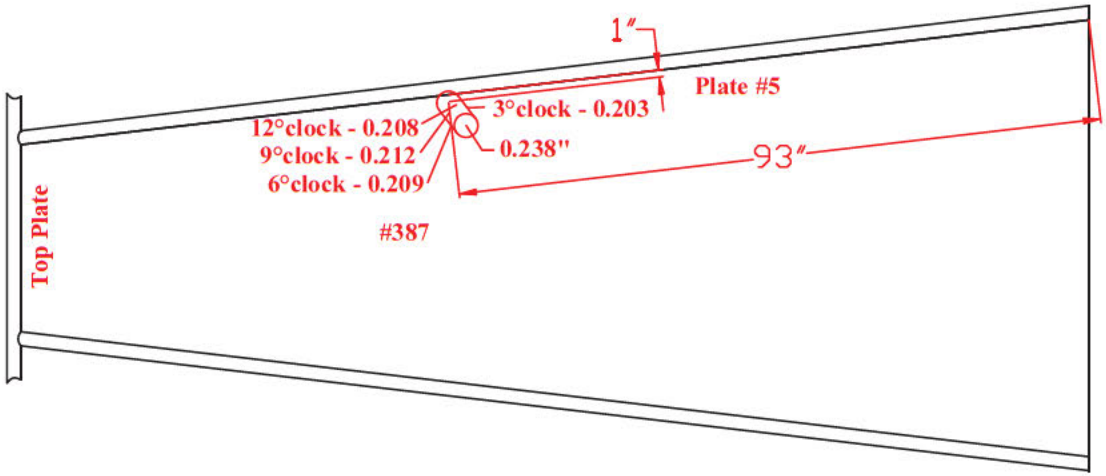


Tank Section: Upper Dome
Quadrant: A

Course: D
Plate #: 5

Flaw # - Type - Remaining:

#387 - GN - 0.238"
(0.203"-0.212")



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant B

TESTEX
WWW.TESTEX-NDT.COM

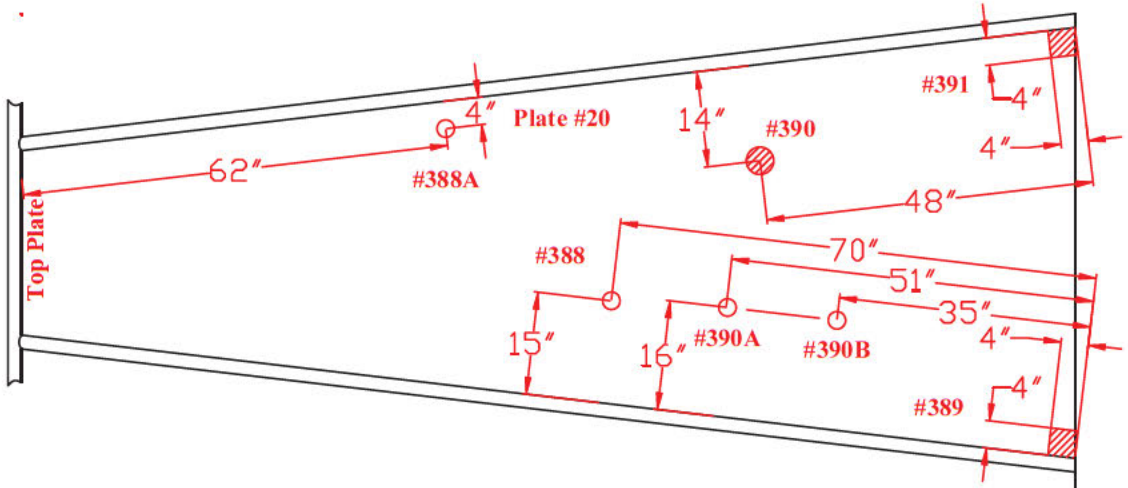
TANK # 5 - QUADRANT B
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: B

Course: D
Plate #: 20

Flaw # - Type - Remaining:

#388 - SP - 0.140" Deep
#388A - SP - 0.100" Deep
#389 - WL - 0.236"
#390 - WL(OPP) - 0.238"
#390A - SP - 0.075" Deep
#309B - SP - 0.100" Deep
#391 - WL - 0.240"

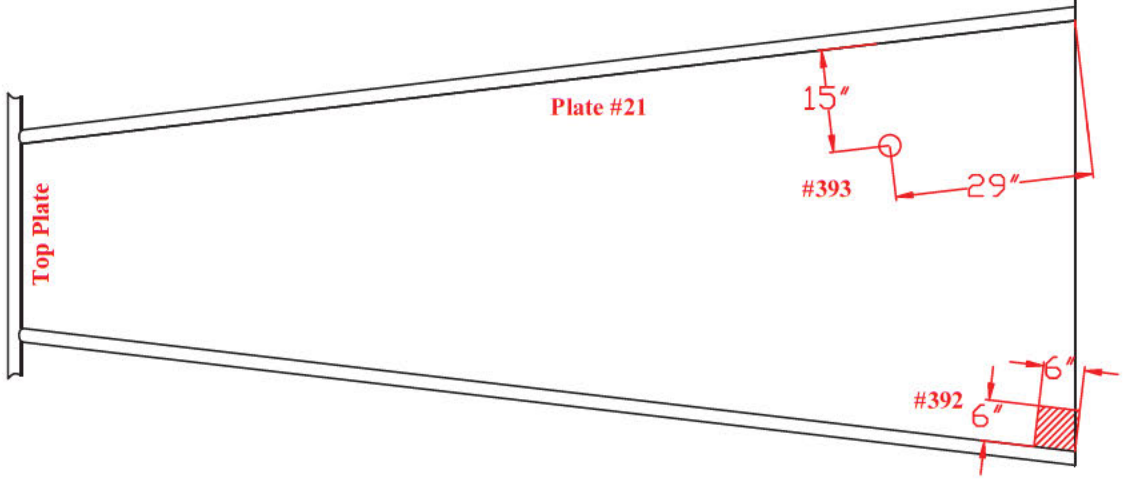


Tank Section: Upper Dome
Quadrant: B

Course: D
Plate #: 21

Flaw # - Type - Remaining:

#392 - WL - 0.240"
#393 - SP - 0.075" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C

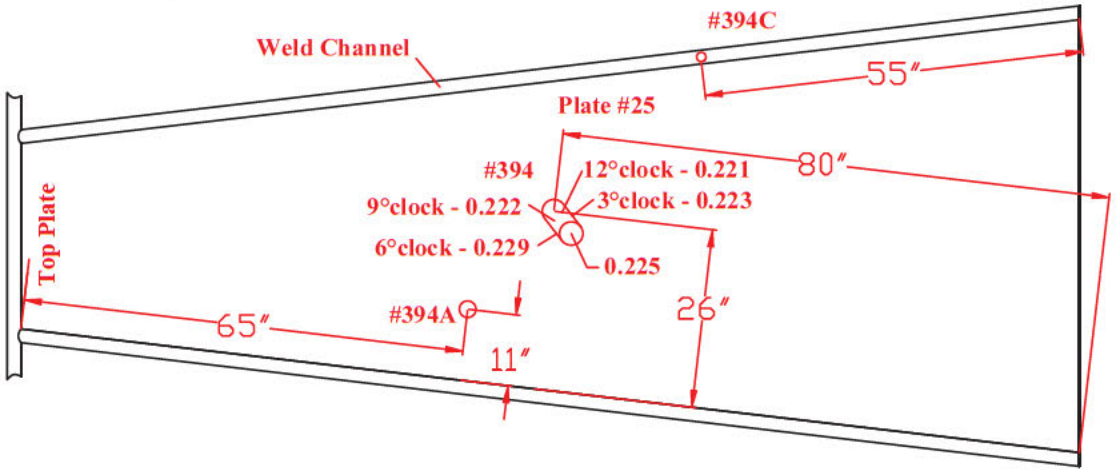
TANK # 5 - QUADRANT C
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: C

Course: D
Plate #: 25, 26

Flaw # - Type - Remaining:

#394 - GN - 0.225" (0.221"-0.229")
#394A - SP - 0.075" Deep
#394B - SP - 0.150" Deep (P26)
#394C - Dent - 0.100" Deep (Channel)

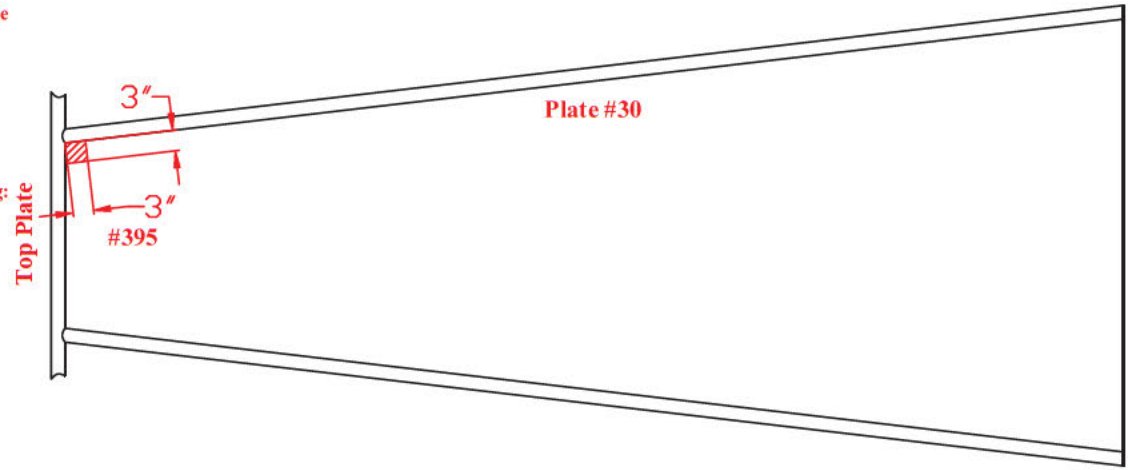


Tank Section: Upper Dome
Quadrant: C

Course: D
Plate #: 30

Flaw # - Type - Remaining:

#395 - WL - 0.203"



Drawing is not to scale

TesTex
WWW.TESTEX-NDT.COM

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C

TESTEX
WWW.TESTEX-NDT.COM

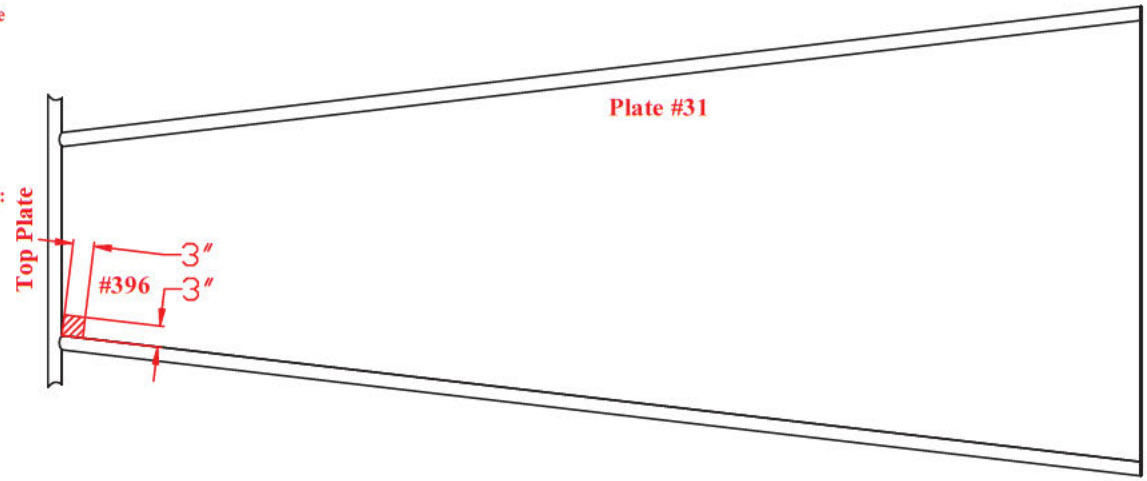
TANK # 5 - QUADRANT C
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: C

Course: D
Plate #: 31

Flaw # - Type - Remaining:

#396 - WL - 0.198"

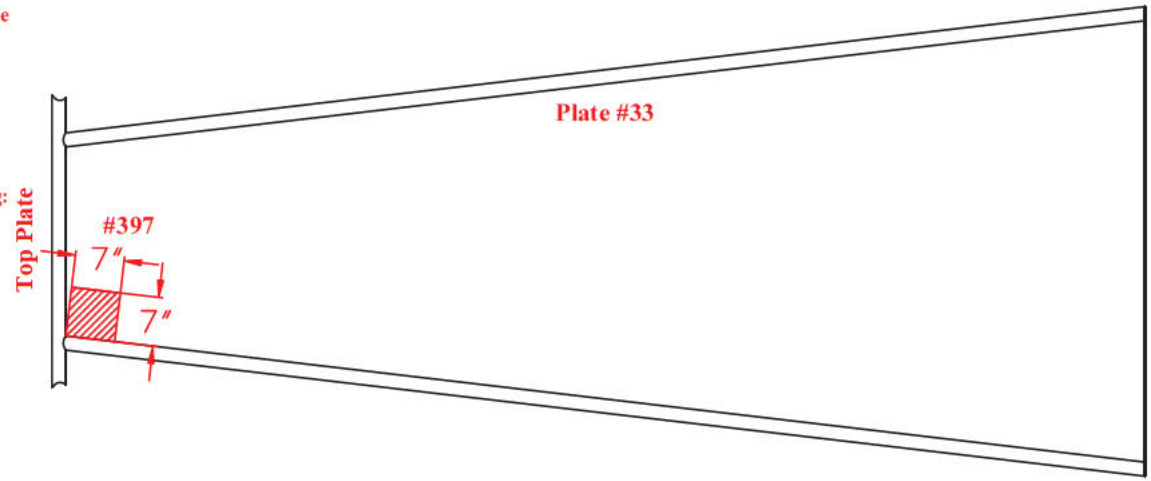


Tank Section: Upper Dome
Quadrant: C

Course: D
Plate #: 33

Flaw # - Type - Remaining:

#397 - WL - 0.198"



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant C/D

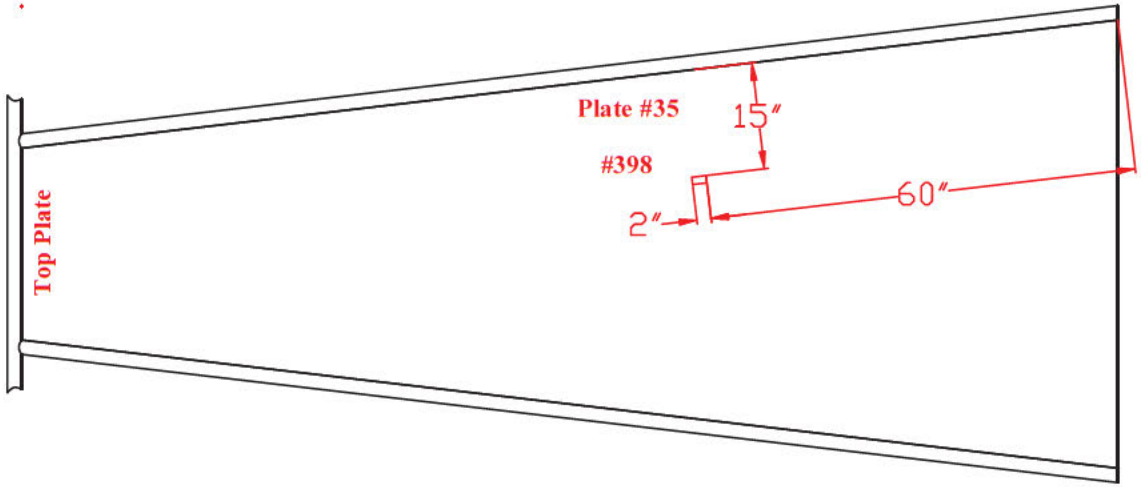
TANK # 5 - QUADRANT C/D
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: C

Course: D
Plate #: 35

Flaw # - Type - Remaining:

#398 - Gouge - 0.075" Deep

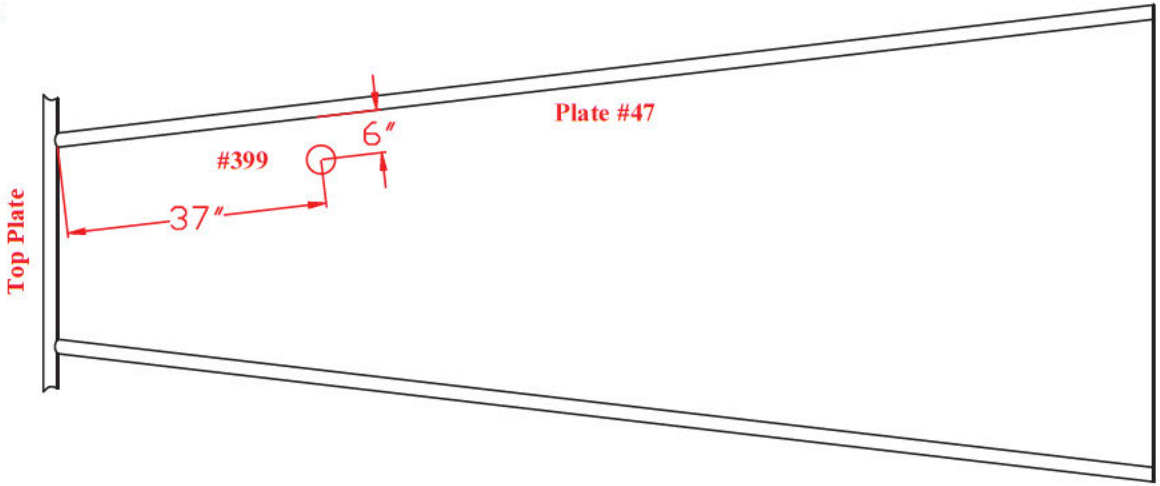


Tank Section: Upper Dome
Quadrant: D

Course: D
Plate #: 47

Flaw # - Type - Remaining:

#399 - Dent - 0.200" Deep



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant D

TESTEX
WWW.TESTEX-NDT.COM

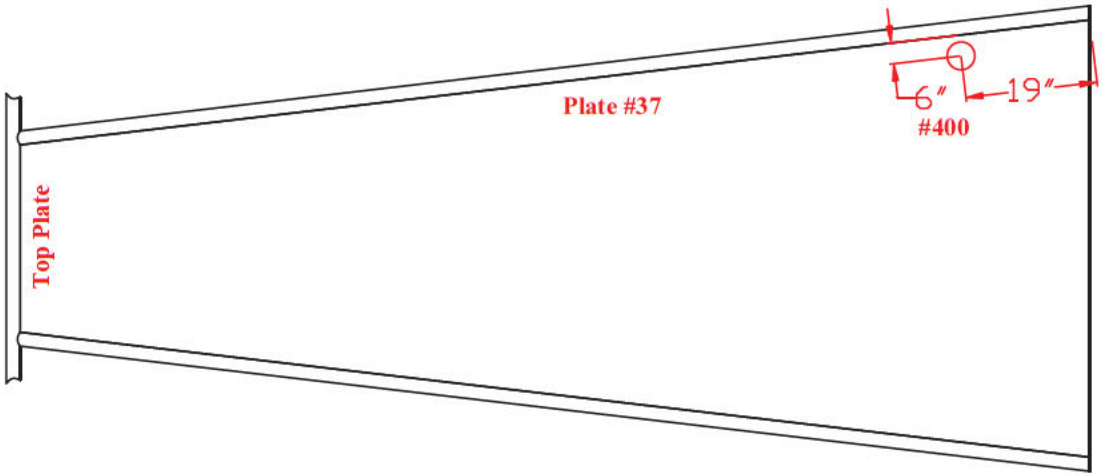
TANK # 5 - QUADRANT D
Nominal Plate Thickness: 0.250"

Tank Section: Upper Dome
Quadrant: D

Course: D
Plate #: 37

Flaw # - Type - Remaining:

#400 - SP - 0.075" Deep

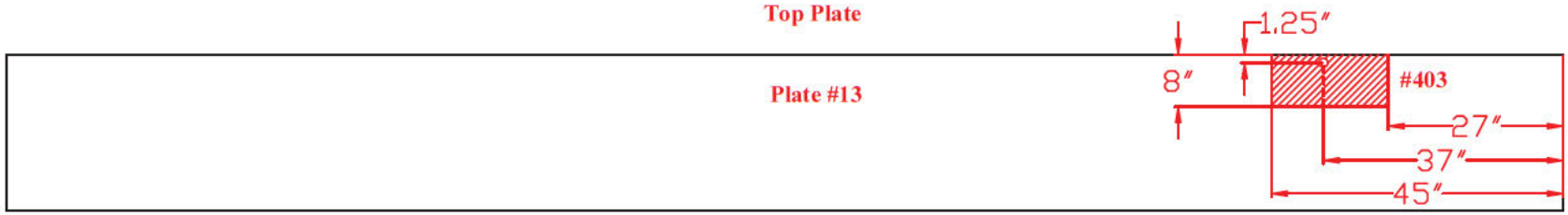


Tank Section: Extension
Quadrant: D

Row: E4
Plate #: 13

Flaw # - Type - Remaining:

#403 - WL - Hole



Drawing is not to scale

TANK MAPS
Willbros Government
Services, LLC
Tulsa, OK
Tank #5 - Quadrant N/A

TANK # 5 - QUADRANT N/A
Nominal Plate Thickness: 0.250"

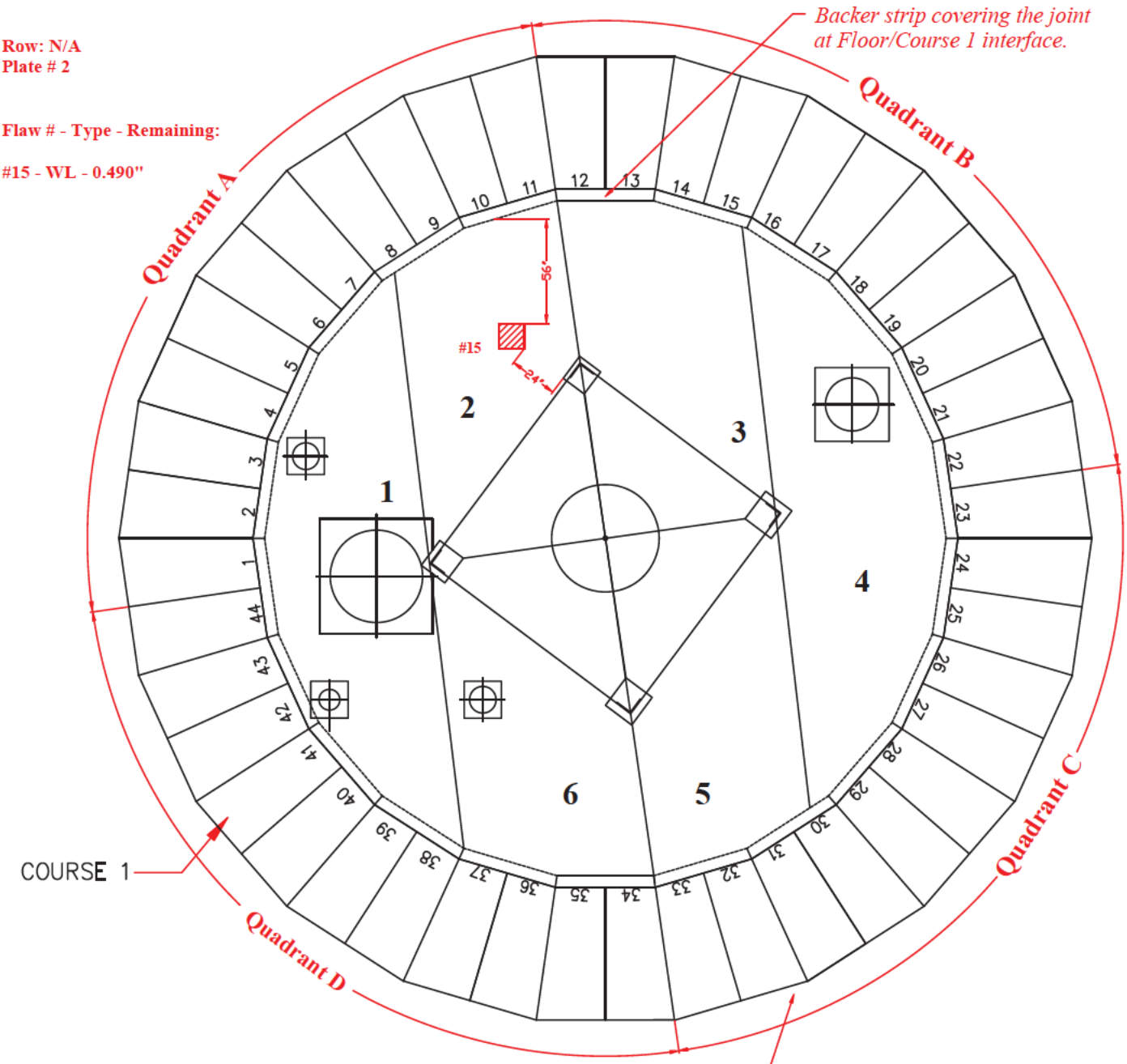
TANK # 5 - Floor

Tank Section: Floor
Quadrant: N/A

Row: N/A
Plate # 2

Flaw # - Type - Remaining:

#15 - WL - 0.490"



Drawing Notes:

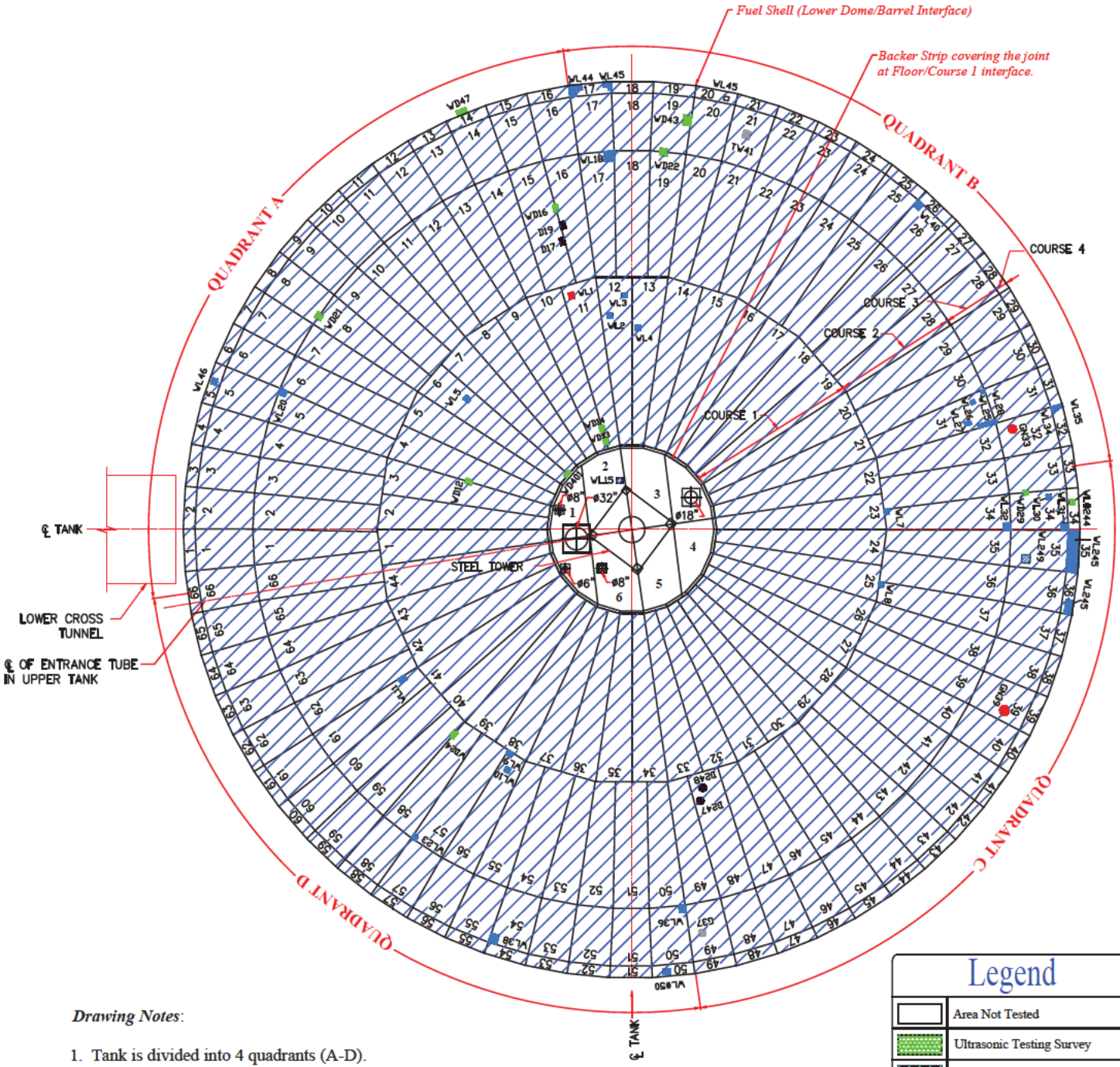
1. Tank is divided into 4 quadrants (A-D).
2. Course 1 is comprised of 44 total plates.
3. Quadrant A is comprised of 11 plates (1-11).
4. Quadrant B is comprised of 11 plates (12-22).
5. Quadrant C is comprised of 11 plates (23-33).
6. Quadrant D is comprised of 11 plates (34-44).
7. This numbering convention begins with plate #1 being the first plate of quadrant A.

Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Lower Dome Liner Plates

TesTex
WWW.TESTEX-NDT.COM

TANK # 5 - LOWER DOME LINER PLATES



Drawing Notes:

1. Tank is divided into 4 quadrants (A-D).
2. The floor plates are 0.500" NWT & all other plates are 0.250" NWT.
3. Course 1 is comprised of 44 total plates.
4. Quadrant A is comprised of 11 plates (1-11).
5. Quadrant B is comprised of 11 plates (12-22).
6. Quadrant C is comprised of 11 plates (23-33).
7. Quadrant D is comprised of 11 plates (34-44).
8. This numbering convention begins with plate #1 being the first plate of quadrant A.

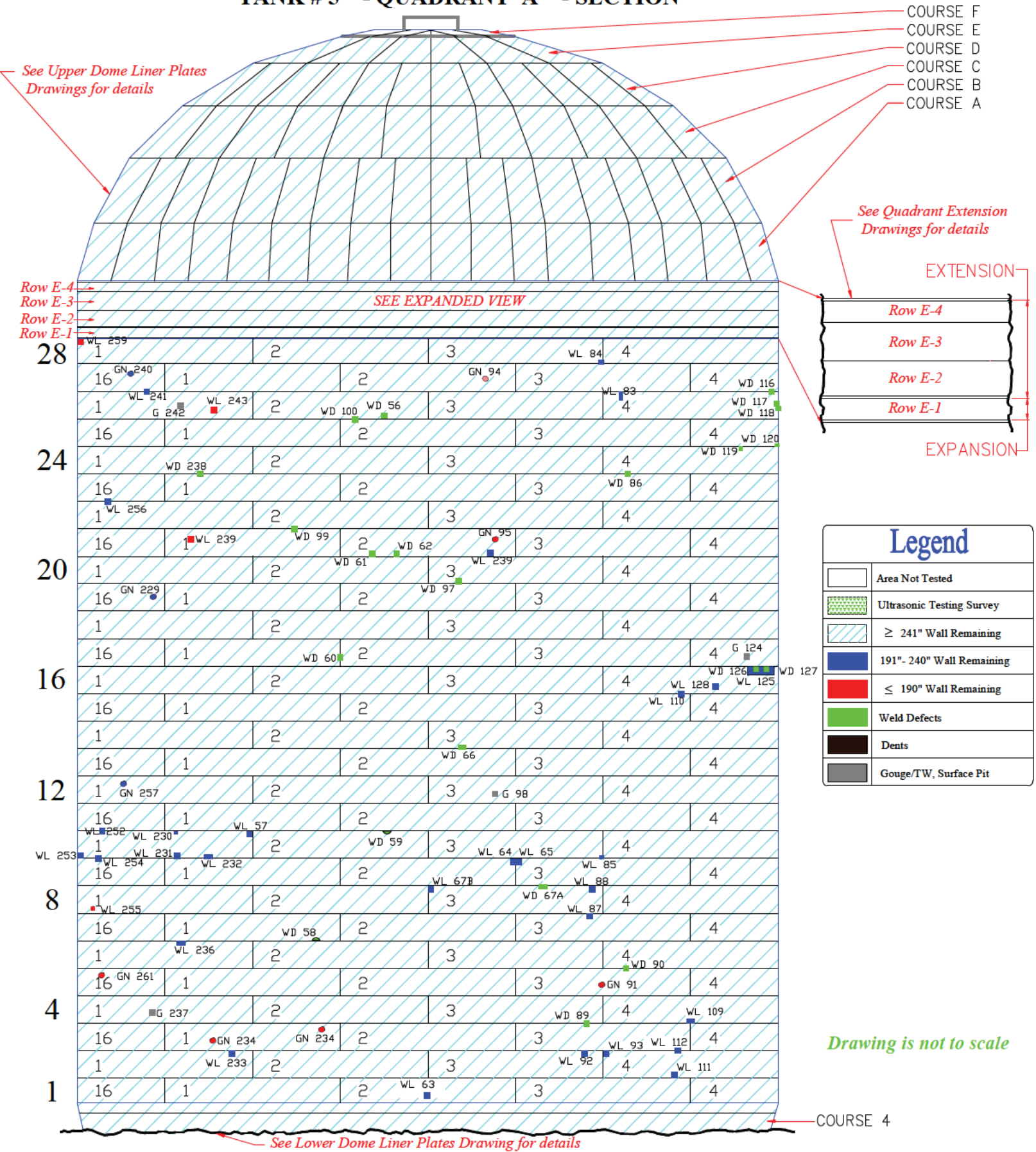
Legend	
	Area Not Tested
	Ultrasonic Testing Survey
	> 240" Wall Remaining
	190"- 240" Wall Remaining
	≤ 190"
	Weld Defects
	Dents
	Gouge/TW, Surface Pit

Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK

TesTex
WWW.TESTEX-NDT.COM

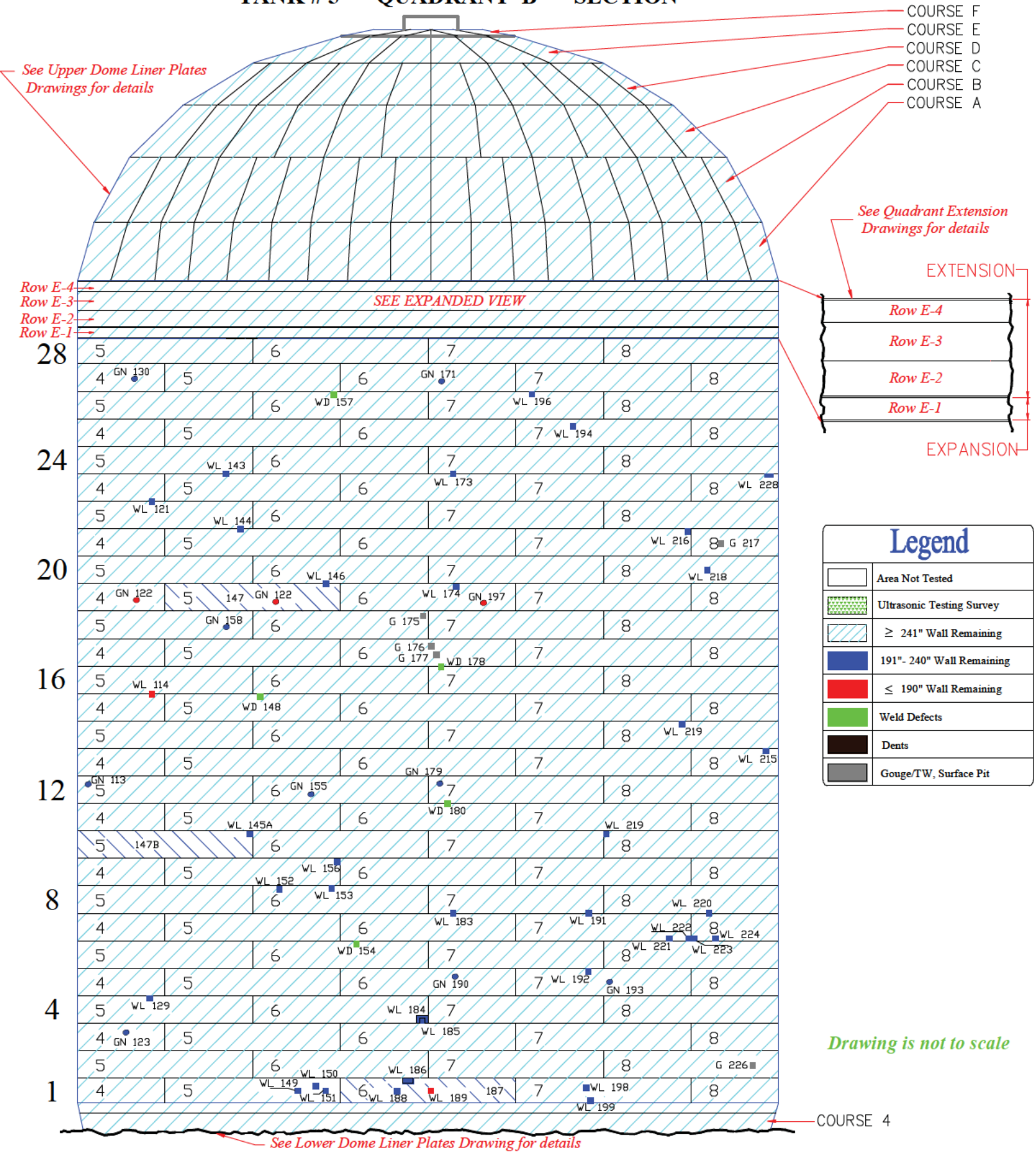
TANK # 5 - QUADRANT A - SECTION



TANK MAPS
Willbros Government Services, LLC
Tulsa, OK

TesTex
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT B - SECTION



Legend

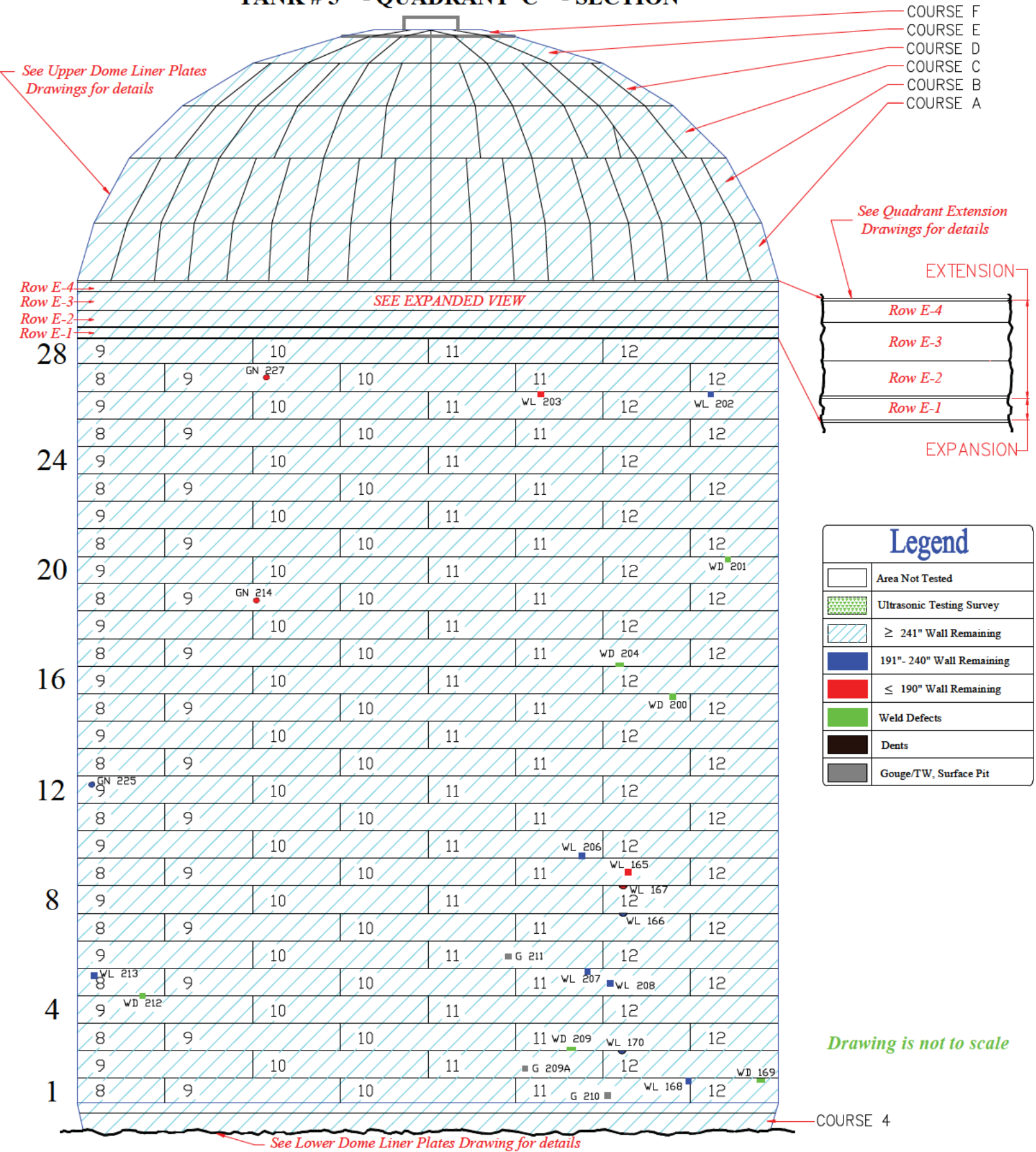
	Area Not Tested
	Ultrasonic Testing Survey
	≥ 241" Wall Remaining
	191"- 240" Wall Remaining
	≤ 190" Wall Remaining
	Weld Defects
	Dents
	Gouge/TW, Surface Pit

Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK

TesTex
WWW.TESTEX-NDT.COM

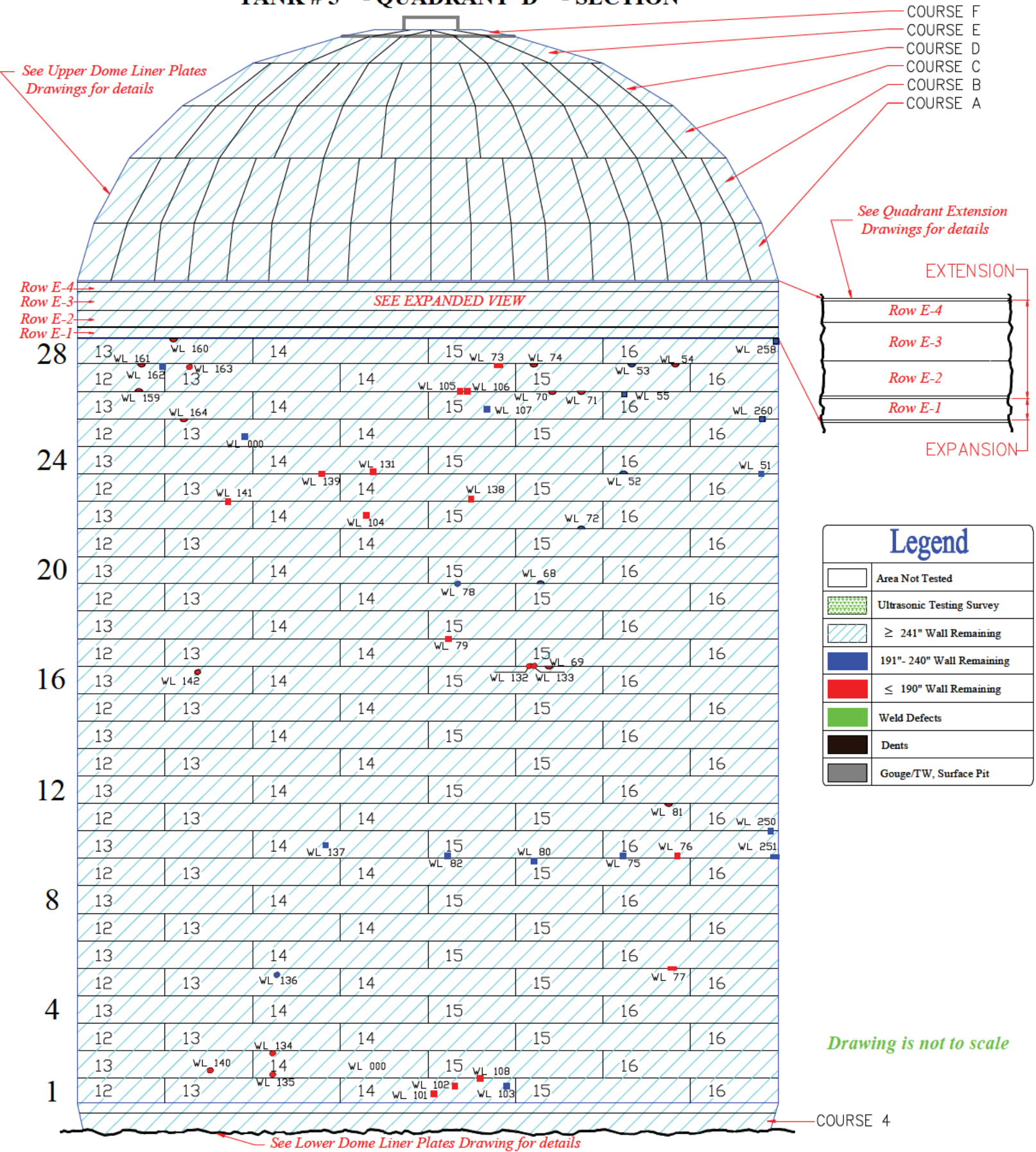
TANK # 5 - QUADRANT C - SECTION



TANK MAPS
Willbros Government Services, LLC
Tulsa, OK

TesTex
WWW.TESTEX-NDT.COM

TANK # 5 - QUADRANT D - SECTION



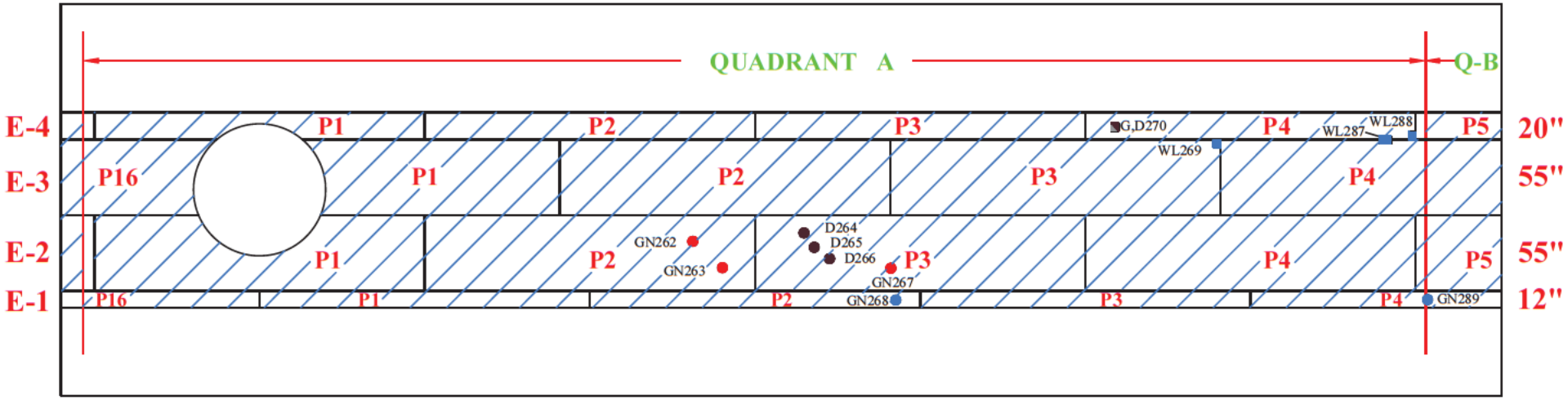
TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5

TesTex
WWW.TESTEX-NDT.COM

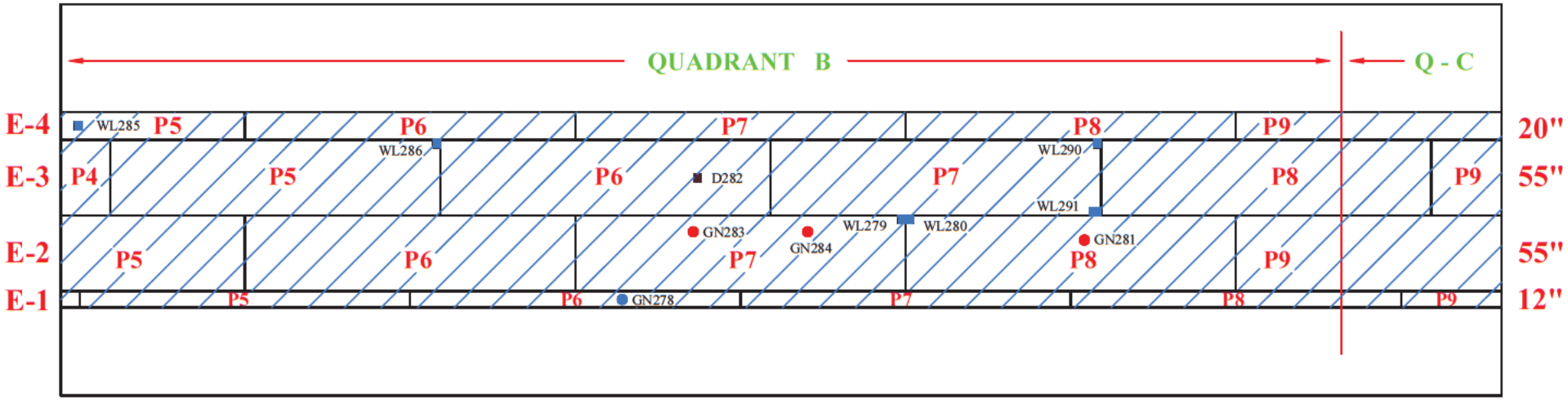
TANK # 5 - QUADRANT A AND B EXTENSION

Nominal Plate Thickness: 0.250"

Date Inspected/Confirmed:



Legend									
		Area Not Tested		190"- 240" Wall Remaining		Dents			
		Ultrasonic Testing Survey		≤ 190" Wall Remaining		Gouge/TW, Surface Pit			
		> 240" Wall Remaining		Weld Defects					



Drawing is not to scale

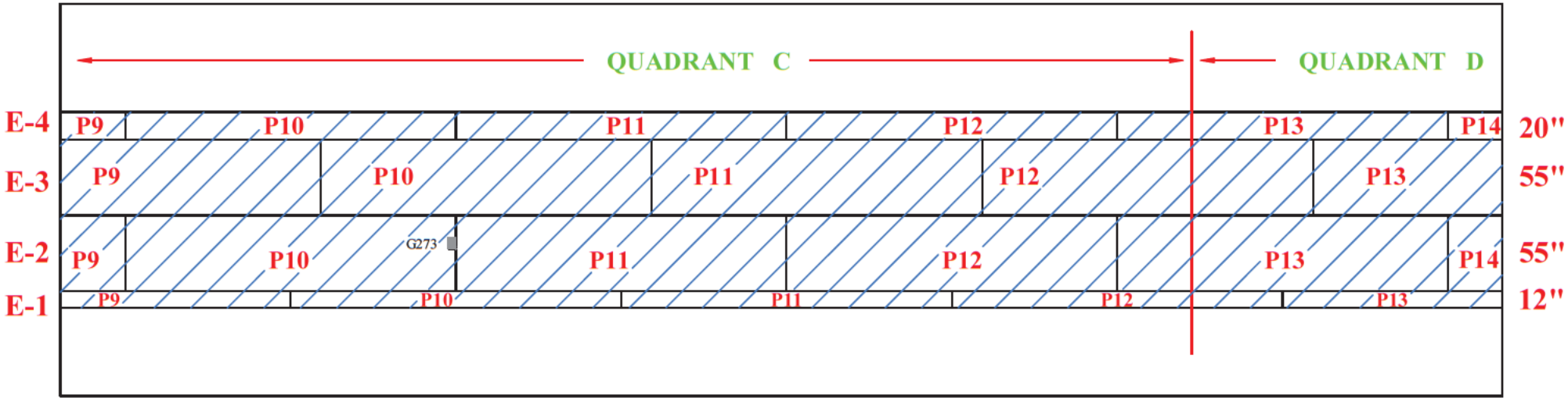
TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5

TesTex
WWW.TESTEX-NDT.COM

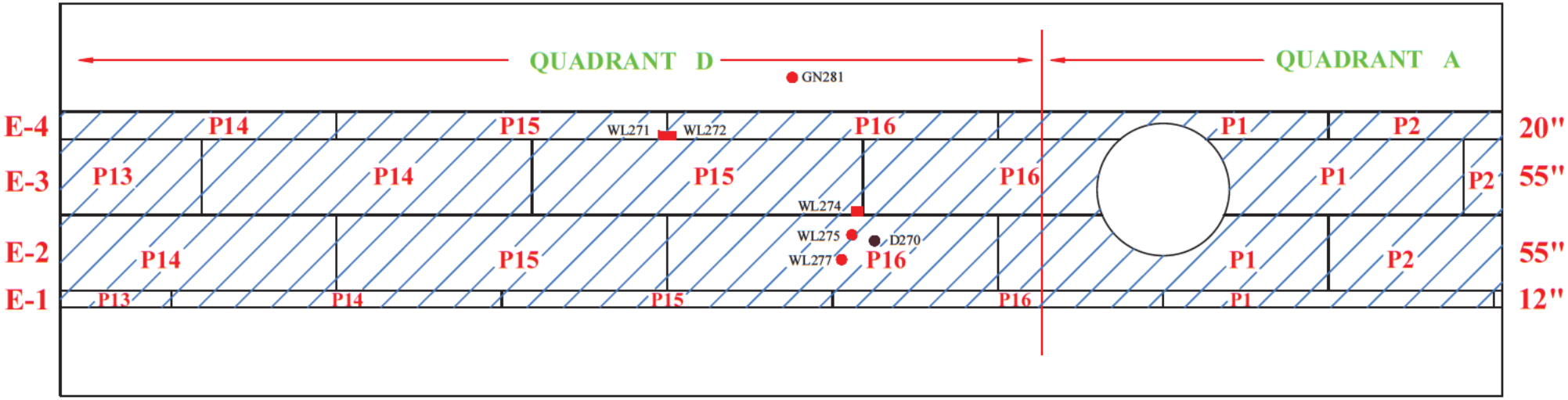
TANK # 5 - QUADRANT C AND D EXTENSION

Nominal Plate Thickness: 0.250"

Date Inspected/Confirmed:



Legend										
		Area Not Tested		190"- 240" Wall Remaining		Dents				
		Ultrasonic Testing Survey		≤ 190" Wall Remaining		Gouge/TW, Surface Pit				
		> 240" Wall Remaining		Weld Defects						



Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Quadrant N/A

TESTEX
WWW.TESTEX-NDT.COM

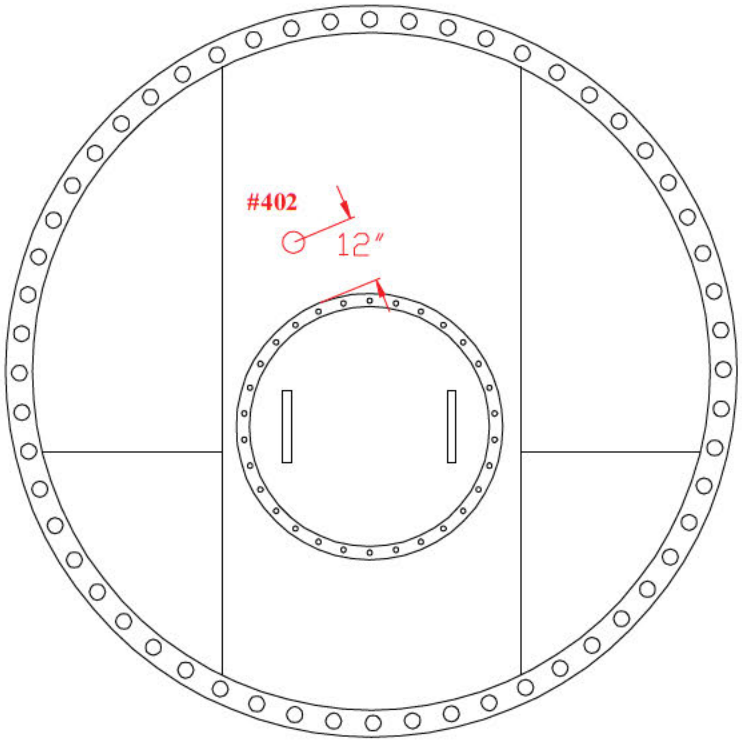
TANK # 5 - QUADRANT N/A
Nominal Plate Thickness: 0.250"

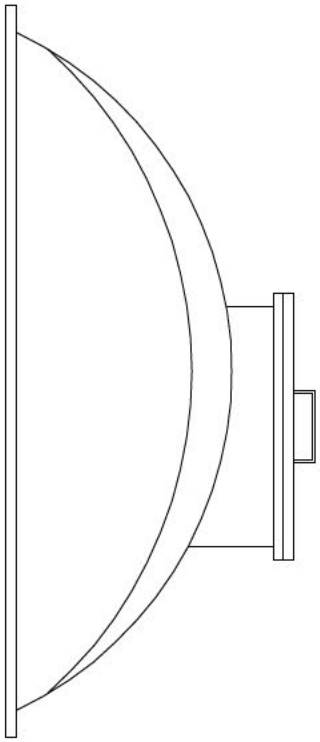
Tank Section: Manway Door
Quadrant: N/A

Course: N/A
Plate #: N/A

Flaw # - Type - Remaining:

#402 - SP - 0 212"



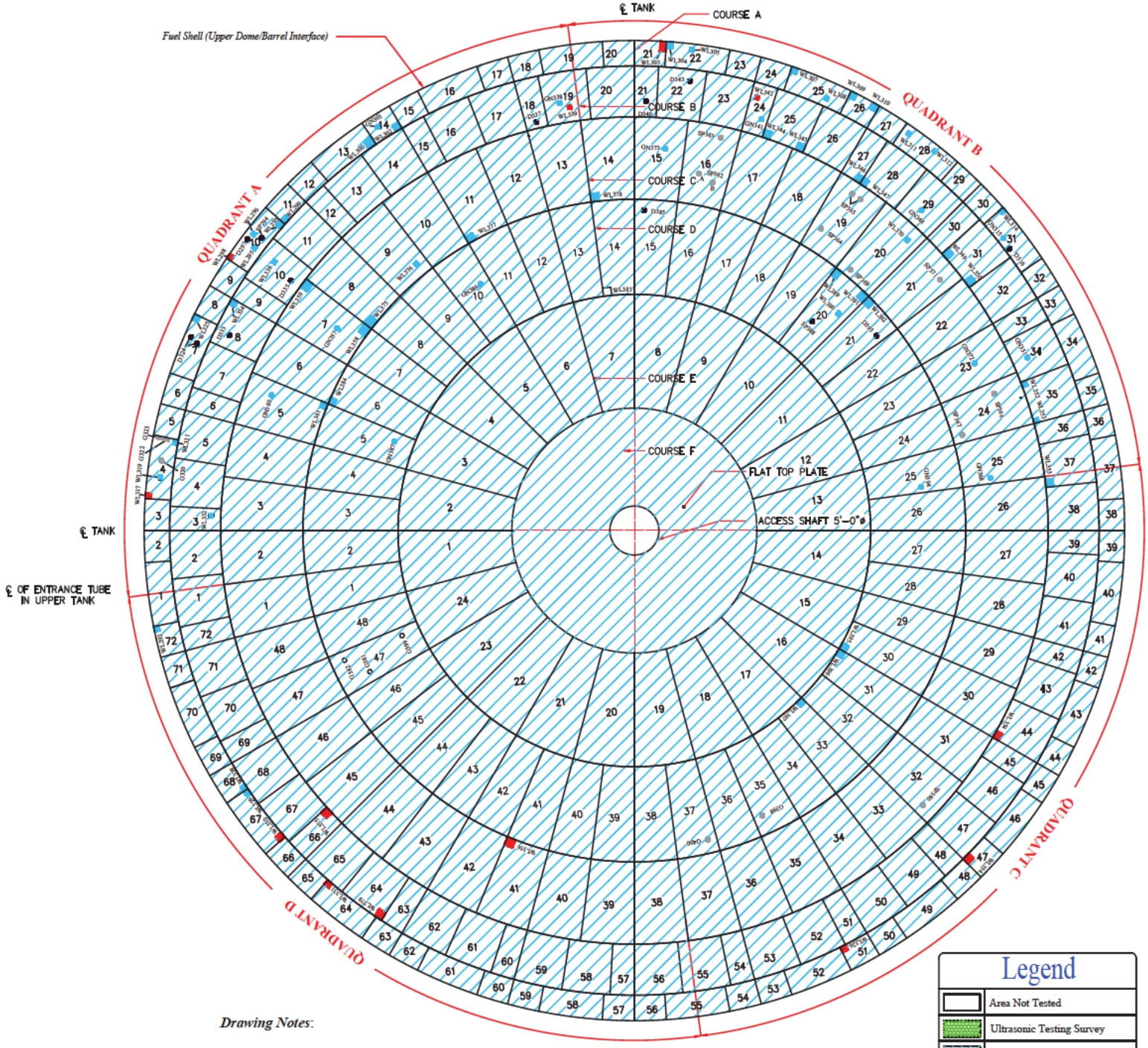


Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5 - Upper Dome Liner Plates

TesTex
WWW.TESTEX-NDT.COM

TANK # 5 - UPPER DOME LINER PLATES



Legend	
	Area Not Tested
	Ultrasonic Testing Survey
	>.240" Wall Remaining
	.190"-.240" Wall Remaining
	≤ .190"
	Weld Defects
	Dents
	Gouge/TW, Surface Pit

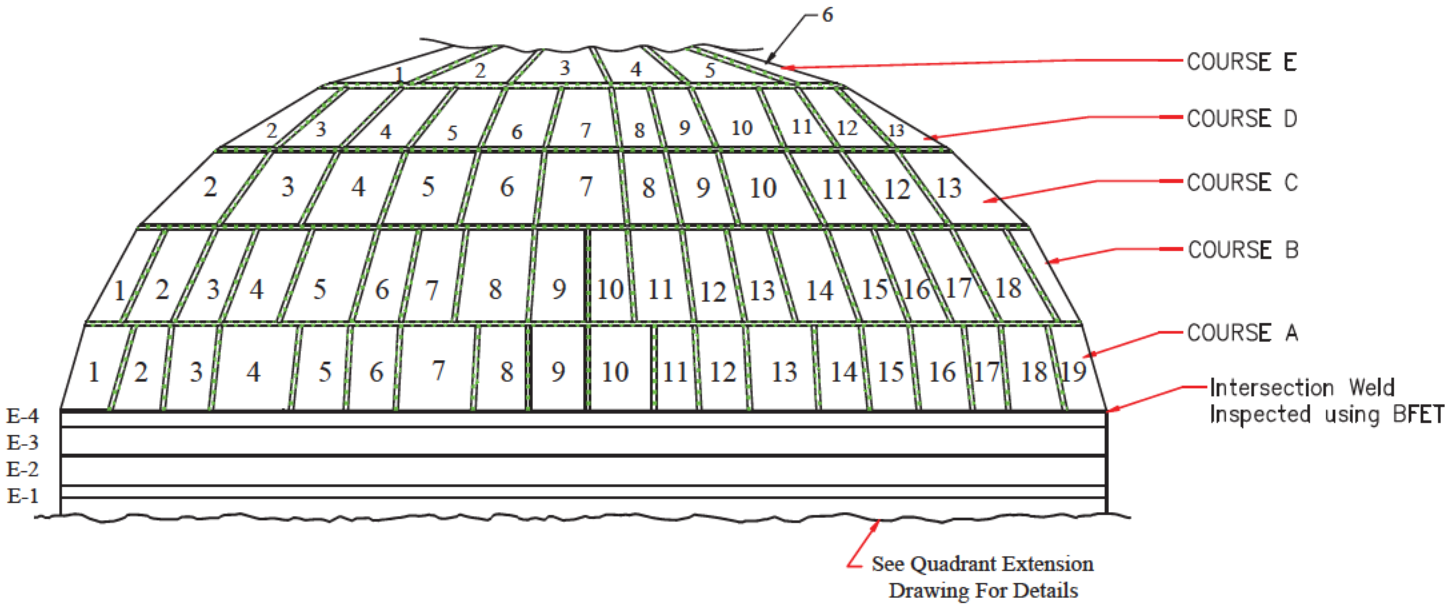
Drawing Notes:

1 Tank is divided into 4 quadrants (A-D)
2 Course A is comprised of 72 total plates
3 Course B is comprised of 72 total plates
4 Course C is comprised of 48 total plates
5 Course D is comprised of 48 total plates
6 Course E is comprised of 24 total plates
7 This numbering convention begins with plate #1 being the first full plate to the left of the manway in plan view
8 All Plate intersection welds are covered with 3" wide channels

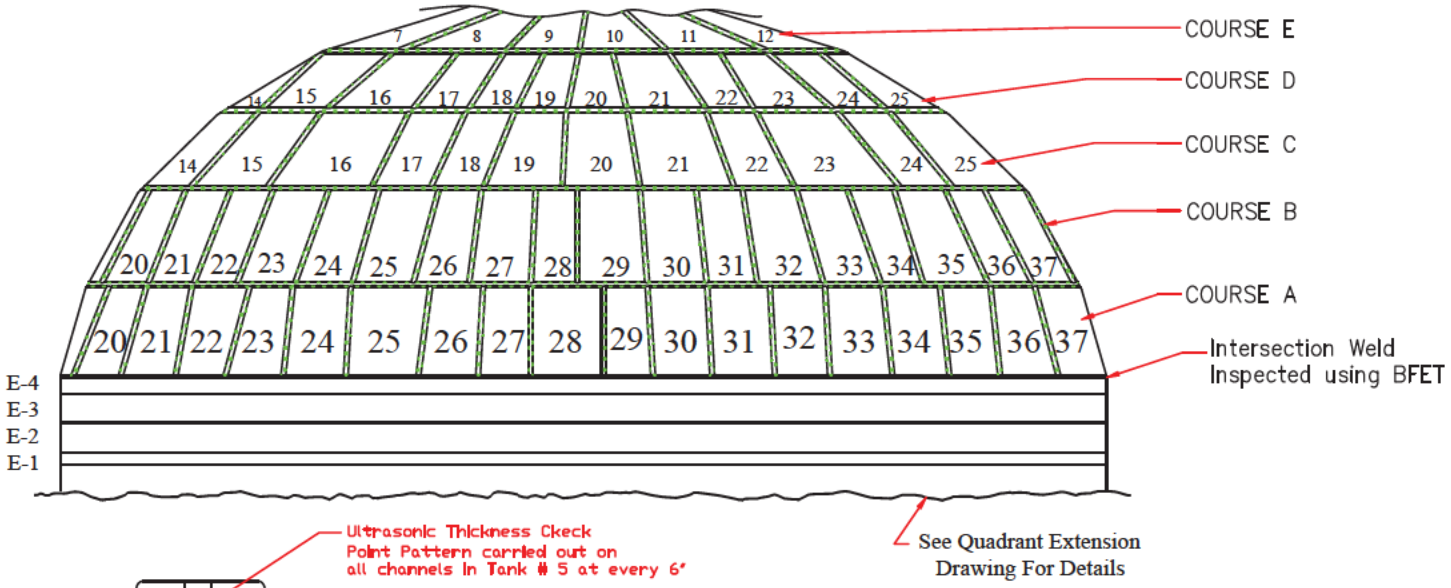
Drawing is not to scale

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5

TANK # 5 - QUADRANT - A UPPER DOME (SECTIONS)



TANK # 5 - QUADRANT - B UPPER DOME (SECTIONS)

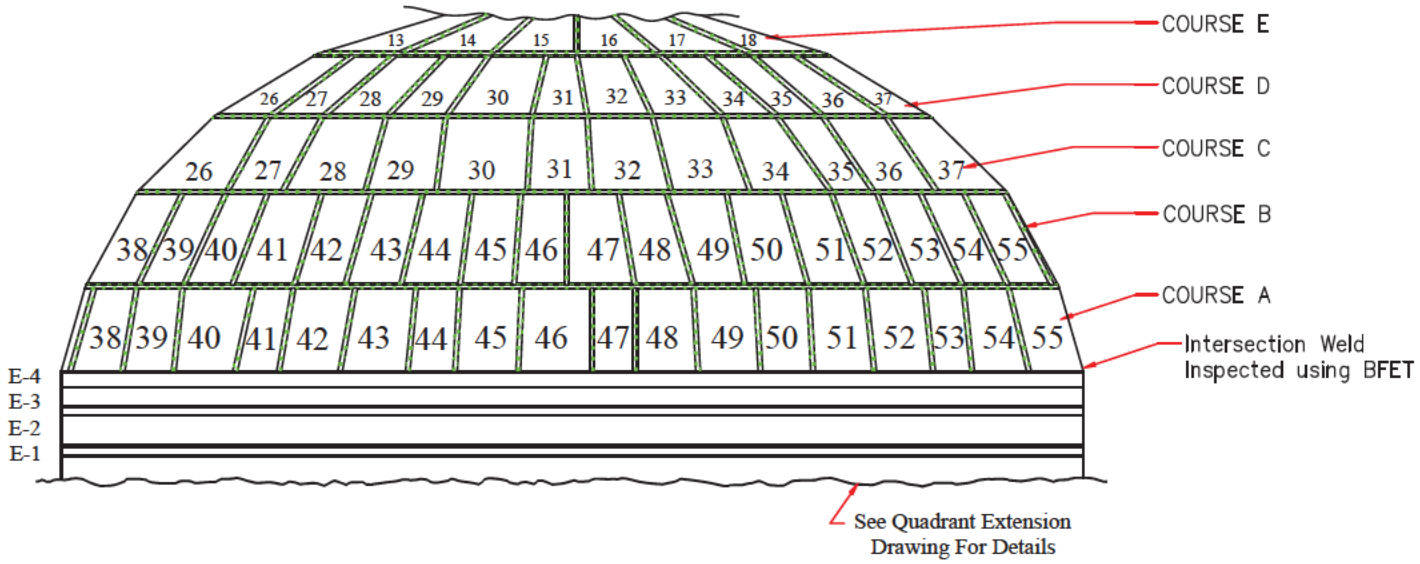


Drawing is not to scale

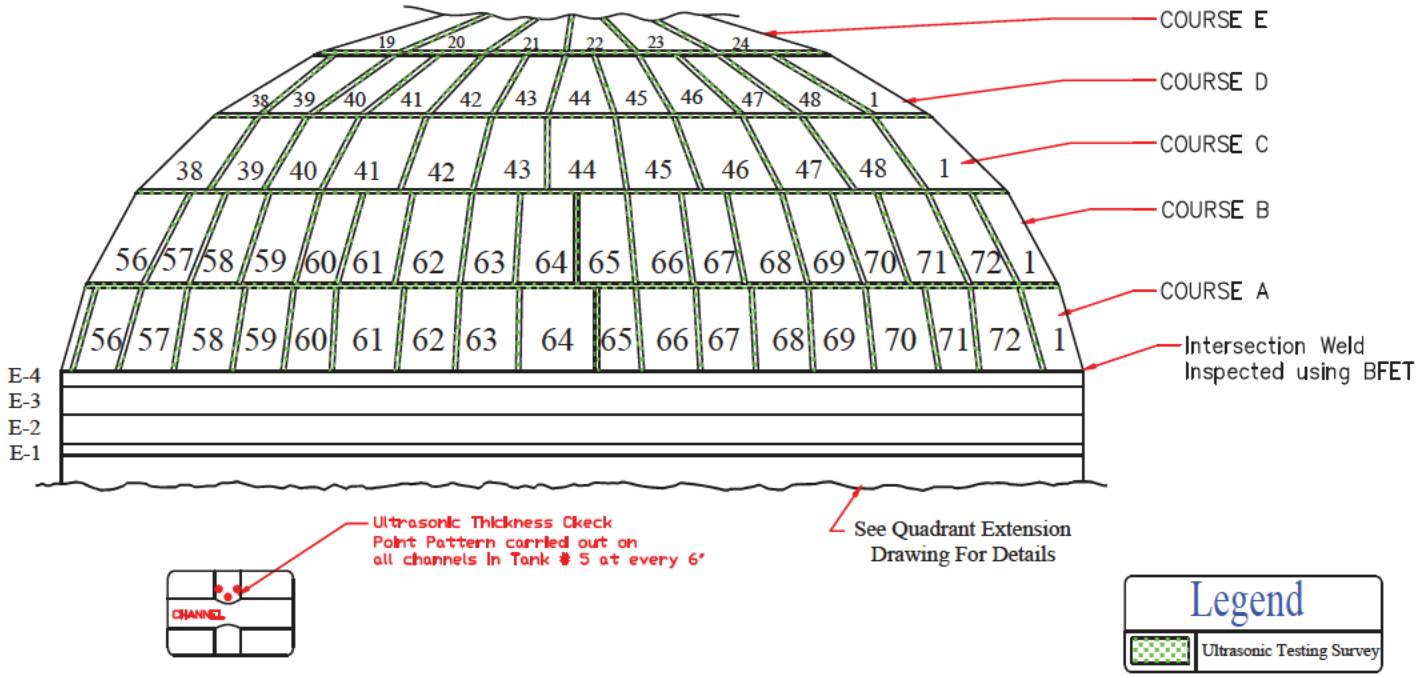
Legend
Ultrasonic Testing Survey

TANK MAPS
Willbros Government Services, LLC
Tulsa, OK
Tank #5

TANK # 5 - QUADRANT - C UPPER DOME (SECTIONS)

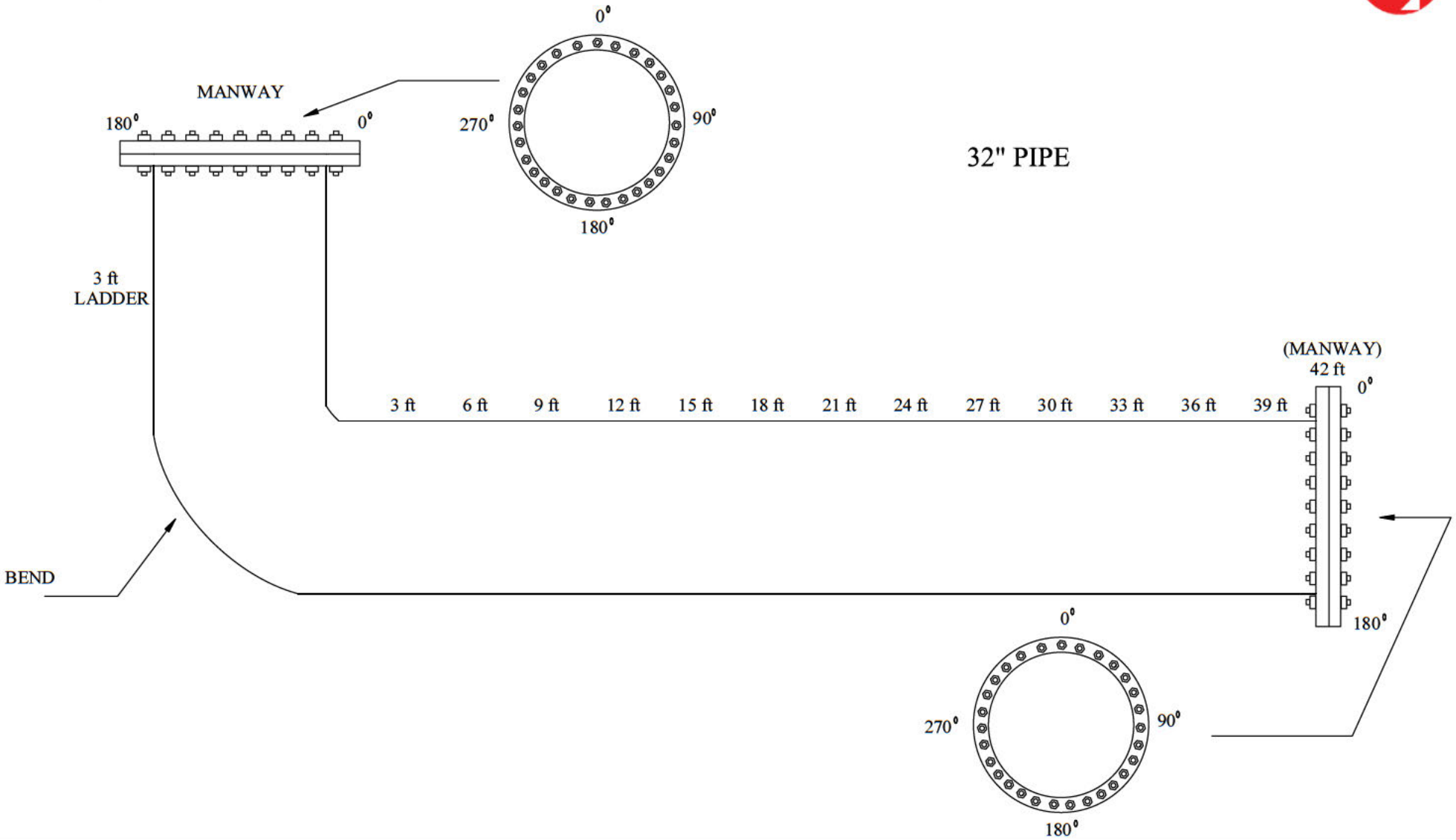


TANK # 5 - QUADRANT - D UPPER DOME (SECTIONS)



Drawing is not to scale

3.0 PIPE MAP
WILLBROS GOVERMENT SERVICES, LLC
RED HILLS FUEL COMPLEX
HONOLULU, HI



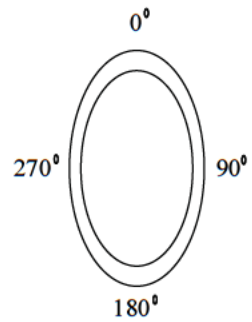
4.0 ULTRA SONIC READINGS
WILLBROS GOVERNMENT SERVICES. LLC
RED HILLS FUEL COMPLEX
HONOLULU, HI
32" PIPE

3 FT LADDER	0˚	0.398"	BEND	0˚	0.396"
	45˚	0.403"		45˚	0.412"
	90˚	0.426"		90˚	0.407"
	135˚	0.398"		135˚	0.397"
	180˚	0.410"		180˚	0.388"
	225˚	0.403"		225˚	0.417"
	270˚	0.428"		270˚	0.393"
	315˚	0.392"		315˚	0.407"
3 FT	0˚	0.378"	6 FT	0˚	0.390"
	45˚	0.376"		45˚	0.387"
	90˚	0.403"		90˚	0.388"
	135˚	0.406"		135˚	0.415"
	180˚	0.403"		180˚	0.428"
	225˚	0.381"		225˚	0.381"
	270˚	0.379"		270˚	0.387"
	315˚	0.382"		315˚	0.385"
9 FT	0˚	0.395"	12 FT	0˚	0.391"
	45˚	0.401"		45˚	0.392"
	90˚	0.391"		90˚	0.390"
	135˚	0.407"		135˚	0.396"
	180˚	0.364"		180˚	0.378"
	225˚	0.410"		225˚	0.374"
	270˚	0.419"		270˚	0.385"
	315˚	0.395"		315˚	0.387"
15 FT	0˚	0.387"	18 FT	0˚	0.383"
	45˚	0.388"		45˚	0.415"
	90˚	0.405"		90˚	0.399"
	135˚	0.391"		135˚	0.427"
	180˚	0.396"		180˚	0.407"
	225˚	0.371"		225˚	0.440"
	270˚	0.380"		270˚	0.403"
	315˚	0.388"		315˚	0.398"

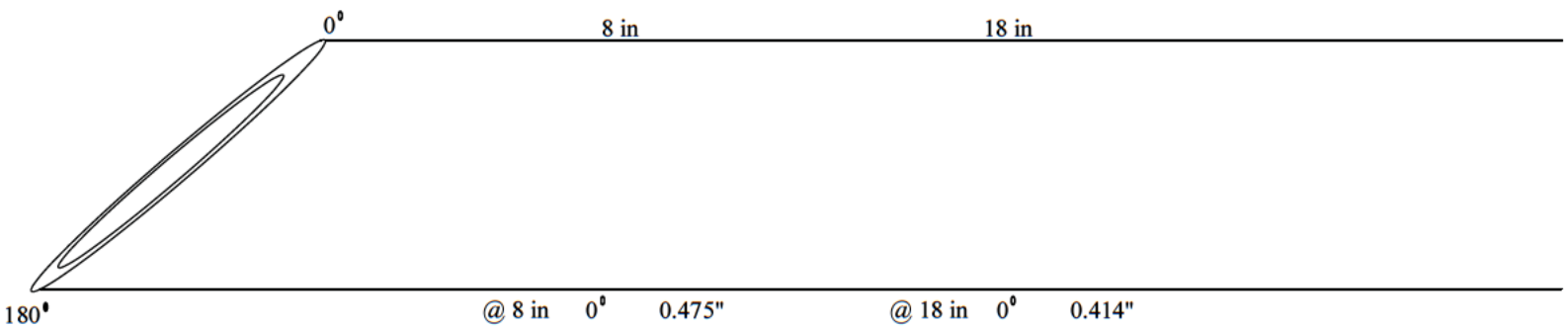
4.0 ULTRA SONIC READINGS
WILLBROS GOVERNMENT SERVICES. LLC
RED HILLS FUEL COMPLEX
HONOLULU, HI
32" PIPE

21 FT	0˚	0.412"	24 FT	0˚	0.387"	
	45˚	0.390"		45˚	0.394"	
	90˚	0.395"		90˚	0.400"	
	135˚	0.430"		135˚	0.466"	
	180˚	0.411"		180˚	0.441"	
	225˚	0.408"		225˚	0.445"	
	270˚	0.400"		270˚	0.443"	
	315˚	0.396"		315˚	0.428"	
27 FT	0˚	0.383"	30 FT	0˚	0.382"	
	45˚	0.407"		45˚	0.383"	
	90˚	0.393"		90˚	0.392"	
	135˚	0.403"		135˚	0.406"	
	180˚	0.415"		180˚	0.411"	
	225˚	0.413"		225˚	0.400"	
	270˚	0.400"		270˚	0.397"	
	315˚	0.393"		315˚	0.410"	
33 FT	0˚	0.383"	36 FT	0˚	0.373"	
	45˚	0.385"		45˚	0.399"	
	90˚	0.395"		90˚	0.387"	
	135˚	0.400"		135˚	0.393"	
	180˚	0.404"		180˚	0.400"	
	225˚	0.403"		225˚	0.393"	
	270˚	0.401"		270˚	0.396"	
	315˚	0.399"		315˚	0.390"	
39 FT	0˚	0.374"	42 FT	0˚	0.372"	
	45˚	0.369"	MANWAY	45˚	0.380"	
	90˚	0.374"		90˚	0.371"	
	135˚	0.370"		135˚	0.350"	PATCH
	180˚	0.373"		180˚	0.370"	
	225˚	0.373"		225˚	0.344"	
	270˚	0.371"		270˚	0.369"	
	315˚	0.371"		315˚	0.380"	

3.0 PIPE MAP
WILLBROS GOVERMENT SERVICES, LLC
RED HILLS FUEL COMPLEX
HONOLULU, HI



18" PIPE



@ 8 in	0°	0.475"	@ 18 in	0°	0.414"
	90°	0.450"		90°	0.420"
	180°	0.450"		180°	0.420"
	270°	0.425"		270°	0.416"

4.0 INSPECTION FLAW SUMMARY

Willbros Government Services, LLC
Tulsa, OK
Tank #5

Flaw No.	Tank Section	Quad	Row/Course	Plate	Description of Flaw	R. Thickness	Date
1	Lower Dome	A	1	11	Wall Loss	0.175	19-Aug
2	Lower Dome	B	1	12	Wall Loss	0.215	19-Aug
3	Lower Dome	B	1	12	Wall Loss	0.245	19-Aug
4	Lower Dome	B	1	13	Wall Loss	0.193	19-Aug
5	Lower Dome	A	1	6	Wall Loss	0.240	19-Aug
6	Lower Dome	B	2	25	Wall Loss	0.235	20-Aug
7	Lower Dome	B	2	34	Wall Loss	0.233	20-Aug
8	Lower Dome	C	2	37	Wall Loss	0.235	20-Aug
9	Lower Dome	D	2	56	Wall Loss	0.238	20-Aug
10	Lower Dome	D	2	56	Wall Loss	0.235	20-Aug
11	Lower Dome	D	2	61	Wall Loss	0.240	20-Aug
12	Lower Dome	A	1	3, 4	WD (Insufficient fill)	0.080 deep, 1.5" long	19-Aug
13	Lower Dome	A	1	10, 11	WD (Insufficient fill)	0.090 deep, 1" long	19-Aug
14	Lower Dome	A	1	10, 11	WD (Insufficient fill)	0.080 deep, 1" long	19-Aug
15	Floor	N/A	N/A	2	Wall Loss	0.490	18-Aug
16	Lower Dome	A	2	15, 16	WD (Surface dent)	0.150 deep	23-Aug
17	Lower Dome	A	2	15	Dent	0.260 deep	23-Aug
18	Lower Dome	B	2	17	Wall Loss	0.240	23-Aug
19	Lower Dome	A	2	16	Dent	No Data	23-Aug
20	Lower Dome	A	2	5	Wall Loss	0.240	23-Aug
21	Lower Dome	A	2, 3	8	WD (Linear)	0.050 deep, 6" long	23-Aug
22	Lower Dome	B	2, 3	19	WD (Surface indication)	0.030 deep, 5" long	23-Aug
23	Lower Dome	D	2	57	Wall Loss	0.237	23-Aug
24	Lower Dome	D	2	58, 59	WD (Surface indication)	No U.T. indication	23-Aug
25	Lower Dome	B	2	31	Wall Loss	0.240	24-Aug
26	Lower Dome	B	2	31	Wall Loss	0.240	24-Aug
27	Lower Dome	B	2	31	Wall Loss	0.240	24-Aug
28	Lower Dome	B	2	31	Wall Loss	0.240	24-Aug
29	Lower Dome	B	3	33, 34	WD (Excessive cap)	No U.T. indication	24-Aug
30	Lower Dome	B	3	34	Wall Loss	0.240	24-Aug
31	Lower Dome	B	3	34	Wall Loss	0.236	24-Aug
32	Lower Dome	B	2	34	Wall Loss	0.240	24-Aug
33	Lower Dome	B	3	32	Grout Nozzle	0.149 (0.186 - 0.190)	24-Aug

4.0 INSPECTION FLAW SUMMARY

Willbros Government Services, LLC

Tulsa, OK

Tank #5

Flaw No.	Tank Section	Quad	Row/Course	Plate	Description of Flaw	R. Thickness	Date
34	Lower Dome	B	4	32	Wall Loss	0.228	24-Aug
35	Lower Dome	B	4	32	Wall Loss	0.240	24-Aug
36	Lower Dome	C	3	50	Wall Loss	0.236	25-Aug
37	Lower Dome	C	3	49	Surface side gouge	0.085 deep	25-Aug
38	Lower Dome	D	3	54	Wall Loss	0.236	25-Aug
39	Lower Dome	C	3	51	Grout Nozzle	0.146	25-Aug
40	Lower Dome	B	3	26	Wall Loss	0.230	25-Aug
41	Lower Dome	B	3	21	Tack weld	Light scaling	25-Aug
42	Lower Dome	B	4	20	Wall Loss	0.171	25-Aug
43	Lower Dome	B	3	19	Surface indication	0.080 deep, 3" long	25-Aug
44	Lower Dome	A	4	17	Wall Loss	0.230 - 0.240	25-Aug
45	Lower Dome	A	4	17	Wall Loss	0.230	25-Aug
46	Lower Dome	A	4	5	Wall Loss	0.238	26-Aug
47	Lower Dome	A	4	14	WD (Surface indication)	No U.T. indication	26-Aug
48	Lower Dome	A	4	14	No Indication	NRI	26-Aug
49	Lower Dome	A	4	9	No Indication	NRI	26-Aug
50	Lower Dome	D	4	50	Wall Loss	0.239	26-Aug
51	Barrel	D	3, 4 **(26, 25)**	16	Wall Loss (Around PP)	0.218	27-Aug
52	Barrel	D	5 **(24)**	16	Wall Loss (Around PP)	0.219	27-Aug
53	Barrel	D	2 **(27)**	15	Wall Loss	0.209	27-Aug
54	Barrel	D	2 **(27)**	15	Wall Loss (Around PP)	0.137	27-Aug
55	Barrel	D	2 **(27)**	15	Wall Loss (Around PP)	0.208	27-Aug
56	Barrel	A	7 **(22)**	2	No Indication	NRI	27-Aug
57	Barrel	A	19 **(10)**	1	Wall Loss	0.239	27-Aug
58	Barrel	A	22 **(7)**	1	Surface indication	0.020 deep, 5" long	27-Aug
59	Barrel	A	19 **(10)**	2	Surface indication	6" long	27-Aug
60	Barrel	A	12 **(17)**	1	Surface indication	No U.T. indication	30-Aug
61	Barrel	A	10 **(19)**	2	Surface indication (Centerli	0.030 deep, 3" long	30-Aug
62	Barrel	A	10 **(19)**	2	Surface indication (Centerli	0.050 deep, 5" long	30-Aug
63	Barrel	A	28 **(1)**	2	Wall Loss (Around PP)	0.237	30-Aug
64	Barrel	A	20 **(9)**	2	Wall Loss	0.239	30-Aug
65	Barrel	A	20 **(9)**	3	Wall Loss	0.240	30-Aug
66	Barrel	A	15 **(14)**	3	Surface indication	5" long	30-Aug
67A	Barrel	A	21 **(8)**	3	Weld Defect (Undercutting)	0.125 deep, 5" long	30-Aug
67B	Barrel	A	21 **(8)**	3	Wall Loss	0.236	30-Aug

4.0 INSPECTION FLAW SUMMARY

Willbros Government Services, LLC

Tulsa, OK

Tank #5

Flaw No.	Tank Section	Quad	Row/Course	Plate	Description of Flaw	R. Thickness	Date
68	Barrel	D	9 **(20)**	15	Wall Loss (Around PP)	0.214	30-Aug
69	Barrel	D	13 **(16)**	15	Wall Loss (Around PP)	0.187	30-Aug
70	Barrel	D	3 **(26)**	15	Wall Loss (Around PP)	0.186	30-Aug
71	Barrel	D	3 **(26)**	15	Wall Loss (Around PP)	0.177	30-Aug
72	Barrel	D	7 **(22)**	15	Wall Loss (Around PP)	0.208	30-Aug
73	Barrel	D	2 **(27)**	14	Wall Loss (Around PP)	0.157	30-Aug
74	Barrel	D	2 **(27)**	15	Wall Loss	0.186	30-Aug
75	Barrel	D	19 **(10)**	16	Wall Loss (Around PP)	0.208	30-Aug
76	Barrel	D	19 **(10)**	16	Wall Loss (Around PP)	0.186	30-Aug
77	Barrel	D	23, 24 **(6, 5)**	15, 16	Wall Loss (On PP)	0.190	30-Aug
78	Barrel	D	20	15	Wall Loss (On PP)	0.198	31-Aug
79	Barrel	D	17,18	15	Wall Loss (On PP)	0.190	31-Aug
80	Barrel	D	7	15	Wall Loss (On PP)	0.208	31-Aug
81	Barrel	D	11	15	Wall Loss (Around PP)	0.186	31-Aug
82	Barrel	D	10	15	Wall Loss (Around PP)	0.209	31-Aug
83	Barrel	A	26	4	Wall Loss	0.239	31-Aug
84	Barrel	A	28	3	Wall Loss	0.210	31-Aug
85	Barrel	A	10	3	Wall Loss	0.238	31-Aug
86	Barrel	A	24	4	Wall Loss (On PP)	0.241	31-Aug
87	Barrel	A	7	3	Wall Loss (Around PP)	0.227 - 0.243	31-Aug
88	Barrel	A	8	3	Wall Loss (Around PP)	0.233	31-Aug
89	Barrel	A	3	3	Surface indication	0.040 deep, 5" long	31-Aug
90	Barrel	A	5	3	Surface indication	0.030 deep, 9" long	31-Aug
91	Barrel	A	5	3	Grout Nozzle	0.170 (0.227 - 0.232)	31-Aug
92	Barrel	A	2	3	Wall Loss	0.238	31-Aug
93	Barrel	A	2	4	Wall Loss	0.240	31-Aug
94	Barrel	A	27	2	Grout Nozzle	0.210 (0.221 - 0.239)	31-Aug
95	Barrel	A	19	2	Grout Nozzle	0.149 (0.188 - 0.195)	31-Aug
96	Barrel	A	19	2	Wall Loss	0.239	31-Aug
97	Barrel	A	18	3	Surface indication	7" long	31-Aug
98	Barrel	A	12	3	Surface gouging	No Data	31-Aug
99	Barrel	A	21	1	Surface indication	0.050 deep, 3" long	31-Aug
100	Barrel	A	25	2	Surface indication	21" long, no depth	31-Aug
101	Barrel	D	1	14	Wall Loss	0.174	1-Sep
102	Barrel	D	1	14	Wall Loss	0.167	1-Sep
103	Barrel	D	1	14	Wall Loss	0.208	1-Sep

4.0 INSPECTION FLAW SUMMARY

Willbros Government Services, LLC

Tulsa, OK

Tank #5

Flaw No.	Tank Section	Quad	Row/Course	Plate	Description of Flaw	R. Thickness	Date
104	Barrel	D	22	14	Wall Loss	0.137	1-Sep
105	Barrel	D	26	15	Wall Loss (On PP)	0.186	1-Sep
106	Barrel	D	26	15	Wall Loss (On PP)	0.189	1-Sep
107	Barrel	D	26	15	Wall Loss (Around PP)	0.203	1-Sep
108	Barrel	D	1	14	Wall Loss (On PP)	0.115	1-Sep
109	Barrel	A	4	4	Wall Loss (Around PP)	0.210	1-Sep
110	Barrel	A	16	4	Wall Loss (On PP)	0.240	1-Sep
111	Barrel	A	2	4	Wall Loss (On PP)	0.239	1-Sep
112	Barrel	A	3	3	Wall Loss (On PP)	0.195	1-Sep
113	Barrel	B	12	5	Grout Nozzle	0.197 (0.205 - 0.211)	1-Sep
114	Barrel	A	15	4	Wall Loss (On PP)	0.157	2-Sep
115	Barrel	B	8	4	Surface indication	No U.T. indication	2-Sep
116	Barrel	A	26	4	Surface indication	6" long	2-Sep
117	Barrel	A	26	4	Surface indication	0.020 deep, 4" long	2-Sep
118	Barrel	A	26	4	Surface indication	0.020 deep, 4" long	2-Sep
119	Barrel	A	25	4	No Indication	NRI	2-Sep
120	Barrel	A	25	4	No Indication	NRI	2-Sep
121	Barrel	A	23	4	Wall Loss (On PP)	0.240	2-Sep
122	Barrel	A	19	4	Grout Nozzle	0.151 (0.205 - 0.211)	2-Sep
123	Barrel	A	5	4	Grout Nozzle	0.206 (0.201 - 0.211)	2-Sep
124	Barrel	A	17	4	Surface gouging	0.020 deep	2-Sep
125	Barrel	A	16	4	Wall Loss (Around PP)	0.230	2-Sep
126	Barrel	A	16	4	Surface indication	0.030 deep, 12" long	2-Sep
127	Barrel	A	16	4	Surface indication	0.030 deep, 4" long	2-Sep
128	Barrel	A	16	4	Wall Loss (On PP)	0.237	2-Sep
129	Barrel	B	4	5	Wall Loss	0.230	2-Sep
130	Barrel	A	27	4	Grout Nozzle	0.207 (0.203 - 0.210)	2-Sep
131	Barrel	D	24	14	Wall Loss (Around PP)	0.139	2-Sep
132	Barrel	D	16, 17	14, 15	Wall Loss (On PP)	0.177	2-Sep
133	Barrel	D	16	14	Wall Loss (On PP)	0.185	2-Sep
134	Barrel	D	2	14	Wall Loss (Around PP)	0.171	2-Sep
135	Barrel	D	2	14	Wall Loss (Around PP)	0.184	2-Sep
136	Barrel	D	5	13	Wall Loss (Around PP)	0.197	2-Sep
137	Barrel	D	10	14	Wall Loss (Around PP)	0.196 - 0.205	2-Sep
138	Barrel	D	23	14	Wall Loss (Around PP)	0.188	2-Sep
139	Barrel	D	24	14	Wall Loss (On PP)	0.172	2-Sep

4.0 INSPECTION FLAW SUMMARY

Willbros Government Services, LLC

Tulsa, OK

Tank #5

Flaw No.	Tank Section	Quad	Row/Course	Plate	Description of Flaw	R. Thickness	Date
140	Barrel	D	2	13	Wall Loss (Around PP)	0.180	2-Sep
141	Barrel	D	22	13	Wall Loss (On PP)	0.141	3-Sep
142	Barrel	D	16	13	Underside Pit	0.189	3-Sep
143	Barrel	B	24	5	Wall Loss (On PP)	0.238	3-Sep
144	Barrel	B	22	5	Wall Loss (On PP)	0.241	3-Sep
145	Barrel	B	10	5	Wall Loss	0.240	3-Sep
146	Barrel	B	19	5	Wall Loss (On PP)	0.240	3-Sep
147	Barrel	B	19	5	Wall Loss	0.240 -0.249	3-Sep
148	Barrel	B	15	5	Surface indication	4" long, no depth	3-Sep
149	Barrel	B	1	5	Wall Loss	0.240 - 0.245	7-Sep
150	Barrel	B	1	5	Wall Loss	0.240	7-Sep
151	Barrel	B	1	5	Wall Loss	0.240	7-Sep
152	Barrel	B	8	6	Wall Loss (Around PP)	0.239	7-Sep
153	Barrel	B	8	6	Wall Loss (Around PP)	0.242	7-Sep
154	Barrel	B	6	6	Surface indication	5" long	7-Sep
155	Barrel	B	12	6	Grout Nozzle	0.204 (0.229 - 0.238)	7-Sep
156	Barrel	B	9	5	Wall Loss	0.235	7-Sep
157	Barrel	B	26	6	Weld Defect (Undercutting)	0.045 deep	7-Sep
158	Barrel	B	14	5	Grout Nozzle	0.199 (0.217 - 0.241)	7-Sep
159	Barrel	C	27	12	Wall Loss (Around PP)	0.189	7-Sep
160	Barrel	C	28	13	Wall Loss	0.083	7-Sep
161	Barrel	C	27	12	Wall Loss (Around PP)	0.164	7-Sep
162	Barrel	C	27	12	Wall Loss	0.215	7-Sep
163	Barrel	C	27	13	Wall Loss (Around PP)	0.172	7-Sep
164	Barrel	C	25	13	Wall Loss (Around PP)	0.189	7-Sep
165	Barrel	C	9	11	Wall Loss (Around PP)	0.093 - 0.196	8-Sep
166	Barrel	C	7	11	Wall Loss (Around PP)	0.205	8-Sep
167	Barrel	C	8	12	Wall Loss (Around PP)	0.153	8-Sep
168	Barrel	C	1	11	Wall Loss	0.236	8-Sep
169	Barrel	C	1	12	Surface indication	0.060 deep, 0.250" long	8-Sep
170	Barrel	C	2	12	Wall Loss (Around PP)	0.205 - 0.217	8-Sep
171	Barrel	B	27	6	Grout Nozzle	0.203 (0.204 - 0.211)	8-Sep
172	Barrel	B	23	6	No Indication	NRI	8-Sep
173	Barrel	B	23	6	Wall Loss (On PP)	0.240	8-Sep
174	Barrel	B	19	6	Wall Loss (On PP)	0.242	8-Sep
175	Barrel	B	18	6	Surface side gouge	0.080 deep	8-Sep

4.0 INSPECTION FLAW SUMMARY

Willbros Government Services, LLC

Tulsa, OK

Tank #5

Flaw No.	Tank Section	Quad	Row/Course	Plate	Description of Flaw	R. Thickness	Date
176	Barrel	B	17	6	Surface side gouge	0.053 deep	8-Sep
177	Barrel	B	17	6	Surface side gouge	0.050 deep	8-Sep
178	Barrel	B	17	6	WD (Porosity)	0.110 deep	8-Sep
179	Barrel	B	12	7	Grout Nozzle	0.203 (0.199 - 0.206)	8-Sep
180	Barrel	B	12	7	Surface indication	0.060 deep	8-Sep
181	Barrel	B	11	6	No Indication	NRI	8-Sep
182	Barrel	B	11	6	No Indication	NRI	8-Sep
183	Barrel	B	8	7	Wall Loss (On PP)	0.240	8-Sep
184	Barrel	B	4	6	Wall Loss	0.240	8-Sep
185	Barrel	B	4	6	Wall Loss (On PP)	0.243	8-Sep
186	Barrel	B	1	6	Wall Loss (Around PP)	0.240	8-Sep
187	Barrel	B	1	6	Wall Loss	0.240 - 0.246	8-Sep
188	Barrel	B	1	6	Wall Loss (On PP)	0.240	8-Sep
189	Barrel	B	1	6	Wall Loss	0.148	8-Sep
190	Barrel	B	5	6	Grout Nozzle	0.203 (0.210 - 0.224)	8-Sep
191	Barrel	B	8	7	Wall Loss (On PP)	0.238	9-Sep
192	Barrel	B	5	7	Wall Loss (Around PP)	0.240	9-Sep
193	Barrel	B	5	7	Grout Nozzle	0.204 (0.201 - 0.209)	9-Sep
194	Barrel	B	25	7	Wall Loss	0.239	9-Sep
195	Barrel	B	10	8	Wall Loss	0.240	9-Sep
196	Barrel	B	26	7	Wall Loss	0.229	9-Sep
197	Barrel	B	19	6	Grout Nozzle	0.154 (0.202 - 0.218)	9-Sep
198	Barrel	B	1	7	Wall Loss	0.240	9-Sep
199	Barrel	B	1	7	Wall Loss (Around PP)	0.239	9-Sep
200	Barrel	C	15	11	Weld Defect (Undercutting)	0.250 deep, 2" long	9-Sep
201	Barrel	C	20	12	WD (I.D. & O.D. indication)	10 dp, 1" long 0.050 dp, 2" l	9-Sep
202	Barrel	C	26	12	Wall Loss	0.212	9-Sep
203	Barrel	C	26	11	Wall Loss (Around PP)	0.181	9-Sep
204	Barrel	C	17	11	Surface indication	0.035 deep, 0.500" long	9-Sep
205	Barrel	C	16	11	No Indication	NRI	9-Sep
206	Barrel	C	10	11	Wall Loss	0.240	9-Sep
207	Barrel	C	5	11	Wall Loss	0.212	9-Sep
208	Barrel	C	5	11	Wall Loss	0.212	9-Sep
209	Barrel	C	2	11	Weld Defect (Undercutting)	0.060 deep, 1.25" long	9-Sep
210	Barrel	C	1	11	Surface side gouging	0.050 deep	9-Sep
211	Barrel	C	6	11	Surface side gouging	0.035 deep	9-Sep

4.0 INSPECTION FLAW SUMMARY

Willbros Government Services, LLC

Tulsa, OK

Tank #5

Flaw No.	Tank Section	Quad	Row/Course	Plate	Description of Flaw	R. Thickness	Date
212	Barrel	C	4	9	Weld Defect (Undercutting)	00 deep, 1.5" long & .110 de	10-Sep
213	Barrel	C	5	8	Wall Loss	0.210	10-Sep
214	Barrel	C	19	9	Grout Nozzle	0.155 (0.197 - 0.206)	10-Sep
215	Barrel	C	13	8	Wall Loss (Around PP)	0.221	10-Sep
216	Barrel	B	21	7	Wall loss	0.234	10-Sep
217	Barrel	B	21	8	Surface side gouging	0.110 deep, 0.120 deep	10-Sep
218	Barrel	B	20	8	Wall Loss	0.195	10-Sep
219	Barrel	B	14	8	Wall Loss (Around PP)	0.232	10-Sep
220	Barrel	B	8	8	Wall Loss (On PP)	0.244	10-Sep
221	Barrel	B	7	7	Wall Loss (Around PP)	0.238 - 0.240	10-Sep
222	Barrel	B	7	7	Wall Loss	0.238	10-Sep
223	Barrel	B	7	8	Wall Loss	0.238	10-Sep
224	Barrel	B	7	8	Wall Loss	0.238	10-Sep
225	Barrel	C	12	9	Grout Nozzle	0.202 (0.201 - 0.207)	10-Sep
226	Barrel	C	2	8	Surface side gouging	0.050 deep	10-Sep
227	Barrel	C	27	9	Grout Nozzle	0.187 (0.190 - 0.201)	10-Sep
228	Barrel	C	23	8	Wall Loss (Around PP)	0.220	10-Sep
229	Under Catwalk	A/D	19	16	Grout Nozzle	0.197 (0.202 - 0.207)	13-Sep
230	Under Catwalk	A/D	10	1	Wall Loss	0.238	13-Sep
231	Under Catwalk	A/D	10	1	Wall Loss	0.237	13-Sep
232	Under Catwalk	A/D	10	1	Wall Loss	0.235	13-Sep
233	Under Catwalk	A/D	2	1	Wall Loss	0.240	13-Sep
234	Lower Dome	A/D	3	1	Grout Nozzle	0.187 (0.198 - 0.201)	13-Sep
235	Lower Dome	A/D	3	1	Grout Nozzle	0.152 (0.196 - 0.205)	13-Sep
236	Under Catwalk	A/D	6	1	Wall Loss (Around PP)	0.238	13-Sep
237	Under Catwalk	A/D	4	1	Surface side gouging	0.060 deep	13-Sep
238	Under Catwalk	A/D	24	1	Wall Loss (On PP)	0.240	13-Sep
239	Under Catwalk	A/D	21	1	Wall Loss	0.175	13-Sep
240	Under Catwalk	A/D	27	16	Grout Nozzle	0.199 (0.201 - 0.206)	13-Sep
241	Under Catwalk	A/D	27	16	Wall Loss (On PP)	0.229	13-Sep
242	Under Catwalk	A/D	26	1	Surface side gouging	0.030 deep	13-Sep
243	Under Catwalk	A/D	26	1	Wall Loss	0.178	13-Sep
244	Lower Dome	B	4	34	Wall Loss (On PP)	0.240	24-Aug
245	Lower Dome	C	3	35	Wall Loss	0.230	24-Aug
246	Lower Dome	C	3	36	Wall Loss	0.240	24-Aug
247	Lower Dome	C	2	48	Dent	0.030 deep	24-Aug

4.0 INSPECTION FLAW SUMMARY
Willbros Government Services, LLC
Tulsa, OK
Tank #5

Flaw No.	Tank Section	Quad	Row/Course	Plate	Description of Flaw	R. Thickness	Date
248	Lower Dome	C	2	48	Dent	0.030 deep	24-Aug
249	Lower Dome	C	3	35	Wall Loss	0.243	24-Aug
250	Under Catwalk	A/D	10	16	Wall Loss (On PP)	0.236	14-Sep
251	Under Catwalk	A/D	10	16	Wall Loss	0.228 - 0.240	14-Sep
252	Under Catwalk	A/D	10	1	Wall Loss (Around PP)	0.238	14-Sep
253	Under Catwalk	A/D	10	1	Wall Loss	0.234	14-Sep
254	Under Catwalk	A/D	10	1	Wall Loss (Around PP)	0.236	14-Sep
255	Under Catwalk	A/D	8	1	Wall Loss	0.178	14-Sep
256	Under Catwalk	A/D	22	1	Wall Loss (On PP)	0.240	14-Sep
257	Under Catwalk	A/D	12	1	Grout Nozzle	0.196 (0.201 - 0.207)	14-Sep
258	Under Catwalk	A/D	28	16	Wall Loss	0.237	14-Sep
259	Under Catwalk	A/D	28	1	Wall Loss	0.237	14-Sep
260	Under Catwalk	A/D	25	16	Wall Loss (On PP)	0.210	14-Sep
261	Under Catwalk	A/D	5	16	Grout Nozzle	0.160 (0.199 - 0.201)	14-Sep
262	Extension	A	E2	2	Grout Nozzle	0.180 (0.199 - 0.205)	15-Sep
263	Extension	A	E2	2	Grout Nozzle	0.180 (0.198 - 0.206)	15-Sep
264	Extension	A	E2	3	Dent	0.200 deep	15-Sep
265	Extension	A	E2	3	Dent	0.200 deep	15-Sep
266	Extension	A	E2	3	Dent	0.240 deep	15-Sep
267	Extension	A	E2	3	Grout Nozzle	0.158 (0.198 - 0.206)	15-Sep
268	Extension	A	E1	2	Grout Nozzle	0.198 (0.199 - 0.205)	15-Sep
269	Extension	A	E3	3	Wall Loss	0.232	15-Sep
270	Extension	A	E4	4	Gouge, Dent	0.020 deep, 0.120 deep	15-Sep
271	Extension	D	E4	15	Wall Loss	0.177	15-Sep
272	Extension	D	E4	16	Wall Loss	0.187	15-Sep
273	Extension	C	E2	10	Surface side gouging	0.160 deep	15-Sep
274	Extension	D	E3	15	Wall Loss	0.141 - 0.190	15-Sep
275	Extension	D	E2	16	Wall Loss (Around PP)	0.150	15-Sep
276	Extension	D	E2	16	Dent	0.150 deep	15-Sep
277	Extension	D	E2	16	Wall Loss (Around PP)	0.171	15-Sep
278	Extension	B	E1	6	Grout Nozzle	0.192 (0.181 - 0.209)	15-Sep
279	Extension	B	E2	7	Wall Loss	0.236	15-Sep
280	Extension	B	E2	8	Wall Loss	0.238	15-Sep
281	Extension	B	E2	8	Grout Nozzle	0.145 (0.199 - 0.208)	15-Sep
282	Extension	B	E3	6	Dent	0.100 deep	15-Sep
283	Extension	B	E2	7	Grout Nozzle	0.181 (0.201 - 0.206)	15-Sep

4.0 INSPECTION FLAW SUMMARY
Willbros Government Services, LLC
Tulsa, OK
Tank #5

Flaw No.	Tank Section	Quad	Row/Course		Description of Flaw	R. Thickness	Date
284	Extension	B	E2	7	Grout Nozzle	0.144 (0.197 - 0.201)	15-Sep
285	Extension	B	E4	5	Wall Loss (On PP)	0.237	15-Sep
286	Extension	B	E3	5	Wall Loss	0.232	15-Sep
287	Extension	B	E4	4	Wall Loss (On PP)	0.231	15-Sep
288	Extension	B	E4	4	Wall Loss	0.236	15-Sep
289	Extension	B	E1	4	Grout Nozzle	0.191 (0.197 - 0.203)	15-Sep
290	Extension	B	E3	7	Wall Loss	0.231	15-Sep
291	Extension	B	E3	7	Wall Loss	0.233 - 0.237	15-Sep
292	Upper Dome	D	A	72	Wall Loss	0.196	16-Sep
293	Upper Dome	A	A	10	Wall Loss	0.234	16-Sep
294	Upper Dome	A	A	10	Surface side gouge	0.080 deep	16-Sep
295	Upper Dome	A	A	10	Wall Loss (On PP)	0.233	16-Sep
296	Upper Dome	A	A	10	Wall Loss (On PP)	0.233	16-Sep
297	Upper Dome	A	A	10	Dent	0.140 deep	16-Sep
298	Upper Dome	A	A	10	Wall Loss	0.198	16-Sep
299	Upper Dome	A	A	11	Wall Loss	0.236	16-Sep
300	Upper Dome	A	A	13	Wall Loss	0.230	16-Sep
301	Upper Dome	A	A	14	Grout Nozzle	0.230 (0.221 - 0.233)	16-Sep
302	Upper Dome	A	A	14	Wall Loss	0.239	16-Sep
303	Upper Dome	B	A	21	Wall Loss	0.189	16-Sep
304	Upper Dome	B	A	22	Wall Loss	0.216	16-Sep
305	Upper Dome	B	A	22	Wall Loss (On PP)	0.230	16-Sep
306	Upper Dome	B	A	22	Wall Loss	0.239	16-Sep
307	Upper Dome	B	A	25	Wall Loss	0.236	16-Sep
308	Upper Dome	B	A	25	Wall Loss (On PP)	0.238	16-Sep
309	Upper Dome	B	A	26	Wall Loss	0.220	16-Sep
310	Upper Dome	B	A	26	Wall Loss	0.231	16-Sep
311	Upper Dome	B	A	28	Wall Loss (On PP)	0.238	16-Sep
312	Upper Dome	B	A	28	Wall Loss (On PP)	0.240	16-Sep
313	Upper Dome	B	A	31	Surface side gouging	0.100 deep	16-Sep
314	Upper Dome	B	A	31	Wall Loss	0.240	16-Sep
315	Upper Dome	B	A	31	Grout Nozzle	0.200 (0.201 - 0.211)	16-Sep
316	Upper Dome	B	A	31	Dent	0.160 deep	16-Sep
317	Upper Dome	A	A	4	Wall Loss	0.181	16-Sep
318	Upper Dome	A	A	4	No Indication	NRI	16-Sep
319	Upper Dome	A	A	4	Wall Loss	0.240	16-Sep

4.0 INSPECTION FLAW SUMMARY
Willbros Government Services, LLC
Tulsa, OK
Tank #5

Flaw No.	Tank Section	Quad	Row/Course	Plate	Description of Flaw	R. Thickness	Date
320	Upper Dome	A	A	4	Surface side Gouge	0.070 deep	16-Sep
321	Upper Dome	A	A	4	Wall Loss	0.220	16-Sep
322	Upper Dome	A	A	4	Surface side gouging	0.070 deep	16-Sep
323	Upper Dome	A	A	4	Surface side gouging	0.070 deep	16-Sep
324	Upper Dome	A	A	7	Dents	0.160 deep, 0.240 deep	16-Sep
325	Upper Dome	A	A	7	Wall Loss	0.226	16-Sep
325A	Upper Dome	C	B	37	Wall Loss	0.185	20-Sep
326	Upper Dome	C	A	51	Wall Loss	0.145	20-Sep
327	Upper Dome	C	A	47	Wall Loss	0.170	20-Sep
328	Upper Dome	D	A	68	Wall Loss	0.194	20-Sep
329	Upper Dome	D	A	67	Wall Loss	0.191	20-Sep
330	Upper Dome	D	A	67	Wall Loss	0.174	20-Sep
331	Upper Dome	D	A	64	Wall Loss	0.131	20-Sep
332	Upper Dome	A	B	3	Wall Loss (On PP)	0.230	20-Sep
333	Upper Dome	A	B	8	Dent	0.141	20-Sep
334	Upper Dome	A	B	8	Wall Loss	0.231	20-Sep
335	Upper Dome	A	B	10	Dent	0.150 deep	20-Sep
336	Upper Dome	A	B	10	Wall Loss (On PP)	0.239	20-Sep
337	Upper Dome	A	B	18	Dent	0.212	20-Sep
338	Upper Dome	B	B	19	Grout Nozzle	0.232 (0.221 - 0.240)	20-Sep
339	Upper Dome	B	B	19	Wall Loss, Dent	0.136, No Data	20-Sep
340	Upper Dome	B	B	21	Dent	0.210 deep	20-Sep
341	Upper Dome	B	B	24	Grout Nozzle	0.220 (0.215 - 0.225)	20-Sep
342	Upper Dome	B	B	24	Surface Pitting/Wall Loss	0.175	20-Sep
343	Upper Dome	B	B	22	Dent	0.250 deep	20-Sep
344	Upper Dome	B	B	25	Wall Loss	0.232	20-Sep
345	Upper Dome	B	B	25	Wall Loss	0.235	20-Sep
346	Upper Dome	B	B	27	Wall Loss	0.239	20-Sep
347	Upper Dome	B	B	28	Wall Loss	0.231	20-Sep
348	Upper Dome	B	B	29	Grout Nozzle	0.235 (0.219 - 0.226)	20-Sep
349	Upper Dome	B	B	31	Wall Loss	0.234	20-Sep
350	Upper Dome	B	B	31	Wall Loss	0.230	20-Sep
351	Upper Dome	B	B	34	Grout Nozzle	0.230 (0.219 - 0.225)	20-Sep
352	Upper Dome	B	B	35	Wall Loss	0.235	20-Sep
353	Upper Dome	B	B	35	Wall Loss	0.236	20-Sep
354	Upper Dome	C	B	44	Wall Loss	0.189	21-Sep

4.0 INSPECTION FLAW SUMMARY
Willbros Government Services, LLC
Tulsa, OK
Tank #5

Flaw No.	Tank Section	Quad	Row/Course	Plate	Description of Flaw	R. Thickness	Date
355	Upper Dome	D	B	66	Wall Loss	0.187	21-Sep
356	Upper Dome	D	C	42	Wall Loss	0.189	21-Sep
357	Upper Dome	A	C	7	Grout Nozzle	0.230 (0.208 - 0.215)	21-Sep
358	Upper Dome	A	C	7	Wall Loss	0.236	21-Sep
359	Upper Dome	A	C	7	Wall Loss	0.234	21-Sep
360	Upper Dome	A	C	5	Grout Nozzle	0.235 (0.218 - 0.225)	21-Sep
361	Upper Dome	A	C	5	Wall Loss	0.235	21-Sep
362	Upper Dome	B	C	16	Surface Pits	(0.138 - 0.208)	21-Sep
363	Upper Dome	B	C	16	Surface Pit	0.150	21-Sep
364	Upper Dome	B	C	19	Surface Pits	0.182	21-Sep
365	Upper Dome	B	C	19	Surface Pits	0.190	21-Sep
366	Upper Dome	B	C	24	Surface Pit	0.168	21-Sep
367	Upper Dome	B	C	24	Surface Pits	0.150	21-Sep
368	Upper Dome	C	C	25	Grout Nozzle	(0.219 - 0.222)	21-Sep
369	Upper Dome	B	C	20	Surface Pit	0.176	21-Sep
370	Upper Dome	B	C	20	Wall Loss (On PP)	0.232	21-Sep
371	Upper Dome	B	C	21	Surface Pit	0.190	21-Sep
372	Upper Dome	B	C	23	Grout Nozzle	0.204 (0.200 - 0.205)	21-Sep
373	Upper Dome	B	C	15	Grout Nozzle	0.232 (0.211 - 0.221)	21-Sep
374	Upper Dome	A	C	2	Dent	0.260 deep	21-Sep
375	Upper Dome	A	C	8	Wall Loss	0.240	21-Sep
376	Upper Dome	A	C	9	Wall Loss	0.237	21-Sep
377	Upper Dome	A	C	11	Wall Loss	0.230	21-Sep
378	Upper Dome	B	C	14	Wall Loss	0.230	21-Sep
379	Upper Dome	D	B	64	Wall Loss	0.187	22-Sep
380	Upper Dome	C	C	32	Surface Pit	0.125	22-Sep
381	Upper Dome	D	D	47	Surface gouge	0.150	22-Sep
382	Upper Dome	D	D	47	Surface gouge	0.125	22-Sep
383	Upper Dome	B	D	14	Wall Loss	0.231	22-Sep
384	Upper Dome	A	D	6	Wall Loss	0.238	22-Sep
385	Upper Dome	B	D	15	Dent	No Data	22-Sep
386	Upper Dome	A	D	10	Grout Nozzle	0.209 (0.209 - 0.216)	22-Sep
387	Upper Dome	A	D	5	Grout Nozzle	0.238 (0.203 - 0.212)	22-Sep
388	Upper Dome	B	D	20	Surface Pit	0.139	22-Sep
389	Upper Dome	B	D	20	Wall Loss	0.236	22-Sep
390	Upper Dome	B	D	20	Wall Loss (On PP)	0.238	22-Sep

4.0 INSPECTION FLAW SUMMARY

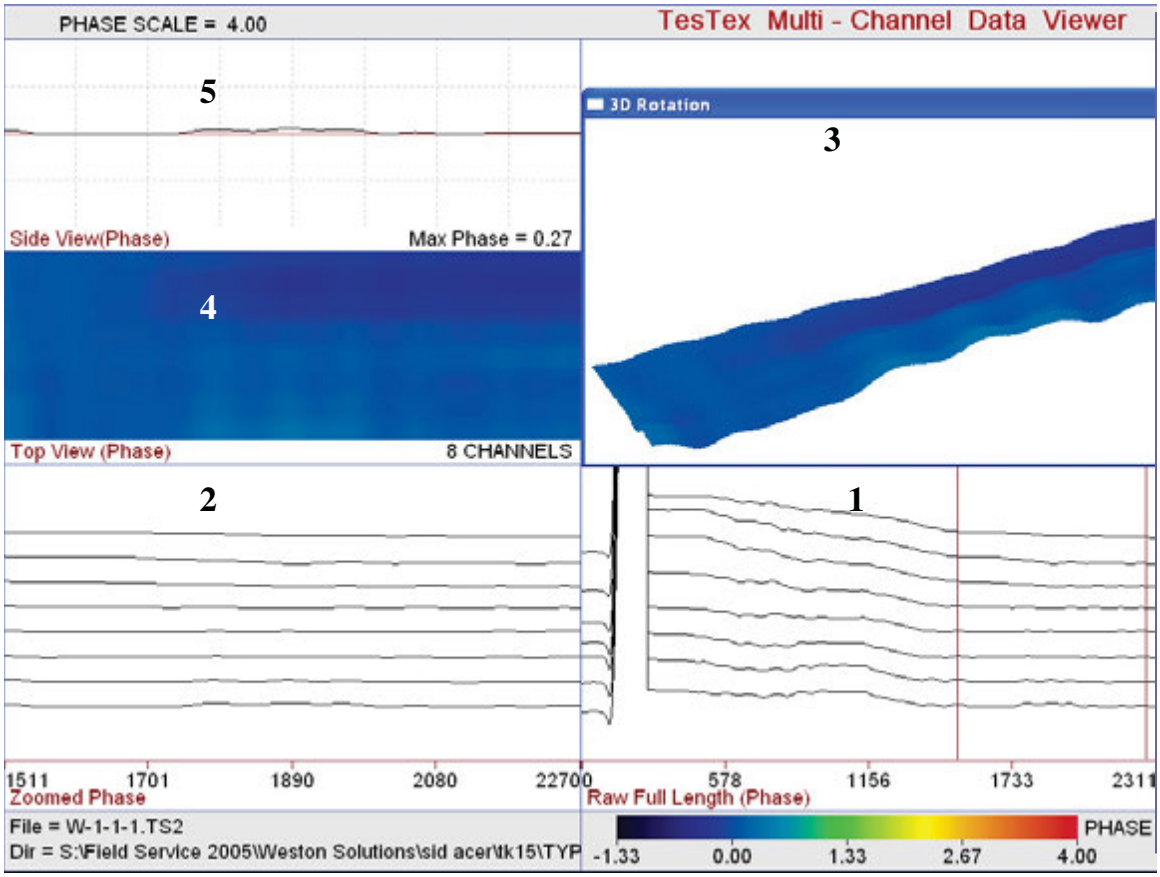
Willbros Government Services, LLC

Tulsa, OK

Tank #5

Flaw No.	Tank Section	Quad	Row/Course	Plate	Description of Flaw	R. Thickness	Date
391	Upper Dome	B	D	20	Wall Loss	0.240	22-Sep
392	Upper Dome	B	D	21	Wall Loss	0.240	22-Sep
393	Upper Dome	B	D	21	Surface side gouge	0.178	22-Sep
394	Upper Dome	C	D	25	Grout Nozzle	0.225 (0.221 - 0.229)	22-Sep
395	Upper Dome	C	D	30	Wall Loss	0.203	22-Sep
396	Upper Dome	C	D	31	Wall Loss	0.198	22-Sep
397	Upper Dome	C	D	33	Wall Loss	0.198	22-Sep
398	Upper Dome	C	D	35	Gouge	0.075 deep	22-Sep
399	Upper Dome	D	D	47	Dent	.200 deep	23-Sep
400	Upper Dome	D	D	37	Surface side gouge	0.176	23-Sep
401	LD/Floor	A	1/Floor	6, 7	WD (Linear)	1.5" long	22-Sep
402	Manway door	N/A	N/A	N/A	Surface Pit	0.212 deep	23-Sep
209A	Barrel	C	2	11	Surface side gouge	0.045 deep	9-Sep

5.0 TYPICAL WAVEFORM
Willbros Government Services, LLC
Tulsa, OK
Tank #5



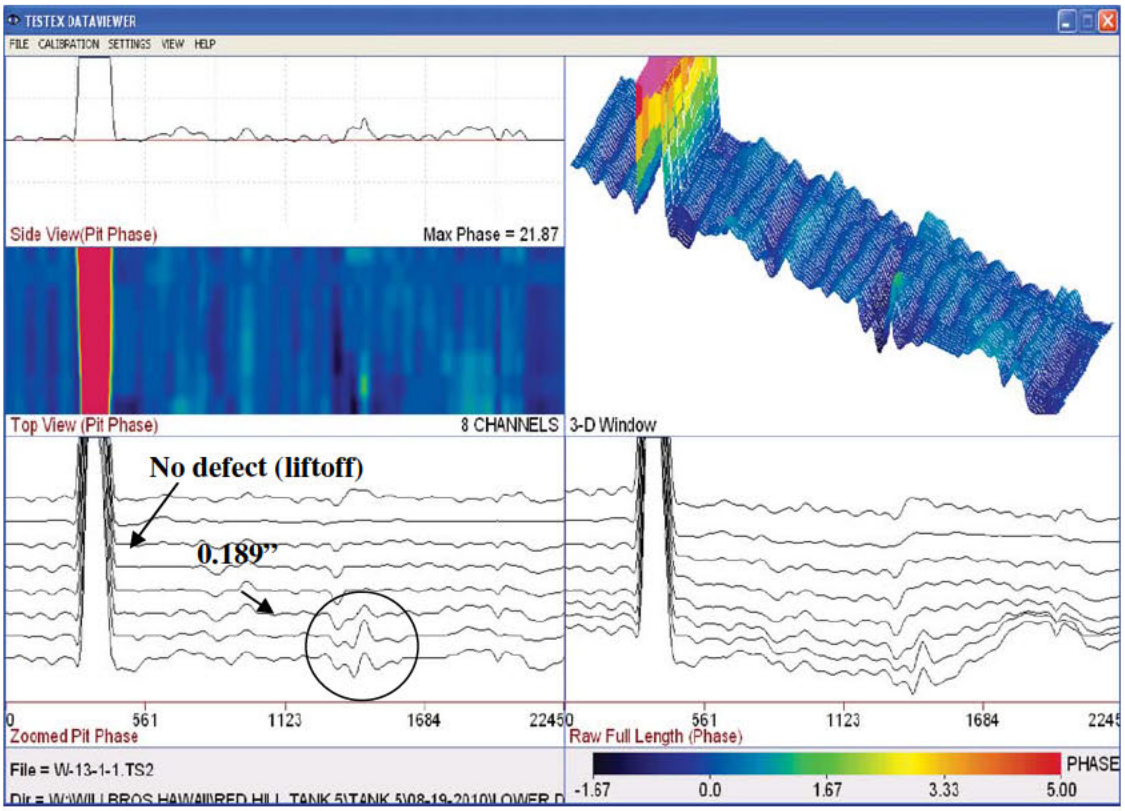
Shown above is a typical **TS-2000** waveform collected from the Barrel of Tank #15. This particular plate exhibits nominal wall thickness.

The **TS-2000** display has 5 windows to facilitate the interpretation of each plate. Window 1 shows raw data from the scanner before the signal is processed or filtered. Window 2 shows the raw data filtered and processed. Window 3 shows a 3-D view of the plate. Window 4 shows a topside view of the plate. Window shows the highest and lowest points of the plate baseline.

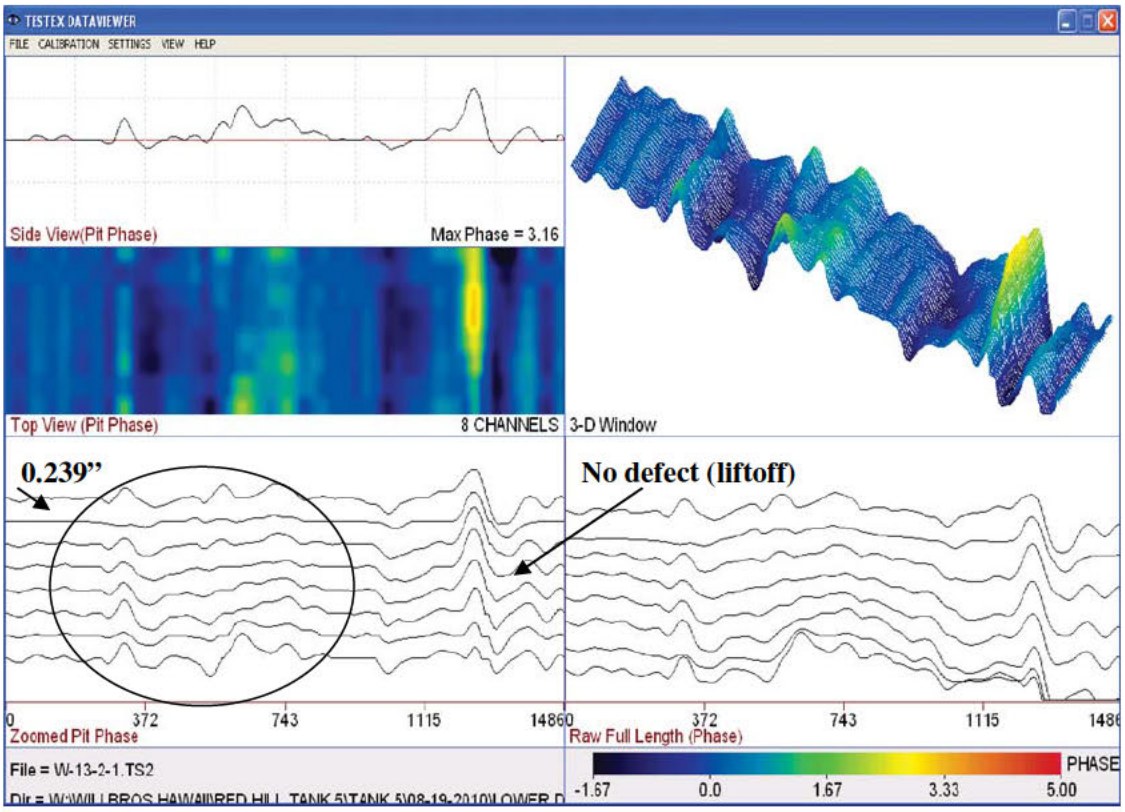
The **TS-2000** scanner is comprised of 8 sensors, which gives more sensitivity to pitting and cracking. A line in windows 1, 2, and 3 individually represents each sensor. Window 4 shows each sensor, and is color marked as it detects wall loss. Any rise in the waveform indicates wall loss. The magnitude of the response is given by a color, and is coded to the right of the waveform. From this color and comparing it to a calibration, a percent wall loss or wall remaining value can therefore be determined.

APPENDIX A – SAMPLE WAVEFORMS

APPENDIX A – SAMPLE WAVEFORMS

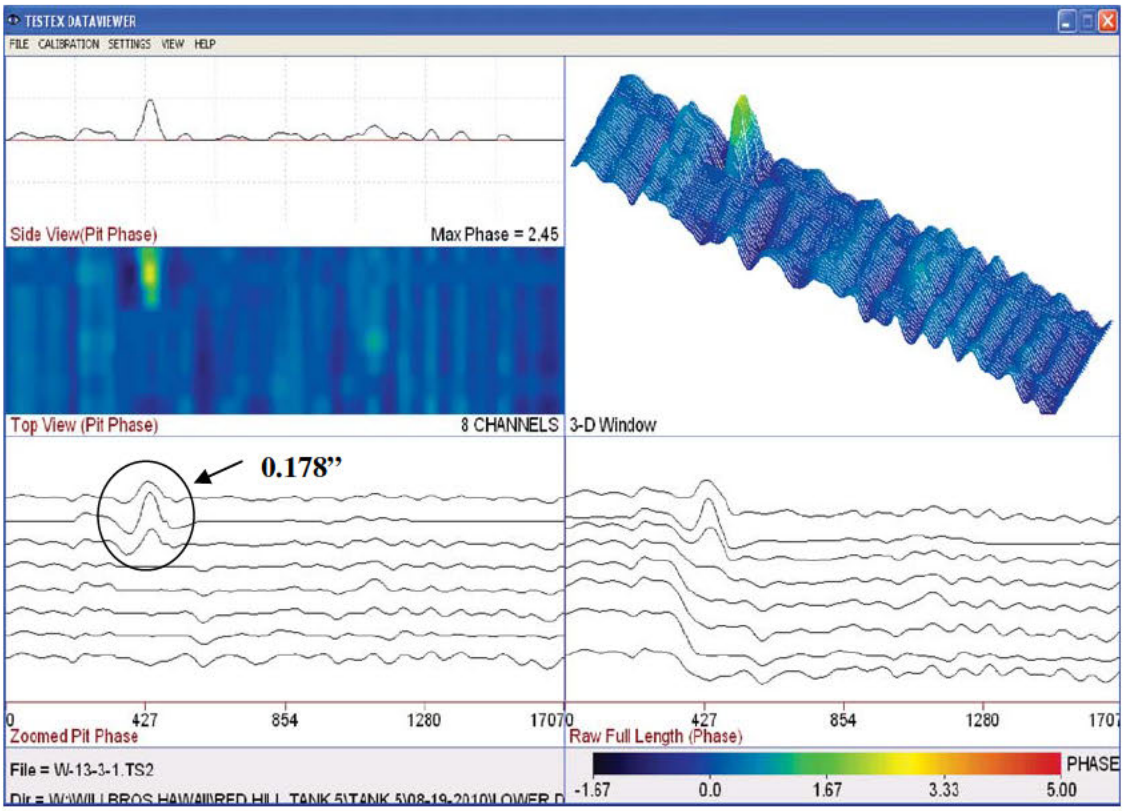


Flaw # 142: The Waveform above depicts an underside pit with 0.189" wall remaining.

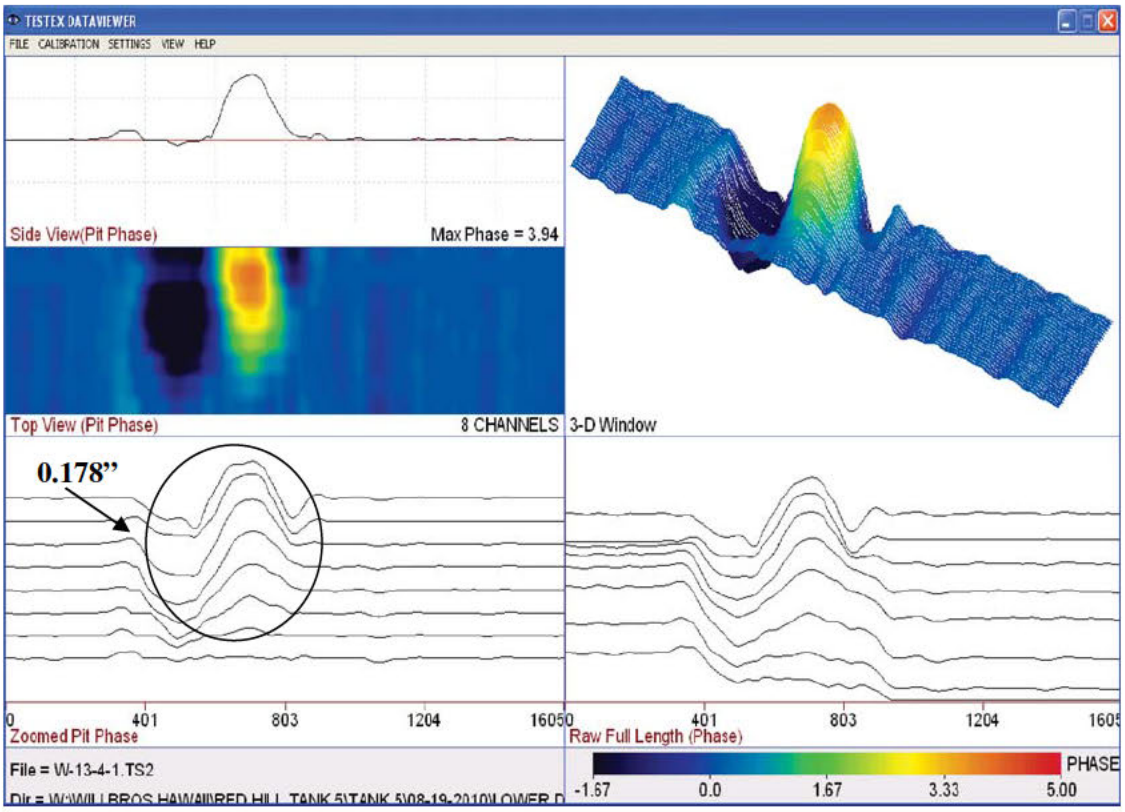


Flaw # 50: The Waveform above depicts an underside corrosion exhibiting 0.239" wall remaining

APPENDIX A – SAMPLE WAVEFORMS

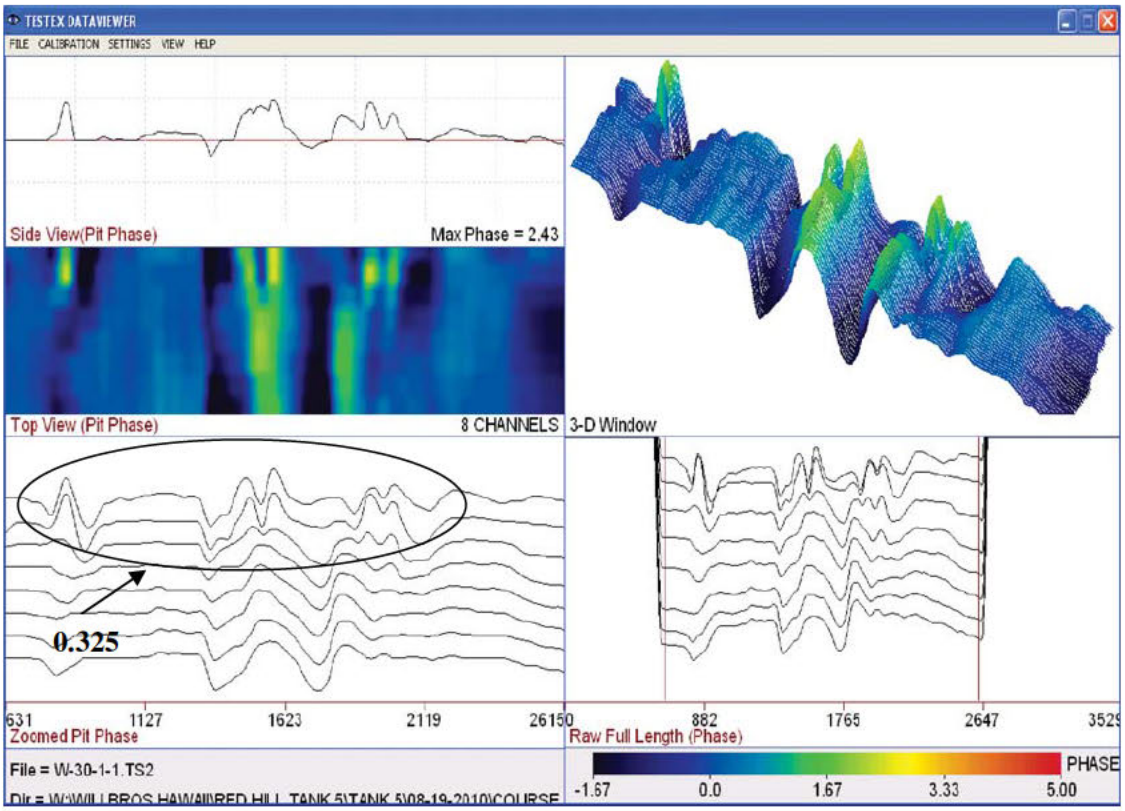


Flaw # 255: The Waveform above depicts an underside corrosion exhibiting 0.178" wall remaining

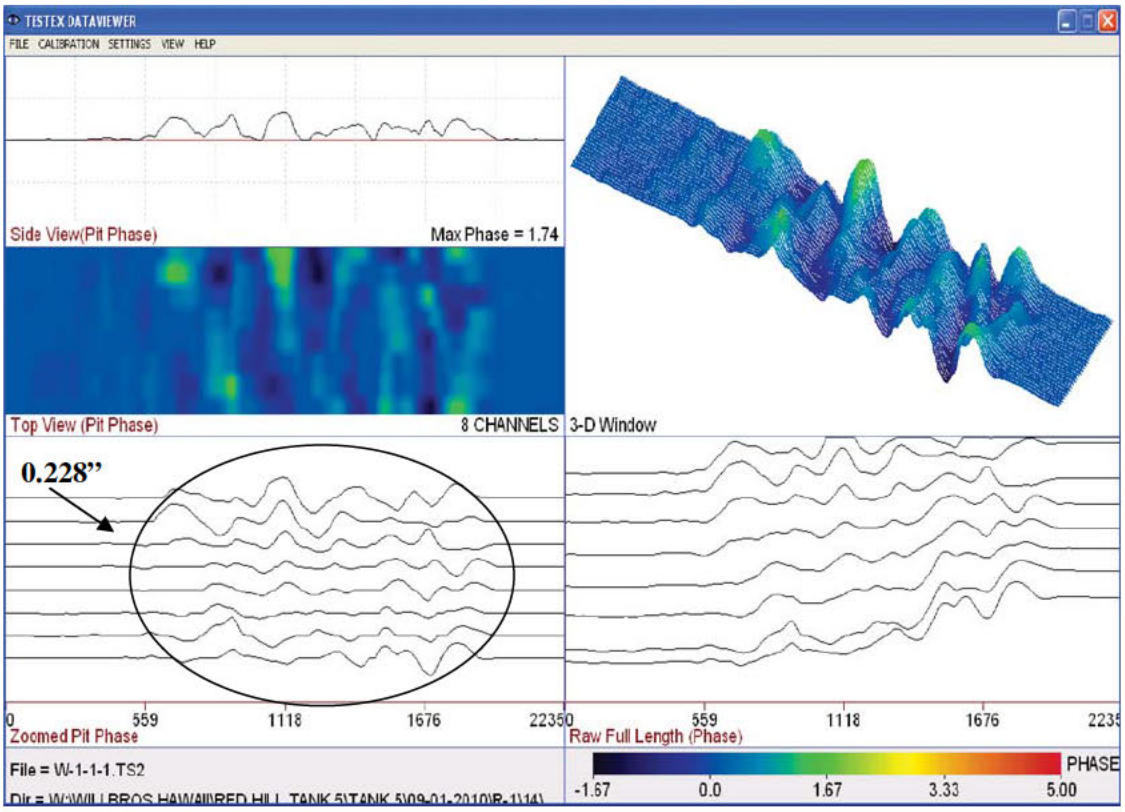


Flaw # 243: The Waveform above depicts an underside corrosion exhibiting 0.178" wall remaining

APPENDIX A – SAMPLE WAVEFORMS

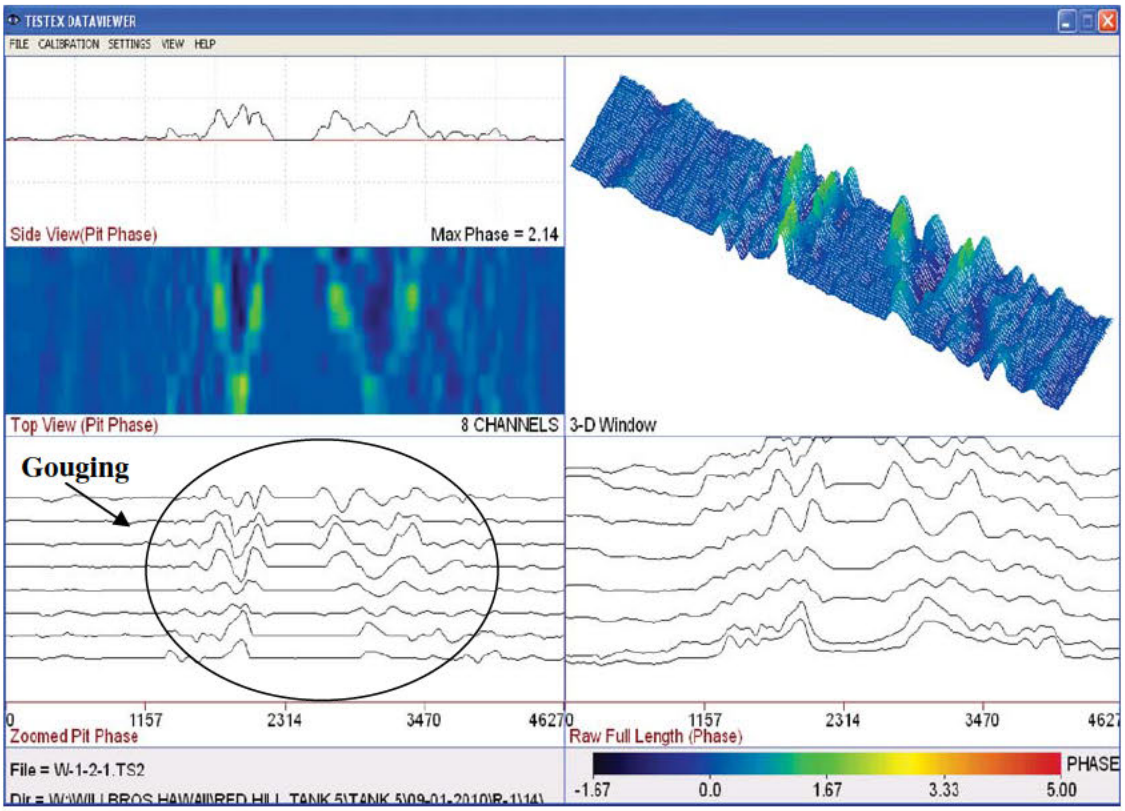


Flaw # 232: The Waveform above depicts an underside corrosion exhibiting 0.235" wall remaining

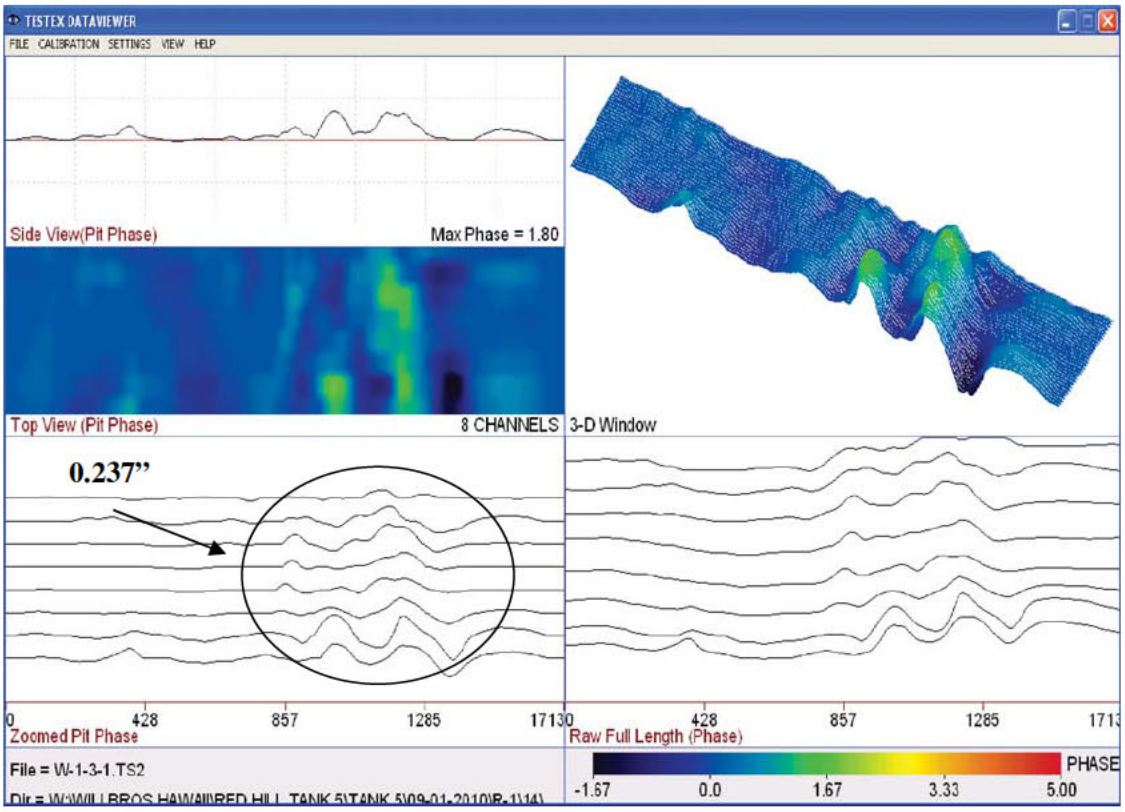


Flaw # 34: The Waveform above depicts an underside corrosion exhibiting 0.228" wall remaining

APPENDIX A – SAMPLE WAVEFORMS

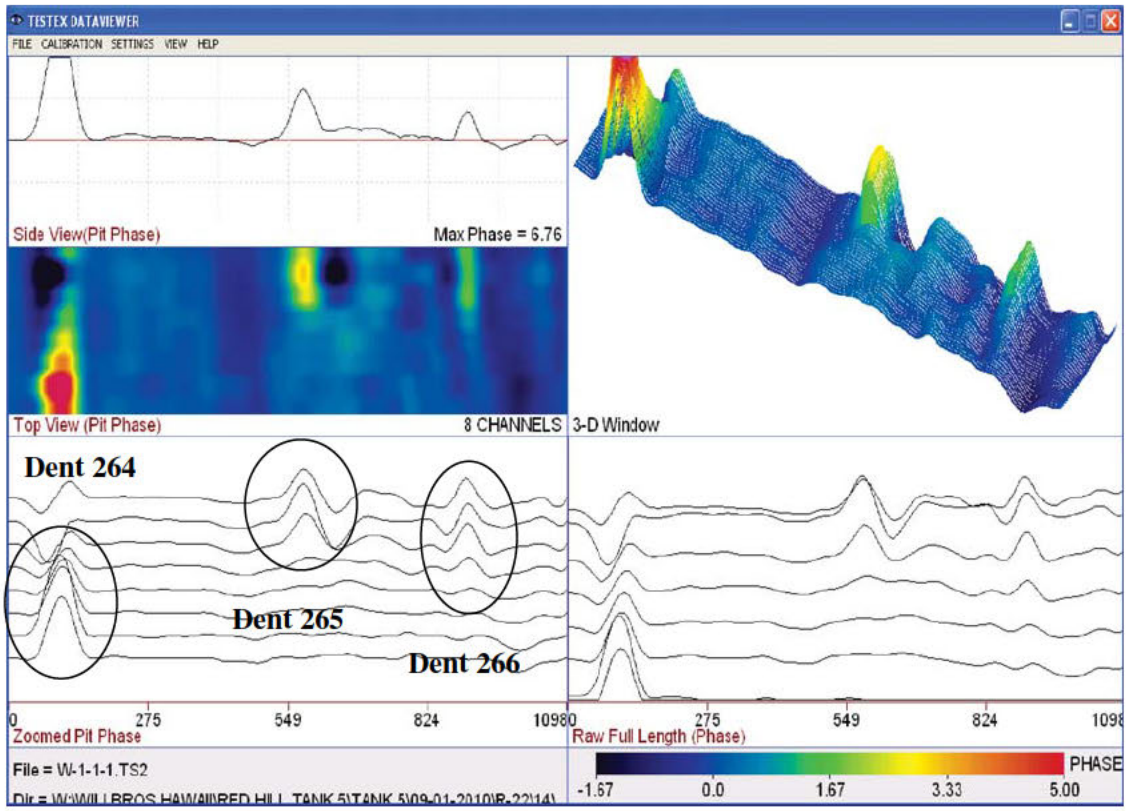


Flaw # 242: The Waveform above depicts surface side gouging 0.30" deep.

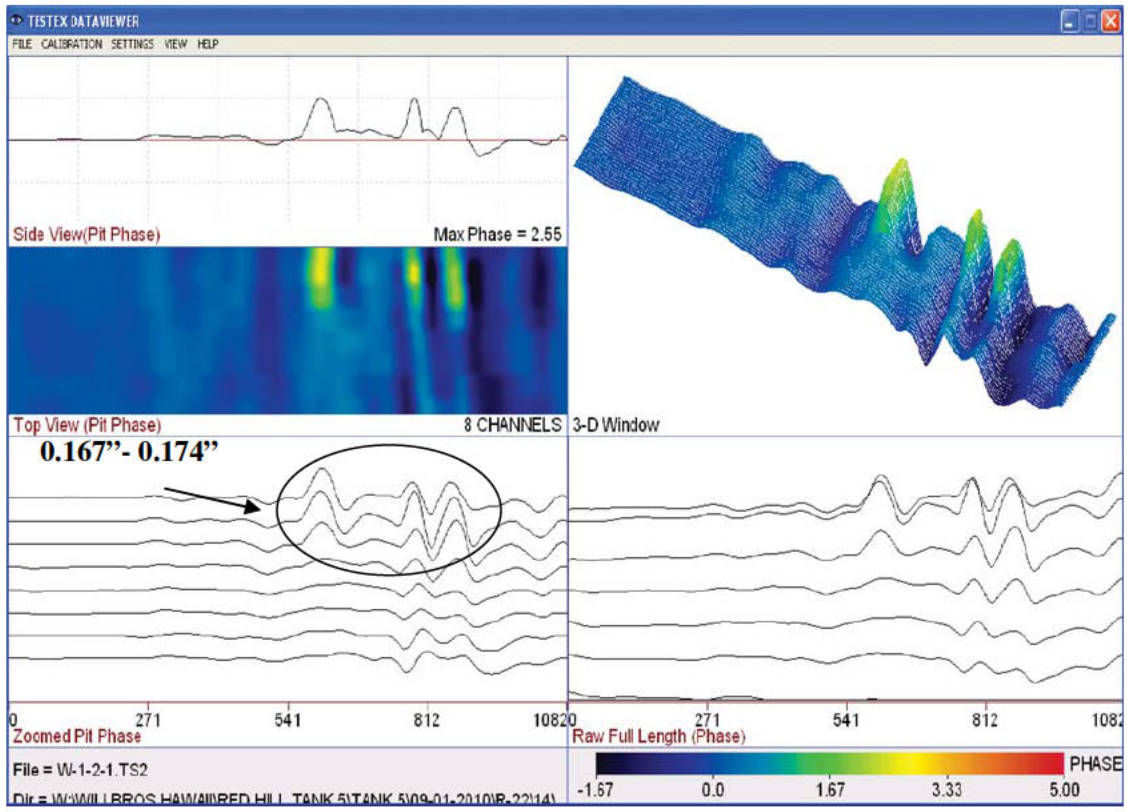


Flaw # 128: The Waveform above depicts an underside corrosion exhibiting 0.237" wall remaining.

APPENDIX A – SAMPLE WAVEFORMS

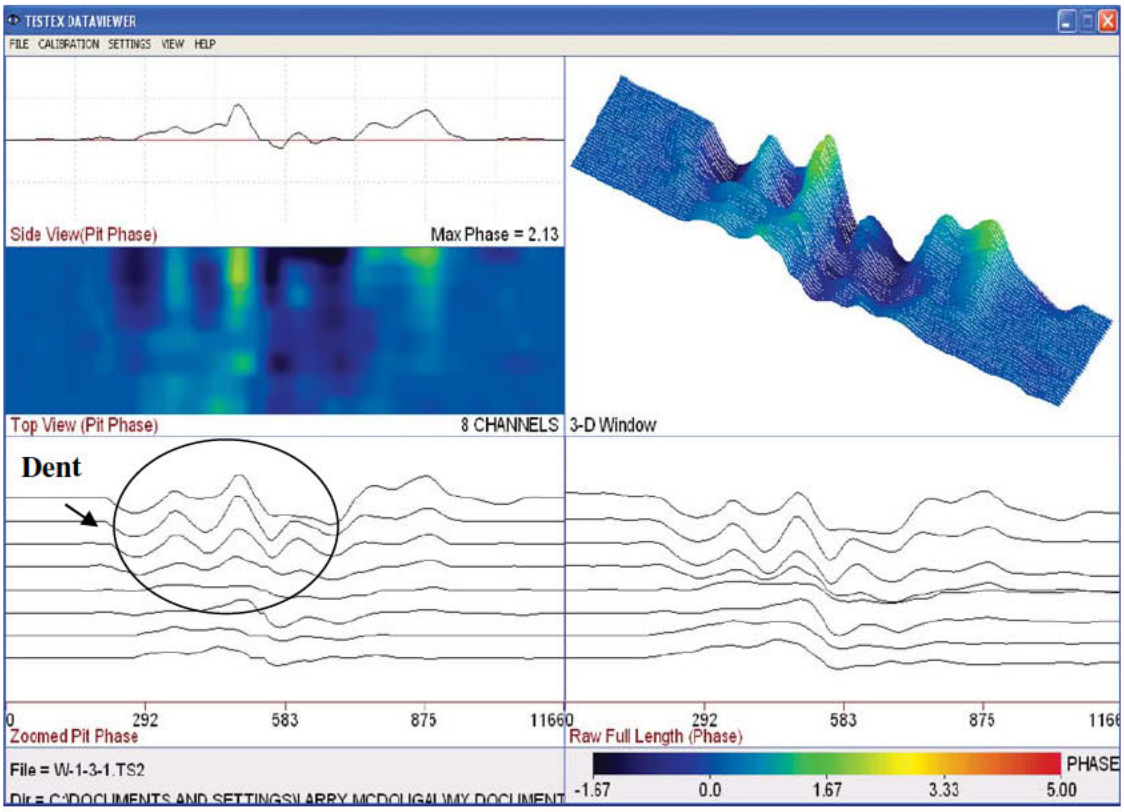


Flaw # 264, 265, and 266: The Waveform above depicts dents that are between 0.200"- 0.240" deep.

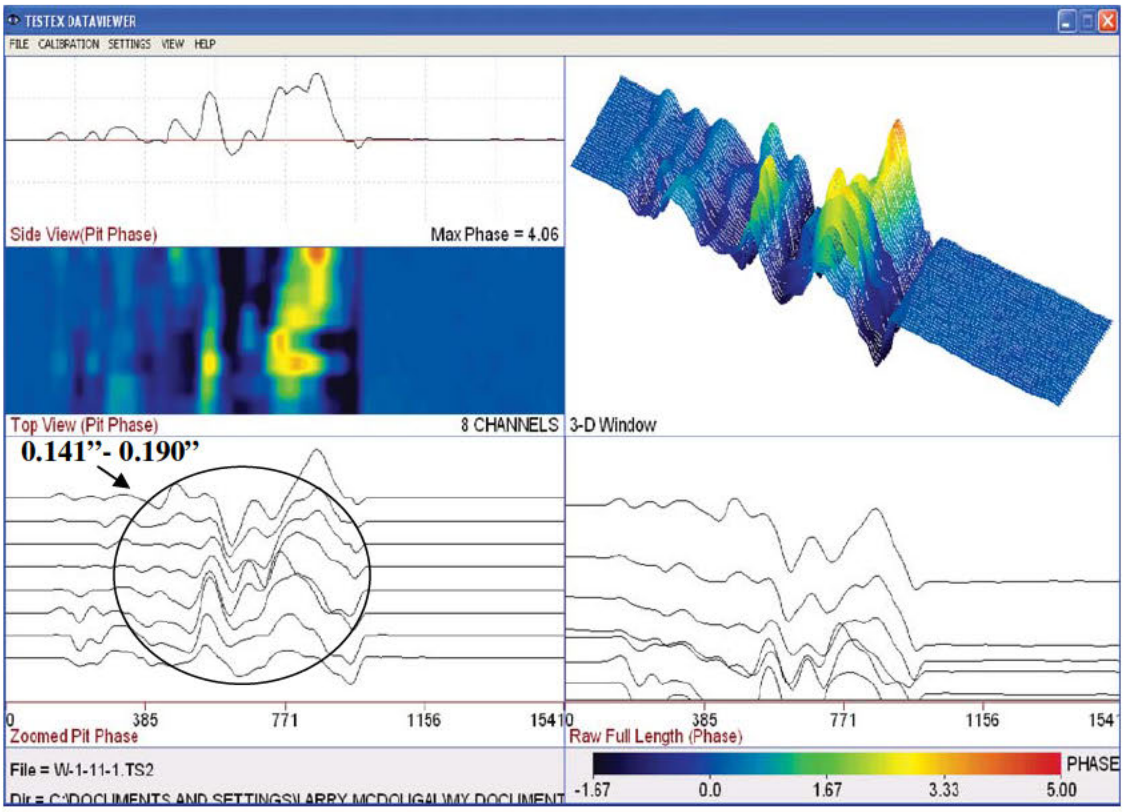


Flaw # 101 and 102: The Waveform above depicts an underside corrosion exhibiting 0.174" and 0.167" wall remaining.

APPENDIX A – SAMPLE WAVEFORMS

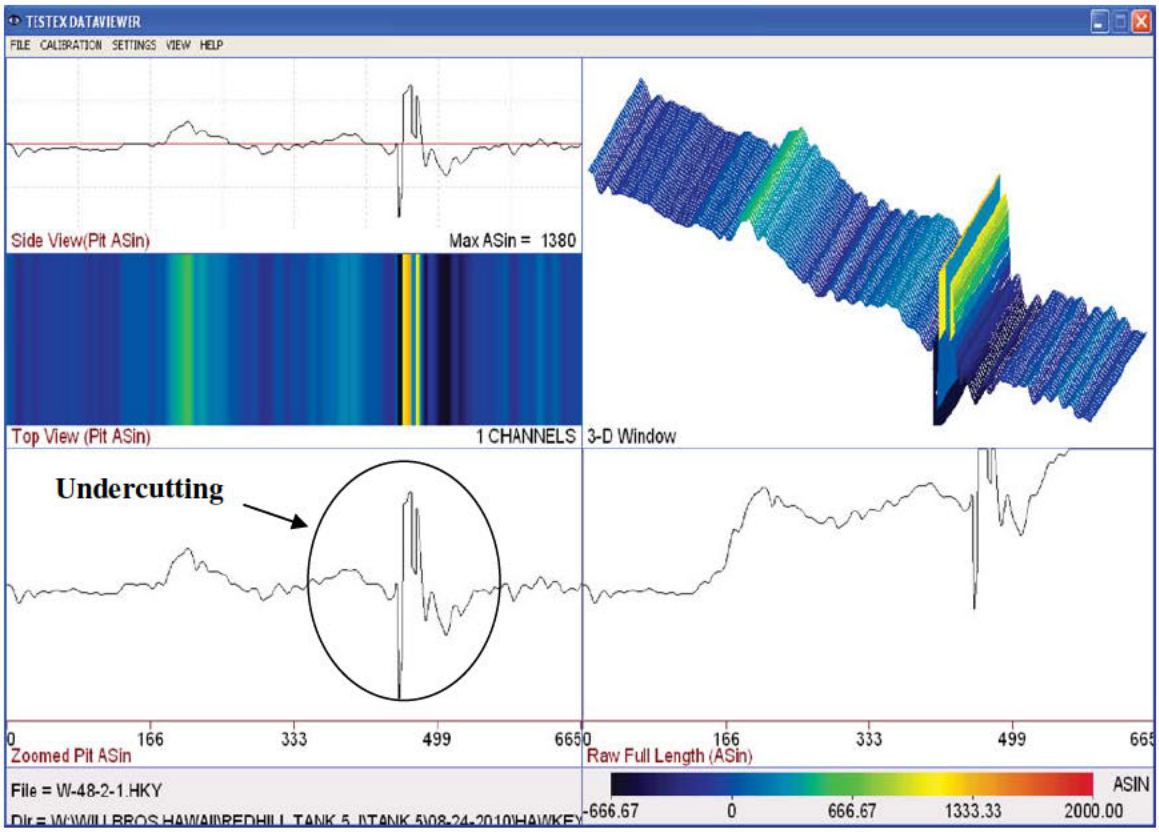


Flaw # 343: The Waveform above depicts a dent 0.250" deep.



Flaw # 274: The Waveform above depicts an underside corrosion exhibiting 0.141" to 0.190" wall remaining.

APPENDIX A – SAMPLE WAVEFORMS

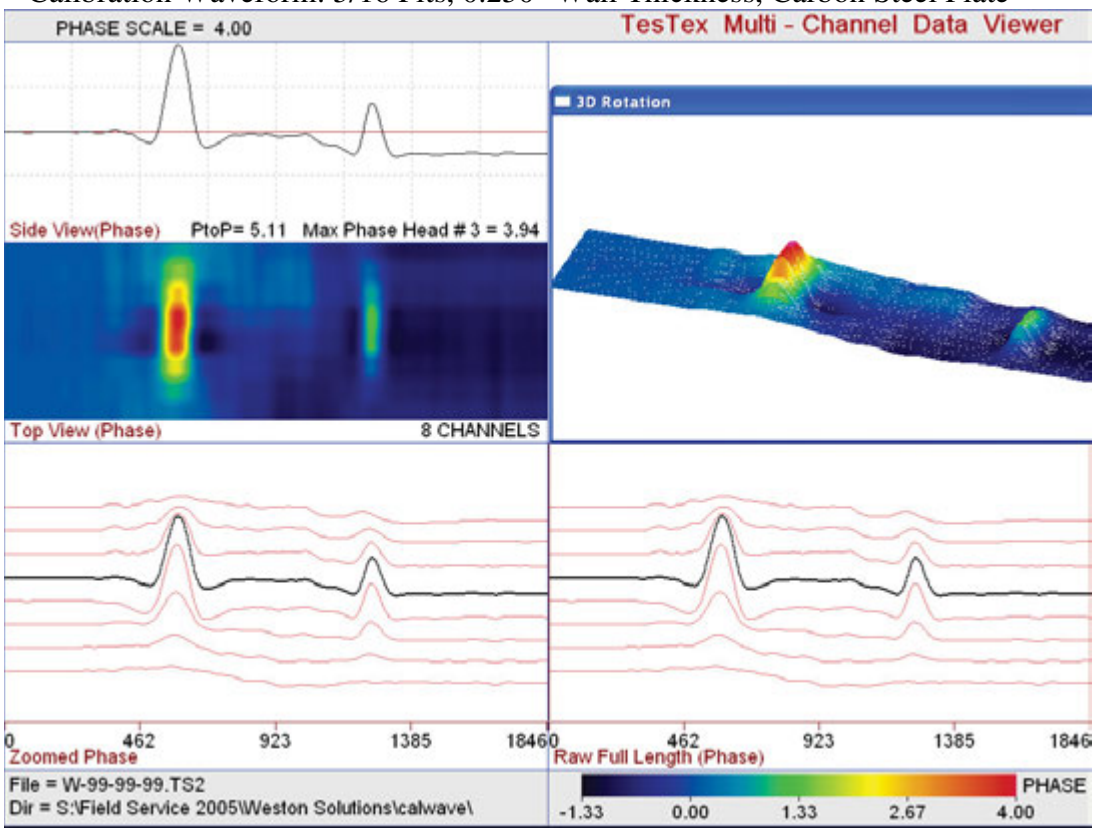


Flaw # 67A: The waveform above depicts undercutting in the weld 0.125" deep, 5" long.

APPENDIX B – CALIBRATION

APPENDIX B – CALIBRATION

* Calibration Waveform: 5/16 Pits, 0.250" Wall Thickness, Carbon Steel Plate



*Calibration Table: 5/16 Pits, 0.250" Wall Thickness, Carbon Steel Plate

FREQ.: 10 Hz., PROBE#: 8.0" Scanner, FILE#: 99-99-99, DATE: 08/15/2005, UNIT#: TS-2000

% WL 1 = 30.00, PHASE 1 = 0.91, AMP 1 = 0.10 | *
% WL 2 = 60.00, PHASE 2 = 1.96, AMP 2 = 0.10 | * [QUADRATIC FIT]%

WALL LOSS	DELTA PHASE	DELTA LNA	WALL REMAINING
5.0	0.14	0.03	0.238
10.0	0.29	0.05	0.225
15.0	0.44	0.06	0.213
20.0	0.59	0.08	0.200
25.0	0.75	0.09	0.188
30.0	0.91	0.10	0.175
35.0	1.08	0.11	0.163
40.0	1.25	0.11	0.150
45.0	1.42	0.11	0.138
50.0	1.60	0.11	0.125
55.0	1.78	0.11	0.113
60.0	1.96	0.10	0.100
65.0	2.15	0.09	0.088
70.0	2.34	0.08	0.075

APPENDIX C – TEST METHODS/PROCEDURES AND EQUIPMENT DESCRIPTION

APPENDIX C – TEST METHODS/PROCEDURES AND EQUIPMENT DESCRIPTION

Principles of LFET

Low Frequency Electromagnetic Technique (LFET) was developed out of further research of Remote Field Electromagnetic Technique (RFET). The main difference of LFET is the placement of the sensors between the two poles of an electromagnetic driver.

With a low frequency AC driver signal of 3 to 40 Hz for carbon steel (see Figure 1), the driver signal fully penetrates the material being tested. When the scanner passes over an area with no defects, the magnetic fields are not distorted.

When the test material has a defect and the sensors are located above that defect, distortions in the magnetic field indicate presence of the flaw. LFET instruments measure this distortion as changes in phase and amplitude. Depth of the flaw is proportional to these phase and amplitude changes. Diameter of the defect is related to the number of sensors affected.

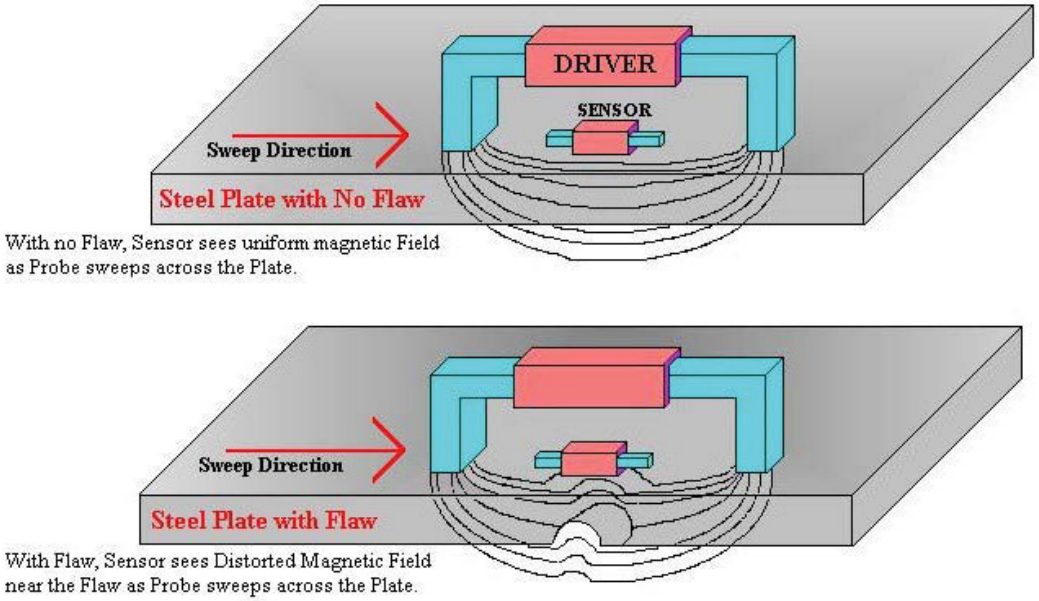


Figure 1.
Principles of Low Frequency Electromagnetic Technique (LFET)

APPENDIX C – TEST METHODS/PROCEDURES AND EQUIPMENT DESCRIPTION

Tank Floor Scanning Theory/Background

FALCON 2000 SYSTEM

The TesTex Tank Floor Inspection System consists of a sixteenth inch modular swath containing 32 probe heads. This configuration allows for a 100% coverage of the tank plate. The probe emits a very low frequency electromagnetic field which penetrates the tank floor. Any variation in the tank floor thickness will cause the electromagnetic field to change. These changes are very small, which makes it necessary to use digital signal processing to enhance the resulting signal. The resulting processed signal is in the form of phase and amplitude readings. Calibration tables are used to convert these signals into percentage wall loss values.

PROCEDURES

Each tank floor is mapped out by measuring the length, width, and orientation of the individual plates. The wall loss information for each plate is stored on a floppy disk.

SOFTWARE

The data acquisition module collects the plate data at a given sample rate. The menu-driven program provides for real-time display of phase, amplitude, and probe position across the plate. The x-y geometry of the plate, probe speed, and other details are also handled by the data acquisition module.

The data analysis and display module contain the calibration curves for wall thinning, volume losses, and pitting. His module correlates calibration standards information with the plant data for flaw sizing and evaluation. Several routines for digital the filtering, averaging techniques, background evaluation, curve fitting, and other useful signal processing techniques are also available. Up to 16 waveforms can be displayed simultaneously in the screen while "zooming" algorithms are used to easily examine small segments of the waveforms.

Plate Scanning Theory/Background

To test vertically/horizontally-oriented plates, the ***TS 2000*** scanner is placed on an unobstructed area on the topside of one of the plates. The equipment is then zeroed using the ***TS 2000 PLATE SCAN*** software's auto-set function. This action also selects the right time constant, sets the gains of the internal amplifiers, and ensures that the data is displayed on the screen as it is being collected.

After zeroing, the scanner is moved to the beginning of the scan sweep area. The scanner is then gradually moved across the surface of the tube and data is collected via magnetic medium on the PC. The processing of the data occurs real-time and the data is stored as several waveforms and stored as several signal responses. Among these are phase and amplitude for each individual channel.

APPENDIX C – TEST METHODS/PROCEDURES AND EQUIPMENT DESCRIPTION

SYSTEM DESCRIPTION

ELECTRONICS: The digital system consists of function generators, power amplifiers, difference amplifiers, phase rotators, auto-zero phase shifters, A-to-D converters, digital controllers, etc. One of the key design objectives was to achieve as low a noise as possible. We detect phase changes to an accuracy of 1/10 of a degree and amplitude signals of a fraction of a microvolt. The ***TS 2000*** contains all the electronics and software for data acquisition. It contains an internal A-to-D converter, which connects to the PC through a serial port.

SOFTWARE: Consists of two modules

The data acquisition module collects the tube data at a given sample rate. The menu driven, user-oriented program provides for real-time display of phase, amplitude, and probe position in the tube. The row and column of the tube, probe speed, and other bookkeeping details are also handled by the data acquisition module.

The data analysis and display module contains the calibration curves for plate thinning, volume losses, pits, vibration/fret wear, and correlates the calibration standard information with the actual plant data for flaw sizing and evaluation. It has routines for digital filtering, averaging techniques, background evaluation, curve fitting, and other useful signal processing techniques. Up to three waveforms can be displayed simultaneously on the screen and the "zooming" algorithm enables the user to easily examine small segments of the waveform.

DETECTION ACCURACY

The ***TesTex, Inc.*** developed lock-in amplifier is capable of measuring very low level signals in the microvolt range and can measure small phase angle changes of a fraction of a degree, even in the presence of a considerable amount of noise. This system, when used in conjunction with the calibration standards: partial and through-wall pitting, gradual wall thinning. Hydrogen damage, etc. and their respective calibration curves, allows us to measure small gradual wall losses on the order of 10%, pits of diameter 0.062" (1.57mm), and vibration/fret wear of five volume percent.

Weld Scanning Theory/Background

TesTex, Inc. has developed a special electromagnetic probe based on the principle of achieving a “balanced field” for the probe. This probe is also very sensitive to small changes in electromagnetic field and the noise is significantly reduced by appropriate phase rotation of the horizontal and vertical component of the signal. A single element probe of this type was used to detect “surface and subsurface cracking” This probe was called Hawkeye and it is successfully used for testing cracks, welds, pipes, plates, etc.

The system works by PHASE ROTATING liftoff noise into the ACOS signal while leaving the CRACK signal in the ASIN waveform. Processing is used to reduce gradual changes in the waveform to make detection easier.

APPENDIX C – TEST METHODS/PROCEDURES AND EQUIPMENT DESCRIPTION

Ultrasonic Shear Wave (Angle Beam) Testing Description

The instrument used for Shear Wave or Angle Beam Testing is a simple pulse-echo flaw detector with A-Scan, receiving, and transmitting capabilities in which the user can size the length, depth, and distance of the flaw.

The primary reason for using shear waves is for the detection of discontinuities with geometries and orientations non-parallel to the testing surface. The Angle Beam technique is extensively used for weld testing at ½ step and full step distances. The frequency range specifically for weld testing with angle beam transducers is 1MHz to 5MHz. The most common Angle Beam contact transducers are designed to produce shear waves of 45, 60, and 70° in steel.

APPENDIX D – TANK INTERIOR PHOTOGRAPHS

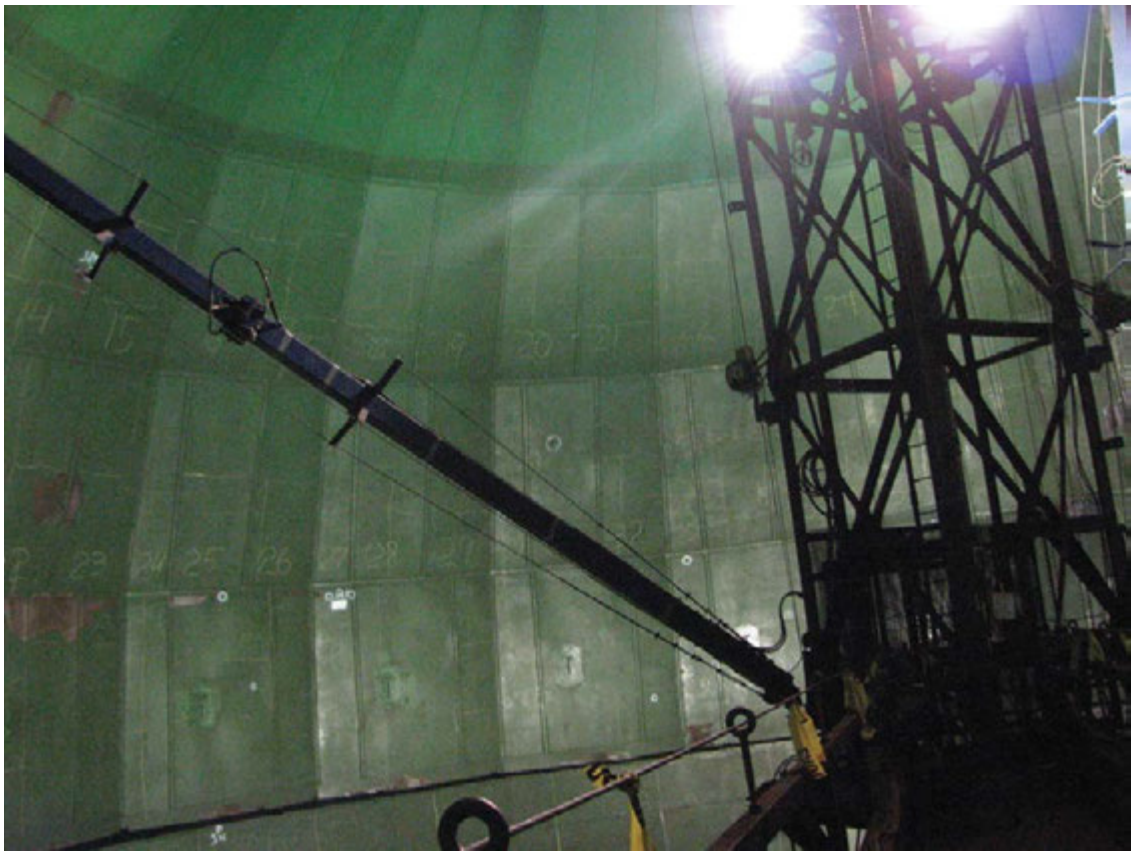
(Typical photographs of the tanks are provided for the Tunnel Access, Tank entry access, tower structures, domes and surface areas. Reference project pictures located in Appendix D of the main report.)

APPENDIX D – TANK INTERIOR PHOTOGRAPHS

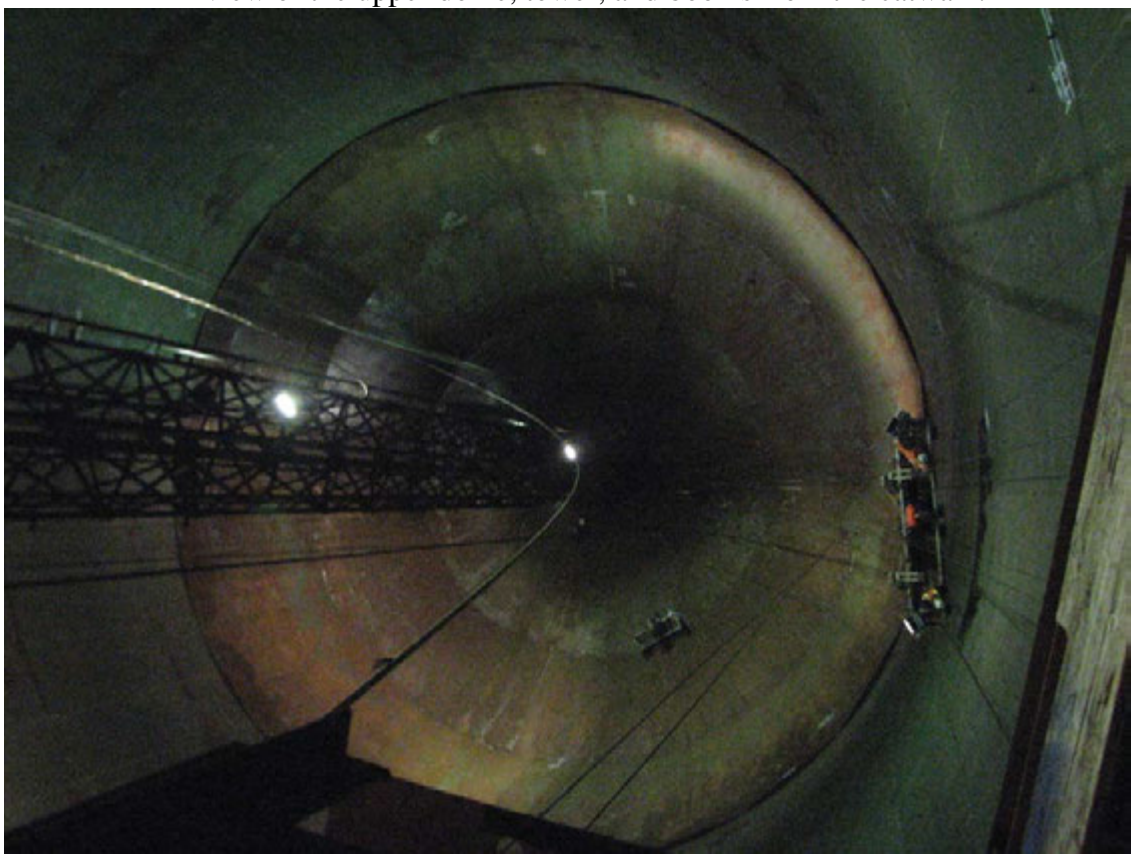
A view of the tunnel area around tank (Typical Tunnel Access)

A view of the manway (Typical Tank Access)

APPENDIX D – TANK INTERIOR PHOTOGRAPHS

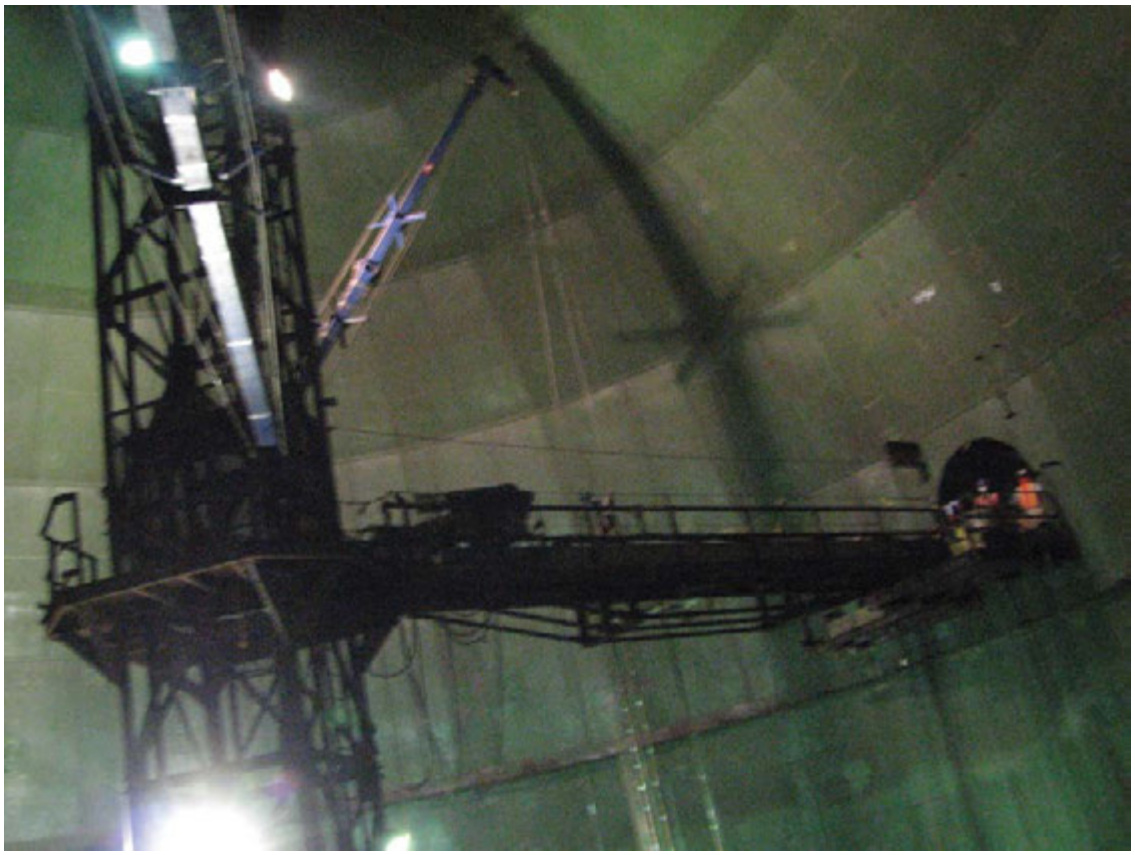


A view of the upper dome, tower, and booms from the catwalk.

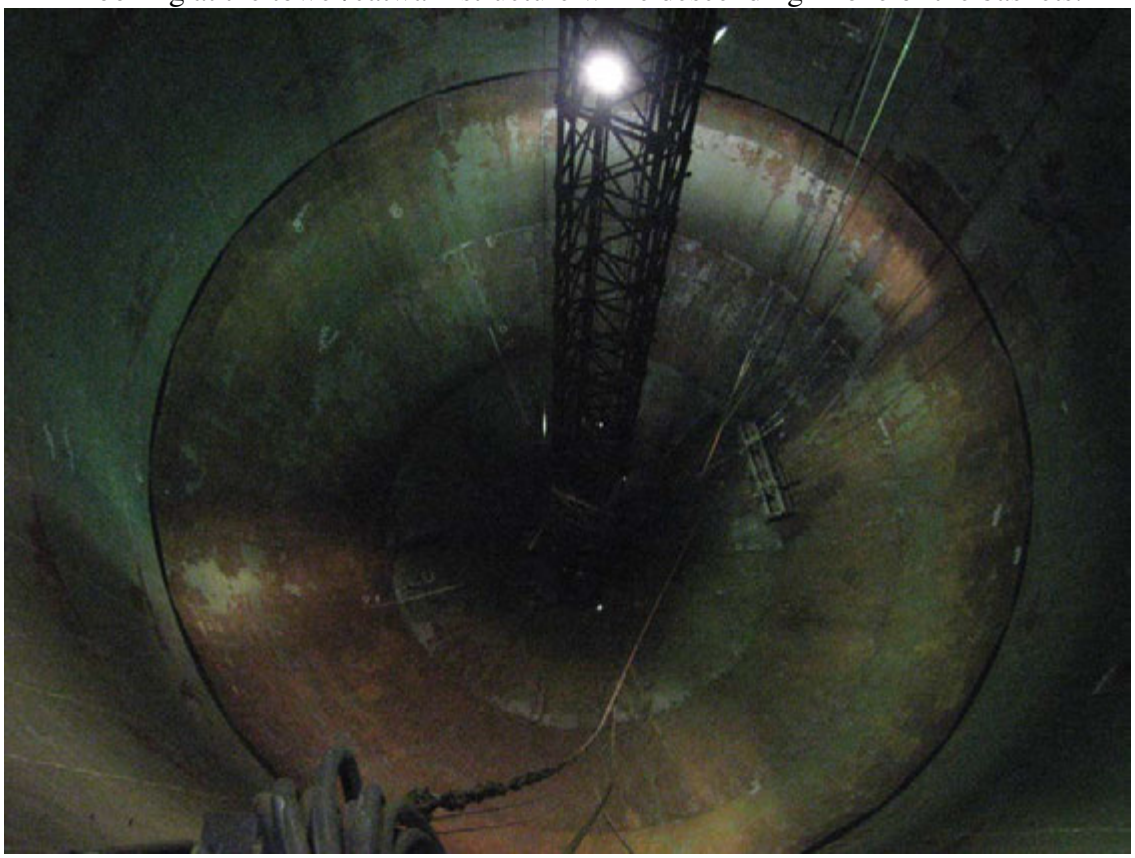


Looking down at the lower dome and the crew inspecting under the catwalk.

APPENDIX D – TANK INTERIOR PHOTOGRAPHS



Looking at the tower/catwalk structure while descending in one of the baskets.



Lower dome view from above showing extensive coating failure.

APPENDIX D – TANK INTERIOR PHOTOGRAPHS

A view from the tank bottom of one of the teams scanning the barrel

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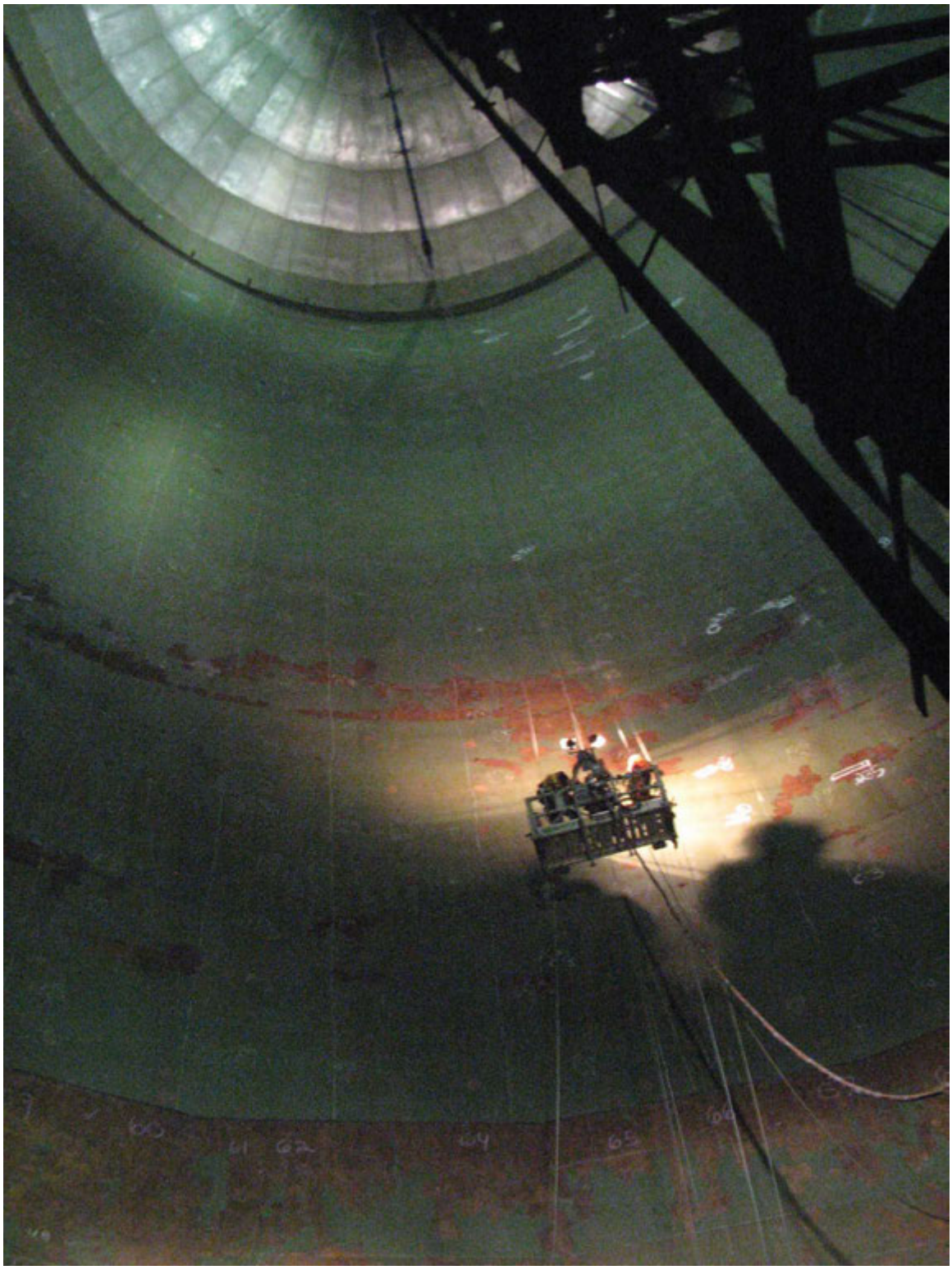
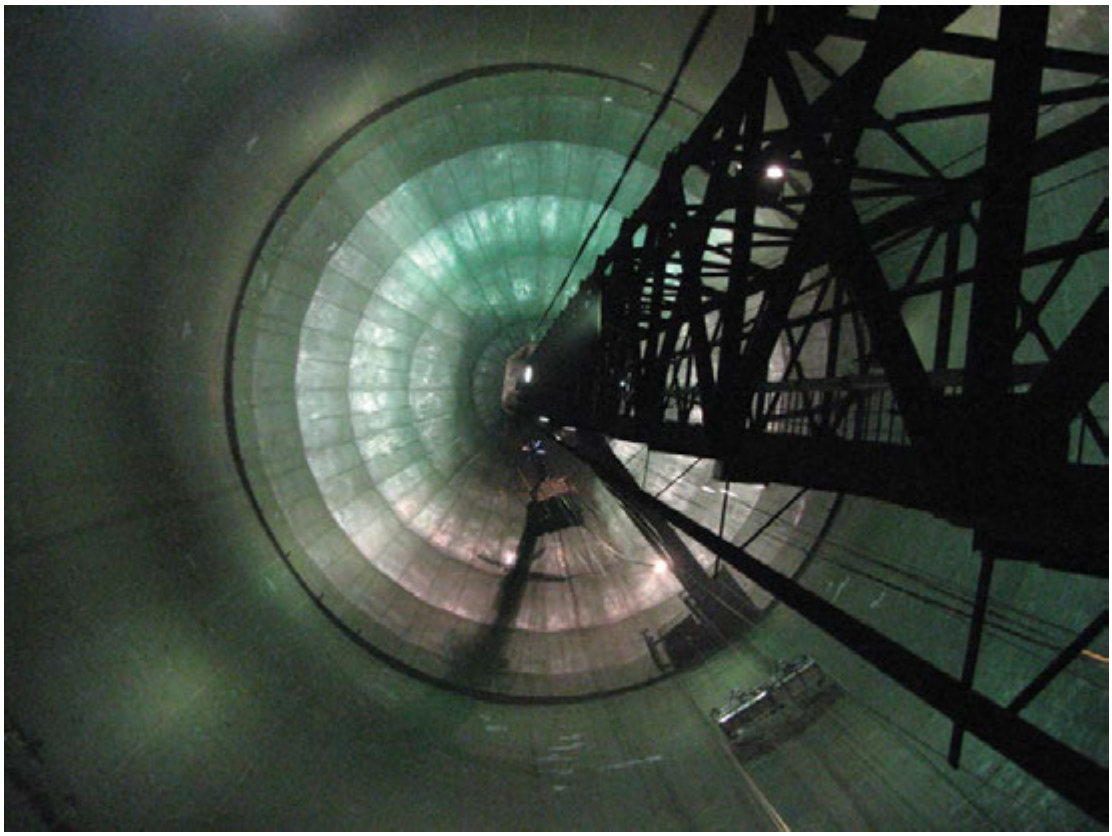
Picture showing part of the floor and lower dome

APPENDIX D – TANK INTERIOR PHOTOGRAPHS



Another view of one crew inspecting the barrel just above the lower dome.

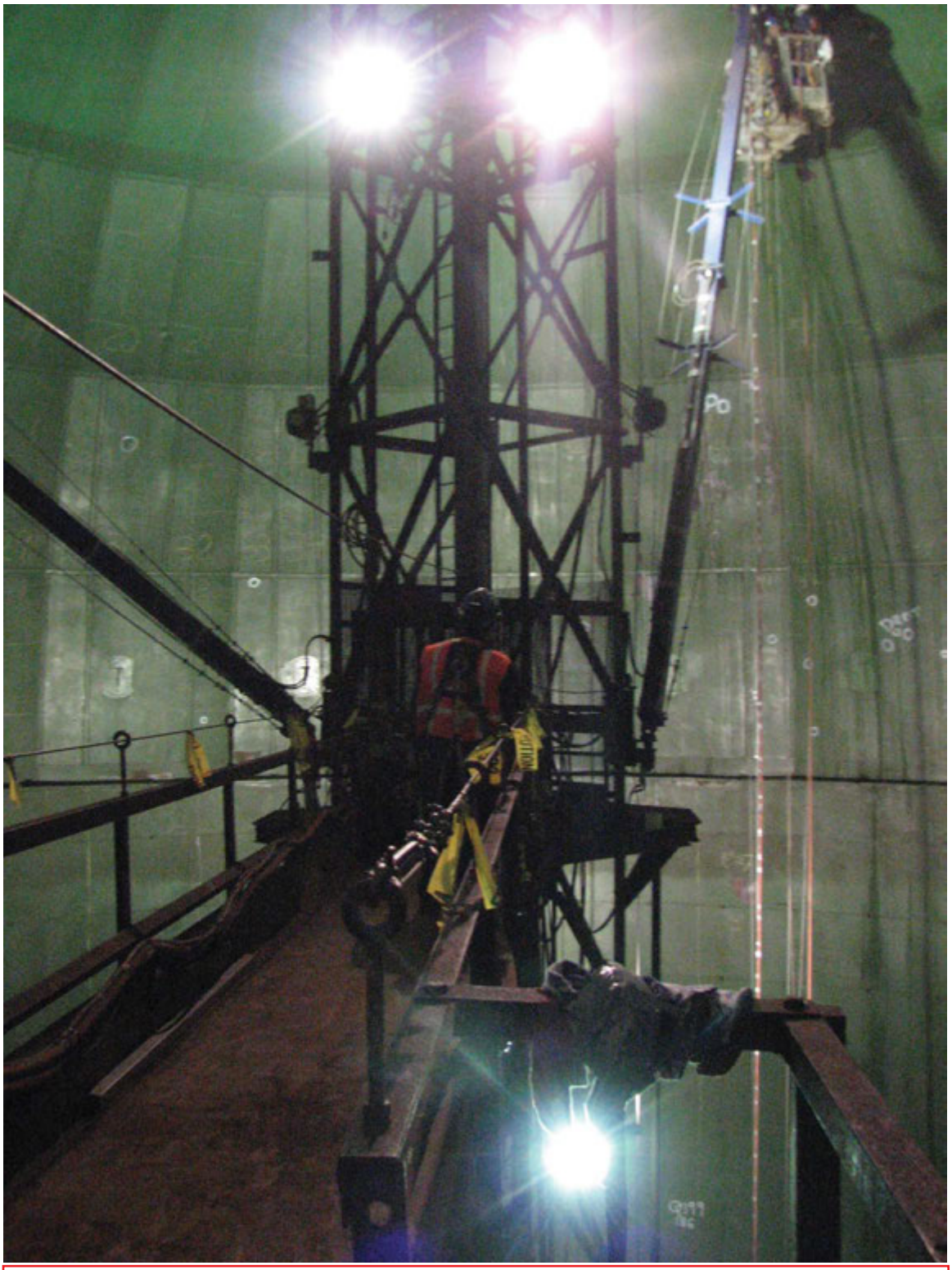
APPENDIX D – TANK INTERIOR PHOTOGRAPHS



Looking up from the floor at one crew inspecting the barrel under the catwalk and the other crew-inspecting course E of the upper dome.

A view of the very top of tank (Typical Tank upper dome section)

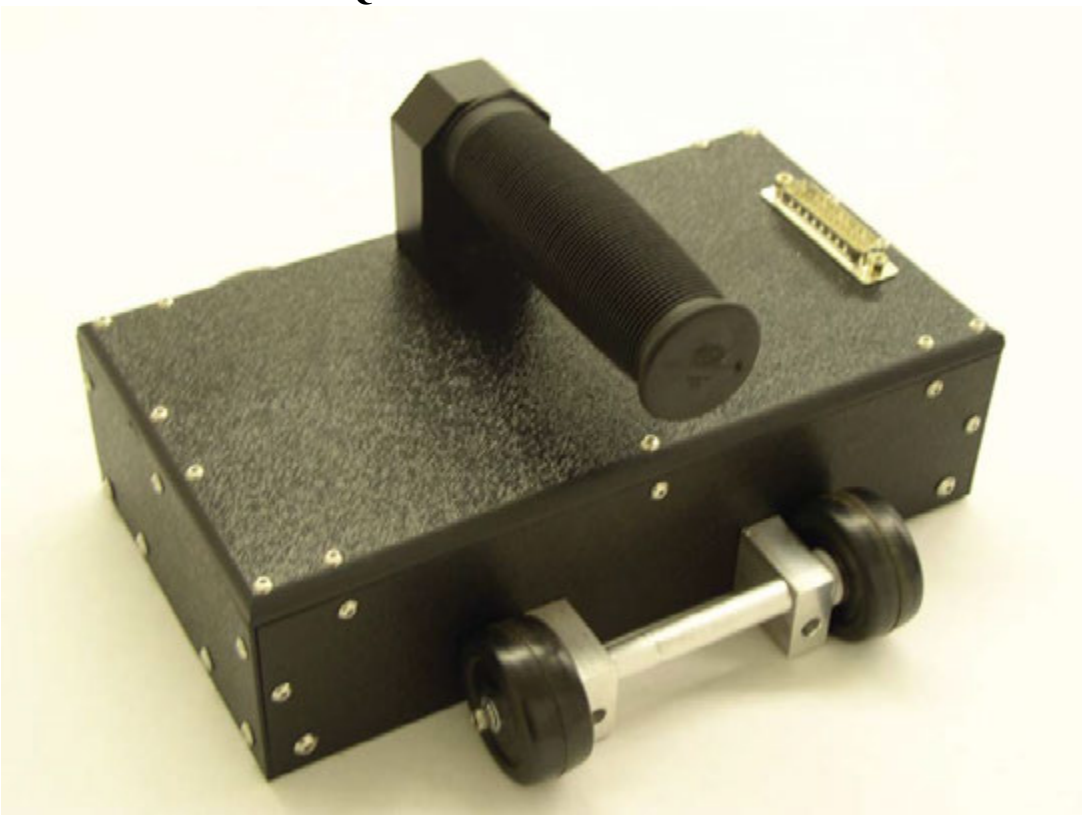
APPENDIX D – TANK INTERIOR PHOTOGRAPHS



(Typical Tank upper dome section view from the catwalk)

APPENDIX E – TESTEX EQUIPMENT

APPENDIX E – TESTEX EQUIPMENT



Above: A specially developed 8" wide hand scanner used for the majority of the surface scanning. Below: A TesTex crewmember using the hand scanner from one of the baskets.

APPENDIX E – TESTEX EQUIPMENT

Above: The Hawkeye Pencil Probe used for testing all welds in tank # 2. Below: A TesTex crewmember using the Hawkeye a weld from one of the baskets.

APPENDIX F – DEFECT AREA PHOTOGRAPHS AND MAGNETIC PARTICLE REPORT

BAKER INSPECTION GROUP, LLC
413 APPLEGROVE ST., NW
NORTH CANTON, OH 44720
(330) 244-1541

MAGNETIC PARTICLE INSPECTION REPORT

CLIENT AND JOB INFORMATION:

Date: 09/21/2010 **Report #** 092110-02
Client: Willbros Government services LLC **Location:** Pearl Harbor, Hawaii
Purchase Order # _____ **Client Job #** _____ **Baker Job #** _____
Component Description: 12.5 million gallon storage tank # 5 Red Hill

EQUIPMENT AND TECHNIQUE:

Procedure # NDT-003 Rev. 2 **Technique:** Coil ☐ Yoke ☒ AC ☒ DC ☐
MT Instrument: Parker DA 400 **Serial #** 1068 **Calibration Due:** 01/10/2011
Visible ☒ Fluorescent ☐ Wet ☐ Dry ☒ **Medium type:** Powder
Pole Spacing: 3"-5" **Lighting Type (Min 100fc):** Flash light
Contrast Used: Yes ☐ No ☒

TESTING CODES AND PARAMETERS:

Acceptance Code: Customer to review **Material Type:** Carbon Steel
Material Thickness: ¼" **Surface Temperature:** Ambient °F
Area Inspected: 100% of upper and lower welds around plate covering lower "T" joint welds **Surface Condition:** Wire brushed and oily
Surface inspection was performed from (O.D., I.D., Top, Etc.): I.D

Comments:

The welds inspected were around a cover plate ¼" thick and 6' wide. This plate covered the lower dome to floor welds and T joints. The plate was fillet welded around 100% Of the circumference, and butt welded in areas joining the plates together. The only welds inspected were the upper and lower fillet welds.

The plates are too numbered in accordance with the T joints listed. There are 44 different tee joints and the MT inspection will list all these areas separately. The customer is to review the report and evaluate for repair areas. Only MT discontinuities are to be listed, a visual inspection by the customer will follow prior to repairs.

WE ASSUME NO RESPONSIBILITY FOR LOSSES OF ANY KIND DUE TO OUR INTERPRETATION OF THE QUALITY OF THE MATERIAL SUBMITTED. ALL DATA WILL BE HELD STRICTLY CONFIDENTIAL (FORM No. 123-QA)

BAKER INSPECTION GROUP, LLC
413 APPLEGROVE ST., NW
NORTH CANTON, OH 44720
(330) 244-1541

MAGNETIC PARTICLE INSPECTION REPORT

Specimen, Weld or Part Number	Area Inspected	Accepted (A) or Rejected (R)	Indication Type	Indication Length	Surface or Sub-Surface
Upper WELD	1-2	Accepted	None Noted		
Upper WELD	2-3	Accepted	None Noted		
Upper WELD	3-4	Accepted	None Noted		
Upper WELD	4-5	Accepted	None Noted		
Upper WELD	5-6	Accepted	None Noted		
Upper WELD	6-7	Rejected	linear	1.5"	Surface
Upper WELD	7-8	Accepted	None Noted		
Upper WELD	8-9	Accepted	None Noted		
Upper WELD	9-10	Accepted	None Noted		
Upper WELD	10-11	Accepted	None Noted		
Upper WELD	11-12	Accepted	None Noted		
Upper WELD	12-13	Accepted	None Noted		
Upper WELD	13-14	Accepted	None Noted		
Upper WELD	14-15	Accepted	None Noted		
Upper WELD	15-16	Accepted	None Noted		
Upper WELD	16-17	Accepted	None Noted		
Upper WELD	17-18	Accepted	None Noted		
Upper WELD	18-19	Accepted	None Noted		
Upper WELD	19-20	Accepted	None Noted		
Upper WELD	20-21	Accepted	None Noted		
Upper WELD	21-22	Accepted	None Noted		
Upper WELD	22-23	Accepted	None Noted		
Upper WELD	23-24	Accepted	None Noted		
Upper WELD	24-25	Accepted	None Noted		
Upper WELD	25-26	Accepted	None Noted		
Upper WELD	26-27	Accepted	None Noted		

Comments: Indication Noted in 6-7 area was at the edge of a grinding mark and was a straight linear indication that was a welding defect that was opened to the surface afrer the grinding was performed.

Technician (1): Joe Wolfe **SNT-TC-1A Level:** II **Date:** 9/21/2010

Technician (2): _____ **SNT-TC-1A Level:** _____ **Date:** _____

Client Reviewer: _____ **Date:** _____

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NORTH CANTON, OH 44720
(330) 244-1541

MAGNETIC PARTICLE INSPECTION REPORT

Specimen, Weld or Part Number	Area Inspected	Accepted (A) or Rejected (R)	Indication Type	Indication Length	Surface or Sub-Surface
Upper WELD	27-28	Accepted	None Noted		
Upper WELD	28-29	Accepted	None Noted		
Upper WELD	29-30	Accepted	None Noted		
Upper WELD	30-31	Accepted	None Noted		
Upper WELD	31-32	Accepted	None Noted		
Upper WELD	32-33	Accepted	None Noted		
Upper WELD	33-34	Accepted	None Noted		
Upper WELD	34-35	Accepted	None Noted		
Upper WELD	35-36	Accepted	None Noted		
Upper WELD	36-37	Accepted	None Noted		
Upper WELD	37-38	Accepted	None Noted		
Upper WELD	38-39	Accepted	None Noted		
Upper WELD	39-40	Accepted	None Noted		
Upper WELD	41-42	Accepted	None Noted		
Upper WELD	42-43	Accepted	None Noted		
Upper WELD	43-44	Accepted	None Noted		
Upper WELD	44-1	Accepted	None Noted		
Lower Weld	1-2	Accepted	None Noted		
Lower Weld	2-3	Accepted	None Noted		
Lower Weld	3-4	Accepted	None Noted		
Lower Weld	4-5	Accepted	None Noted		
Lower Weld	5-6	Accepted	None Noted		
Lower Weld	6-7	Accepted	None Noted		
Lower Weld	7-8	Accepted	None Noted		
Lower Weld	8-9	Accepted	None Noted		
Lower Weld	9-10	Accepted	None Noted		

Comments: _____

Technician (1): Joe Wolfe SNT-TC-1A Level: II Date: 09/21/10
Technician (2): _____ SNT-TC-1A Level: _____ Date: _____
Client Reviewer: _____ Date: _____

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413 APPLEGROVE ST., NW
NORTH CANTON, OH 44720
(330) 244-1541

MAGNETIC PARTICLE INSPECTION REPORT

Specimen, Weld or Part Number	Area Inspected	Accepted (A) or Rejected (R)	Indication Type	Indication Length	Surface or Sub-Surface
Lower Weld	10-11	Accepted	None Noted		
Lower Weld	11-12	Accepted	None Noted		
Lower Weld	12-13	Accepted	None Noted		
Lower Weld	13-14	Accepted	None Noted		
Lower Weld	14-15	Accepted	None Noted		
Lower Weld	15-16	Accepted	None Noted		
Lower Weld	16-17	Accepted	None Noted		
Lower Weld	17-18	Accepted	None Noted		
Lower Weld	18-19	Accepted	None Noted		
Lower Weld	19-20	Accepted	None Noted		
Lower Weld	20-21	Accepted	None Noted		
Lower Weld	21-22	Accepted	None Noted		
Lower Weld	22-23	Accepted	None Noted		
Lower Weld	23-24	Accepted	None Noted		
Lower Weld	24-25	Accepted	None Noted		
Lower Weld	25-26	Accepted	None Noted		
Lower Weld	26-27	Accepted	None Noted		
Lower Weld	27-28	Accepted	None Noted		
Lower Weld	28-29	Accepted	None Noted		
Lower Weld	29-30	Accepted	None Noted		
Lower Weld	30-31	Accepted	None Noted		
Lower Weld	31-32	Accepted	None Noted		
Lower Weld	32-33	Accepted	None Noted		
Lower Weld	33-34	Accepted	None Noted		
Lower Weld	34-35	Accepted	None Noted		
Lower Weld	35-36	Accepted	None Noted		

Comments: None

Technician (1): Joe Wolfe **SNT-TC-1A Level:** II **Date:** 9/21/2010
Technician (2): _____ **SNT-TC-1A Level:** _____ **Date:** _____
Client Reviewer: _____ **Date:** _____

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NORTH CANTON, OH 44720
(330) 244-1541

MAGNETIC PARTICLE INSPECTION REPORT

Specimen, Weld or Part Number	Area Inspected	Accepted (A) or Rejected (R)	Indication Type	Indication Length	Surface or Sub-Surface
Lower Weld	36-37	Accepted	None Noted		
Lower Weld	37-38	Accepted	None Noted		
Lower Weld	38-39	Accepted	None Noted		
Lower Weld	39-40	Accepted	None Noted		
Lower Weld	41-42	Accepted	None Noted		
Lower Weld	42-43	Accepted	None Noted		
Lower Weld	43-44	Accepted	None Noted		
Lower Weld	44-1	Accepted	None Noted		

Comments:

The welds inspected were around a cover plate ¼" thick and 6' wide. This plate covered the lower dome to floor welds and T joints. The plate was fillet welded around 100% Of the circumference, and butt welded in areas joining the plates together. The only welds inspected were the upper and lower fillet welds.

The plates are too numbered in accordance with the T joints listed. There are 44 different tee joints and the MT inspection will list all these areas separately. The customer is to review the report and evaluate for repair areas. Only MT discontinuities are to be listed, a visual inspection by the customer will follow prior to repairs.

Comments: See above

Technician (1): Joe Wolfe **SNT-TC-1A Level:** II **Date:** 9/21/2010
Technician (2): _____ **SNT-TC-1A Level:** _____ **Date:** _____
Client Reviewer: _____ **Date:** _____

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MAGNETIC PARTICLE INSPECTION REPORT

PHOTO AND/OR SKETCH

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APPENDIX G – SHEAR WAVE REPORT AND CALIBRATIONS

BAKER INSPECTION GROUP, LLC
413 APPLEGROVE ST., NW
NORTH CANTON, OH 44720
(330) 244-1541

ULTRASONIC INSPECTION REPORT

CLIENT AND JOB INFORMATION:

Date: 09/21 Thru 09/25 2010 **Report #** 09211001
Client: Willbros Government Services, LLC **Location:** Pearl Harbor Hawaii
Purchase Order # _____ **Client Job #** _____ **Baker Job #** _____
Component Description: Red Hill Tank #5

EQUIPMENT AND TECHNIQUE:

Procedure # UT-5 Rev. 3 **Technique:** **Straight Beam** ☐ **Angle Beam** ☒
Instrument: Avenger EZ **Serial #:** 11094343 **Calibration Due Date:** 4/22/2001
Transducer: Panametrics **Serial #:** 258265 **Dia. & Freq.:** .375" / 2.25 MHZ
Probe Angle: 45 **Corrective Angle:** 46 **Couplant Type:** Sonotech
Calibration Block: ASME **Serial #:** 08-1698 **Material:** Carbon Steel
Cable Type: BNC **Length:** 6'

COMPONENT:

Component Description: 12.5 Million Gallon Storage Tank #5
Acceptance Code: Customer to Evaluate **Material Type:** Carbon Steel
Material Thickness: ¼" **Length/Width of Material:** 3-4" of floor T joints(42) and various floor and shell location noted by TESTEX
Area Inspected: Areas noted and 3"-4" of floor TEE Joints Longitudinal Welds (42) **Surface Condition:** Painted and wire brushed
Surface inspection was performed from (O.D., I.D., Top, Etc.): I.D
Material Velocity: 1284

INSPECTION SETTINGS:

Reference db: 46 **Scanning db:** 62 **Scanning Speed:** <6" per Second
Reject: 0 **Damping:** 375 **Calibration Screen Range:** 10"
Inspection Screen Range: 5" **Manual Scanning:** Yse
Dac 1st Indication: .246"/90% **Dac 2nd Indication:** .461"/80% **Dac 3rd indication:** .746/70%
Comments: The Customer is to review inspection results and evaluate indications. Calibration was performed at the beginning of the shift 12:23 PM on 9/21/2010 and verified at 5:23 PM 9/21/2010.

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BAKER INSPECTION GROUP, LLC
413 APPLEGROVE ST., NW
NORTH CANTON, OH 44720
(330) 244-1541

ULTRASONIC INSPECTION REPORT

Specimen, Weld or Part Number	Area Inspected	Accepted (A) or Rejected (R)	Indication Type	Indication Depth/Length	Percent of DAC
Floor "T" Joint	1-2	Accepted	See Notes	N/A	N/A
Floor "T" Joint	2-3	Accepted	See Notes	N/A	N/A
Floor "T" Joint	3-4	Accepted	See Notes	N/A	N/A
Floor "T" Joint	3-4	Accepted	See Notes	N/A	N/A
Floor "T" Joint	4-5	Accepted	See Notes	N/A	N/A
Floor "T" Joint	5-6	Accepted	See Notes	N/A	N/A
Floor "T" Joint	6-7	Accepted	See Notes	N/A	N/A
Floor "T" Joint	7-8	Accepted	See Notes	N/A	N/A
Floor "T" Joint	8-9	Accepted	See Notes	N/A	N/A
Floor "T" Joint	9-10	Accepted	See Notes	N/A	N/A
Floor "T" Joint	10-11	Accepted	See Notes	N/A	N/A
Floor "T" Joint	11-12	Accepted	See Notes	N/A	N/A
Floor "T" Joint	12-13	Accepted	See Notes	N/A	N/A
Floor "T" Joint	13-14	Accepted	See Notes	N/A	N/A
Floor "T" Joint	14-15	Accepted	See Notes	N/A	N/A
Floor "T" Joint	15-16	Accepted	See Notes	N/A	N/A
Floor "T" Joint	16-17	Accepted	See Notes	N/A	N/A
Floor "T" Joint	17-18	Accepted	See Notes	N/A	N/A
Floor "T" Joint	18-19	Accepted	See Notes	N/A	N/A
Floor "T" Joint	19-20	Accepted	See Notes	N/A	N/A
Floor "T" Joint	20-21	Accepted	See Notes	N/A	N/A

Comments: All areas revealed indications at 30 to 40% of DAC on the OD side of welds and in the adjacent base metal. This appears to some type of rough general corrosion with very little depth. Best guess approx .010" to .020" noted during straight beam scan. All other indications are noted above.

Technician (1):	Joe Wolfe	SNT-TC-1A Level:	II	Date:	9/21/2010
Technician (2):		SNT-TC-1A Level:		Date:	
Client Reviewer:			Date:		

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413 APPLEGROVE ST., NW
NORTH CANTON, OH 44720
(330) 244-1541

ULTRASONIC INSPECTION REPORT

Specimen, Weld or Part Number	Area Inspected	Accepted (A) or Rejected (R)	Indication Type	Indication Depth/Length	Percent of DAC
Floor "T" Joint	21-22	Accepted	See Notes	N/A	N/A
Floor "T" Joint	22-23	Accepted	See Notes	N/A	N/A
Floor "T" Joint	23-24	Customer to review	Linear	.070"/ 2" center line of weld lower 2"	40%
Floor "T" Joint	24-25	Accepted	See Notes	N/A	N/A
Floor "T" Joint	25-26	Accepted	See Notes	N/A	N/A
Floor "T" Joint	26-27	Accepted	See Notes	N/A	N/A
Floor "T" Joint	27-28	Accepted	See Notes	N/A	N/A
Floor "T" Joint	28-29	Accepted	See Notes	N/A	N/A
Floor "T" Joint	29-30	Accepted	See Notes	N/A	N/A
Floor "T" Joint	30-31	Accepted	See Notes	N/A	N/A
Floor "T" Joint	31-32	Accepted	See Notes	N/A	N/A
Floor "T" Joint	32-33	Accepted	See Notes	N/A	N/A
Floor "T" Joint	33-34	Accepted	See Notes	N/A	N/A
Floor "T" Joint	34-35	Accepted	See Notes	N/A	N/A
Floor "T" Joint	35-36	Accepted	See Notes	N/A	N/A
Floor "T" Joint	36-37	Accepted	See Notes	N/A	N/A
Floor "T" Joint	37-38	Accepted	See Notes	N/A	N/A
Floor "T" Joint	38-39	Accepted	See Notes	N/A	N/A
Floor "T" Joint	39-40	Accepted	See Notes	N/A	N/A
Floor "T" Joint	40-41	Accepted	See Notes	N/A	N/A
Floor "T" Joint	41-42	Accepted	See Notes	N/A	N/A
Floor "T" Joint	42-43	Accepted	See Notes	N/A	N/A
Floor "T" Joint	43-44	Accepted	See Notes	N/A	N/A
Floor "T" Joint	44-1	Accepted	See Notes	N/A	N/A

Comments: All areas revealed indications at 30 to 40% of DAC on the OD side of welds and in the adjacent base metal. This appears to some type of rough general corrosion with very little depth. Best guess approx .010" to .020" noted during straight beam scan. All other indications are noted above.

Technician (1):	Joe Wolfe	SNT-TC-1A Level:	II	Date:	9/21/2010
Technician (2):		SNT-TC-1A Level:		Date:	
Client Reviewer:			Date:		

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BAKER INSPECTION GROUP, LLC
413 APPLEGROVE ST., NW
NORTH CANTON, OH 44720
(330) 244-1541

ULTRASONIC INSPECTION REPORT

CLIENT AND JOB INFORMATION:

Date: 09/21 Thru 09/25 2010 **Report #** 09231001
Client: Willbros Government Services, LLC **Location:** Pearl Harbor, Hawaii
Purchase Order # _____ **Client Job #** _____ **Baker Job #** _____
Component Description: Red Hill Tank #5

EQUIPMENT AND TECHNIQUE:

Procedure # UT-5 Rev. 3 **Technique:** **Straight Beam** ☐ **Angle Beam** ☒
Instrument: Avenger EZ **Serial #:** 11094343 **Calibration Due Date:** 4/22/2001
Transducer: Panametrics **Serial #:** 258265 **Dia. & Freq.:** .375" / 2.25 MHZ
Probe Angle: 45 **Corrective Angle:** 46 **Couplant Type:** Sonotech
Calibration Block: ASME **Serial #:** 08-1698 **Material:** Carbon Steel
Cable Type: BNC **Length:** 6'

COMPONENT:

Component Description: 12.5 Million Gallon Storage Tank #5
Acceptance Code: Customer to Evaluate **Material Type:** Carbon Steel
Material Thickness: ¼" **Length/Width of Material:** various barrel location noted by testex
Area Inspected: Areas noted by Testex **Surface Condition:** Painted
Surface inspection was performed from (O.D., I.D., Top, Etc.): I.D
Material Velocity: 1280

INSPECTION SETTINGS:

Reference db: 46 **Scanning db:** 60 **Scanning Speed:** <6" per Second
Reject: 0 **Damping:** 375 **Calibration Screen Range:** 10"
Inspection Screen Range: 5" **Manual Scanning:** Yse
Dac 1st Indication: .252"/80% **Dac 2nd Indication:** .462"/70% **Dac 3rd indication:** .750/70%
Comments: The Customer is to review inspection results and evaluate indications. Calibration was performed at the beginning of the shift 12:20 PM on 9/23/2010 and verified at 5:15 PM 9/23/2010.

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ULTRASONIC INSPECTION REPORT

Specimen, Weld or Part Number	Area Inspected	Accepted (A) or Rejected (R)	Indication Type	Indication Depth/Length	Percent of DAC
Lower Dome verification areas course 1	Quad A plate 3-4 #12	Customer to review	Surface Indication	Insufficient fill Approx .080" deep and 1.5" long	45%
Lower Dome verification areas course 1	Quad A plate 10-11 #13	Customer to review	Surface Indication	Insufficient fill Approx .090" deep and 1" long	55%
Lower Dome verification areas course 1	Quad A plate 10-11 #14	Customer to review	Surface Indication	Insufficient fill Approx .080" deep and 1" long	30%

Comments: Areas inspected were marked by TESTEX during remote field inspection. UT is to verify indications noted on their inspection to be reviewed by the customer for acceptance

Technician (1): Joe Wolfe **SNT-TC-1A Level:** II **Date:** 9/21/2010

Technician (2): _____ **SNT-TC-1A Level:** _____ **Date:** _____

Client Reviewer: _____ **Date:** _____

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(330) 244-1541

ULTRASONIC INSPECTION REPORT

CLIENT AND JOB INFORMATION:

Date: 09/21 Thru 09/25 2010 **Report #** 09231001
Client: Willbros Government Services, LLC **Location:** Pearl Harbor, Hawaii
Purchase Order # _____ **Client Job #** _____ **Baker Job #** _____
Component Description: Red Hill Tank #5

EQUIPMENT AND TECHNIQUE:

Procedure # UT-5 Rev. 3 **Technique:** **Straight Beam** ☐ **Angle Beam** ☒
Instrument: Avenger EZ **Serial #:** 11094343 **Calibration Due Date:** 4/22/2001
Transducer: Panametrics **Serial #:** 258265 **Dia. & Freq.:** .375" / 2.25 MHZ
Probe Angle: 45 **Corrective Angle:** 46 **Couplant Type:** Sonotech
Calibration Block: ASME **Serial #:** 08-1698 **Material:** Carbon Steel
Cable Type: BNC **Length:** 6'

COMPONENT:

Component Description: 12.5 Million Gallon Storage Tank #5
Acceptance Code: Customer to Evaluate **Material Type:** Carbon Steel
Material Thickness: ¼" **Length/Width of Material:** various barrel location noted by testex
Area Inspected: Areas noted by Testex **Surface Condition:** Painted
Surface inspection was performed from (O.D., I.D., Top, Etc.): I.D
Material Velocity: 1280

INSPECTION SETTINGS:

Reference db: 46 **Scanning db:** 60 **Scanning Speed:** <6" per Second
Reject: 0 **Damping:** 375 **Calibration Screen Range:** 10"
Inspection Screen Range: 5" **Manual Scanning:** Yse
Dac 1st Indication: .252"/80% **Dac 2nd Indication:** .462"/70% **Dac 3rd indication:** .750/70%
Comments: The Customer is to review inspection results and evaluate indications. Calibration was performed at the beginning of the shift 12:20 PM on 9/23/2010 and verified at 5:15 PM 9/23/2010.

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ULTRASONIC INSPECTION REPORT

Specimen, Weld or Part Number	Area Inspected	Accepted (A) or Rejected (R)	Indication Type	Indication Depth/Length	Percent of DAC
Lower Dome verification areas course 2	Quad A Plate15-16 #16	Customer to review	Surface dent .150"deep	No UT Indications	N/A
Lower Dome verification areas course 2,3	Quad A Plate 8 #21	Customer to review	Linear	.050" deep from external and 6"long	50%
Lower Dome verification areas course 2,3	Quad B plate 19 #22	Customer to review	Surface Indication	5" long .030" Deep	45%
Lower Dome verification areas course 2	Quad D Plate58-59 #24	Customer to review	Surface Indication	No UT Indications	N/A
Lower Dome verification areas course 3	Quad B Plate33-34 #29	Customer to review	Surface indication Excessive cap	No UT Indications	N/A
Lower Dome verification areas course 3	Quad B Plate 19 #43	Customer to review	Surface Indication into base metal HORZ	3" long .080" Deep	95%
Lower Dome verification areas course 4	Quad A plate 14 #47	Customer to review	Surface indication cap	No UT Indications	N/A
Lower Dome verification areas course 4	Quad A Plate 14 #48	Customer to review	No Indications	N/A	N/A
Lower Dome verification areas course 4	Quad A Plate 9 #49	Customer to review	No Indications	N/A	N/A
barrel verification areas course 22	Quad A Plate 2 #56	Customer to review	No Indications	N/A	N/A
barrel verification areas course 7	Quad A Plate 1 #58	Customer to review	Surface Indication	5" long .020" Deep	70%
barrel verification areas course 10	Quad A Plate 2 #59	Customer to review	Surface indication 6" Long	No UT Indications	N/A
barrel verification areas course 17	Quad A Plate 1 #60	Customer to review	Surface Indication	No UT Indications	N/A
barrel verification areas course 19	Quad A Plate 2 #61	Customer to review	Surface Indication centerline	3" long .030" Deep	50%

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ULTRASONIC INSPECTION REPORT

Specimen, Weld or Part Number	Area Inspected	Accepted (A) or Rejected (R)	Indication Type	Indication Depth/Length	Percent of DAC
barrel verification areas course 19	Quad A Plate 2 #62	Customer to review	Surface Indication centerline	4" long .050" Deep	50%
barrel verification areas course 14	Quad A Plate 3 #66	Customer to review	Surface 5" Long	No Indications	N/A
barrel verification areas course 8	Quad A Plate 3 #67A	Customer to review	Surface Indication undercut	5" long .125" Deep	60%
barrel verification areas course 3	Quad A Plate 3 #89	Customer to review	Surface Indication	5" long .040" Deep	50%
barrel verification areas course 5	Quad A Plate 3 #90	Customer to review	Surface Indication	9" long and .030"deep	70%
barrel verification areas course 18	Quad A Plate 3 #97	Customer to review	Surface indication 7" Long	No Indications	N/A
barrel verification areas course 21	Quad A Plate 1 #99	Customer to review	Surface Indication	3" long and .050" deep	70%
barrel verification areas course 25	Quad A Plate 2 #100	Customer to review	Surface Indication	21" long and no depth	40%
barrel verification areas course 8	Quad B Plate 4 #115	Customer to review	Surface Indication	No Indications	N/A
barrel verification areas course 26	Quad A Plate 4 #116	Customer to review	Surface Indication 6" long	No Indications	N/A
barrel verification areas course 26	Quad A Plate 4 #117	Customer to review	Surface Indication	4" long and .020"deep	40%
barrel verification areas course 26	Quad A Plate 4 #118	Customer to review	Surface Indication	4" long and .020"deep	40%
barrel verification areas course 25	Quad A Plate 4 #119	Customer to review	No Indications	N/A	N/A
barrel verification areas course 25	Quad A Plate 4 #120	Customer to review	No Indications	N/A	N/A

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NORTH CANTON, OH 44720
(330) 244-1541

ULTRASONIC INSPECTION REPORT

CLIENT AND JOB INFORMATION:

Date: 09/21 Thru 09/25 2010 **Report #** 09241001
Client: Willbros Government Services, LLC **Location:** Pearl Harbor, Hawaii
Purchase Order # _____ **Client Job #** _____ **Baker Job #** _____
Component Description: Red Hill Tank #5

EQUIPMENT AND TECHNIQUE:

Procedure # UT-5 Rev. 3 **Technique:** **Straight Beam** ☐ **Angle Beam** ☒
Instrument: Avenger EZ **Serial #:** 11094343 **Calibration Due Date:** 4/22/2001
Transducer: Panametrics **Serial #:** 258265 **Dia. & Freq.:** .375" / 2.25 MHZ
Probe Angle: 45 **Corrective Angle:** 46 **Couplant Type:** Sonotech
Calibration Block: ASME **Serial #:** 08-1698 **Material:** Carbon Steel
Cable Type: BNC **Length:** 6'

COMPONENT:

Component Description: 12.5 Million Gallon Storage Tank #5
Acceptance Code: Customer to Evaluate **Material Type:** Carbon Steel
Material Thickness: ¼" **Length/Width of Material:** various barrel location noted by testex
Area Inspected: Areas noted by Testex **Surface Condition:** Painted /Scraped
Surface inspection was performed from (O.D., I.D., Top, Etc.): I.D
Material Velocity: 1280

INSPECTION SETTINGS:

Reference db: 46 **Scanning db:** 61 **Scanning Speed:** <6" per Second
Reject: 0 **Damping:** 375 **Calibration Screen Range:** 10"
Inspection Screen Range: 5" **Manual Scanning:** Yse
Dac 1st Indication: .242"/85% **Dac 2nd Indication:** .458"/70% **Dac 3rd indication:** .746/70%
Comments: The Customer is to review inspection results and evaluate indications. Calibration was performed at the beginning of the shift 0730 AM on 9/24/2010 and verified at 12:45 PM 9/24/2010.

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ULTRASONIC INSPECTION REPORT

Specimen, Weld or Part Number	Area Inspected	Accepted (A) or Rejected (R)	Indication Type	Indication Depth/Length	Percent of DAC
barrel verification areas course 16	Quad A Plate 4 #126	Customer to review	Surface indication	12" long and .030"deep	40%
barrel verification areas course 16	Quad A Plate 4 #127	Customer to review	Surface indication	4" long and .030"deep	45%
barrel verification areas course 15	Quad B Plate 5 #148	Customer to review	Surface indication	4" long and No Depth	45%
barrel verification areas course 6	Quad B Plate 6 #154	Customer to review	Surface indication 5" Long	No Indications	N/A
barrel verification areas course 26	Quad B Plate 6 #157	Customer to review	Surface .045" Deep under cut	No Ut Indication	N/A
barrel verification areas course 1	Quad C Plate 12 #169	Customer to review	Surface indication	.25" long and .060"deep	70%
barrel verification areas course 23	Quad B Plate 6 #172	Customer to review	No Indications	N/A	N/A
barrel verification areas course 17	Quad B Plate 6 #178	Customer to review	Small isolated porosity	.110" Deep no length	70%
barrel verification areas course 12	Quad B Plate 7 #180	Customer to review	Surface .060" Deep top of repair weld in base metal	No UT Indications	N/A
barrel verification areas course 11	Quad B Plate 6 #181	Customer to review	No Indications	N/A	N/A
barrel verification areas course 11	Quad B Plate 6 #182	Customer to review	No Indications	N/A	N/A
barrel verification areas course 15	Quad C Plate 11 #200	Customer to review	Surface indication undercut	UT indication2" long and .025" deep	35%
barrel verification areas course 20	Quad C Plate 12 #201	Customer to review	I.D and O.D indications	I.D is1" long and.110" deep. O.D is .030" deep and 2" long	40%OD 65% ID

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ULTRASONIC INSPECTION REPORT

Specimen, Weld or Part Number	Area Inspected	Accepted (A) or Rejected (R)	Indication Type	Indication Depth/Length	Percent of DAC
barrel verification areas course 17	Quad C Plate 11 #204	Customer to review	Surface indication	.035" deep And .5" long	60%
barrel verification areas course 16	Quad C Plate 11 #205	Customer to review	No indications	N/A	N/A
barrel verification areas course 2	Quad C Plate 11 #209	Customer to review	Surface indication undercut	. UT indication 1.25" Long and .060" deep	90%
barrel verification areas course 4	Quad c Plate 95 #212	Customer to review	Surface indication undercut	Under cut .100" Deep. UT indication 1.5" Long and .110" deep	45%
barrel verification areas course E	Quad A Plate 4 #270	Customer to review	Surface indication / dent with gouge	Dent is .120" deep and gouge is .020" deep	No UT Indications

Technician (1): Joe Wolfe SNT-TC-1A Level: II Date: 9/24/2010
Technician (2): _____ SNT-TC-1A Level: _____ Date: _____
Client Reviewer: _____ Date: _____

Comments: See attached spread sheet logged by defect number for exact location of indications

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ULTRASONIC INSPECTION REPORT

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Ultrasonic Inspection Location Report

Client Review		Date	

Weld or Defect Number	Location from horizontal weld	Location of defect from vertical weld	Indication Type	Indication Depth/Length
Lower dome Floor "T" Joint # 23	Connects to cover plate weld at bottom of indication	Lower 2" of weld between plates 23 and 24	Ut linear indication 2" long centerline	.070" deep
Lower dome Defect #12	106" down from row 1 to row 2 Circ weld	In row 1 between plates 3 and 4	Surface indication Excessive cap	6" long
Lower dome Defect #13	20" up from T joint weld	In row 1 between plates 10 and 11	Surface indication	2" long
Lower dome Defect #14	11" up from T joint weld	In row 1 between plates 10 and 11	Surface indication	4" long
Lower dome Defect #16	48" down from row 3 circ weld	In row 1 between plates 15 and 16	Surface indication Dent	2" long
Lower dome Defect #21	Weld between rows 2 and 3	6" in from row 3 plate 7 to 8 weld	Ut linear indication on external side	6" long
Lower dome Defect #22	Weld between rows 2 and 3	40" in from row 2 plate 19 to 20 weld	Surface indication undercut	4" long
Lower dome Defect #29	128" down from row 4 Circ weld	In row 3 between plates 33 and 34	Surface indication excessive cap	7" long
Lower dome Defect #43	40" down from row 2 Circ weld	In row 3 between plates 19 and 20	Base metal gouge extends from weld out 3" into plate 19	3" Long
Lower dome Defect #47	Weld between rows 3 and 4	40" in from row 4 plate 14 to 15 weld	No Indications	N/A
Lower dome Defect #48	Weld between rows 3 and 4	34" in from row 2 plate 19 to 20 weld	No Indications	N/A
Lower dome Defect #49	10" down from Barrel Circ weld	In row 4 between plates 8 and 8	Surface indication undercut plate 9 side	6" long
Barrel Defect #56	Weld between rows 21 and 22	40" in from row 22 plate 1 to 2 weld	Surface indication	4" long

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BAKER INSPECTION GROUP

Ultrasonic Inspection Location Report

Weld or Defect Number	Location from horizontal weld	Location of defect from vertical weld	Indication Type	Indication Depth/Length
Barrel Defect #58	Weld between rows 7 and 8	50" in from row 7 plate 16 to 1 weld	Surface indication undercut	5" long
Barrel Defect #59	Weld between rows 10 and 11	47" in from row 10 plate 2 to 3 weld	No Indications	N/A
Barrel Defect #60	15" up from row 16 to 17 weld	In row 17 between plates 1 and 2	Surface indication undercut	3"long
Barrel Defect #61	Weld between rows 18 and 19	46" in from row 9 plate 16 to 1 weld	Surface indication	3"long
Barrel Defect #62	Weld between rows 18 and 19	64" in from row 9 plate 16 to 1 weld	Surface indication	4"long
Barrel Defect #66	Weld between rows 13 and 14	45" in from row 14 plate 1 to 2 weld	Surface indication	5" long
Barrel Defect #67A	Weld between rows 8 and 9	32" in from row 8 plate 2 to 3 weld	Surface indication undercut	5" long
Barrel Defect #89	Weld between rows 3 and 4	36" in from row 4 plate 3 to 4 weld	Surface indication	7" long
Barrel Defect #90	Weld between rows 5 and 6	10" in from row 6 plate 3 to 4 weld	UT indication	9" long
Barrel Defect #97	Weld between rows 17 and 18	42" in from row 18 plate 2 to 3 weld	Surface indication	7" long
Barrel Defect #99	Weld between rows 21 and 22	67" in from row 22 plate 1 to 2 weld	Surface indication undercut	3" long
Barrel Defect #100	Weld between rows 25 and 26	21" in from row 25 plate 1 to 2 weld	Surface indication	21" long
Barrel Defect #115	Weld between rows 8 and 9	63" in from row 8 plate 4 to 5 weld	No indication	N/A
Barrel Defect #116	Weld between rows 26 and 27	1" in from row 26 plate 4 to 5 weld	Surface indication	6" long
Barrel Defect #117	22" down from row 24 and 25 circ weld	Weld between rows 24 Plates 4 and 5	Surface indication	4" long
Barrel Defect #118	31" down from row 24 and 25 circ weld	Weld between rows 24 Plates 4 and 5	Surface indication	4" long
Barrel Defect #119	Weld between rows 24 and 25	44" in from row 24 plate 4 to 5 weld	No indication	N/A

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Ultrasonic Inspection Location Report

Weld or Defect Number	Location from horizontal weld	Location of defect from vertical weld	Indication Type	Indication Depth/Length
Barrel Defect #120	Weld between rows 24 and 25	12" in from row 24 plate 4 to 5 weld	No indication	N/A
Barrel Defect #126	Weld between rows 16 and 17	4" in from row 16 plate 4 to 5 weld	Surface indication	12" long
Barrel Defect #127	4" down from row 15 and 16 circ weld	Weld between rows 16 Plates 4 and 5	Surface indication	4" long
Barrel Defect #148	Weld between rows 15 and 16	5" in from row 16 plate 5 to 6 weld	Surface indication	4" long
Barrel Defect #154	Weld between rows 6 and 7	2" in from row 7 plate 5 to 6 weld	Surface indication	5" long
Barrel Defect #157	Weld between rows 26 and 27	22" in from row 27 plate 5 to 6 weld	Surface indication undercut in repair weld	1" long
Barrel Defect #169	Weld between rows 1 and 2	44" in from row 2 plate 12 to 13 weld	UT indication	¼" Long
Barrel Defect #172	Weld between rows 23 and 24	51" in from row 24 plate 6 to 7 weld	No indication	N/A
Barrel Defect #178	Weld between rows 16 and 17	1" in from row 16 plate 6 to 7 weld	Surface indication undercut	3.5" long
Barrel Defect #180	Weld between rows 12 and 13	22" in from row 12 plate 7 to 8 weld	No Indication	N/A
Barrel Defect #181	Weld between rows 10 and 11	3" in from row 10 plate 6 to 7 weld	No Indication	N/A
Barrel Defect #182	Weld between rows 10 and 11	20" in from row 10 plate 6 to 7 weld	No Indication	N/A
Barrel Defect #200	Weld between rows 15 and 16	24" in from row 15 plate 11 to 12 weld	Ut Indication	.5" long
Barrel Defect #201	Weld between rows 19 and 20	48" in from row 19 plate 11 to 12 weld	Surface indication under cut	2" long
Barrel Defect #204	Weld between rows 16 and 17	2" in from row 16 plate 11 to 12 weld	Ut Indication	.5" long
Barrel Defect #205	Weld between rows 15 and 16	15" in from row 16 plate 11 to 12 weld	Surface indication under cut	4" long

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Ultrasonic Inspection Location Report

Weld or Defect Number	Location from horizontal weld	Location of defect from vertical weld	Indication Type	Indication Depth/Length
Barrel Defect #209	Weld between rows 2 and 3	52" in from row 2 plate 11 to 12 weld	Surface indication under cut	3" long
Barrel Defect #212	Weld between rows 4 and 5	36" in from row 5 plate 8 to 9 weld	Surface indication under cut	3" long

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APPENDIX H – INSPECTION PROCEDURE

TesTex Inspection Procedure
For Storage Tanks 1-20
at the
Red Hill site
Oahu, Hawaii

Flaw reporting and marking

When areas reading less than nominal wall are found, the area is marked directly with paint. That area is then measured to the nearest permanent landmark (such as a weld line, patch plate, etc). The information is then placed on the TesTex-Red Hill preliminary data sheet. Copies of these sheets are to be given to the job contact at the beginning of the following day. Additional copies are to be faxed or emailed to TesTex headquarters once a week for processing.

The Inspection begins on the Floor of the Tank

Numbering and Inspection

1) Number the floor plates as per the TesTex-Red Hill tank floor drawing, paying close attention to the orientation of landmarks such as the 36" and 18" pipes, Tower corners, patch plates, etc. Keep in mind that odd numbered tanks are mirrored in comparison to even numbered tanks.

<u>Floor</u>

2) Once numbered, the floor (made up of 7 plates for a total of 25 feet in diameter) can now be scanned. Each of the 4 Technicians will use specially designed 8" wide LFET (Low Frequency Electromagnetic Technique) scanners. The electronics for each is to be the TesTex 8 channel TS-2000 instrument. Each technician's computer is to be running software WinLFET version 1.80.03, TS-2000 option. Since the floor plates are carbon steel with a thickness of 0.500", the frequency should be set to between 5 and 10 Hz. The actual frequency will be determined by the lowest frequency in the range producing the cleanest baseline (signal to noise below 0.5 degrees phase). Note: At a minimum, all technicians must check their system using the calibration plate at the beginning of each day. See separate LFET procedure for more details. Also note that if power is lost, once restored, all computer settings must be re-entered.

Notes:

* All patch and cover plates throughout the tank will be spot checked with conventional ultrasonic technique. Also, if any nozzles exist in the tank, U.T. will be

performed at the 12, 3, 6, and 9 o'clock positions around the circumference of the pipe as well as a spot check on the face of the nozzle.

* Additionally, the corners of all plates throughout the tank must be checked with U.T.

Lower Dome

3) Using the position of the catwalk above and the corners of the tower, start to layout and mark the quadrants (A, B, C, and D). Quadrant A begins directly under the catwalk at the closest corner of the tower. Likewise, quadrant B begins at the next corner clockwise around the tower. Continue this pattern for the other two quadrants. Paint lines showing the locations of each quadrant on course 1 and as far as you can reach on course 2, along with each quadrant letter so as to clearly be seen from above.

Course 1

4) Once the quadrants have been identified, numbers are then assigned to the plates (wrote in chalk on each plate) of course 1. The numbers begin in quadrant A and continue through quadrant D.

5) Once the floor plates have been scanned, technicians can begin scanning the plates in course 1. These plates, as well as the rest of the tank, are carbon steel with a thickness of 0.250". A frequency of 10 Hz (plus or minus up to 1 Hz is allowed for cleanliness of signal) will be used for the remainder of the inspection.

Course 2

6) Once all of the plates of course 1 have been scanned, scanning is to begin on the first 3 feet of course 2. Plates again are numbered in chalk starting with plate 1 at the beginning of quadrant A and continuing around to quadrant D. When the first 3' has been scanned, the two boomed baskets must be loaded with all of the equipment (3 TS-2000 electronics per basket) and the 2 outrigger trays (2 per basket to place computers on). Once the baskets have been fitted with all of the items, scanning can continue on the remainder of course 2. This is done by starting at the 3' line and scanning vertical passes up and down the width of the basket from the 3' line to the interface between course 3 and 4. All area now above the 3' line of course 2 must be both scanned with the 8" hand scanners (all plate surface area) and with the Hawkeye pencil probes (all welds). When scanning with the Hawkeye, a scan is taken on each side of all welds (probe bisects the weld/plate interface on each side). The software is to be set on a frequency of 100 Hz, gain of 18, rotation of 305. The probe should be used on the calibration plate periodically to assure proper function. See separate Hawkeye procedure for more details.

Notes:

* There will be area in quadrant A and quadrant D that will not be reachable in the boomed baskets. This area will be scanned with an auxiliary basket at the end of the job (see barrel section for more details).

* If a project coordinator is on site during the first week, this person will scan all welds below 3' on course 2 to include course 1 and the floor. Otherwise, the four technicians will scan these welds as each section is done.

* Additionally, all intersection welds between course 1 and the floor must be retested using Shear Wave Ultrasonic Technique. This is performed when a Certified Ultrasonic Technician is available. Also, all possible defect locations found in welds throughout the tank, will be backed up with Shear Wave Ultrasonic technique. In addition, all welds will be visually inspected for pinholes. These pinhole areas, if found to have depth, will be marked for later Shear Wave sizing.

Course 3

7) Once all of the plates in course 2 have been scanned, the teams can move to course 3. Again, plates in this course are numbered as they were in course 2. Scanning also is performed in the same pattern of vertical up and down movements the width of the basket between the intersection of course 2 & 3 and course 4.

Course 4

8) Repeat the procedure for course 3.

<u>Barrel</u>

9) The Barrel consists of 28 courses (or rows) of plates. The plates in each course will be numbered 1 through X starting in quadrant A.

10) When scanning the barrel, drops as wide as the width of the basket are made vertically the entire height of the barrel section. Within a drop, there will be 28 scanning areas (i.e. the basket will be repositioned 28 times to cover the height of the barrel). Chalk lines will be placed at each end of the baskets on the wall the full height of the barrel to show individual drops. There will be 19 drops for each basket for a total of 38 that are reachable in the boomed baskets.

Note:

* There will be 2 additional drops (one in quadrant A and one in quadrant D under the catwalk) that will be scanned using the auxiliary doublewide basket. These scans are best done after the upper dome has been scanned (so as to not lose time

dismantling equipment from the boomed baskets). Both drops are done at the same time and includes the lower dome from 3' above the course 1 and course 2 intersection to barrel.

Expansion joint

11) The expansion joint consists of a lip of double plate that extends from the tank wall into the tank perpendicularly at the barrel-extension interface or at the barrel-upper dome interface. The welds associated with this area must be scanned using the Hawkeye system.

Extension (not present in all tanks)

12) The extension section consists of 4 courses of plates and is approximately 15' in height. This section, if present, is numbered and scanned the same way as the barrel.

Notes: The area around the catwalk that is not reachable in the baskets will be scanned at the end of the job from the catwalk. A ladder will be used to reach the rest of the extension area above the catwalk that is out of reach by standing.

* Additionally, the inside of the manway will be scanned with LFET scanners after the catwalk area.

Upper Dome

Course A

13) This section is scanned the same way as the barrel. The plate numbering should be much the same as it was for the lower dome.

Note: Some tanks have a channel over the welds of the upper dome. If this is the case, U.T. spot checks will be done at the bottom of each vertical channel where they intersect a horizontal channel. No Hawkeye weld scanning will be done since the exposed welds are not structural. The only exception to this will be if wall loss is found around the intersection points of the channels.

Course B

14) This section is numbered and scanned the same way as course A.

Course C

15) This section is numbered and scanned the same way as course B. *

* Inspection of portions or this entire course will depend on how close the baskets can get to the surface of the tank. Scanning procedure may resort to that of course D.

Course D

16) Scanning of this course depends on how close the boom is able to position the basket to the surface. Traditionally in past inspections, the basket was too far away from the surface to hand scan-using LFET. The alternative was 100% U.T. measurements by using a special designed delivery unit.

Course E

17) Inspection of this course is to be done with the special designed U.T. delivery units.

Course F

18) This course is the top of the tank. Access to this course is by the ladder staircase, which is outside of the tank. This ladder staircase leads up and over to a manhole in the top of the tank. Enter into and down the ladder to the penthouse platform. From this platform, U.T readings will be taken on the 24 plates of the course above you.

<u>Pipes</u>

19) The 18 and 32-inch supply pipes in the lower tunnel under the tank will be U.T. spot-checked. A technician is to craw into the 32 inch line and take 8 circumferential U.T. readings every 3 feet. The 18-inch line is too small to enter into, so the U.T. readings are taken at 8" and 18", just inside of the pipe. Additional methods may be used such as, Shear Wave Ultrasonics on the welds or special designed LFET scanners for I.D. surface inspections. *

* Special designed scanners are a concept at this time and are not included in the price of the inspection

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

A WILLBROS COMPANY

Technical Data & Submittal for Project:

Project Title: CLEAN, INSPECT, AND REPAIR STORAGE TANKS
Location: PEARL HARBOR NAVAL STATION, OAHU, HI
Task Order No.: N62583-09-D-0132/0003
WGS Project Number: 54118
Equipment: Tank 5

APPENDIX B
PROJECT CHECKLIST

Rev	Date	Description	Reviewed	Approved
P	11/18/10	Preliminary - For Info	RC	TDA
A	11/22/10	Draft Data – For Info	RC	TDA
B	4/2/11	For Review and Approval	JS	TDA
0				
1				
2				
3				

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

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APPENDIX B

PROJECT CHECKLIST
Tank Summary Sheet
Section B-1

Rev	Date	Description	Reviewed	Approved
P	11/18/10	Preliminary - For Info	RC	TDA
A	11/22/10	Draft Data – For Info	RC	TDA
B	4/2/11	For Review and Approval	JS	TDA
0				
1				
2				
3				

Tank Inspection Summary Sheet – Redhill Complex Tank 5	
Tank Location	Redhill Complex, Pearl Harbor HI
Tank No. (plus previous identification)	TK 5
Facility Number	332
Inspection Date(s)	Aug 18 – Nov 16, 2010
Tank Type	UST, Vertical, concrete / gunite encasement
Type of Inspection	Out of Service, Modified, API
Contract Number, Task Order	
Prime Contractor Name	Willbros Government Services, LLC (WGS)
Inspector, Cert #, Inspection Company	Tim Anderson, API 653 #494 WGS
Manufacturer, Date, Design Standard	Mosrrison Knudsen, 1942, Unknown
Diameter	100 ft.
Height/Safe Fill Height	250 ft. / 240 ft.
Product/Specific Gravity	JP-5, 0.82
Design Pressure/Temperature	Atmospheric, Ambient
Gross Capacity/Nominal Capacity	12,756,725 gal / 12.75 MM gal
Safe Fill Height	240 ft.
GPS Latitude & Longitude	Underground
Foundation Configuration	UST / concrete / gunite encasement
Shell Configuration	28 courses, heights of each, 0.25 orig. thk.
Floor Configuration	Dome, 50 ft. radius
Roof (Fixed, Floating or both. Seal type)	Dome, 50 ft. radius
Cathodic Protection, if so what type	None
Stilling Wells (Sizes, Applications)	None
Last Inspection (type, date)	1982
Last Coated Internally (Product)	1982 / 1983
Last Coated Externally (Product)	1942 concrete / gunite encasement
Inspection Results	
Can tank be returned to service?	No - Repairs required
Deficiencies identified as mandatory repairs	Yes – See summary list
Deficiencies identified as recommended repairs	Yes – See summary list
Deficiencies identified as long term repairs	Yes – See summary list
Next Scheduled Inspection (type, date)	TBD – After repairs are completed
Upgrades / Repairs Made at this Time	
Tank Re-Calibration to 1/16 in	Yes / No (when repairs completed)
Stilling Wells	N/A
Coating (specify system, location)	Epoxy – needs repair
Floor (including sump)	Epoxy – needs repair
Shell	Epoxy – needs repair
Vents / Appurtenances	24" upper dome
Secondary Containment	None

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

A WILLBROS COMPANY

APPENDIX B

PROJECT CHECKLIST
Tank Inspection Checklist
Section B-2

Rev	Date	Description	Reviewed	Approved
A	6/02/2011	Preliminary - For Approval	DB	TDA
B				
0				
1				
2				
3				

Willbros Government Services, LLC - Tank Inspection Checklist
Redhill Complex - TK 5 Pearl Harbor Naval Station, Oahu HI

	Tank Out-of-service Inspection Checklist		
	Item	**Completed** X	**Comments**
C.2.1	**Overview**		
a)	Check that tank has been cleaned, is gas free, and safe for entry.	X	
b)	Check that the tank is completely isolated from product lines, all electrical power, and steam lines.	X	
c)	Check that roof is adequately supported, including fixed roof structure and floating roof legs.	X	
d)	Check for presence of falling object hazards, such as corroded-through roof rafters, asphalt stalactites, and trapped hydrocarbons in unopened or plugged equipment or appurtenances, ledges, etc.	X	
e)	Inspect for slipping hazards on the bottom and roof decks.	X	
f)	Inspect structural welds on accessways and clips.	X	
g)	Check surfaces needing inspection for a heavy-scale buildup and check weld seams and oily surfaces where welding is to be done. Note areas needing more cleaning, including blasting.	X	
h)	Review cathodic protection potential readings.	NA	NA=Not applicable/accessible
C.2.2.	**Tank Exterior**	NA	NA=Not applicable/accessible
a)	Inspect appurtenances opened during cleaning such as lower floating swing sheave assemblies, nozzle interiors (after removal of valves).	NA	
b)	Hammer test or ultrasonically test he roof.	NA	
c)	Enter and inspect he floating roof pontoon compartments.	NA	
C.2.3.	**Bottom Interior Surface**		
a)	Using a flashlight held close to and parallel to the bottom plates, and using the bottom plate layout as a guide, visually inspect and hammer test the entire bottom.	X	See inspection report
b)	Measure the depth of pitting and describe the pitting appearance (sharp edged, lake type, dense, scattered, etc)	X	See inspection report
c)	Mark areas requiring patching or further inspection.	X	See inspection report
d)	Mark locations for turning coupons for inspection.	NA	
e)	Inspect all welds for corrosion and leaks, particularly he shell-to-bottom weld.	X	See inspection report
f)	Inspect sketch plates for corrosion.	X	See inspection report
g)	Check condition of internal sump, if applicable. Standing liquid should be removed from he sump to allow for complete inspection and vacuum testing of weld seams as appropriate. Sump bottom and sidewall plate and seams need to be evaluated for both product-side and soil-side corrosion.	NA	
h)	Locate and mark voids under the bottom.	X	See inspection report
i)	Record bottom data on a layout sketch using the existing bottom plates as a grid. List he number and sizes of patches required.	X	See inspection report
j)	Vacuum test the bottom lap welds.	NA	
k)	Hammer test or ultrasonically examine any slightly discolored spots or damp areas.	X	
l)	Check for reinforcing pads under all bottom attached clips, brackets, and supports.	X	
m)	Inspect floating roof leg pads for pitting or cutting, and excessive dimpling (indicating excessive loading).	NA	
n)	Check the column bases of fixed roof supports for adequate pads and restraining clips.	X	
o)	In earthquake Zones 3 and 4, check that roof supports are not welded down to the tank bottom, but are only restrained from horizontal movement.	X	
p)	Check area beneath swing line cable for indications of cable cutting or dragging.	NA	
q)	Mark old oil and air test connection for removal and patching.	NA	
r)	Identify and report low areas on the bottom that do not drain adequately.	X	
s)	Inspect coating for holes, disbonding, deterioration, and discoloration.	X	
C.2.4.	**Shell Seams and Plate**		
a)	On cone up bottoms, closely inspect and gauge the depth of metal loss on the lower 2 in. to 4 in. of the shell (area of standing water).	NA	
b)	Measure the depth of pitting on each course.	X	See inspection report

	Tank Out-of-service Inspection Checklist		
	Item	Completed X	Comments
c)	Inspect and es imate the amount of metal loss on the heads of rivets and bolts.	NA	NA=Not applicable/accessible
d)	Inspect shell-to-bottom riveted lap joints.	NA	NA=Not applicable/accessible
e)	Inspect for vertical grooving damage from seal assembly protrusions.	NA	NA=Not applicable/accessible
f)	Inspect existing protective coa ings for damage, deterioration, and disbonding.	X	See inspection report
g)	Check for areas of rubbing (indicating too much pressure by the seal assembly shoes or inadequate annular space).	NA	
h)	Visually inspect the shell plates and seams for indications of leakage.	X	See inspection report
i)	If the shell has riveted or bolted seams, record the leak locations by film or chart in case he locations are lost during surface preparation for painting.	NA	
j)	Measure annular space at 40-ft intervals.	NA	
k)	Survey the shell to check for roundness and plumb.	X	
C.2.5	**Shell-mounted Overflows**	NA	NA=Not applicable/accessible
a)	Inspect overflow for corrosion and adequate screening.	NA	
b)	Check location of overflow that it is not above any tank valves or equipment.	NA	
C.2.6	**Roof Interior Surface**		
C.2.6.1	**General**	NA	NA=Not applicable/accessible
a)	Visually inspect the underside surface of the roof plates for holes, scale buildup, and pitting.	NA	
b)	Hammer test or ultrasonically examine to check for thin areas, particularly in the vapor space of floating roofs and at edge of roof on cone roof tank.	NA	
c)	Check all clips, brackets, braces, etc., welded to he roof deck plate for welded reinforcing pads and see that they have not broken free.	NA	
d)	If no pad is present, penetrant test for cracking of he weld or deck plate.	NA	
e)	Inspect for protective coating for breaks, disbondment, and deterioration.	NA	
f)	Spark test the interior surface coating if recoating is not planned.	NA	
C.2.6.2	**C.2.6.2 Fixed Roof Support Structure**	NA	
a)	Inspect the support columns for thinning in the upper 2 ft.	NA	
b)	On API columns (two channels welded together) check for corrosion scale breaking the tack welds, unless the joint between he channels is completely seal welded.	NA	
c)	Check that the reinforcing pad on the bottom is seal-welded to the tank bottom wi h horizontal movement restraining clips welded to the pad.	NA	
d)	Determine if pipe column supports are concrete filled or open pipe. If open pipe, check for a drain opening in the bottom of the pipe.	NA	
e)	Inspect and gauge rafters for thinning, particularly near the center of the roof. Report metal loss.	NA	
f)	Check for loose or twisted rafters.	NA	
g)	Inspect girders for thinning and check that they are attached securely to the top of the columns.	NA	
h)	Report if the columns have cross bracing in the area between the low pump out of the top of the shell (for future internal floating roof installation).	NA	
i)	Inspect and report presence of any roof-mounted swing line bumpers.	NA	
j)	Photograph the roof structure if no rafter layout drawing exists.	NA	
C.2.7	**Fixed Roof Appurtenances**	NA	NA=Not applicable/accessible
C.2.7.1	**Inspection and Light Hatches**	NA	
a)	Inspect the hatches for corrosion, paint and coating failures, holes, and cover sealing.	NA	
b)	On loose covers, check for a safety chain in good condition.	NA	
c)	On light hatches over 30 in. across, check for safety rods.	NA	
d)	Inspect the condition of the gaskets on bold or latched down hatch covers.	NA	
C.2.7.2	**Staging Support Connection**	NA	
	Inspect the condition of the staging support for corrosion.	NA	
C.2.7.3	**Breathers and Vents**	NA	
a)	Inspect and service the breather.	NA	
b)	Inspect screens on vents and breathers.	NA	
C.2.7.4	**Emergency P/V Hatches**	NA	

Willbros Government Services, LLC - Tank Inspection Checklist
Redhill Complex - TK 5 Pearl Harbor Naval Station, Oahu HI

	Tank Out-of-service Inspection Checklist		
	Item	**Completed X**	**Comments**
a)	Inspect and service pressure/vacuum hatches. (Setting should be high enough to prevent chattering of breather during normal operation. See breather manufacturer's guide.)	NA	
b)	Inspect liquid seal hatches for corrosion and proper liquid level in the seal.	NA	
C.2.7.5	**Sample Hatch**	NA	
a)	Inspect sample hatch for corrosion.	NA	
b)	Check that the cover operates properly.	NA	
c)	If the tank has no gauge well, check for a hold-off distance marker and check measurement.	NA	
C.2.8	**Floating Roof**	NA	NA=Not applicable/accessible
C.2.8.1	**Roof Deck**	NA	
a)	Hammer test the area between roof rim and shell. (If access for hammer testing is inadequate, measure the distance from he bottom edge of he roof to the corroded area and then hammer test from inside the pontoon.)	NA	
b)	In sour water service, clean and test all deck plate weld seams for cracking unless the lower laps have been seal-welded.	NA	
c)	Check that either the roof drain is open or the drain plug in the roof is open in case of unexpected rain.	NA	
d)	On flat bottomed and cone bottom roof decks, check for a vapor dam around the periphery of the roof. The dam should be continuous without break to prevent escape of vapors to the seal area from under the center of he roof.	NA	
C.2.8.2	**Floating Roof Pontoons**	NA	
a)	Visually inspect each pontoon for liquid leakage.	NA	
b)	Run a light wire through the gooseneck vents on locked down inspection hatch covers to make sure they are open.	NA	
c)	Inspect lockdown latches on each cover.	NA	
d)	Check and report if each pontoon is:	NA	
1)	vapor tight (bulkhead seal welded on one side on bottom, sides, and top),	NA	
2)	liquid tight (seal-welded on bottom and sides only), or	NA	
3)	unacceptable (minimum acceptable condition is liquid tight).	NA	
C.2.8.3	**Floating Roof Cutouts**	NA	
a)	Inspect underside of cutouts for mechanical damage.	NA	
b)	Inspect welds for cracks.	NA	
c)	Inspect plate for thinning, pitting, and erosion.	NA	
d)	Measure mixer cutouts and record plate thickness for future mixer installation or replacement. Plate thickness _____ .	NA	
C.2.8.4	**Floating Roof Supports**	NA	
a)	Inspect fixed low and removable high floating roof legs for thinning.	NA	
b)	Inspect for notching at bottom of legs for drainage.	NA	
c)	Inspect for leg buckling or felling at bottom.	NA	
d)	Inspect pin hole in roof guide for tears.	NA	
e)	Check plumb of all legs.	NA	
f)	Inspect for adequate reinforcing gussets on all legs through a single portion of the roof.	NA	
g)	Inspect the area around the roof legs for cracking if there is no internal reinforcing pad or if the topside pad is not welded to the deck plate on the underside.	NA	
h)	Inspect the sealing system on the two-position legs and the vapor plugs in the fixed low leg for deterioration of he gaskets.	NA	
i)	On shell-mounted roof supports, check for adequate clearance based on he maximum floating roof movement as determined by the posi ion of the roof relative to he gauge well and/or counter-rotational device.	NA	
C.2.9	**Floating Roof Seal Assemblies**	NA	
C.2.9.1	**Primary Shoe Assembly**	NA	
a)	Remove four sections of foam log (foam-filled seals) for inspection on 90° locations.	NA	

	Tank Out-of-service Inspection Checklist		
	Item	Completed X	Comments
b)	Inspect hanger attachment to roof rim for thinning, bending, broken welds, and wear of pin holes.	NA	
c)	Inspect clips welded to roof rim for thinning.	NA	
d)	Shoes—inspect for hinning and holes in shoes.	NA	
e)	Inspect for bit-metal bolts, clips, and attachments.	NA	
f)	Seal fabric—inspect for deterioration, stiffening, holes, and tears in fabric.	NA	
g)	Measure length of fabric from top of shoe to roof rim, and check against maximum anticipated annular space as roof operates.	NA	
h)	Inspect any modification of shoes over shell nozzles, mixers, etc., for clearance.	NA	
i)	Inspect shoes for damage caused by striking shell nozzles, mixers, etc.	NA	
C.2.9.2	**Primary Toroidal Assembly**	NA	
a)	Inspect seal fabric for wear, deterioration, holes, and tears.	NA	
b)	Inspect hold-down system for buckling or bending.	NA	
c)	Inspect foam for liquid absorption and deterioration.	NA	
C.2.9.3	**Rim-mounted Secondaries**	NA	
a)	Inspect the rim-mounted bolting bar for corrosion and broken welds.	NA	
b)	Measure and chart seal-to-shell gaps.	NA	
c)	Visually inspect seam from below, looking for holes as evidenced by light.	NA	
d)	Inspect fabric for deterioration and stiffness.	NA	
e)	Inspect for mechanical damage, corrosion, and wear on tip in contact with shell.	NA	
f)	Inspect for contact with obstructions above top of shell.	NA	
C.2.10	**Floating Roof Appurtenances**	NA	
C.2.10.1	**Roof Manways**	NA	
a)	Inspect walls of manways for pit ing and thinning.	NA	
b)	On tanks with interface autogauges, check seal around gauge tape cable and guide wires through manway cover.	NA	
c)	Inspect cover gasket and bolts.	NA	
C.2.10.2	**Rim Vent**	NA	
a)	Check rim vent for pitting and holes.	NA	
b)	Check vent for condi ion of screen.	NA	
c)	On floating roof tanks where the environmental rules require closing off the vent, check he vent pipe for corrosion at the pipe-to-rim joint and check that the blinding is adequate.	NA	
C.2.10.3	**Vacuum Breaker, Breather Type**	NA	
a)	Service and check operation of breather valve.	NA	
b)	Check that nozzle pipe projects no more than 1/2 in. below roof deck.	NA	
C.2.10.4	**Vacuum Breaker, Mechanical Type**	NA	
	Inspect the stem for thinning. Measure how far the vacuum breaker cover is raised off he pipe when he roof is resting on high or low legs.	NA	
a)	On high legs: _____ .	NA	
b)	On low legs: _____ .	NA	
C.2.10.5	**Roof Drains: Open Systems, Including Emergency Drains**	NA	NA=Not applicable/accessible
a)	Check liquid level inside open roof drains for adequate freeboard. Report if there is insufficient distance between liquid level and top of drain.	NA	
b)	If tank comes under Air Quality Monitoring District rules, inspect the roof drain vapor plug.	NA	
c)	If emergency drain is not at the center of the roof, check that there are at least hree emergency drains.	NA	
C.2.10.6	**Closed Drain Systems: Drain Basins**	NA	NA=Not applicable/accessible
a)	Inspect for hinning and pitting.	NA	
b)	Inspect protective coating (topside).	NA	
c)	Inspect basin cover or screen for corrosion.	NA	
d)	Test operation of check valve.	NA	

	Tank Out-of-service Inspection Checklist		
	Item	Completed X	Comments
e)	Check for presence of check valve where bottom of basin is below product level.	NA	
f)	Inspect drain basin(s) to roof deck welds for cracking.	NA	
g)	Check drain basin(s) outlet pipe for adequate reinforcement to roof deck (including reinforcing pad).	NA	
C.2.10.7	**Closed Drain Systems: Fixed Drain Line on Tank Bottom**		
a)	Hammer test fixed drain line on tank bottom for thinning and scale/debris plugging.	X	
b)	Inspect supports and reinforcing pads for weld failures and corrosion.	X	
c)	Check that pipe is guided, not rigidly locked to support, to avoid tearing of tank bottom plate.	X	
C.2.10.8	**Closed Drain Systems: Flexible Pipe Drain**	NA	NA=Not applicable/accessible
a)	Inspect for damage to exterior of pipe.	NA	
b)	Check for obstructions that pipe could catch on.	NA	
c)	Inspect shields to protect pipe from snagging.	NA	
d)	Inspect results of hydrostatic test on flexible roof drain system.	NA	
C.2.10.9	**Closed Drain Systems: Articulated Joint Drain**	NA	NA=Not applicable/accessible
a)	Hammer test rigid pipe in flexible joint systems for thinning and scale/debris plugging.	NA	
b)	Inspect system for signs of bending or strain.	NA	
c)	Inspect results of system hydrostatic test.	NA	
d)	Inspect landing leg and pad.	NA	
C.2.10.10	**Autogauge System and Alarms**	NA	NA=Not applicable/accessible
a)	Check freedom of movement of tape through autogauge tape guide.	NA	
b)	Inspect sheaves for freedom of movement.	NA	
c)	Test operation checker.	NA	
d)	Inspect tape and tape cable for twisting and fraying.	NA	
e)	Test the tape's freedom of movement through guide sheaves and tape guide pipe.	NA	
f)	On open-top tanks, check that gate tapes with cables have no more than one foot of tape exposed with float at lowest point.	NA	
g)	Check float for leakage.	NA	
h)	Test float guide wire anchors for spring action by pulling on wire and releasing.	NA	
i)	Inspect floatwells in floating roofs for thinning and pitting of walls just above the liquid level.	NA	
j)	Check that the autogauge tape is firmly attached to the float.	NA	
k)	Inspect the tape cable and float guide wire fabric seals through the float well cover.	NA	
l)	Inspect the bottom guide wire attachment clip: inspect for a temporary weighted bar instead of a permanent welded down clip.	NA	
m)	Inspect board-type autogauge indicators for legibility and freedom of movement of indicator.	NA	
n)	Measure and record these distances to determine if seal damage will occur if tank is run over from:	NA	
1)	Shell top angle to underside of tape guide system.	NA	
2)	Liquid level on floating top to top of secondary seal.	NA	
o)	Identify floating roofs where the tape is connected directly to the roof.	NA	
p)	Overfill alarm: Inspect tank overfill prevention alarm switches for proper operation.	NA	
C.2.11	**Common Tank Appurtenances**		
C.2.11.1	**Gauge Well**	NA	NA=Not applicable/accessible
a)	Inspect gate well pipe for thinning at about two-thirds distance above the bottom: look for thinning at the edge of the slots.	NA	
b)	Check for corrosion on the pipe joint. Check that sample cords, weights, thermometers, etc., have been removed from the pipe.	NA	
c)	Check for cone at bottom end of pipe about one foot above he bottom.	NA	

	Tank Out-of-service Inspection Checklist		
	Item	Completed X	Comments
d)	Check condition of well washer pipe and that its flared end is directed at the near side of the hold off pad.	NA	
e)	Check that supports for gauge well are welded to pad or to shell and not directly to bottom plate.	NA	
f)	Check operation of gauge well cover.	NA	
g)	Check presence of a hold-off distance marker in well pipe and record hold-off distance. Hold-off distance _____ .	NA	
h)	Identify and report size and pipe schedule, and whether pipe is solid or slotted. Report slot size.	NA	
i)	Check that the hold-off distance plate is seal-welded to he bottom and hat any gauge well supports are welded to the plate and not directly to the bottom.	NA	
j)	Inspect vapor control float and cable.	NA	
k)	Check for presence and condition of gauge well washer.	NA	
l)	Check for bull plug or plate blind on gauge well washer valve.	NA	
m)	Inspect gauge well guide in floating roof for pitting and thinning.	NA	
n)	Inspect the guide rollers and sliding plates for freedom of movement.	NA	
o)	Inspect condition of gauge well pipe seal system.	NA	
p)	On black oil and diesel services: if gauge well is also used for sampling, check for presence of a thief- and gauge-type hatch to avoid spillage.	NA	
q)	Visually inspect inside of pipe for pipe weld protrusions which could catch or damage vapor control float.	NA	
C.2.11.2	**Sampling Systems: Roof Sample Hatches**	NA	NA=Not applicable/accessible
a)	Inspect roof-mounted sample hatches for reinforcing pads and cracking.	NA	
b)	Inspect cover for operation.	NA	
c)	For tanks complying with Air Quality Monitoring District rules, inspect sample hatch covers for adequate sealing.	NA	
d)	Check horizontal alignment of internal floating roof sample hatches under fixed roof hatches.	NA	
e)	Inspect the sealing system on the internal floating roof sample hatch cover.	NA	
f)	Inspect floating roof sample hatch cover recoil reel and rope.	NA	
C.2.11.3	**Shell Nozzles**		
a)	Inspect shell nozzles for thinning and pitting.	X	See inspection report
b)	Inspect hot tap nozzles for trimming of holes.	X	See inspection report
c)	Identify type of shell nozzles.	X	See inspection report
d)	Identify and describe internal piping, including elbow-up and elbow-down types.	X	See inspection report
C.2.11.4	**For Nozzles Extended Into the Tank**		
a)	Inspect pipe support pads welded to tank bottom.	X	See inspection report
b)	Inspect to see that pipe is free to move along support without strain or tearing action on bottom plate.	X	See inspection report
c)	Inspect nozzle valves for packing leaks and damaged flange faces.	X	See inspection report
d)	Inspect heater stream nozzle flanges and valves for wire cutting.	X	See inspection report
e)	Report which nozzles have thermal pressure relief bosses and valves.	X	See inspection report
f)	In internal elbow-down fill line nozzles, inspect the wear plate on the tank bottom.	X	See inspection report
g)	On elbow-up fill lines in floating roof tanks, check that opening is directed against underside of roof, not against vapor space. Inspect impact are for erosion.	X	See inspection report
C.2.11.5	**Diffusers and Air Rolling Systems**	NA	NA=Not applicable/accessible
a)	Inspect diffuser pipe for erosion and thinning.	NA	
b)	Check holes in diffuser for excessive wear and enlargement.	NA	
c)	Inspect diffuser supports for damage and corrosion.	NA	
d)	Check that diffuser supports restrain, not anchor, longitudinal line movement.	NA	
e)	Inspect air spiders on bottom of lube oil tanks for plugging and damaged or broken hreaded joints.	NA	
C.2.11.6	**Swing Lines**	NA	NA=Not applicable/accessible

	Tank Out-of-service Inspection Checklist		
	Item	Completed X	Comments
a)	Inspect flexible joint for cracks and leaks.	NA	
b)	Scribe the flexible joint across the two moving faces and raise end of swing line to check the joint's freedom of movement, indicated by separa ion of scribe marks.	NA	
c)	Check that flexible joints over 6 in. are supported.	NA	
d)	Inspect the swing pipe for deep pitting and weld corrosion.	NA	
e)	Loosen the vent plugs in the pontoons and listen for a vacuum. Lack of a vacuum indicates a leaking pontoon.	NA	
f)	Check the results of air test on pontoons during repairs.	NA	
g)	Inspect the pontoons for pitting.	NA	
h)	Inspect the pull-down cable connections to the swing.	NA	
i)	Inspect the condition of the bottom-mounted support, fixed roof limiting bumper, or shell-mounted limiting bumper for wood condition, weld and bolt corrosion, and seal welding to bottom or shell.	NA	
j)	Inspect safety hold-down chain for corrosion and weak links.	NA	
k)	Check that there is a welded reinforcing pad where the chain connects to the bottom.	NA	
l)	If the floa ing swing in a floating or internal floating roof tank does not have a limiting device preventing the swing from exceeding 60 degrees, measure and calculate the maximum angle possible with the roof on overflow. Max. angle on overflow _____ . (If the calculated angle exceeds 65 degrees, recommended installation of a limiting bracket.)	NA	
m)	Inspect pull-down cable for fraying.	NA	
n)	Inspect for hree cable clamps where cable attaches to end of swing line (single-reeved) or to roof assembly (double-reeved). Inspect sheaves for freedom of move-ment.	NA	
o)	Inspect winch opera ion and check the height indicator for legibility and accuracy.	NA	
p)	Inspect bottom-mounted sheave assembly at end of pontoon for freedom of rotation of sheave.	NA	
q)	Inspect shell-mounted lower sheave assembly for freedom of rotation of sheave, corrosion thinning, and pitting of sheave housing.	NA	
r)	Inspect upper sheave assembly for freedom of movement of sheave.	NA	
s)	Inspect the cable counterbalance assembly for corrosion and freedom of operation.	NA	
C.2.11.7	**Manway Heater Racks**	NA	NA=Not applicable/accessible
a)	Inspect the manway heater racks for broken welds and bending of the sliding rails.	NA	
b)	Measure and record the length of the heater and length of the track.	NA	
C.2.11.8	**Mixer Wear Plates and Deflector Stands**	NA	NA=Not applicable/accessible
a)	Inspect bottom and shell plates and deflector stands.	NA	
b)	Inspect for erosion and corrosion on the wear plates. Inspect for rigidity, structural soundness, corrosion, and erosion of deck plates and reinforcing pads that are seal-welded to the bottom under the deflector stand legs.	NA	
c)	Measure for propeller clearance between the bottom of deflector stand and roof when he roof is on low legs.	NA	
C.2.12	**Access Structures**		
C.2.12.1	**Handrails**	X	See inspection report
a)	Identify and report type (steel pipe, galvanized pipe, square tube, angle) and size of handrails.	X	
b)	Inspect for pitting and holes, paint failure.	X	
c)	Inspect attachment welds.	X	
d)	Identify cold joints and sharp edges. Inspect the handrails and midrails.	X	
e)	Inspect safety drop bar (or safety chain) for corrosion, func ioning, and leng h.	X	
f)	Inspect the handrail between the rolling ladder and the gaging platform for a hazard-ous opening when the floating roof is at its lowest level.	X	
C.2.12.2	**Platform Frame**	X	See inspection report
a)	Inspect frame for corrosion and paint failure.	X	

Willbros Government Services, LLC - Tank Inspection Checklist
Redhill Complex - TK 5 Pearl Harbor Naval Station, Oahu HI

	Tank Out-of-service Inspection Checklist		
	Item	**Completed** X	**Comments**
b)	Inspect the attachment of frame to supports and supports to tank for corrosion and weld failure.	X	
c)	Check reinforcing pads where supports are attached to shell or roof.	X	
d)	Inspect the surface that deck plate or grating rests on, for thinning and holes.	X	
e)	Check that flat-surface-to-flat-surface junctures are seal-welded.	X	
C.2.12.3	**Deck Plate and Grating**	X	See inspection report
a)	Inspect deck plate for corrosion-caused hinning or holes (not drain holes) and paint failure.	X	
b)	Inspect plate-to-frame weld for rust scale buildup.	X	
c)	Inspect gra ing for corrosion-caused thinning of bars and failure of welds.	X	
d)	Check grating tie down clips. Where grating has been retrofitted to replace plate,	X	
	measure the rise of the step below and above the grating surface and compare with other risers on the stairway.	X	
C.2.12.4	**Stairway Stringers**	NA	NA=Not applicable/accessible
a)	Inspect spiral stairway stringers for corrosion, paint failure, and weld failure. Inspect attachment of stairway treads to stringer.	NA	
b)	Inspect stairway supports to shell welds and reinforcing pads.	NA	
c)	Inspect steel support attachment to concrete base for corrosion.	NA	
C.2.12.5	**Rolling Ladder**	NA	NA=Not applicable/accessible
a)	Inspect rolling ladder stringers for corrosion.	NA	
b)	Identify and inspect ladder fixed rungs (square bar, round bar, angles) for weld attachment to stringers and corrosion, particularly where angle rungs are welded to stringers.	NA	
c)	Check for wear and corrosion where rolling ladder attaches to gaging platform.	NA	
d)	Inspect pivot bar for wear and secureness.	NA	
e)	Inspect operation of self-leveling stairway treads.	NA	
f)	Inspect for corrosion and wear on moving parts.	NA	
g)	Inspect rolling ladder wheels for freedom of movement, flat spots, and wear on axle.	NA	
h)	Inspect alignment of rolling ladder with roof rack.	NA	
i)	Inspect top surface of rolling ladder track for wear by wheels to assure at least 18 in. of unworn track (track long enough).	NA	
j)	Inspect rolling ladder track welds for corrosion.	NA	
k)	Inspect track supports on roof for reinforcing pads seal-welded to deck plate.	NA	
l)	Check by dimensioning, the maximum angle of the rolling ladder when the roof is on low legs.	NA	
m)	If rolling ladder track extends to within 5 ft of the edge of the roof on the far side, check for a handrail on the top of the shell on that side.	NA	
NOTES -			

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

A WILLBROS COMPANY

Technical Data & Submittal for Project:

Project Title: CLEAN, INSPECT, AND REPAIR STORAGE TANKS
Location: PEARL HARBOR NAVAL STATION, OAHU, HI
Task Order No.: N62583-09-D-0132/0003
WGS Project Number: 54118
Equipment: Tank 5

APPENDIX C
PROJECT DRAWINGS AND SKETCHES

Rev	Date	Description	Reviewed	Approved
P	11/18/10	Preliminary - For Info	RC	TDA
A	11/22/10	Draft Data – For Info	RC	TDA
B	4/2/11	For Review and Approval	JS	TDA
0				
1				
2				
3				

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

A WILLBROS COMPANY

APPENDIX C

PROJECT DRAWINGS AND SKETCHES
Section C-1

Rev	Date	Description	Reviewed	Approved
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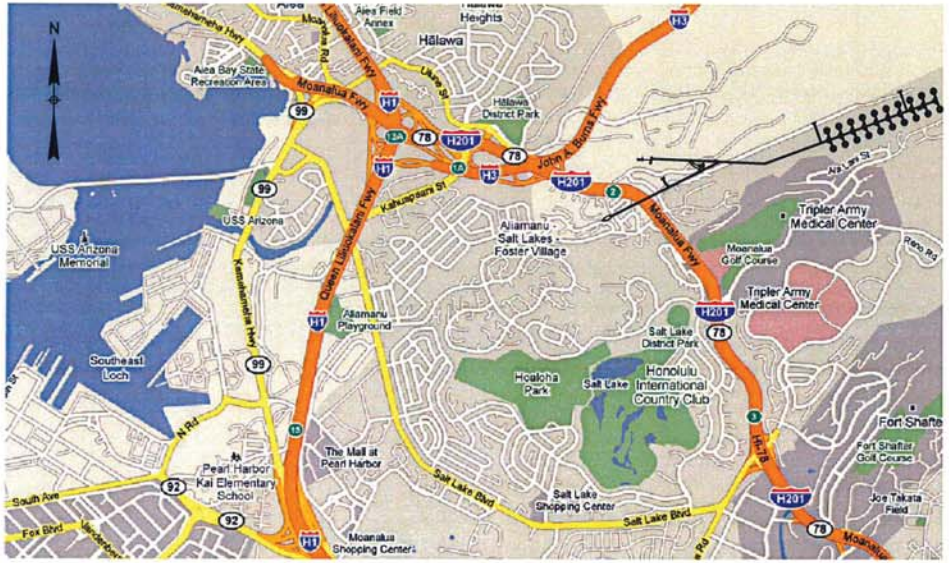
0				
1				
2				
3				

Pearl Naval Base-Redhill Complex
Clean, Inspect & Repair Tanks No. 5 & 17
Pearl Harbor, HI

MAP OF OAHU
SCALE: NONE



AREA VICINITY MAP

VICINITY MAP
SCALE: NONE

ABBREVIATIONS

AAE	AUTOMATIC AIR ELIMINATOR	HS	HAND SWITCH
ABAND	ABANDONED	IT	INTERFACE TANK
AC	ASPHALT CONCRETE	K	KILO DOCK
ADJ	ADJUSTABLE	kPa	KILO PASCAL
AG	ABOVE GROUND	LLA	LOW LEVEL ALARM
APPROX	APPROXIMATELY	LL	LOW LEVEL
BG	BELOW GROUND	LPD	LOW POINT DRAIN
BOP	BOTTOM OF PIPE	LR	LONG RADIUS
CL	GLASS	LSH	LEVEL SWITCH HIGH
CONC	CONCRETE	MIN.	MINIMUM
CONT	CONTINUATION	N.I.C.	NOT IN CONTRACT
D	DIAMETER	OC	ON CENTER
DB&B	DOUBLE BLOCK & BLEED	OD	OUTSIDE DIAMETER
DN	DIAMETER NORMAL	OOS	OUT OF SERVICE
DR	DRAIN	OP	OPERATOR
DPI	DIFFERENTIAL PRESSURE INDICATOR	PI	PRESSURE INDICATOR
DPP	DIESEL PURIFICATION PLANT	PS	PIPE SUPPORT, PRESSURE SWITCH
EL	ELEVATION	PSV	PRESSURE SAFETY VALVE
EQPT	EQUIPMENT	R	RADIUS
EXP	EXPANSION	S	SOLENOID, STRAINER, SUPPORT
EXIST	EXISTING	STA	STATION
FC	FLOW CONTROL	TLR	TRUCK LOADING RACK
FCV	FLOW CONTROL VALVE	TYP	TYPICAL
FISC	FLEET INDUSTRIAL SUPPLY CENTER	T	TANK
FOR	FUEL OIL RECLAIMED	TOC	TOP OF CONCRETE
FQI	FLOW QUANTITY INDICATOR	UGPH	UNDERGROUND PUMP HOUSE
FQT	FLOW QUANTITY TOTALIZER	UTF	UPPER TANK FARM
FRP	FIBERGLASS REINFORCED PIPE	VC	VALVE CHAMBER
HDPE	HIGH DENSITY POLYETHYLENE	VS	VALVE STATION
HHLA	HIGH HIGH LEVEL ALARM	W/	WITH
HHL	HIGH HIGH LEVEL	WORF	WASTE OIL RECLAMATION FACILITY
HL	HIGH LEVEL	YGS	EVENT GROUND SWITCH
HPV	HIGH POINT VENT		

CONTACT INFORMATION

ADDRESS OF FACILITY: PEARL NAVAL BASE-REDHILL COMPLEX

FACILITY POINTS OF CONTACT: FISC-PEARL HARBOR, GREG YAMASKI/ROBERT CAMPBELL
NFESC-COR, MIKE ROCHA
NFESC-NTR, DAVID WALTON

ADDRESS OF ENGINEERS: WILLBROS GOVERNMENT SERVICES, LLC
2087 E. 71ST ST.
TULSA, OK 74136
(918) 496-0400

POINTS OF CONTACT: PROJECT MGR.-TIM ANDERSON (918) 481-4357, CELL (832) 618-0281
PROJECT ENGINEER-GENE HUMES P.E. (918) 499-2764, CELL (918) 606-2731.
PROGRAM MGR.-DOUG BAYLES (918) 499-2890, CELL (918) 845-3700.

NOT FOR CONSTRUCTION

ISSUED FOR APPROVAL
9-MAR-10

DOUGLAS M. BAYLES
LICENSED PROFESSIONAL ENGINEER
No. 11128-C
HAWAII U.S.A.
3/9/10

REFERENCE	NUMBER	NO.	DATE	REVISION	BY	CHK	APPR	APPR	APPR
		A	3/9/10	ISSUED FOR PROPOSAL	LJM	TDA			

DRAWING ISSUES: CONSTRUCTION, BIDS, APPROVAL, INFORMATION

ISSUED FOR:	SIGNATURE	DATE	REV.
DRAWN:	LJM	DATE: 3/1/10	
CHECKED:		DATE:	
ENGINEER:	TDA	DATE:	
W.E.I.:		DATE:	
CLIENT:		DATE:	
CLIENT:		DATE:	

DRAWING APPROVALS

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

PEARL NAVAL BASE-REDHILL COMPLEX
CLEAN, INSPECT, REPAIR TANKS 5, 17
PEARL HARBOR, HI

SCALE	PROJECT NO.	DRAWING NO.	SHEET	REV.
NOTED	54118	01-001	1 OF 1	A

Pearl Naval Base-RedHill Complex
Clean, Inspect & Repair Tanks No. 5 & 17
Pearl Harbor, HI

01-GENERAL DRAWINGS

SHEET No. / REVISION No.	REFERENCE SHEET No.	NAVFAC DWG. No.	DRAWING TITLE
01-001s1rA	–	–	CLEAN, INSPECT, REPAIR TANKS #5, 17
01-002s1rA	–	–	DISCIPLINE DRAWING INDEX
01-005s1rB	–	–	TANK EQUIPMENT STAGING DETAILS
01-006s1rB	–	–	EQUIPMENT STAGING AND ACCESS
01-100s1rA	–	–	SITE PLAN & LAYDOWN AREAS
	–	–	

02-EARTHWORK AND GRADING DRAWINGS

SHEET No. / REVISION No.	REFERENCE SHEET No.	NAVFAC DWG. No.	DRAWING TITLE

03-CONCRETE DRAWINGS

SHEET No. / REVISION No.	REFERENCE SHEET No.	NAVFAC DWG. No.	DRAWING TITLE

04-STRUCTURAL DRAWINGS

SHEET No. / REVISION No.	REFERENCE SHEET No.	NAVFAC DWG. No.	DRAWING TITLE

07-PIPING DRAWINGS

SHEET No. / REVISION No.	REFERENCE SHEET No.	NAVFAC DWG. No.	DRAWING TITLE

09-ELECTRICAL DRAWINGS

SHEET No. / REVISION No.	REFERENCE SHEET No.	NAVFAC DWG. No.	DRAWING TITLE

10-TANKS AND APPURTENANCES DRAWINGS

SHEET No. / REVISION No.	REFERENCE SHEET No.	NAVFAC DWG. No.	DRAWING TITLE
10-001s1rA	–	–	TANK PLAN AND SECTION DETAILS
10-002s1rA	–	–	TANK ELEVATION PLAN, AND DETAILS

11-PERMIT DRAWINGS

SHEET No. / REVISION No.	REFERENCE SHEET No.	NAVFAC DWG. No.	DRAWING TITLE

32-DETAIL DRAWINGS

SHEET No. / REVISION No.	REFERENCE SHEET No.	NAVFAC DWG. No.	DRAWING TITLE

36-TYPICAL DRAWINGS

SHEET No. / REVISION No.	REFERENCE SHEET No.	NAVFAC DWG. No.	DRAWING TITLE

38-HYDROSTATIC TEST DRAWINGS

SHEET No. / REVISION No.	REFERENCE SHEET No.	NAVFAC DWG. No.	DRAWING TITLE

DOUGLAS J. BAKER
LICENSED PROFESSIONAL ENGINEER
No. 11128-C
HAWAII U.S.A.
3/1/10

NOT FOR CONSTRUCTION

ISSUED FOR APPROVAL
9-MAR-10

REFERENCE	NUMBER	NO.	DATE	REVISION	BY	CHK	APPR	APPR	APPR
		A	3/9/10	ISSUED FOR PROPOSAL	LJM	TDA			

DRAWING ISSUES: CONSTRUCTION / BIDS / APPROVAL / INFORMATION

ISSUED FOR:	SIGNATURE	DATE	REV.
DRAWN: LJM		DATE: 3/1/10	
CHECKED:		DATE:	
ENGINEER: TDA		DATE:	
W.E.I.:		DATE:	
CLIENT:		DATE:	
CLIENT:		DATE:	

DRAWING APPROVALS

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

PEARL NAVAL BASE-REDHILL COMPLEX
DISCIPLINE DRAWING INDEX
REARL HARBOR, HI

SCALE	PROJECT NO.	DRAWING NO.	SHEET	REV.
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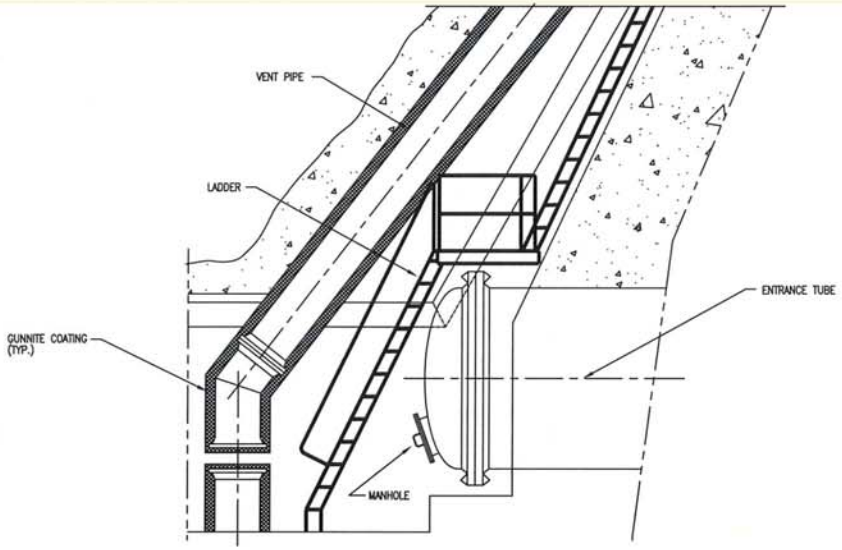
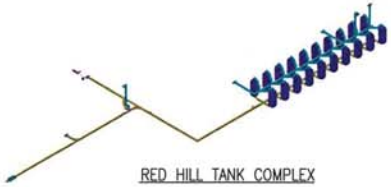
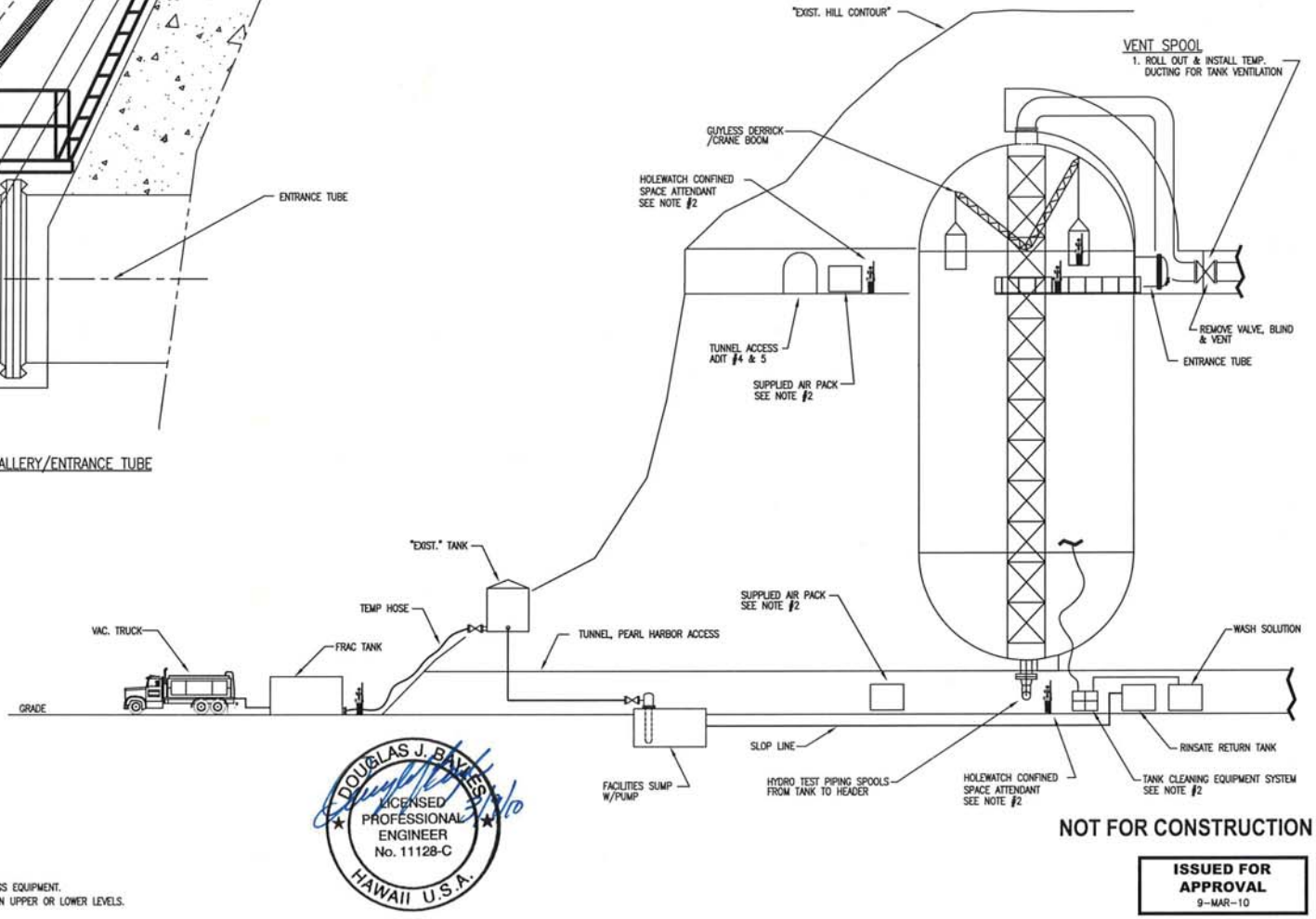


SECTION THROUGH ACCESS GALLERY/ENTRANCE TUBE



RED HILL TANK COMPLEX

FOR DETAILS (SEE DWG. 01-006)



DOUGLAS J. BAYES
LICENSED PROFESSIONAL ENGINEER
No. 11128-C
HAWAII U.S.A.
3/9/10

NOT FOR CONSTRUCTION

ISSUED FOR APPROVAL
9-MAR-10

NOTE:
1. ACCESS THRU TUNNEL BY NAVFAC TRAIN OR WGS EQUIPMENT.
2. EQUIPMENT AND PERSONNEL MAY BE STAGED ON UPPER OR LOWER LEVELS.

REFERENCE	NUMBER	NO.	DATE	REVISION	BY	CHK	APPR	APPR	APPR
		B	3/9/10	REVISED, RESUBMITTED FOR APPROVAL					
		A	11/20/09	ISSUED FOR PROPOSAL	LJM	GH			

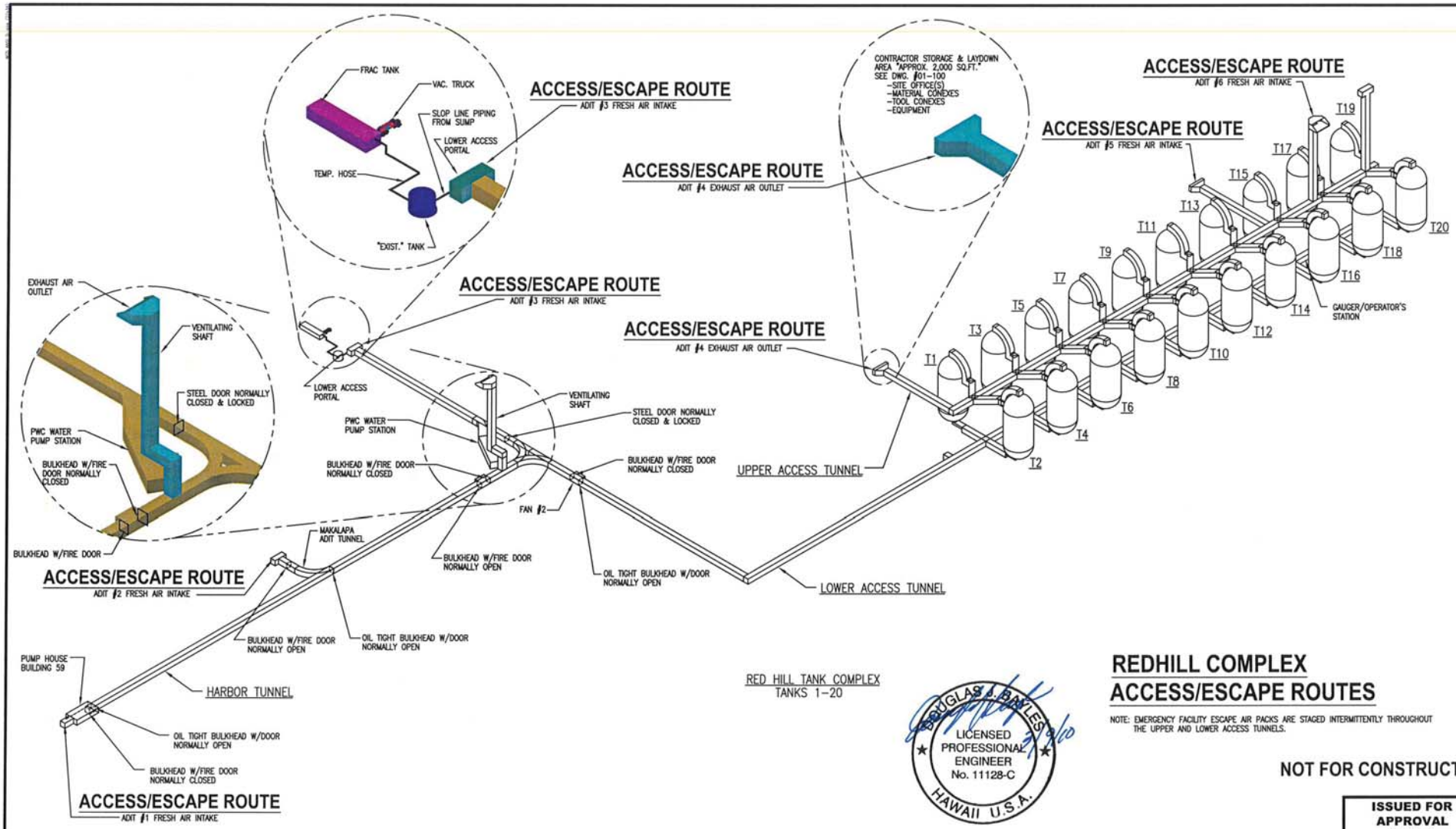
DRAWING ISSUES			
CONSTRUCTION			
BIDS			
APPROVAL			
INFORMATION			
ISSUED FOR:	SIGNATURE	DATE	REV.

DRAWING APPROVALS		
DRAWN:	LJM	DATE: 11/20/09
CHECKED:		DATE:
ENGINEER:	TDA	DATE:
E.I.:		DATE:
CLIENT:		DATE:
CLIENT:		DATE:

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

PEARL NAVAL BASE-REDHILL COMPLEX
TANK EQUIPMENT STAGING DETAILS
PEARL HARBOR, HI

SCALE	PROJECT NO.	DRAWING NO.	SHEET	REV.
NOTED	54118	01-005	1 OF 1	B



RED HILL TANK COMPLEX
TANKS 1–20

DOUGLAS J. BAYLES
LICENSED PROFESSIONAL ENGINEER
No. 11128-C
HAWAII U.S.A.
3/9/10

REDHILL COMPLEX
ACCESS/ESCAPE ROUTES

NOTE: EMERGENCY FACILITY ESCAPE AIR PACKS ARE STAGED INTERMITTENTLY THROUGHOUT THE UPPER AND LOWER ACCESS TUNNELS.

NOT FOR CONSTRUCTION

ISSUED FOR APPROVAL
9–MAR–10

REFERENCE	NUMBER	NO.	DATE	REVISION	BY	CHK	APPR	APPR	APPR
		B	3/9/10	REVISED, RESUBMITTED FOR APPROVAL					
		A	11/20/09	ISSUED FOR PROPOSAL	LJM	GH			

DRAWING ISSUES: CONSTRUCTION, BIDS, APPROVAL, INFORMATION

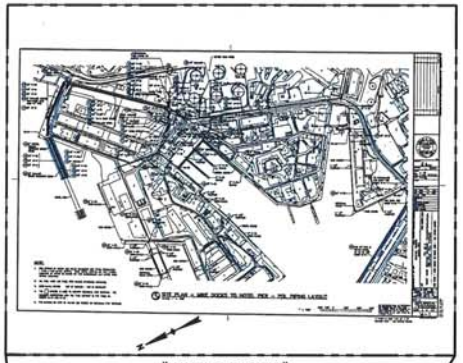
ISSUED FOR	SIGNATURE	DATE	REV.
DRAWN: LJM		DATE: 11/20/09	
CHECKED:		DATE:	
ENGINEER: TDA		DATE:	
W.E.I.:		DATE:	
CLIENT:		DATE:	
CLIENT:		DATE:	

DRAWING APPROVALS

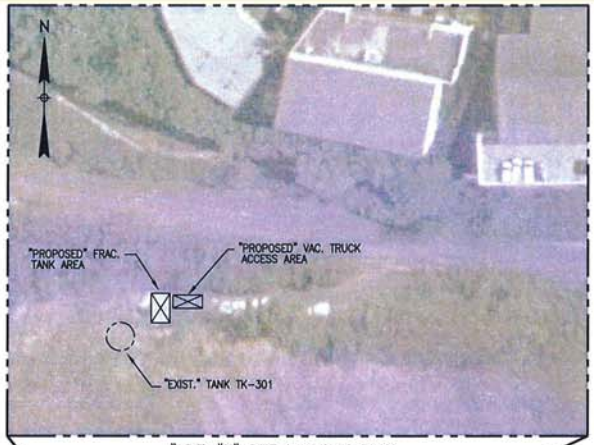
WILLBROS GOVERNMENT SERVICES (U.S.), LLC

PEARL NAVAL BASE–REDHILL COMPLEX
EQUIPMENT STAGING AND ACCESS
PEARL HARBOR, HI

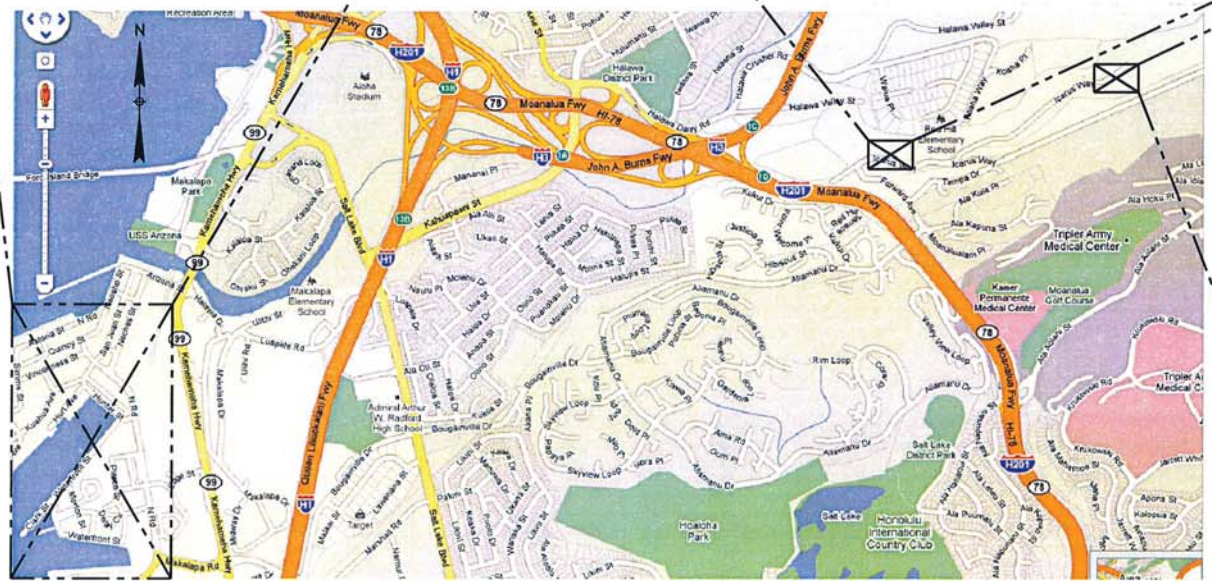
SCALE	PROJECT NO.	DRAWING NO.	SHEET	REV.
NOTED	54118	01–006	1 OF 1	B



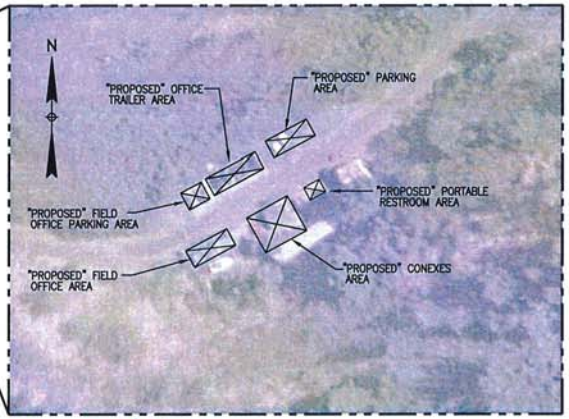
"NAVFAC PACIFIC"
PEARL HARBOR SITE PLAN
CUSTOMER SUPPLIED, PLAN ROTATED F/CLARITY



"ADIT #3" SITE LAYDOWN PLAN



"EXPANDED" SITE PLAN



"ADIT #4" SITE LAYDOWN PLAN

DOUGLAS J. BAYLES
LICENSED PROFESSIONAL ENGINEER
No. 11128-C
HAWAII, U.S.A.

NOT FOR CONSTRUCTION

ISSUED FOR APPROVAL
9-MAR-10

REFERENCE	NUMBER	NO.	DATE	REVISION	BY	CHK	APPR	APPR	APPR
		A	3/9/10	ISSUED FOR APPROVAL	LJM	GH			

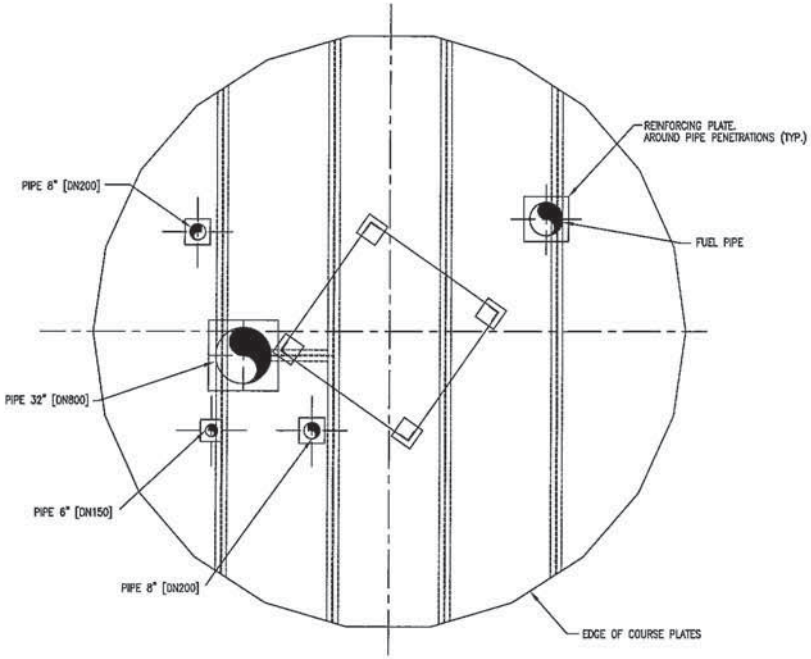
DRAWING ISSUES				
CONSTRUCTION				
BIDS				
APPROVAL				
INFORMATION				
ISSUED FOR:		SIGNATURE	DATE	REV.
DRAWING APPROVALS	DRAWN:	LJM	DATE:	2/25/10
	CHECKED:	TDA	DATE:	2/25/10
	ENGINEER:	TDA	DATE:	
	W.E.I.:		DATE:	
	CLIENT:		DATE:	
	CLIENT:		DATE:	

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

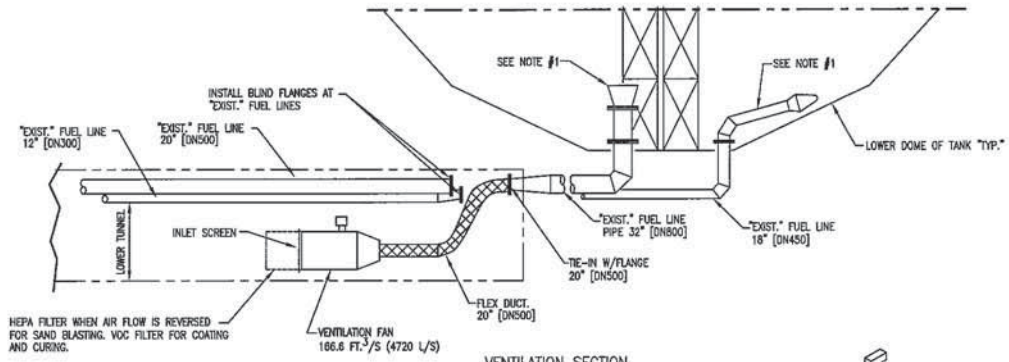
PEARL NAVAL BASE–REDHILL COMPLEX
SITE PLAN & LAYDOWN AREAS
PEARL HARBOR, HI

SCALE	PROJECT NO.	DRAWING NO.	SHEET	REV.
NOTED	54118	01–100	1 OF 1	A

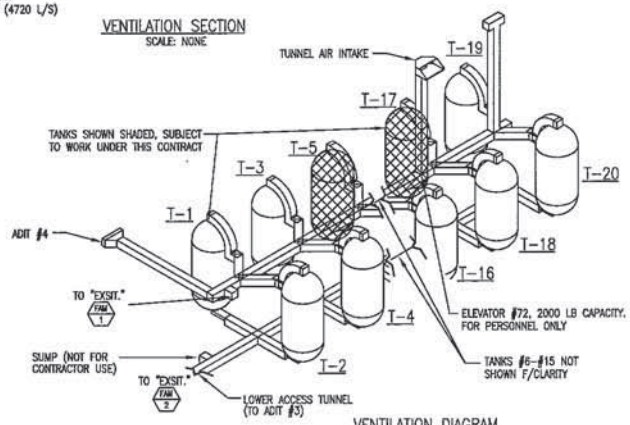
DWNAVAC - PORT HUENEME CA\TASK ORDERS\54118 NAVFAC REDHILL PROJECT\DRAWINGS\01_GENERAL, PLOT PLANS\01-100SITEPLAN.DWG



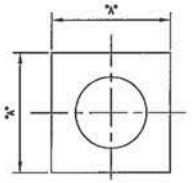
TYP. "EXIST." BOTTOM PLATE ASSEMBLY–PLAN VIEW
SCALE: NONE



VENTILATION SECTION
SCALE: NONE

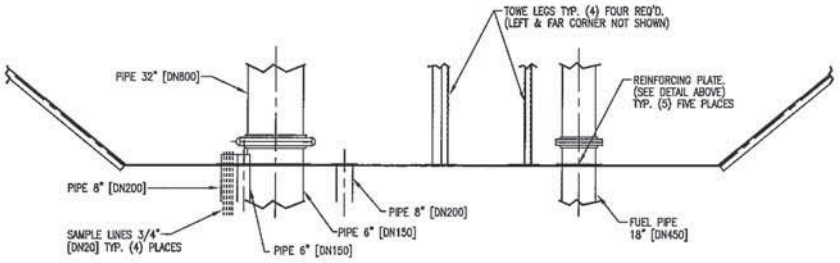


VENTILATION DIAGRAM
"EXIST." SYSTEM SHOWN



PIPE SIZE	"A"
6" [DN150]	11 7/8" [300]
8" [DN200]	13 3/4" [350]
18" [DN450]	24" [609]
32" [DN800]	37 7/8" [962]

TYP. "EXIST." REINFORCING PLATES
SCALE: NONE



BOTTOM PLATE ASSEMBLY–SECTION VIEW
SCALE: NONE

NOTES:

1. REMOVE NOZZLES IN TANK AT LOWER FLANGED CONNECTIONS. PROTECT OPEN PIPE ENDS FROM DEBRIS AND FOREIGN OBJECTS, REINSTALL ALL WORK AFTER REPAIRS ARE COMPLETED.
2. THE CONTRACTOR SHALL MAKE SURE WHEN COATING IS REQUIRED, THE ABBRASIVE BLASTING OF THE BOTTOM PLATE WILL ENSURE THAT ALL REINFORCING PLATES HAVE 1/8" [3] RADIUS ROUNDED CORNERS AND EDGES. GRIND 1/8" [3] RADIUS ROUNDED CORNERS AND EDGES ON PLATES THAT DO NOT HAVE THEM. NO SHARP CORNERS AND EDGES ARE ALLOWED WHEN APPLYING THE NEW COATING. GRIND ALL WELD BEADS AND SPATTER SMOOTH.
3. PROTECTED AREA OF 33.79' [10.30m] DIA. CIRCLE IS 896.95 SQ. FT. ACTUAL SURFACE AREA IS 947.65 SQ. FT.
4. FOR AIR FLOW THROUGH TANK AND EXHAUST, SEE DWG'S. #10-002, 01-005 & 01-006.

DOUGLAS J. BAYLES
LICENSED PROFESSIONAL ENGINEER
No. 11128-C
HAWAII U.S.A.

NOT FOR CONSTRUCTION

ISSUED FOR APPROVAL
9–MAR–10

DIM'S. IN [ ] ARE MM

REFERENCE	NUMBER	NO.	DATE	REVISION	BY	CHK	APPR	APPR	APPR
		A	3/9/10	ISSUED FOR PROPOSAL	LJM	TDA			

DRAWING ISSUES: CONSTRUCTION, BIDS, APPROVAL, INFORMATION

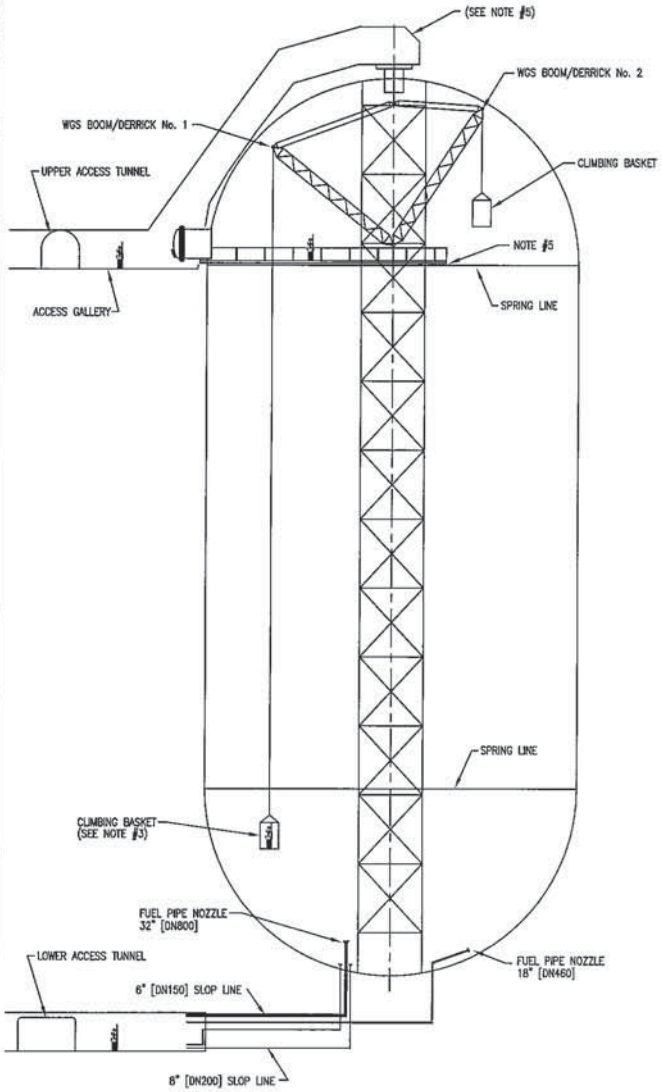
ISSUED FOR:	SIGNATURE:	DATE:	REV:
DRAWN:	LJM	DATE: 2/26/10	
CHECKED:		DATE:	
ENGINEER:	TDA	DATE:	
W.E.I.:		DATE:	
CLIENT:		DATE:	
CLIENT:		DATE:	

DRAWING APPROVALS

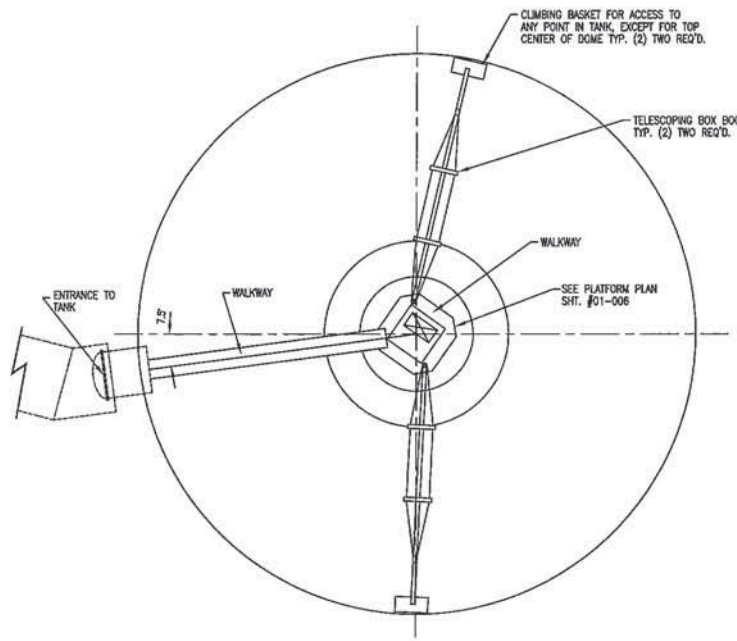
WILLBROS GOVERNMENT SERVICES (U.S.), LLC

PEARL NAVAL BASE–REDHILL COMPLEX
TANK PLAN & SECTION DETAILS
PEARL HARBOR, HI

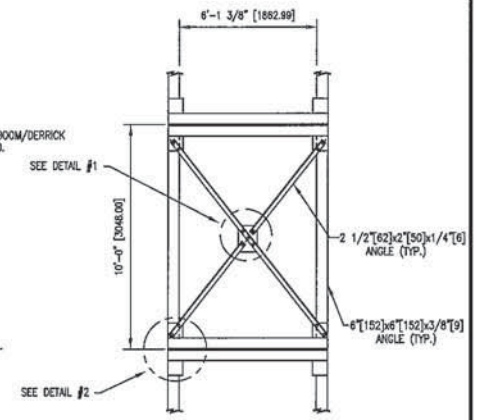
SCALE	PROJECT NO.	DRAWING NO.	SHEET	REV.
NOTED	54118	10–001	1 OF 1	A



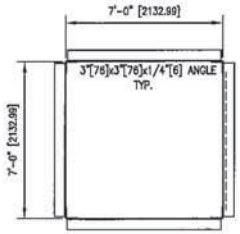
ELEVATION (A)
SCALE NONE
(LOOKING WEST)



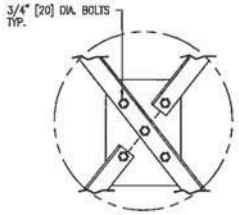
PLAN
SCALE NONE



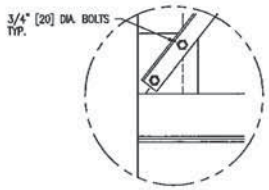
ELEVATION
SCALE none



PLAN
SCALE 1:25



DETAIL (1)
SCALE NONE



DETAIL (2)
SCALE NONE

NOTES:

1. DRAWING SHOWS "EXIST." CONDITIONS EXCEPT AS INDICATED.
2. TELESCOPING BOX BOOMS/CRANES AND ANCILLARY EQUIPMENT WILL BE STAGED IN BETWEEN THE TANKS AND READY FOR INSTALLATION.
3. BOOM AND CABLES TO SUPPORT A MAXIMUM WORKING LOAD OR BASKET OF 2,000 Lbs. [907]Kg.
4. FOR THE DURATION OF THE PROJECT WHILE IN THE TANK IS OPEN, THE CONTRACTOR SHALL PROVIDE PROTECTION FOR THE PAINTED BOTTOM AREA FROM FALLING OBJECTS AND DEBRIS FROM OVERHEAD WALKWAY AND THE TOWER STRUCTURE.
5. PROVIDE A CLIMBING BASKET INSIDE THE CENTER TOWER SUSPENDED FROM THE GAUGING GALLERY OR OTHER APPROVED LOCATION, FOR INITIAL CLEANING, INSPECTION & REPAIR OF THE TOWER.
6. CRANE BOOM/DERRICK WILL BE BOLTED/CONNECTED TO THE CENTER STRUCTURE AFTER THE STRUCTURAL INSPECTION AND ANY REPAIRS ARE COMPLETE.

DOUGLAS J. HAMILTON 3/9/10
LICENSED PROFESSIONAL ENGINEER No. 11128-C
HAWAII, U.S.A.

NOT FOR CONSTRUCTION

ISSUED FOR APPROVAL
9-MAR-10

DIM'S. IN [ ] ARE MM

REFERENCE	NUMBER	NO.	DATE	REVISION	BY	CHK	APPR	APPR
		A	3/9/10	ISSUED FOR PROPOSAL	LJM	TDA		

DRAWING ISSUE: COMPLETE / APPROVAL / INFORMATION

ISSUED FOR	SIGNATURE	DATE	REV.
DRAWN:	LJM	DATE: 2/26/10	
CHECKED:		DATE:	
ENGINEER:	TDA	DATE:	
W.E.L.:		DATE:	
CLIENT:		DATE:	
CLIENT:		DATE:	

DRAWING APPROVALS

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

PEARL NAVAL BASE–REDHILL COMPLEX
TANK ELEVATION, PLAN & DETAILS
PEARL HARBOR, HI

SCALE	PROJECT NO.	DRAWING NO.	SHEET	REV.
NOTED	54118	10–002	1 OF 1	A

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

A WILLBROS COMPANY

Technical Data & Submittal for Project:

Project Title: CLEAN, INSPECT, AND REPAIR STORAGE TANKS
Location: PEARL HARBOR NAVAL STATION, OAHU, HI
Task Order No.: N62583-09-D-0132/0003
WGS Project Number: 54118
Equipment: Tank 5

APPENDIX D
PROJECT PHOTOGRAPHS

Rev	Date	Description	Reviewed	Approved
P	11/18/10	Preliminary - For Info	RC	TDA
A	11/22/10	Draft Data – For Info	RC	TDA
B	4/2/11	For Review and Approval	JS	TDA
0				
1				
2				
3				

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

A WILLBROS COMPANY

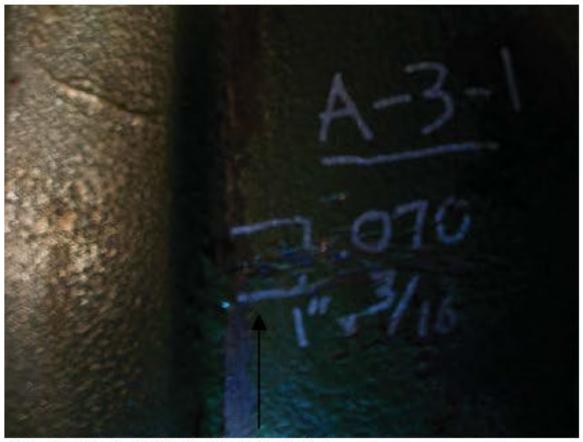
APPENDIX D

PROJECT API INSPECTION PHOTOGRAPHS
Section D-1

Rev	Date	Description	Reviewed	Approved
P	11/18/10	Preliminary - For Info	RC	TDA
A	11/22/10	Draft Data – For Info	RC	TDA
B	4/2/11	For Review and Approval	JS	TDA
0				
1				
2				
3				

UPPER DOME

A-P1-1 GOUGE REPAIR



A-P3-1 GOUGE REPAIR

A-P1-3 WELD REPAIR- UNDERCUT

A-P4-1 PITS

A-P1-2 GOUGE REPAIR

A-P4-2 WELD REPAIR - UNDERCUT

UPPER DOME

A-P5-1 PIT REPAIR

A-P11-1 WELD- POROSITY

A-P10-1 DENT REPAIR

A-P16-1 MULTIPLE PIT REPAIR

A-P10-2 DENT REPAIR

A-P19-1 WELD REPAIR- UNDERCUT

UPPER DOME

A-P19-2 WELD REPAIR- POROSITY

A-P25-1 PIT REPAIR

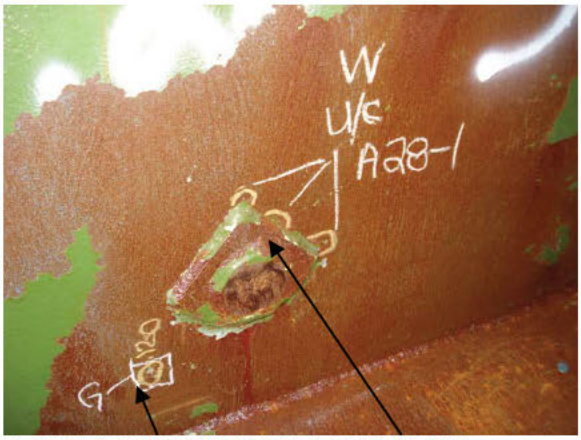
A-P20-1 GOUGE

A-26-1 PIT REPAIR

A-P23-1 PIT REPAIR

A-P27-2 PIT REPAIR

UPPER DOME



A-P28-1 GOUGE & WELD REPAIR-UNDERCUT

A-P31-2 DENT REPAIR

A-P30-1 GOUGE REPAIR

A-P34-1 GOUGE REPAIR

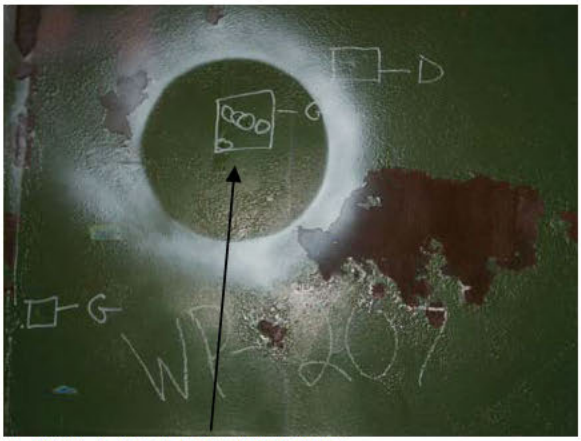
A-P30-2 PIT REPAIR

A-P35-1 GOUGE REPAIR

UPPER DOME

A-P35-2 PIT & GOUGE REPAIR

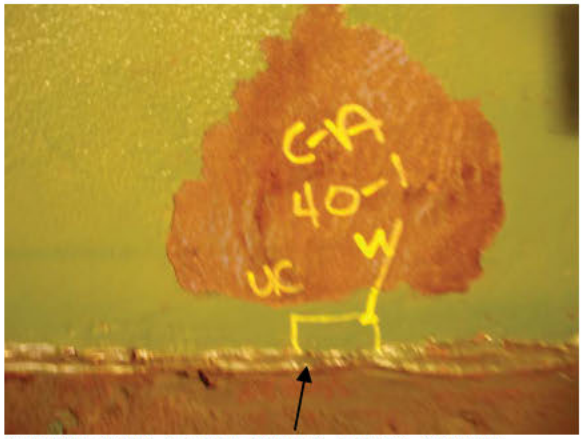
A-P37-2 GOUGE REPAIR



A-P36-1 GOUGE REPAIR

A-P39-1 WELD REPAIR- LACK OF FUSION

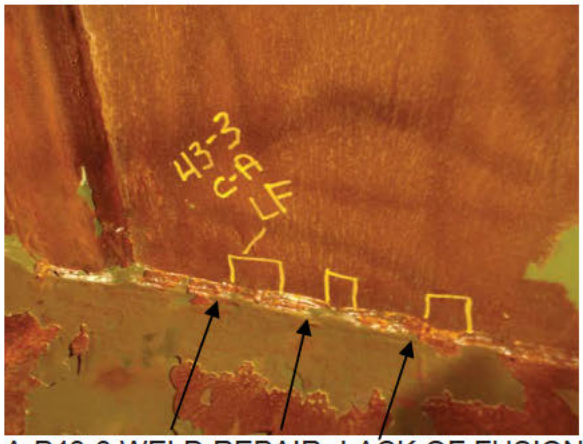
A-P37-1 WELD REPAIR- UNDERCUT



A-P40-1 WELD REPAIR- UNDERCUT

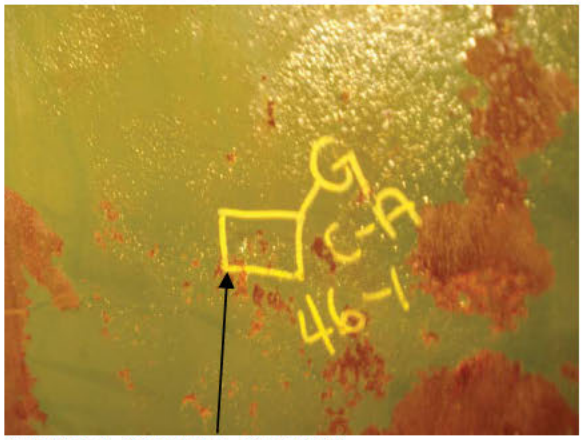
UPPER DOME

A-P42-1 WELD REPAIR- POROSITY

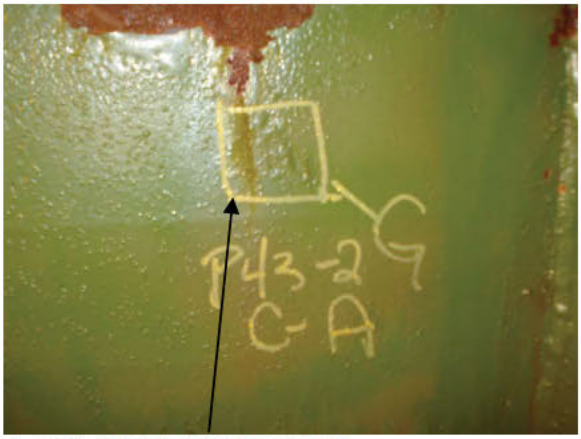


A-P43-3 WELD REPAIR- LACK OF FUSION

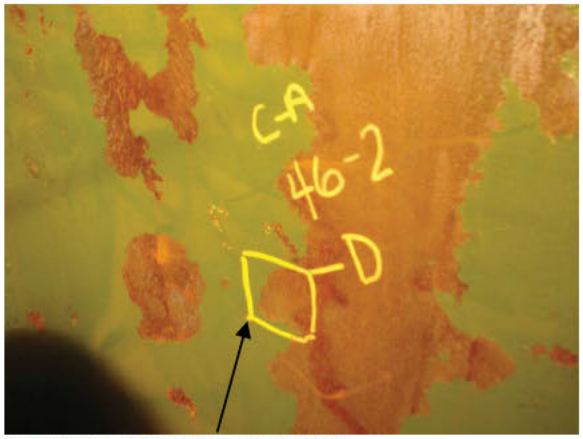
A-P43-1 GOUGE REPAIR



A-P46-1 GOUGE REPAIR

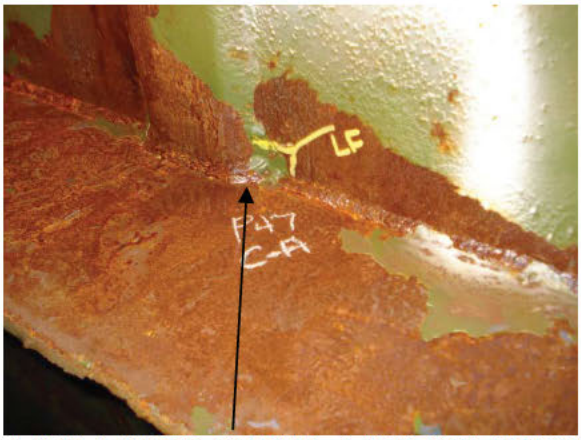


A-P43-2 GOUGE REPAIR

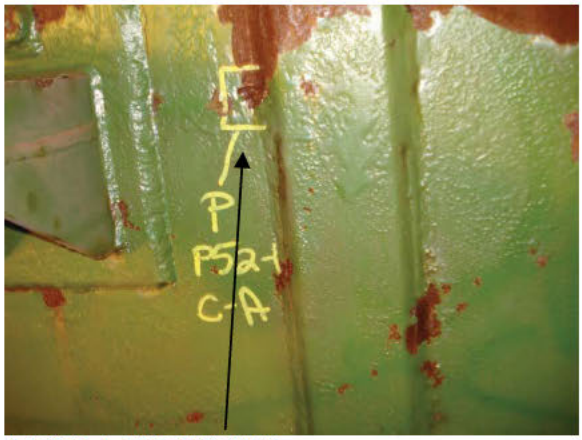


A-P46-2 GOUGE REPAIR

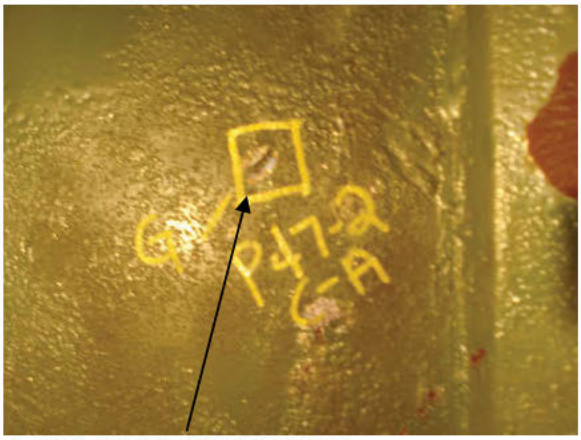
UPPER DOME



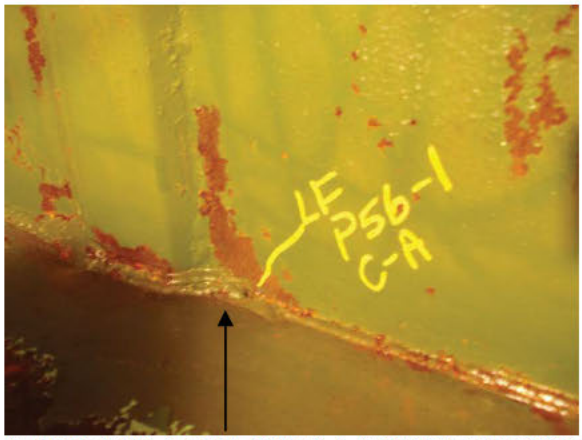
A-P47-1 WELD REPAIR- LACK OF FUSION



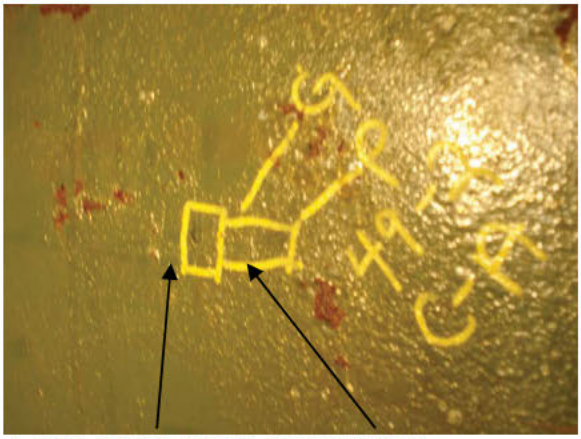
A-P52-1 PIT REPAIR



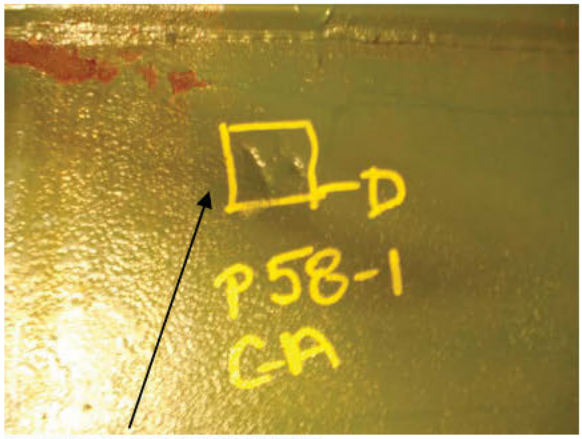
A-P47-2 GOUGE REPAIR



A-P56-1 WELD REPAIR- LACK OF FUSION

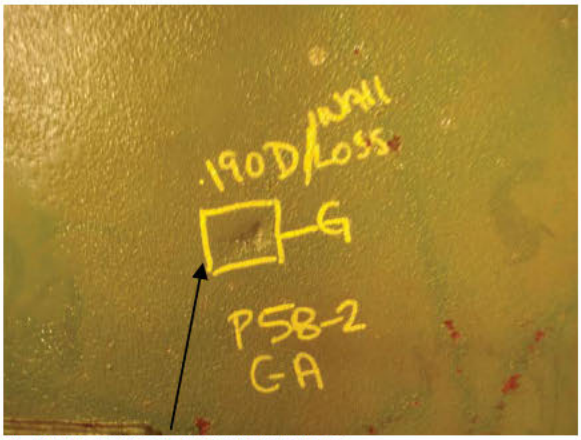


A-P49-2 GOUGE & PIT REPAIR

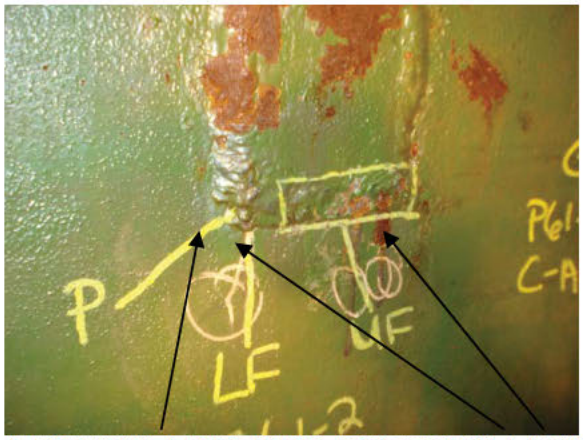


A-P58-1 DENT REPAIR

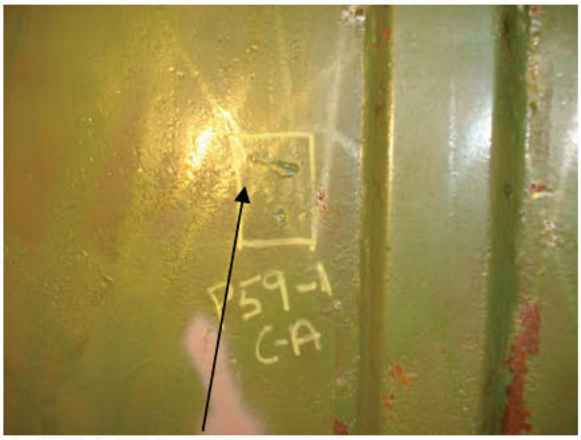
UPPER DOME



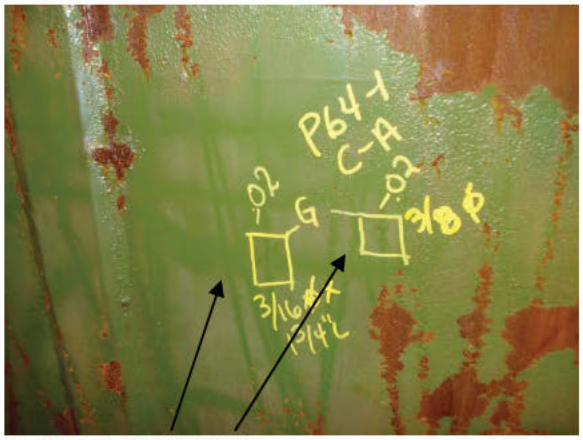
A-P58-2 GOUGE REPAIR



A-P61-2 WELD REPAIR- POROSITY, LACK OF FUSION,
UNDERFILL



A-P59-1 GOUGE REPAIR



A-P64-1 GOUGES

A-P61-1 GOUGE REPAIR

A-P64-2 GOUGE REPAIR

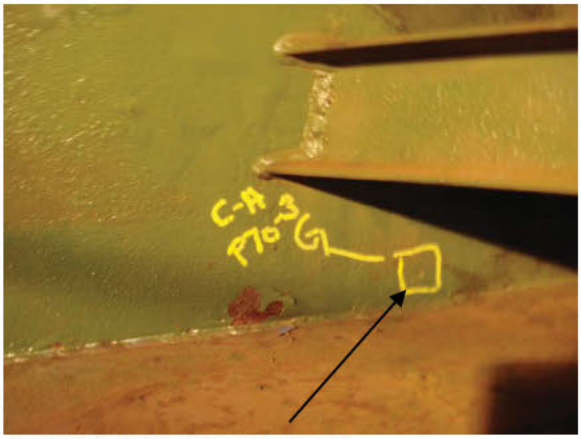
UPPER DOME

A-P67-1 DENT

A-P71-2 WELD REPAIR- LACK OF FUSION

A-P68-1 GOUGE REPAIR

A-P71-3 GOUGE REPAIR



A-P70-1 GOUGE REPAIR

A-P71-1 WELD REPAIR- UNDERCUT

UPPER DOME

A-P72-1 GOUGE REPAIR

B-P10-1 GOUGE REPAIR

B-P1-1 GOUGE REPAIR

B-P18-1 DENT REPAIR

B-P8-1 DENT REPAIR

B-P20-1 DENT

UPPER DOME

B-P24-1 PIT REPAIR

B-P30-1 PIT REPAIR

B-P27-1 PIT REPAIR

B-P33-1 DENT REPAIR

B-P27-2 PIT REPAIR

B-P36-1 PIT REPAIR

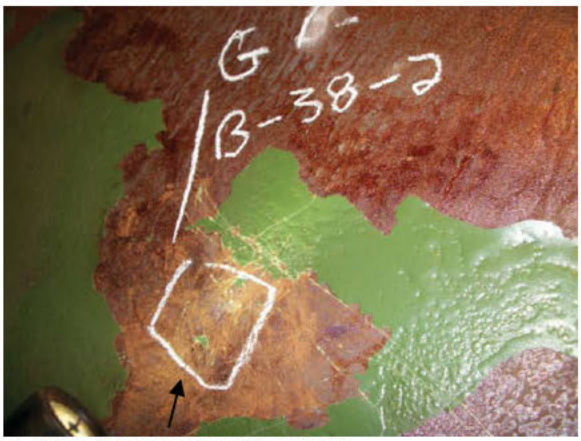
UPPER DOME

B-P38-1 GOUGE REPAIR

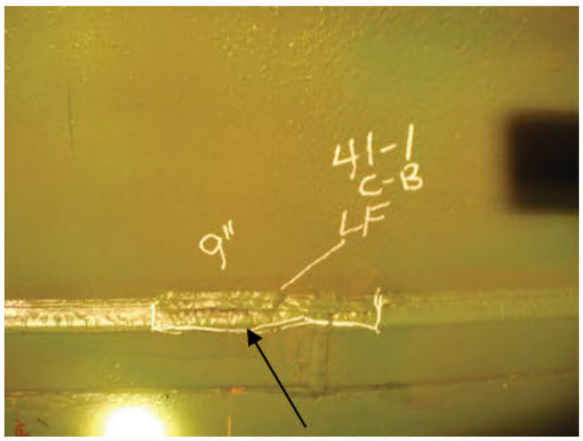
B-P38-4 GOUGE REPAIR

B-P38-2 GOUGE REPAIR

B-P40-1 WELD BUILD UP

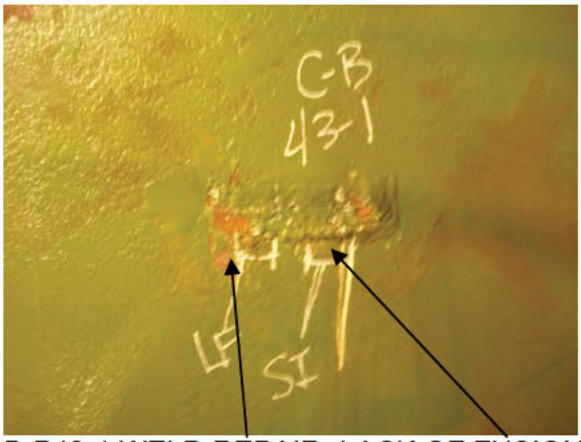


B-P38-3 GOUGE REPAIR



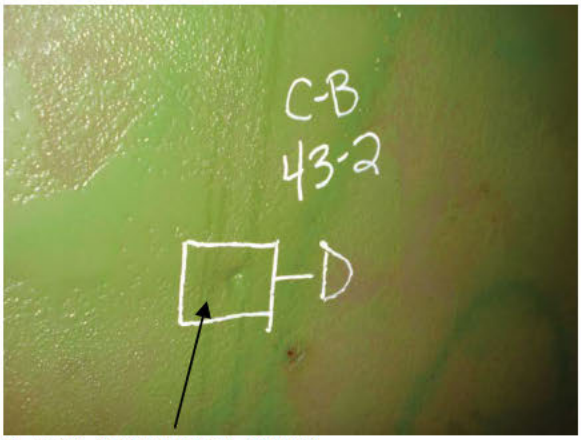
B-P41-1 WELD REPAIR LACK OF FUSION

UPPER DOME



B-P43-1 WELD REPAIR- LACK OF FUSION SLAG INCLUSION

B-P44-2 DENT REPAIR



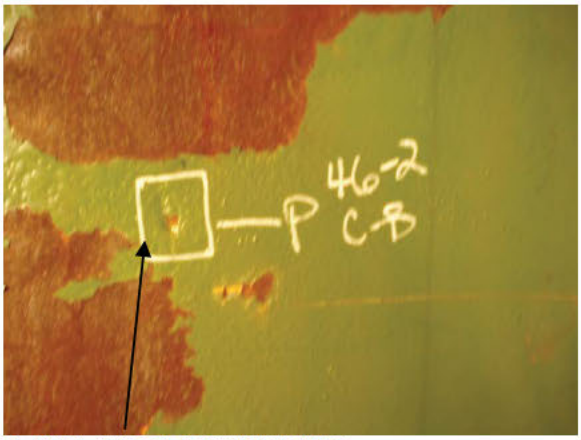
B-P43-2 DENT REPAIR

B-P45-1 WELD REPAIR- SLAG INCLUSION

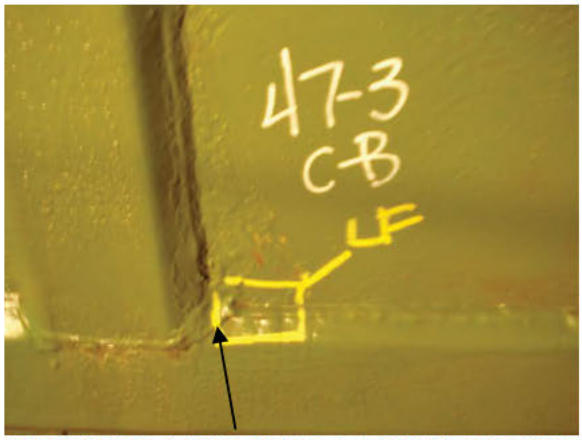
B-P44-1 GOUGE REPAIR

B-P46-1 GOUGE

UPPER DOME



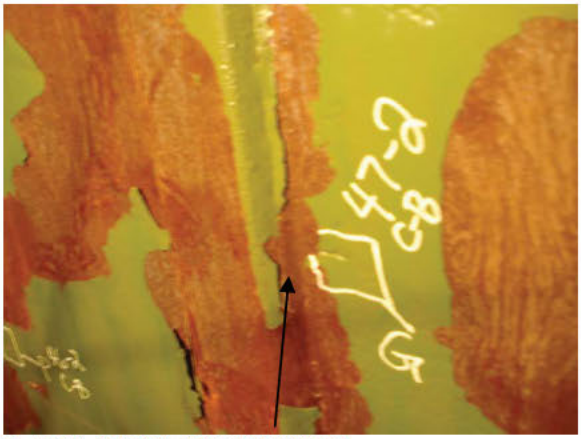
B-P46-2 GOUGE REPAIR



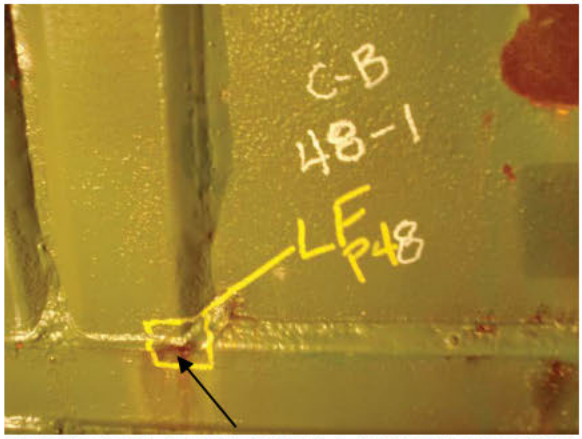
B-P47-3 WELD REPAIR- LACK OF FUSION

B-P46-3 WELD BUILD UP

B-P47-4 WELD REPAIR- LACK OF FUSION



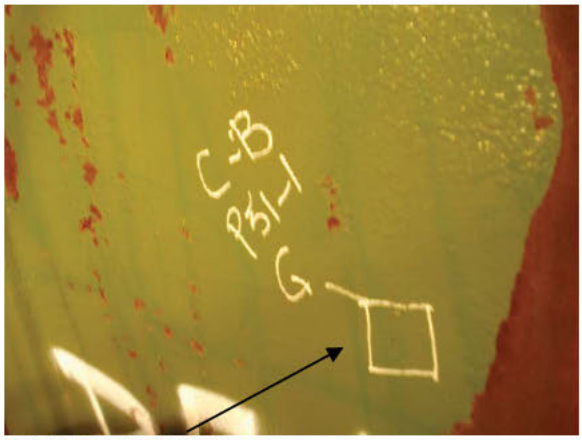
B-P47-2 GOUGE REPAIR



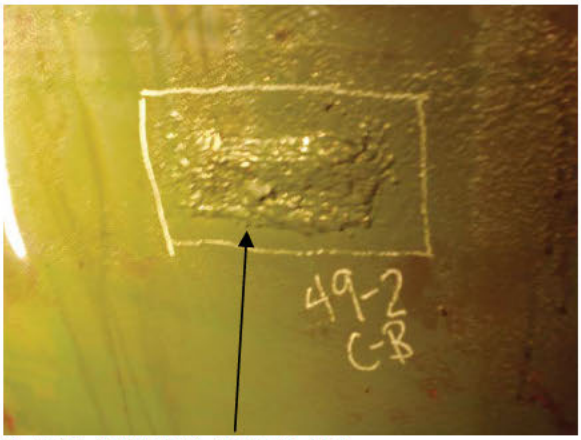
B-P48-1 WELD REPAIR- LACK OF FUSION

UPPER DOME

B-P49-1 GOUGE

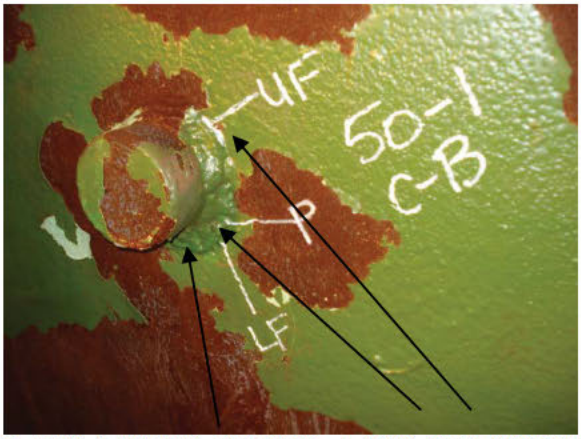


B-P51-1 GOUGE



B-P49-2 WELD BUILD UP

B-P52-1 GOUGE REPAIR



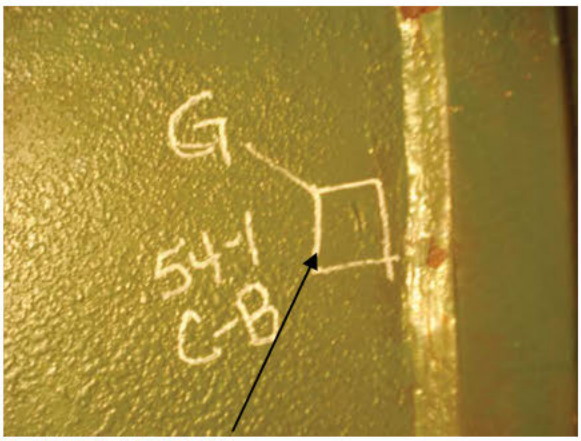
B-P50-1 WELD REPAIR- LACK OF FUSION
POROSITY
UNDERFILL

B-52-2 GOUGE REPAIR

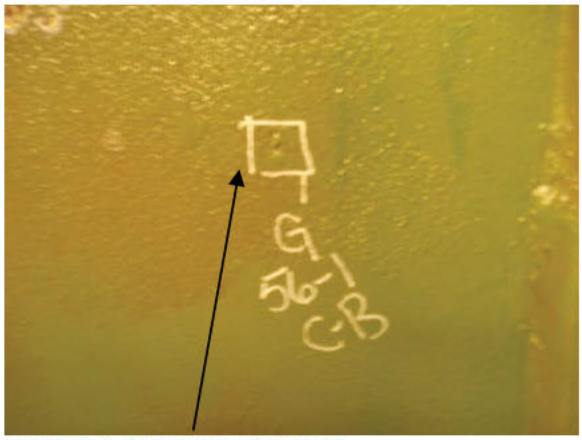
UPPER DOME

B-P52-3 GOUGE REPAIR

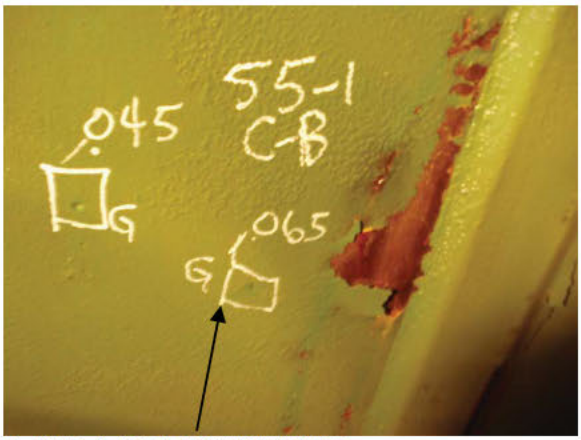
B-P55-2 GOUGE REPAIR



B-P54-1 GOUGE



B-P56-1 GOUGE REPAIR

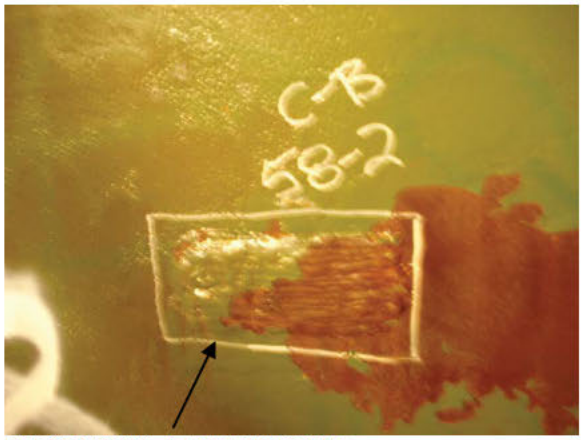


B-P55-1 GOUGE REPAIR

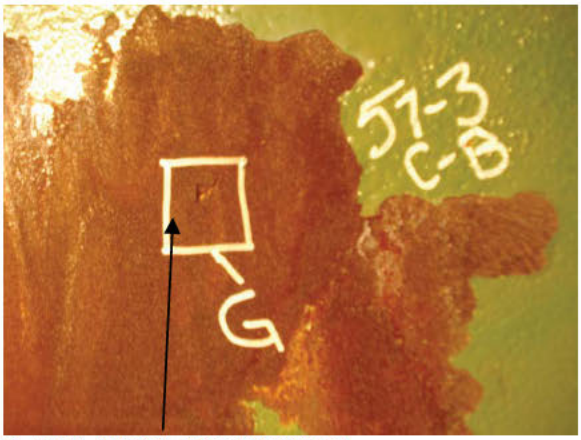
B-P57-1 WELD REPAIR- UNDERCUT

UPPER DOME

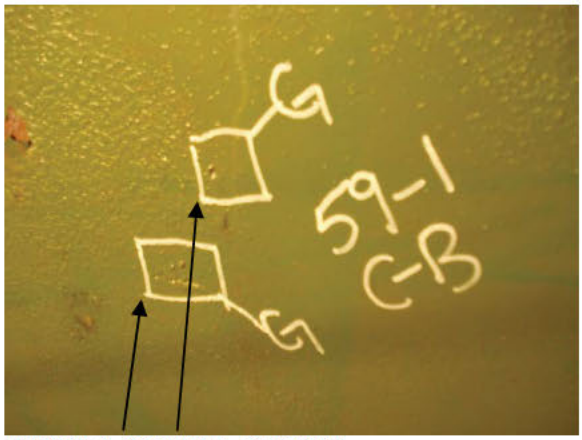
B-P57-2 GOUGE



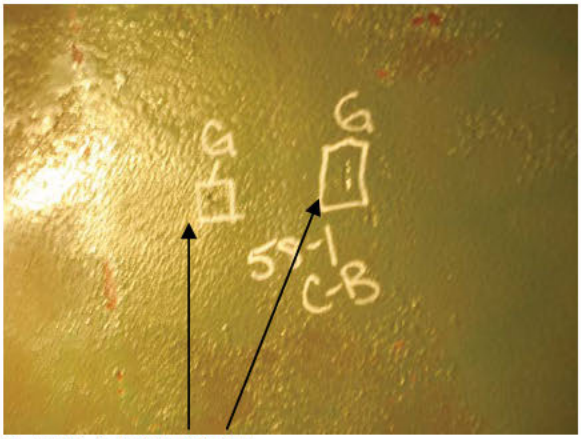
B-P58-2 WELD BUILD UP



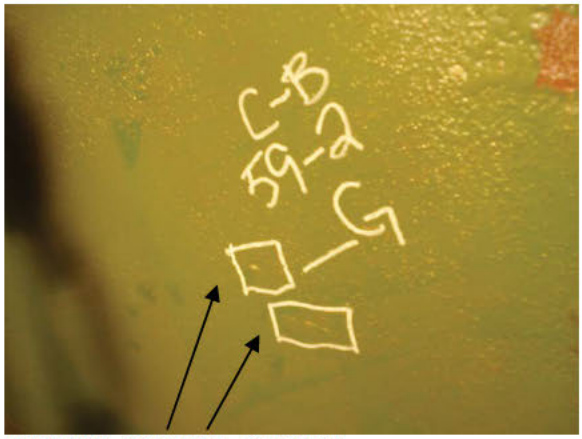
B-P57-3 GOUGE REPAIR



B-P59-1 GOUGE REPAIR



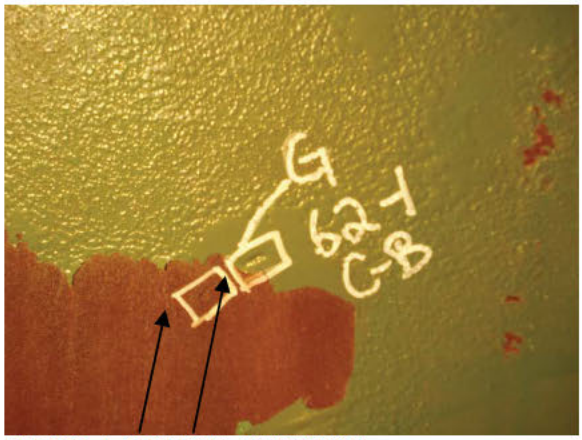
B-P58-1 GOUGES



B-P59-2 GOUGE REPAIR

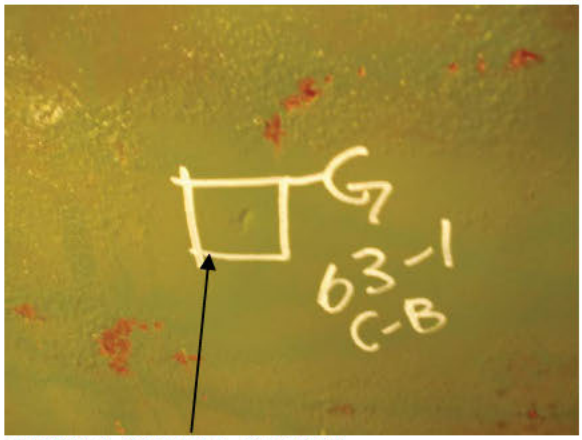
UPPER DOME

B-P59-3 WELD REPAIR- UNDERCUT

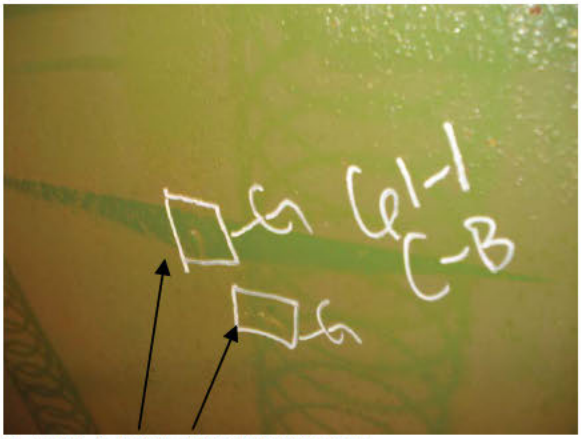


B-P62-1 GOUGE REPAIRS

B-P60-1 GOUGE



B-P63-1 GOUGE REPAIR

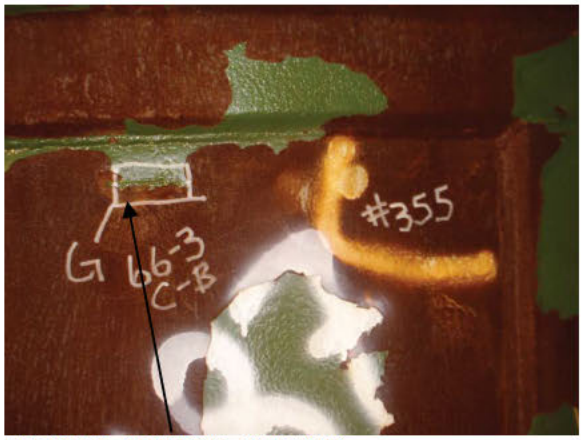


B-P61-1 GOUGE REPAIRS

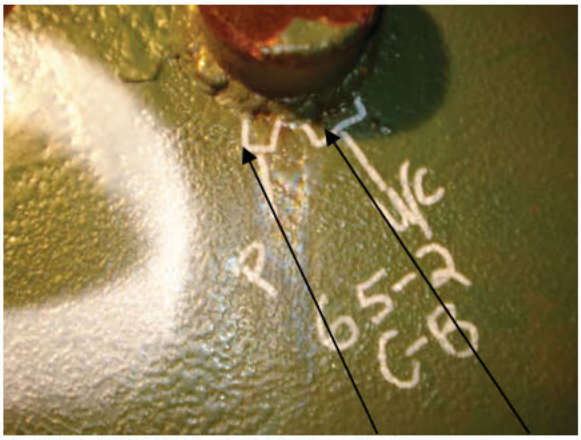
B-P63-2 GOUGE REPAIR

UPPER DOME

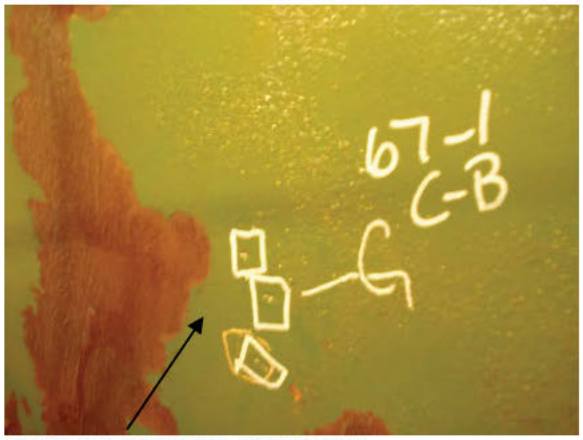
B-P65-1 GOUGE REPAIRS



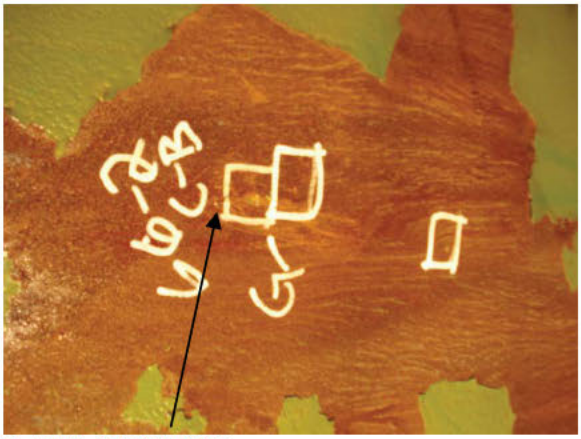
B-P66-3 GOUGE REPAIR



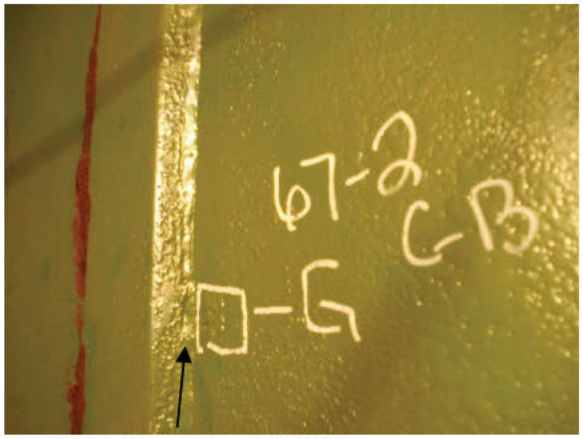
B-P65-2 WELD REPAIR- POROSITY, UNDERCUT



B-P67-1 GOUGE REPAIRS



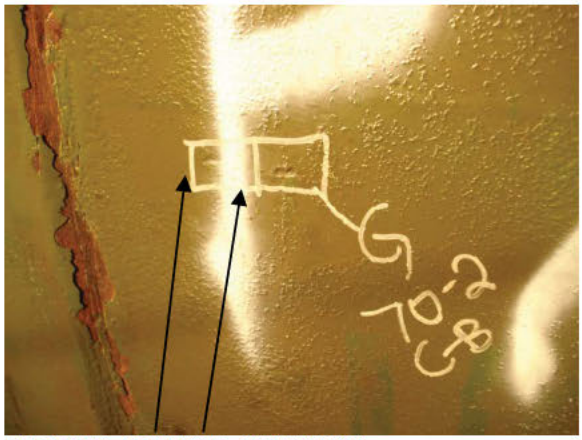
B-P66-2 GOUGE



B-P67-2 GOUGE REPAIR

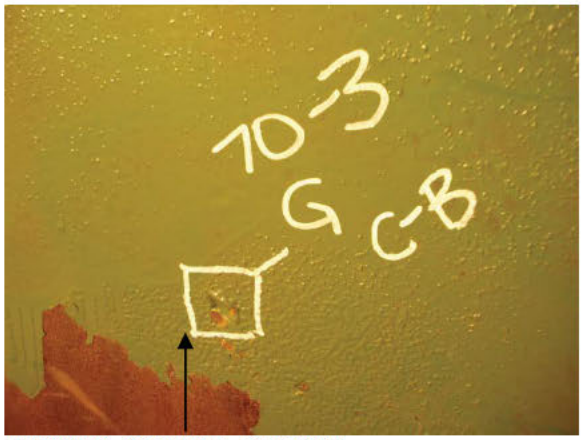
UPPER DOME

B-P67-3 GOUGE REPAIR

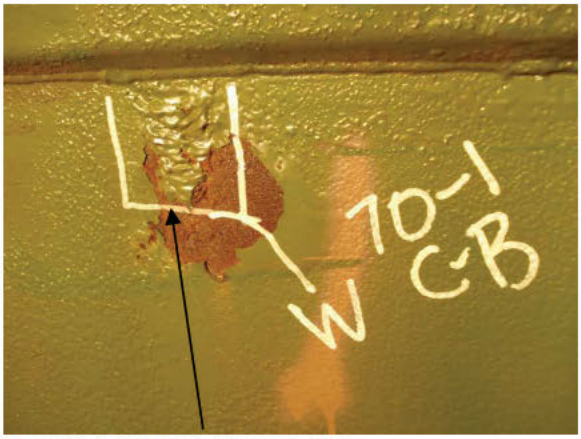


B-P70-2 GOUGE REPAIRS

B-P68-1 GOUGE REPAIR



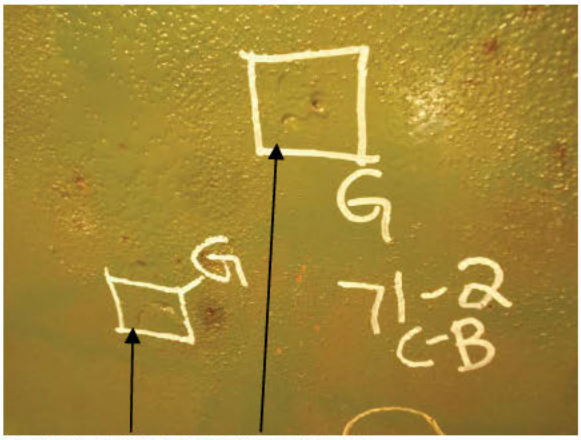
B-P70-3 GOUGE REPAIR



B-P70-1 WELD BUILD UP

B-P70-4 GOUGE REPAIR

UPPER DOME



B-P71-2 GOUGE REPAIRS

C-P10-1 GOUGE REPAIR

C-1-1 GOUGE REPAIR

C-P8-1 PIT REPAIR

C-1-2 GOUGE & WELD REPAIR-UNDERCUT

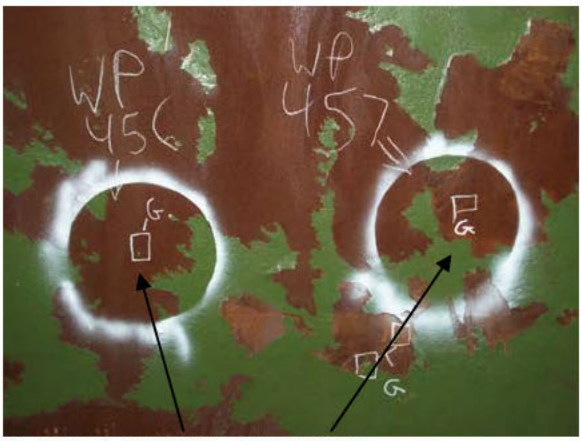
C-P11-1 PIT REPAIR

UPPER DOME

C-P16-1 PIT REPAIR

C-P22-1 GOUGE REPAIR

C-P16-2 PIT REPAIRS



C-P25-1 GOUGE REPAIRS

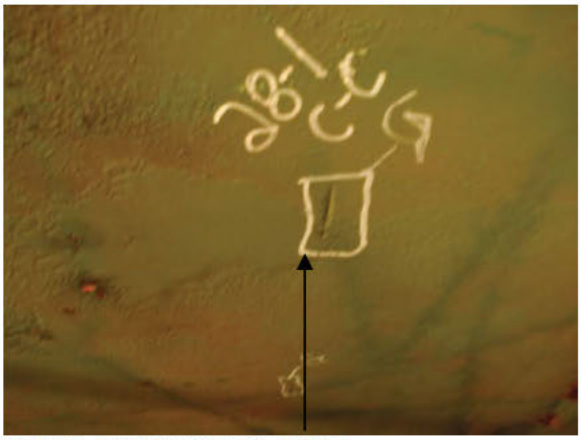
C-P20-1 WELD REPAIR- LACK OF FUSION

C-P26-1 GOUGE & WELD REPAIR- UNDERCUT

UPPER DOME

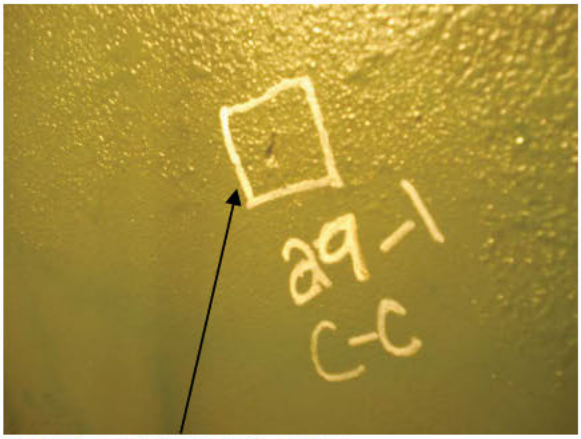
C-P27-1 DENT REPAIR, GOUGE

C-P29-2 GOUGE

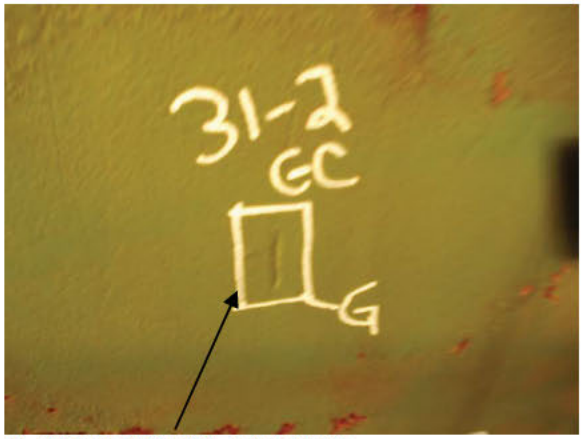


C-P28-1 GOUGE REPAIR

C-P31-1 GOUGE REPAIR



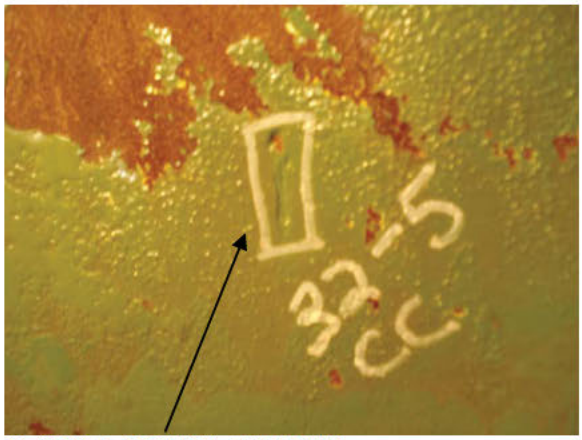
C-P29-1 GOUGE REPAIR



C-P31-2 GOUGE REPAIR

UPPER DOME

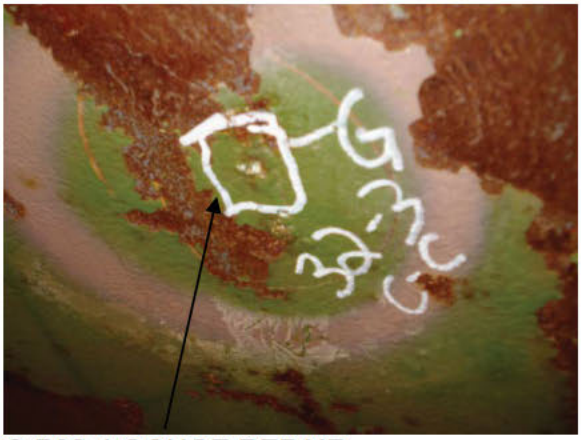
C-P32-1 GOUGE REPAIR



C-P32-5 GOUGE REPAIR

C-P32-2 GOUGE REPAIR

C-P33-1 GOUGE REPAIR



C-P32-4 GOUGE REPAIR

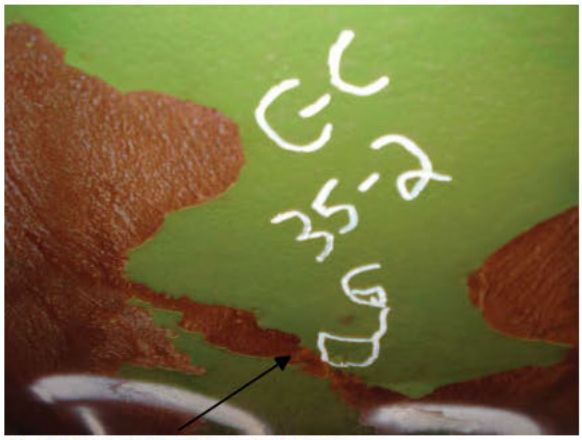
C-P33-2 GOUGE REPAIR

UPPER DOME

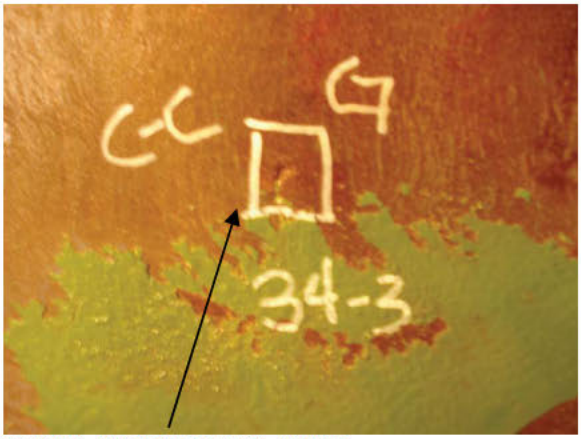
C-P34-1 GOUGE REPAIR

C-P35-1 GOUGE REPAIR

C-P34-2 GOUGE REPAIR



C-P35-2 GOUGE REPAIR



C-P34-3 GOUGE REPAIR

C-P35-3 GOUGE REPAIR

UPPER DOME

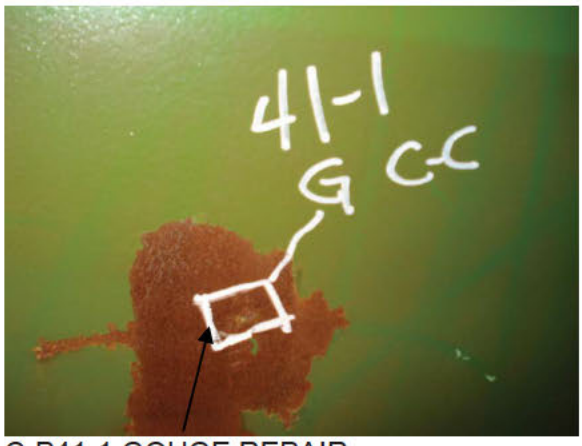
C-P38-1 GOUGE REPAIR

C-P40-1 GOUGE REPAIR

C-P38-2 GOUGE REPAIRS

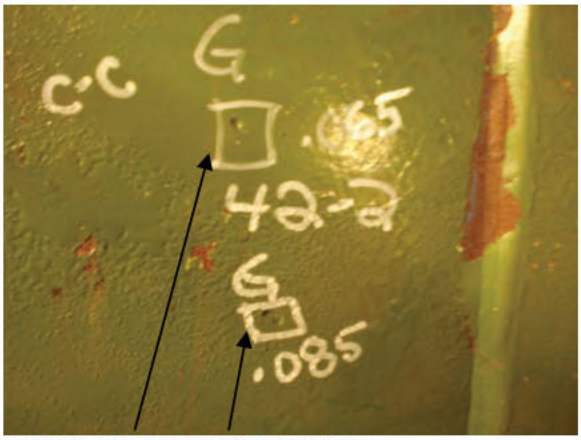
C-P40-2 GOUGE REPAIR

C-P39-1 WELD- POROSITY

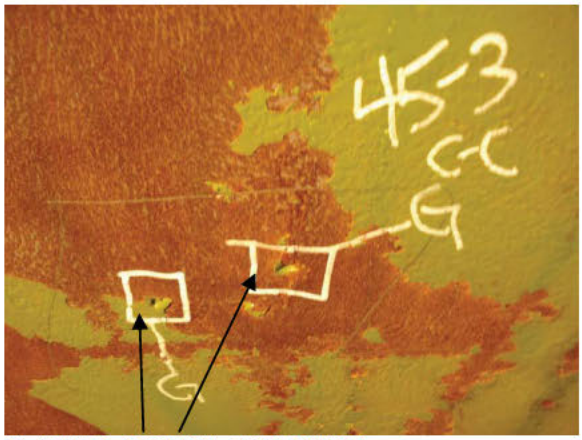


C-P41-1 GOUGE REPAIR

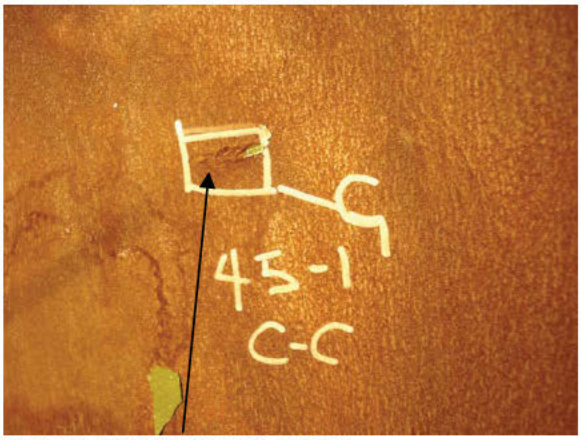
UPPER DOME



C-P42-2 GOUGE REPAIRS



C-P45-3 GOUGE REPAIRS



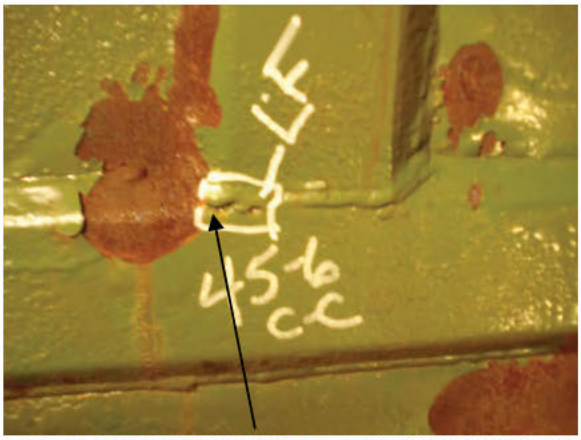
C-P45-1 GOUGE REPAIR

C-P45-4 GOUGE REPAIRS

C-P45-2 GOUGE

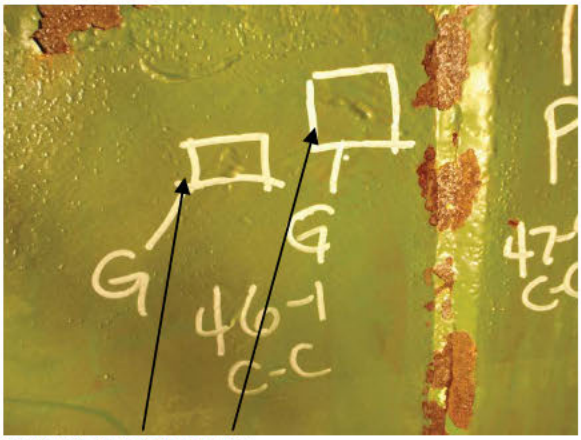
C-P45-5 GOUGE REPAIRS

UPPER DOME

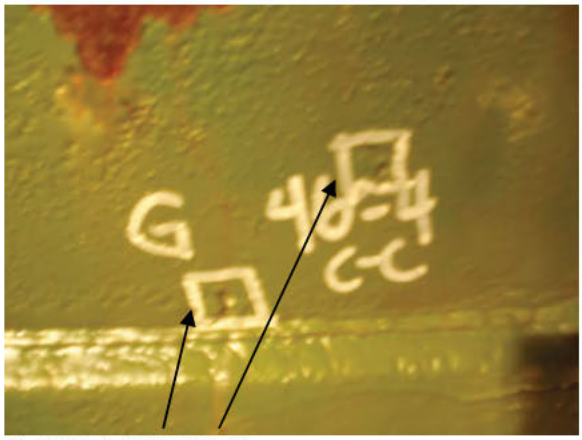


C-P45-6 WELD REPAIR- LACK OF FUSION

C-P46-3 GOUGE



C-P46-1 GOUGES



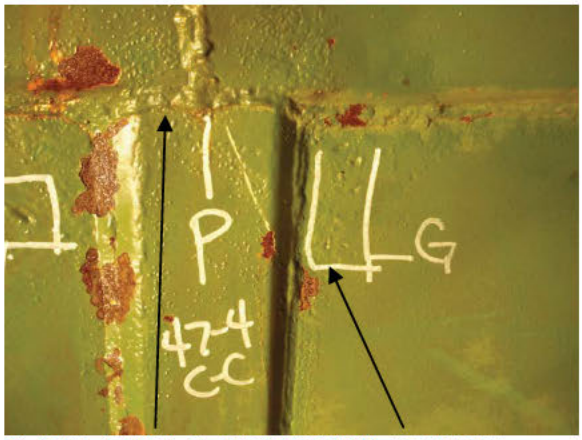
C-P46-4 GOUGES

C-P46-2 GOUGE

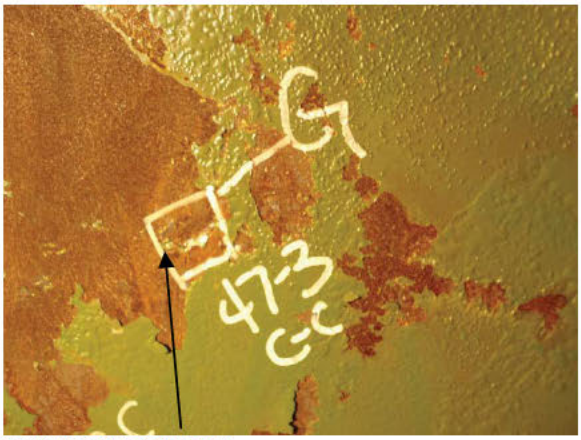
C-P46-5 GOUGE

UPPER DOME

C-P47-1 GOUGE

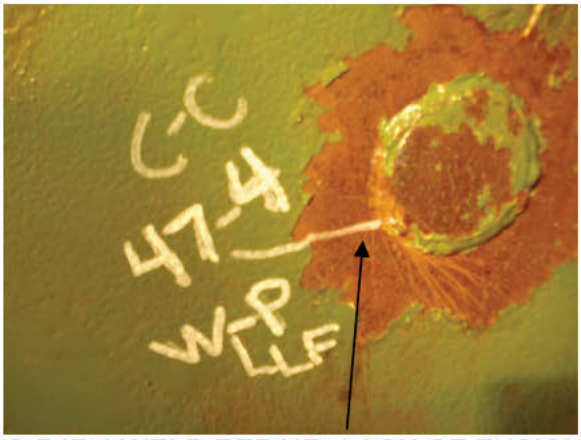


C-P47-4 WELD- POROSITY, GOUGE



C-P47-3 GOUGE

C-P48-1 GOUGE REPAIR

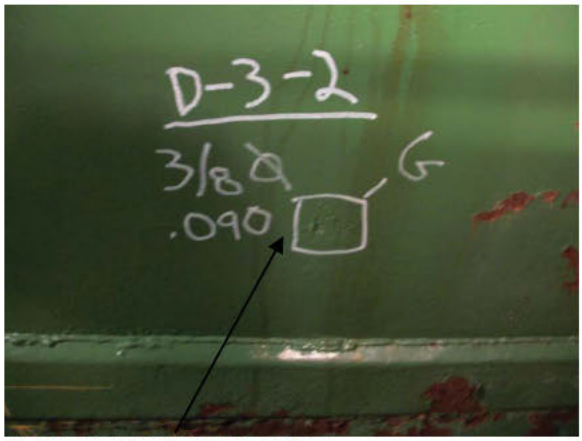


C-P47-4 WELD REPAIR- LACK OF FUSION

D-P1-1 GOUGE REPAIR

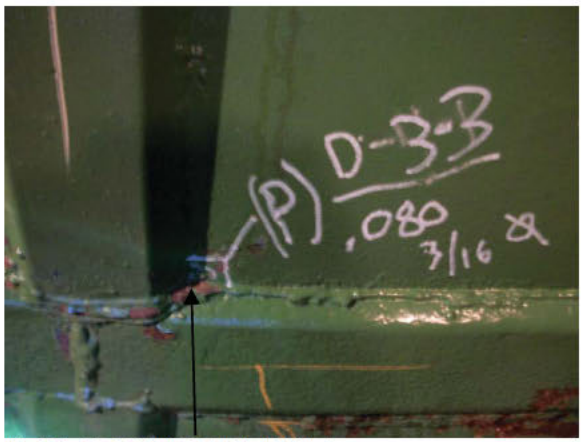
UPPER DOME

D-P1-2 GOUGE REPAIR

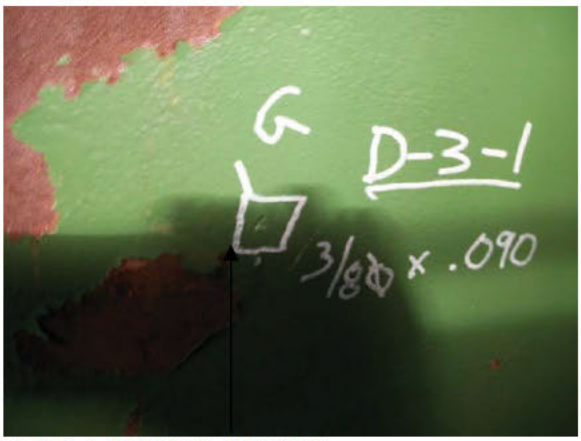


D-P3-2 GOUGE REPAIR

D-P2-1 GOUGE REPAIR



D-P3-3 GOUGE REPAIR



D-P3-1 GOUGE REPAIR

D-P4-2 GOUGE REPAIR

UPPER DOME

D-P5-1 WELD REPAIR- POROSITY

D-P9-1 GOUGE REPAIR

D-P6-1 WELD REPAIR- UNDERFILL

D-P10-1 GOUGE REPAIR

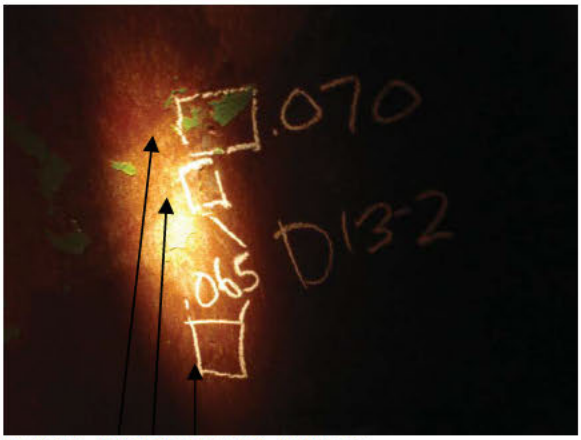
D-P7-1 GOUGE REPAIR

D-P11-1 GOUGE REPAIR

UPPER DOME

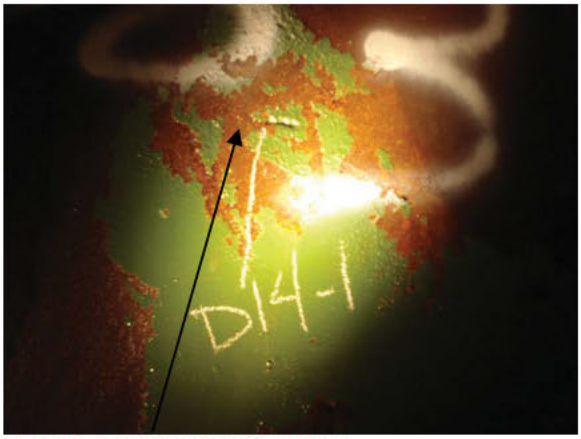
D-P13-1 GOUGE REPAIR

D-P14-2 GOUGE REPAIR



D-P13-2 GOUGE REPAIRS

D-P16-1 PIT REPAIR



D-P14-1 GOUGE REPAIR

D-P16-2 GOUGE REPAIR

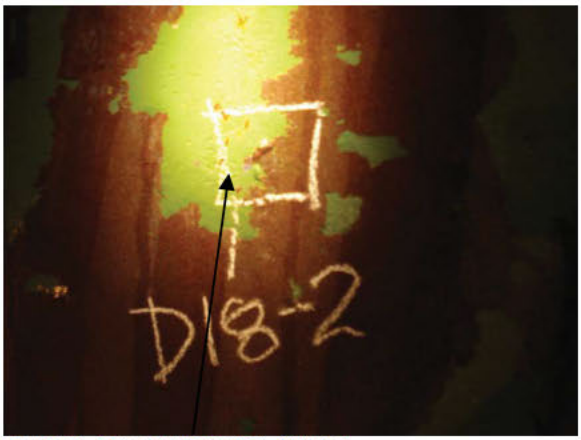
UPPER DOME

D-P17-1 GOUGE REPAIR

D-P19-1 PIT REPAIR

D-P18-1 GOUGE REPAIR

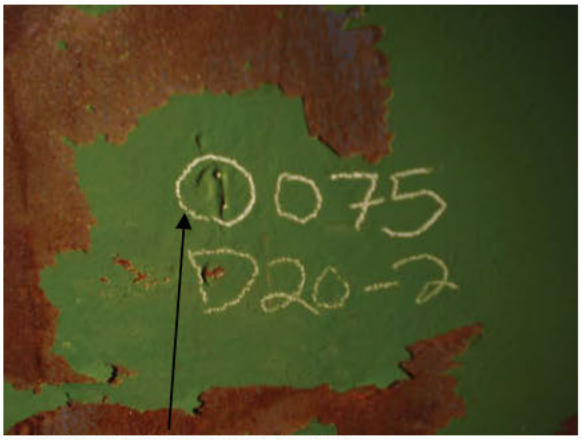
D-P19-2 GOUGE REPAIR



D-P18-2 GOUGE REPAIR

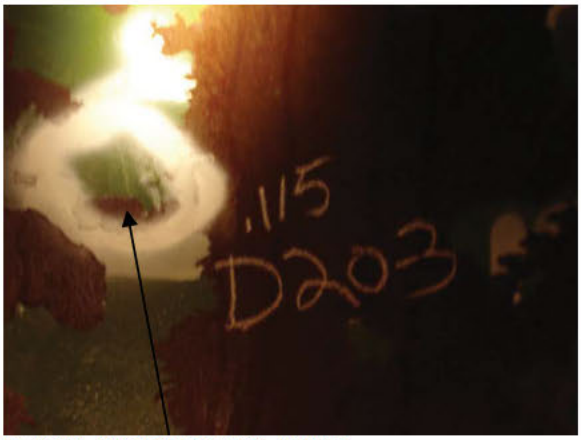
D-P20-1 GOUGE REPAIR

UPPER DOME



D-P20-2 GOUGE REPAIR

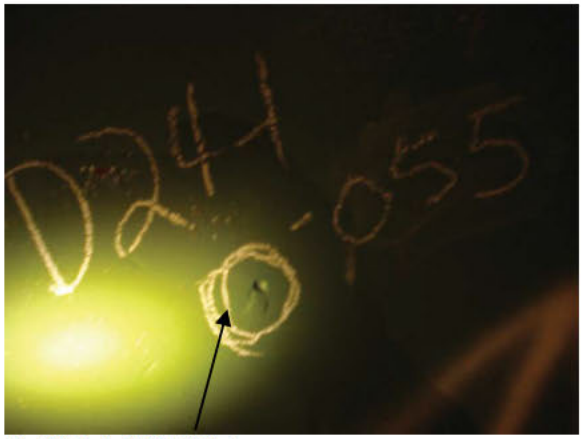
D-P21-1 GOUGE REPAIR



D-P20-3 GOUGE REPAIR

D-P21-2 GOUGE REPAIRS

D-P20-4 GOUGE REPAIR



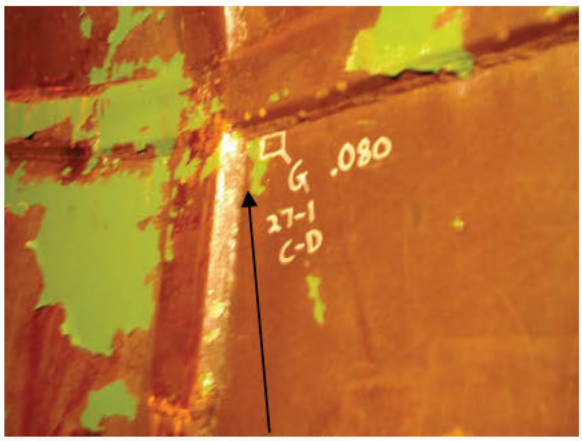
D-P24-1 GOUGE

UPPER DOME

D-P25-1 GOUGE REPAIR

D-P26-1 GOUGE REPAIR

D-P25-2 WELD REPAIR-UNDERCUT



D-P27-1 GOUGE REPAIR

D-P25-3 PIT REPAIR

D-P27-2 GOUGE REPAIR

UPPER DOME

RD-P28-1 GOUGE REPAIR

D-P31-1 GOUGE REPAIRS

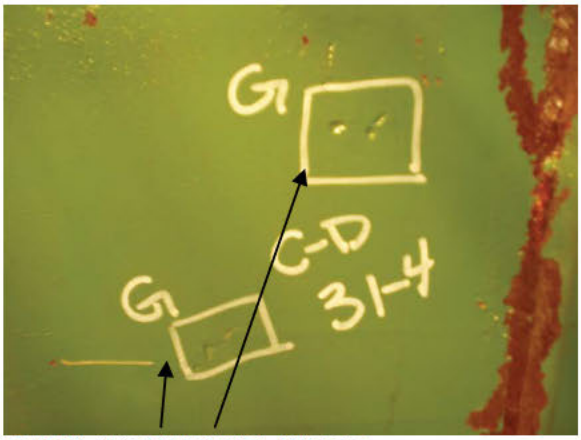
D-P28-2 GOUGE REPAIR

D-P31-2 GOUGE REPAIR

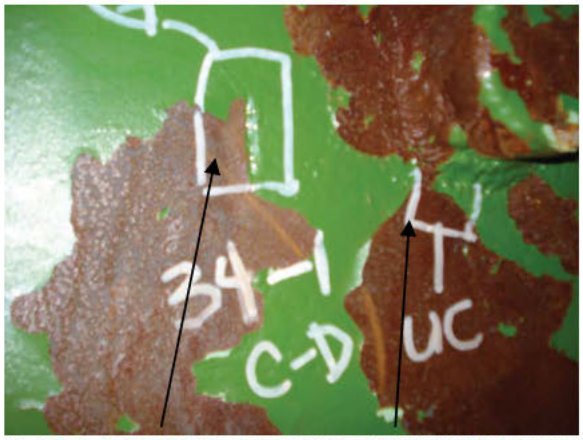
D-P29-1 GOUGE REPAIR

D-P31-3 GOUGE REPAIR

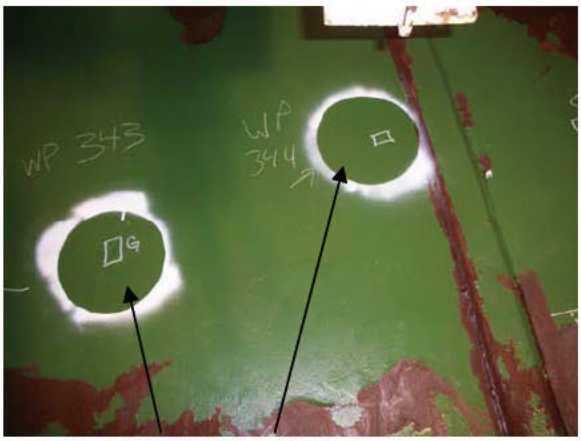
UPPER DOME



D-P31-4 GOUGE REPAIRS

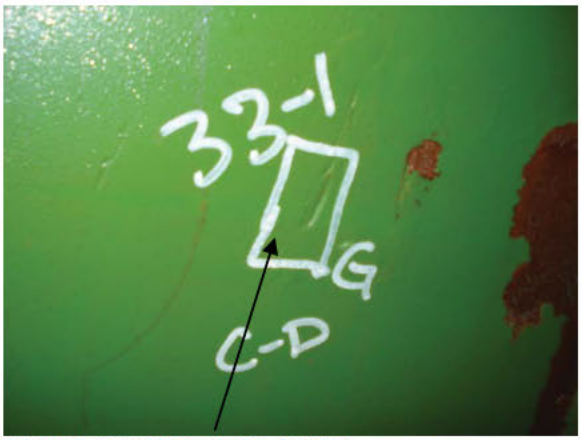


D-P34-1 GOUGE REPAIR & WELD REPAIR UNDERCUT



D-P32-1 GOUGE REPAIRS

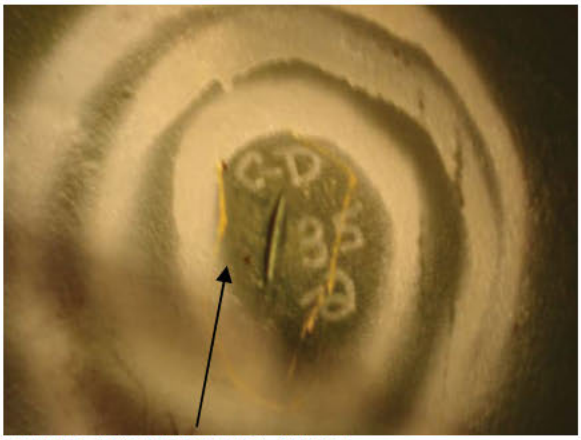
RD-P34-2 GOUGE REPAIR



D-P33-1 GOUGE REPAIR

D-P35-1 GOUGE REPAIR

UPPER DOME



D-P35-2 GOUGE REPAIR

D-P37-1 GOUGE REPAIR

D-P36-1 GOUGE REPAIR

D-P37-2 GOUGE REPAIR

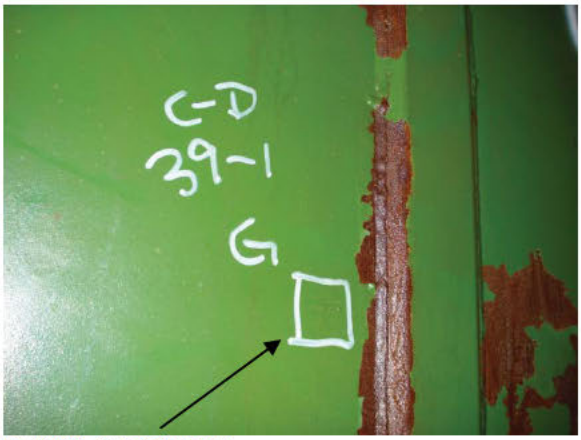
D-P36-2 GOUGE REPAIR

D-P37-3 GOUGE REPAIR

UPPER DOME

D-P38-1 GOUGE REPAIR

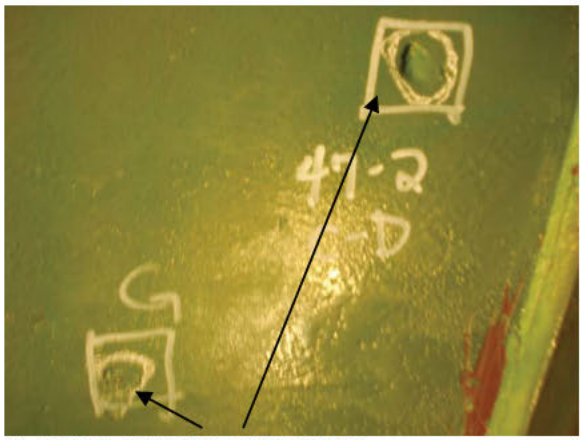
D-P45-1 GOUGE REPAIR



D-P39-1 GOUGE

D-P47-1 GOUGE REPAIR

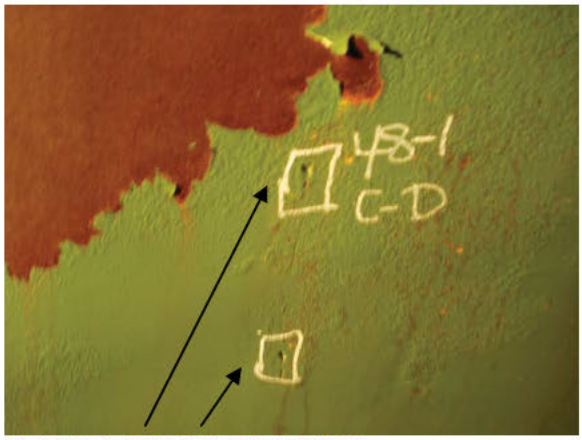
D-P44-1 WELD - UNDERCUT



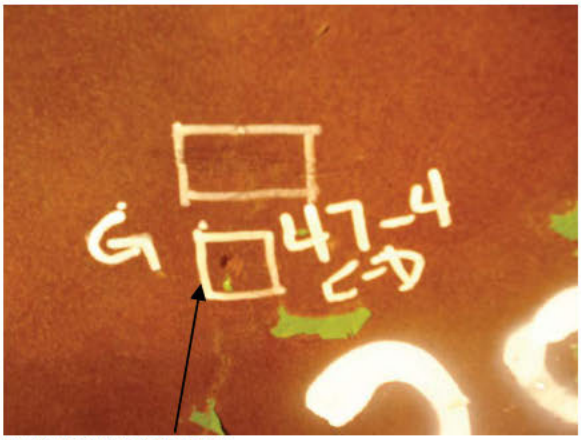
D-P47-2 GOUGE REPAIRS

UPPER DOME

D-P47-3 GOUGE REPAIR



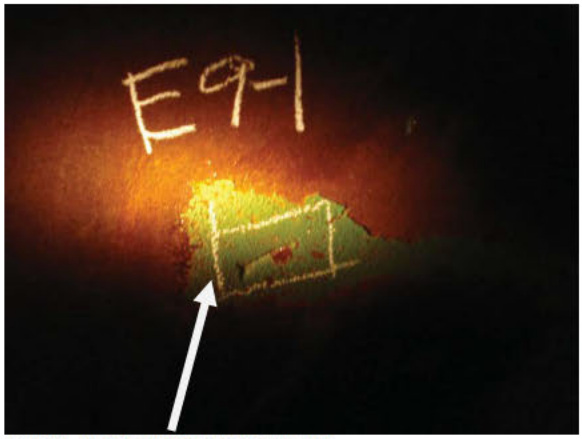
D-P48-1 GOUGE REPAIRS



D-P47-4 GOUGE

E-P8-1 WELD REPAIR- POROSITY

RD-P47-5 GOUGE REPAIR



E-P9-1 GOUGE REPAIR

UPPER DOME

E-P13-3 GOUGE REPAIR

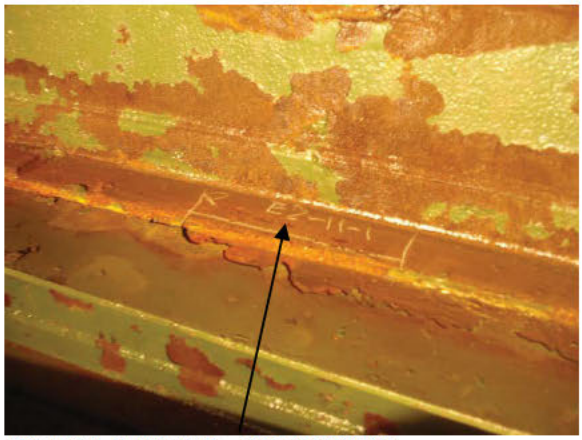
E-P13-4 GOUGE REPAIR

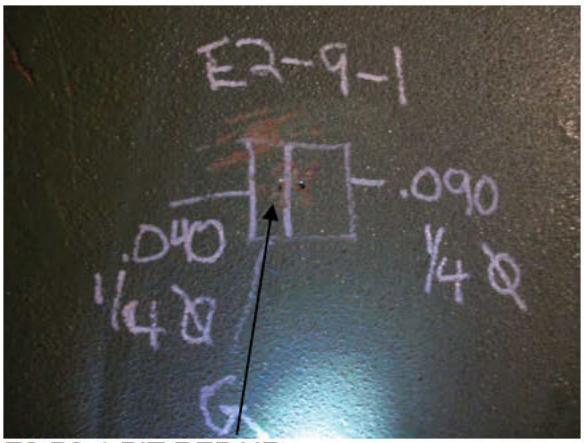
EXTENSION RINGS

E2-P3-1 PIT REPAIR

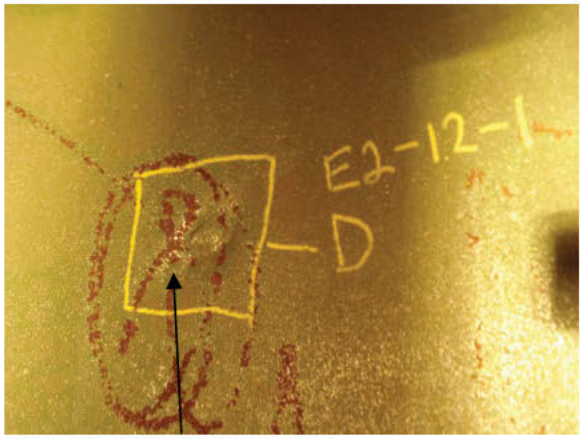
E2-P10-1 PIT REPAIR

E2-P4-1 DENT


E2-P11-1 WELD- POROSITY



E2-P9-1 PIT REPAIR



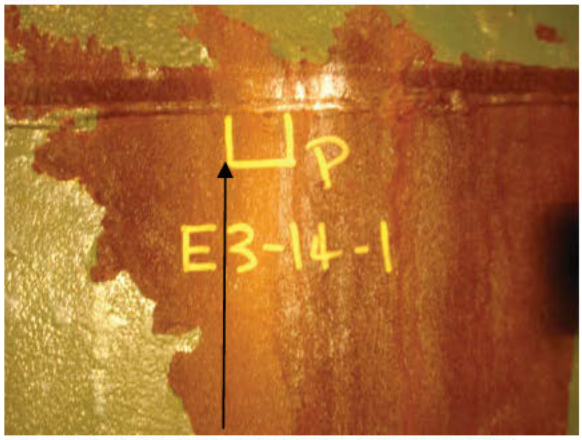
E2-P12-1 DENT REPAIR

EXTENSION RINGS

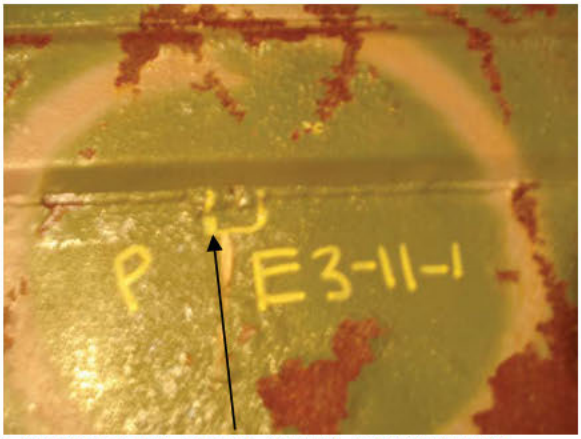
E3-P5-1 GOUGE REPAIR

E3-P12-1 WELD REPAIR- LEAK

E3-P7-1 PIT REPAIR



E3-P14-1 WELD REPAIR- POROSITY



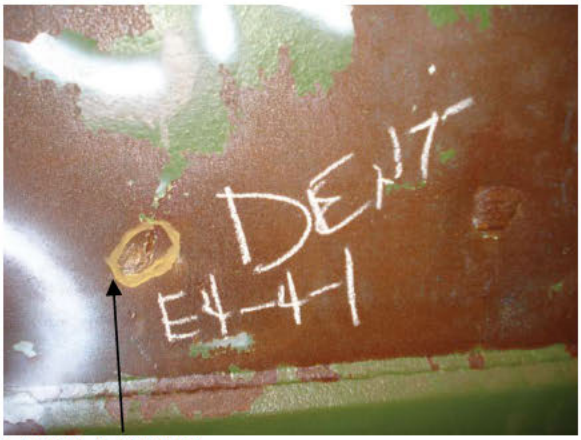
E3-P11-1 WELD REPAIR- POROSITY

E4-P2-1 DENT

EXTENSION RINGS

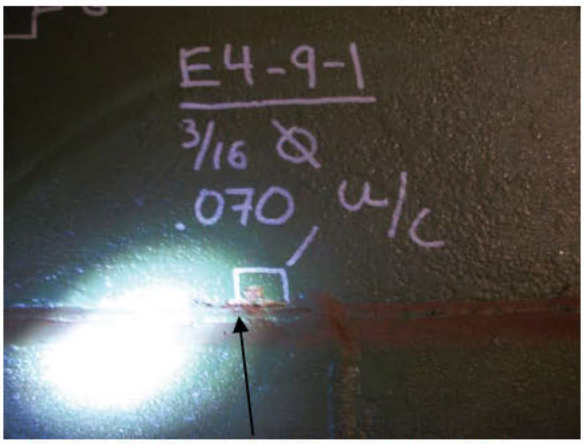
E4-P2-2 GOUGE REPAIR

E4-P9-2 PIT REPAIR



E4-P4-1 DENT

E4-P13-1 HOLE REPAIR



E4-P9-1 WELD REPAIR- UNDERCUT

E4-P13-2 WELD REPAIR- POROSITY

EXTENSION RINGS

E4-P16-2 PIT REPAIR

E4-P16-5 PIT REPAIR

E4-P16-3 PIT REPAIR

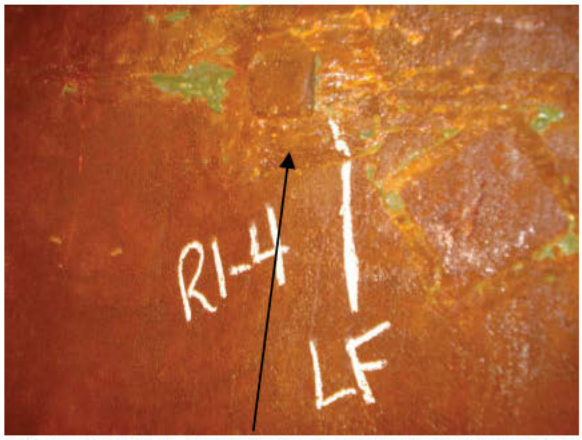
E4-P16-4 PIT REPAIR

SHELL

R1-P1-1 GOUGE REPAIR

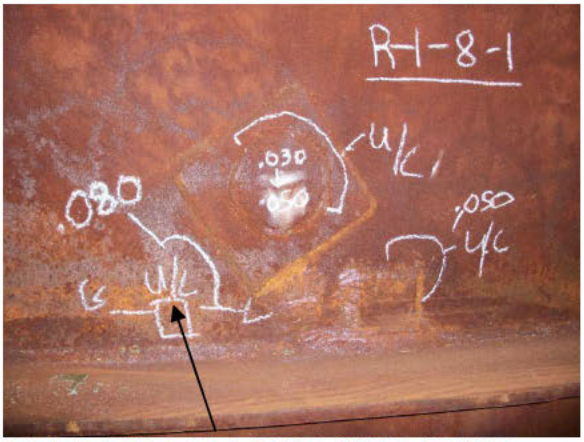
R1-P4-1 WELD REPAIR- POROSITY

R1-P2-1 GOUGE REPAIR



R1-P4-2 WELD REPAIR- LACK OF FUSION

R1-P3-1 PLATE CLAMP REPAIR



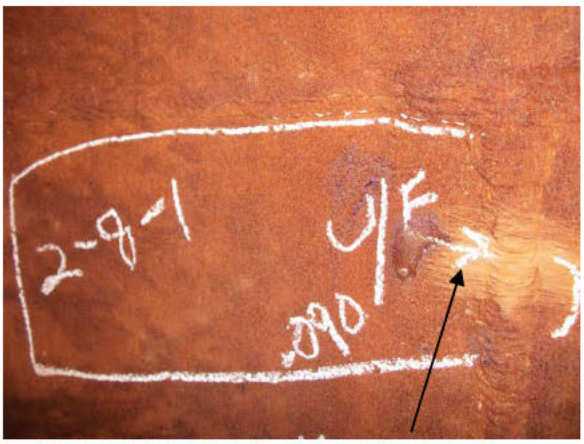
R1-P8-1 WELD REPAIR- UNDERCUT

SHELL

R1-P8-2 WELD REPAIR- UNDERCUT

R2-P2-1 GOUGE REPAIR

R1-P9-1 WELD REPAIR- LACK OF FUSION

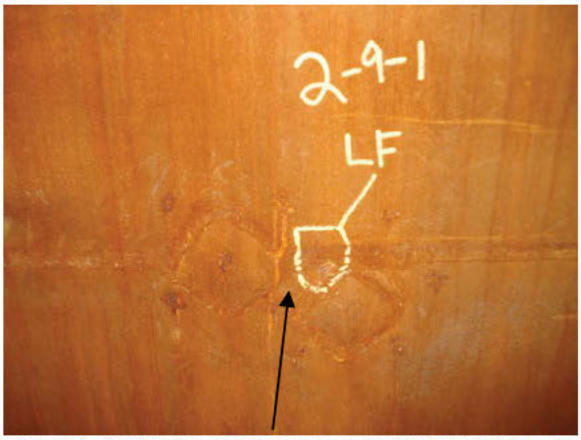


R2-P8-1 WELD REPAIR- UNDERFILL

R1-P16-1 GOUGE REPAIR

R2-P8-2 PIT REPAIRS

SHELL

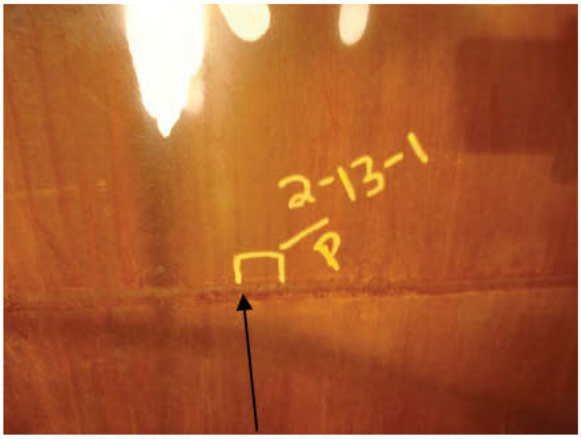


R2-P9-1 WELD REPAIR- LACK OF FUSION

R2-P13-2 WELD REPAIR- POROSITY

R2-P12-1 WELD REPAIR- POROSITY

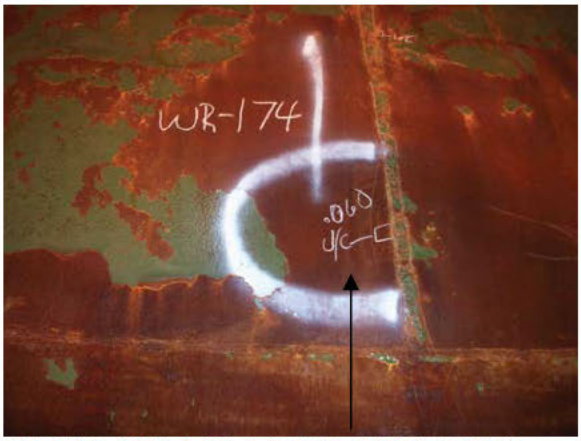
R2-P14-3 GENERAL CONDITION



R2-P13-1 WELD REPAIR- POROSITY

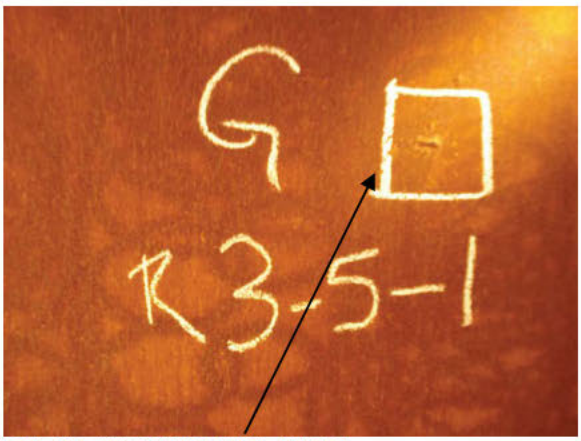
R2-P14-4 GENERAL CONDITION

SHELL

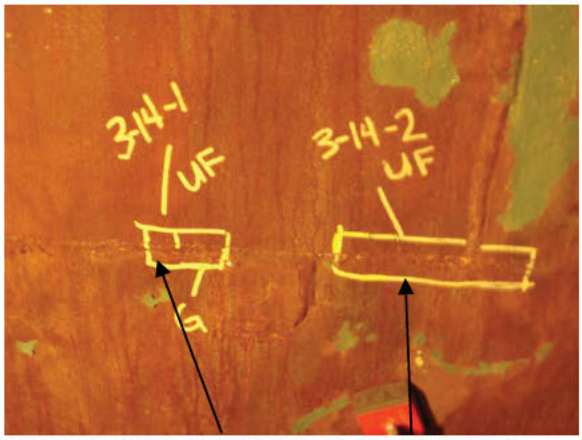


R2-P16-1 WELD REPAIR- UNDERCUT

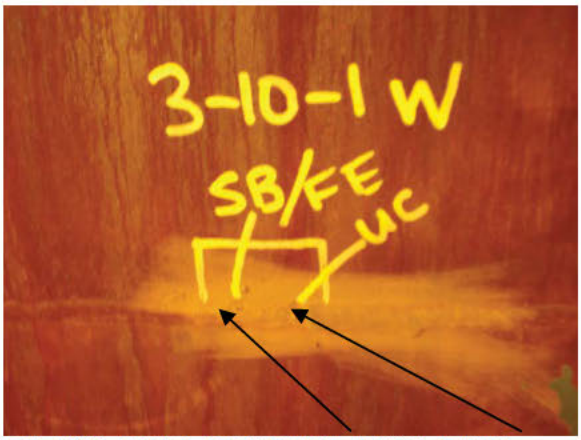
R3-P12-1 WELD REPAIR- POROSITY



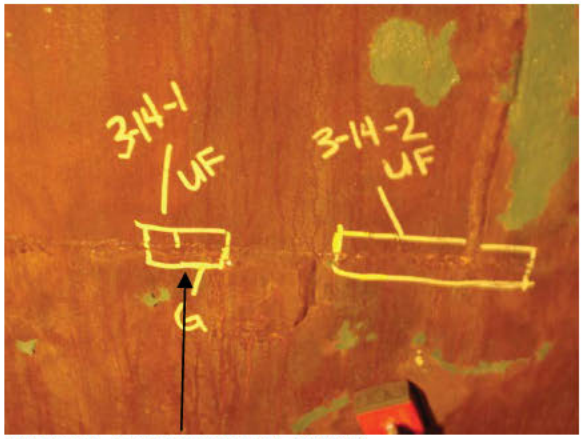
R3-P5-1 GOUGE REPAIR



R3-P14-1 WELD REPAIR- UNDERFILL

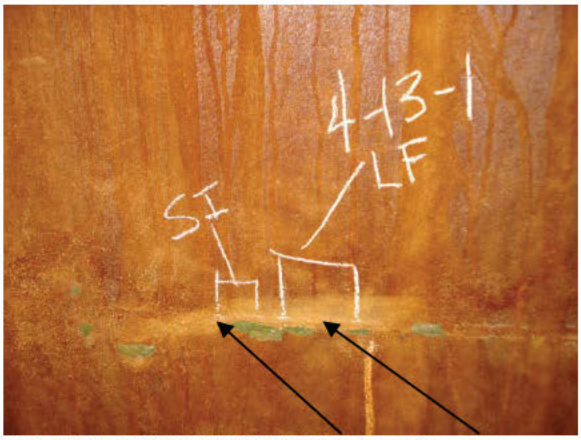


R3-P10-1 WELD REPAIR- UNDERFILL, UNDERCUT



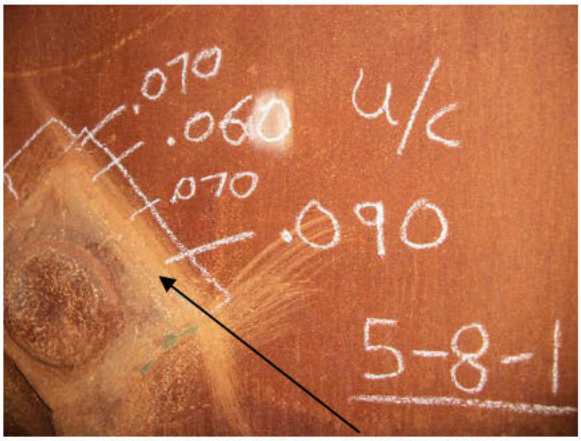
R3-P14-2 GOUGE REPAIR

SHELL

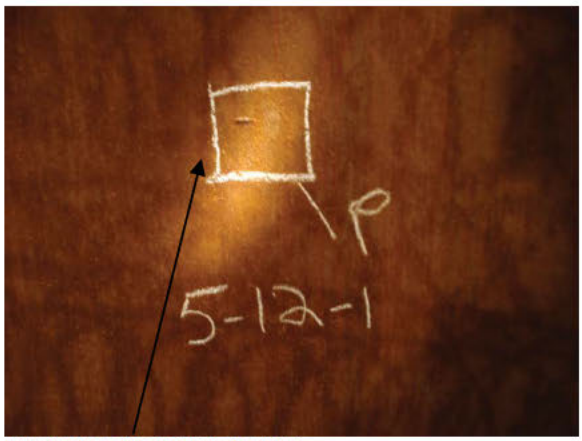


R4-P13-1 WELD REPAIR- SLAG INCLUSION, LACK OF FUSION

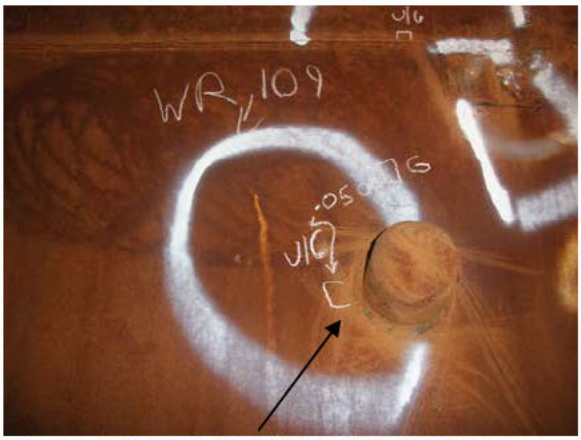
R5-P9-1 PIT REPAIR



R5-P8-1 WELD REPAIR- UNDERCUT



R5-P12-1 PIT REPAIR

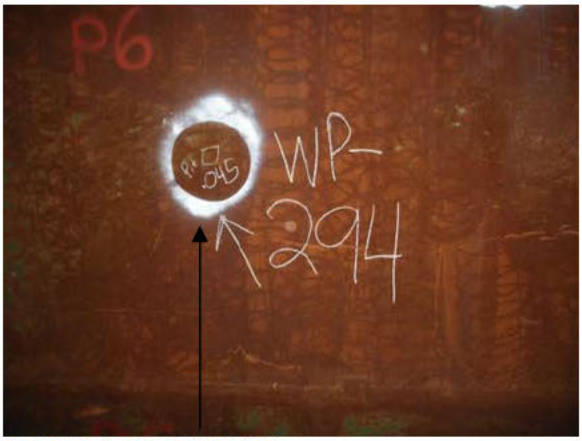


R5-P8-2 WELD REPAIR- UNDERCUT

R5-P15-1 WELD REPAIR- UNDERFILL

SHELL

R5-P15-2 WELD REPAIR- UNDERFILL

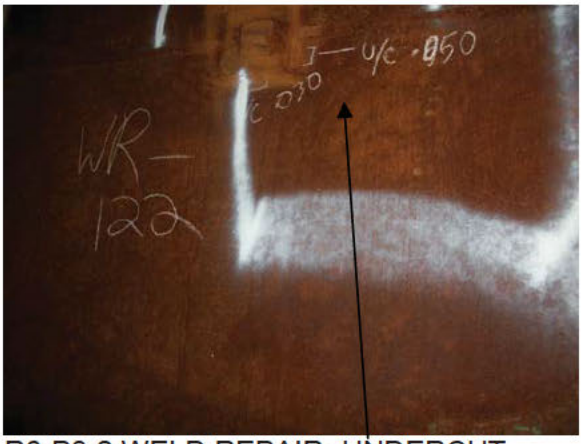


R6-P6-1 PIT REPAIR

R5-P16-1 WELD REPAIR- UNDERFILL

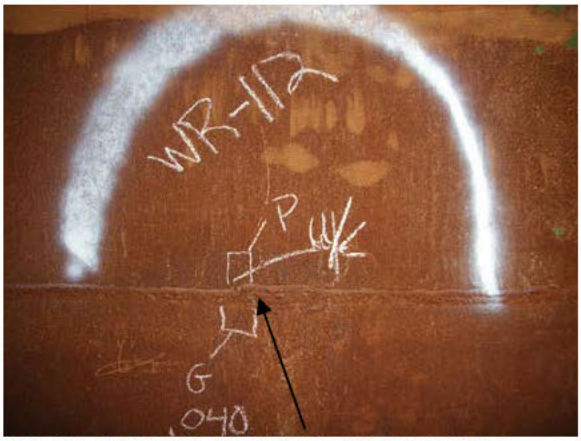
R6-P8-1 WELD REPAIR- UNDERCUT

R6-P1P-1 WELD REPAIR- UNDERCUT



R6-P8-2 WELD REPAIR- UNDERCUT

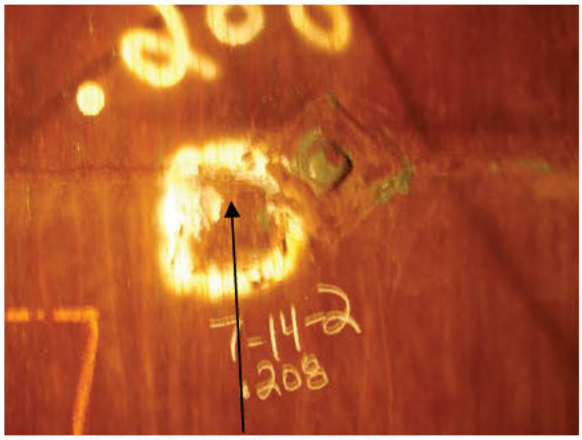
SHELL



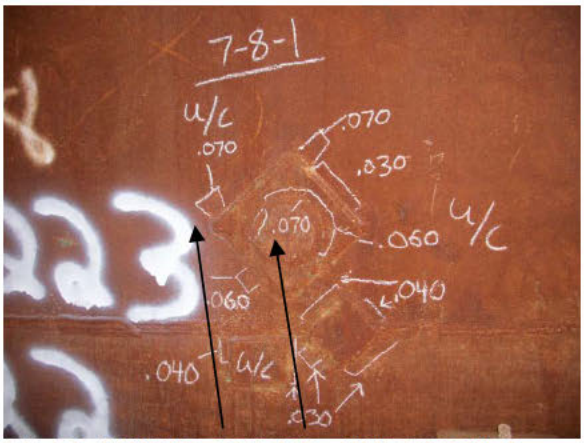
R6-P8-3 WELD REPAIR- UNDERCUT

R7-P14-1 WELD REPAIR- POROSITY

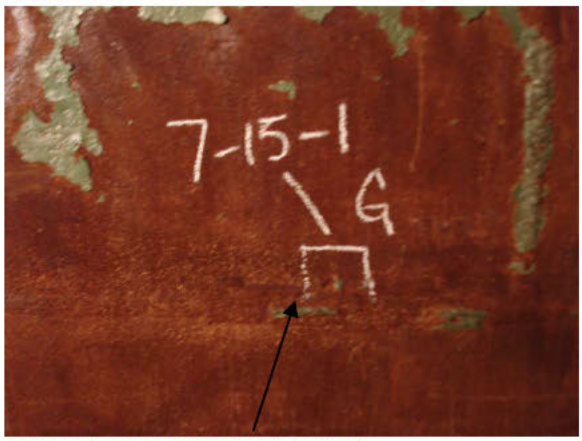
R6-P9-1 WELD REPAIR- UNDERCUT



R7-P14-2 WELD- POROSITY

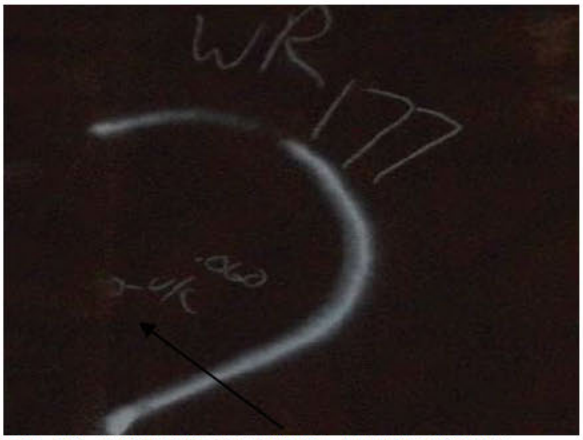


R7-P8-1 WELD REPAIR- UNDERCUTS



R7-P15-1 GOUGE REPAIR

SHELL



R8-P1-1 WELD REPAIR- UNDERCUT

R8-P9-1 WELD UNIFORMITY

R8-P5P1 PIT REPAIR

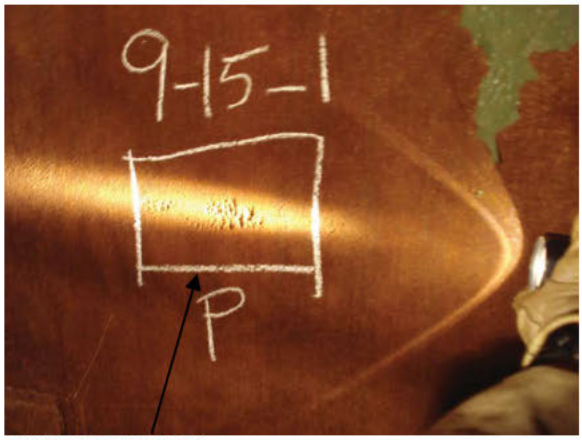
R9-P1-1 PIT REPAIR

R8-P8-1 WELD REPAIR- UNDERCUT

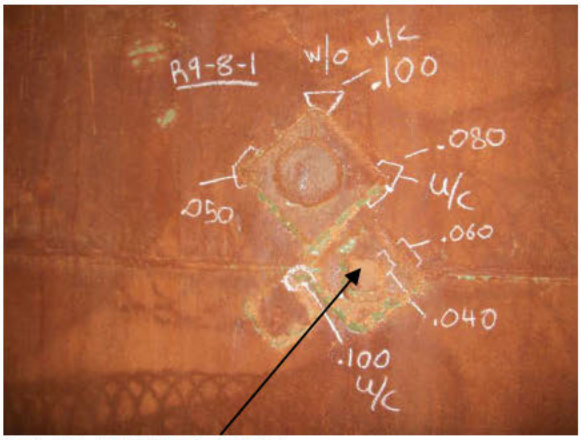
R9-P5-1 PIT REPAIR

SHELL

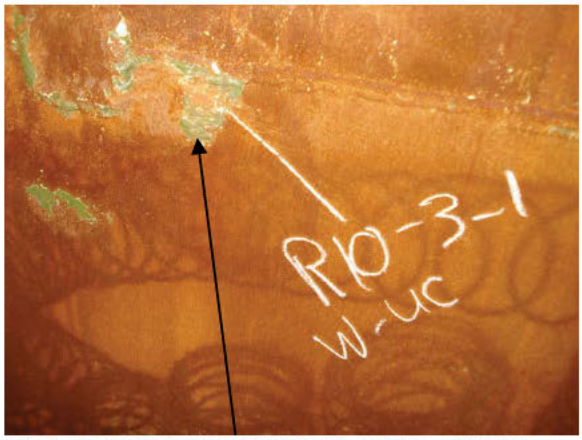
R9-P8-1 WELD REPAIR- UNDERCUT



R9-P15-1 PITS



R9-P8-2 PIT REPAIR



R10-P3-1 WELD REPAIR- UNDERCUT

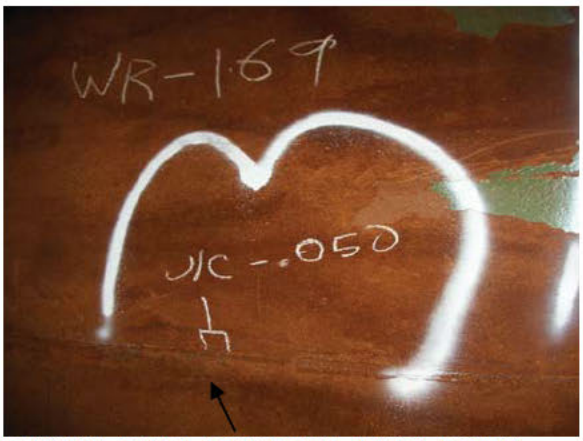
R9-P11-2 WELD

R10-P8-1 WELD REPAIR- UNDERCUT

SHELL

R10-P8-2 GOUGE REPAIR

R11-P6-1 WELD REPAIR- POROSITY



R10-P9-1 WELD REPAIR- UNDERCUT

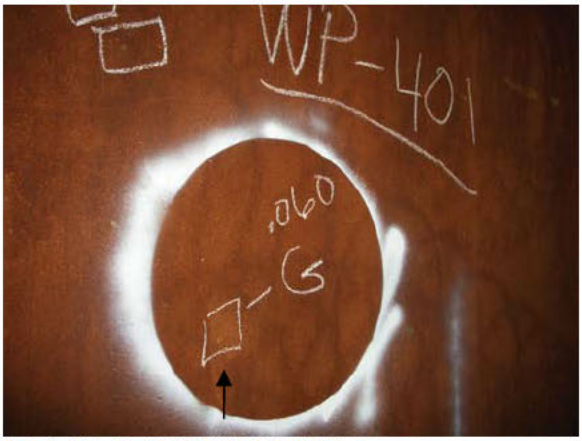
R11-P6-2 PIT REPAIR

R10-P16-1 WELD REPAIR- UNDERCUT

R11-P6-3 PIT REPAIR

SHELL

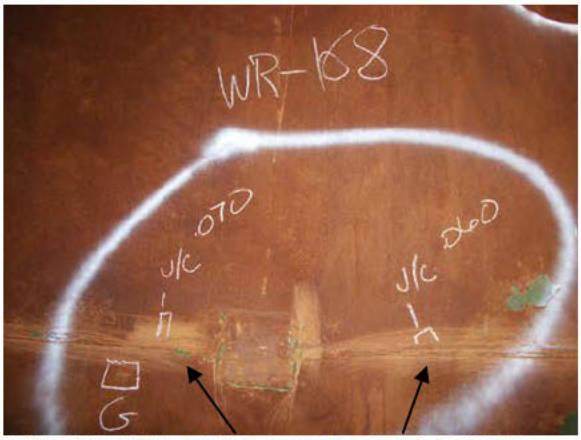
R11-P7-1 WELD REPAIR- UNDERCUT



R11-P8-3 GOUGE REPAIR

R11-P8-1 WELD REPAIR- UNDERCUT

R11-P8-4 WELD REPAIR- UNDERCUT



R11-P8-2 WELD REPAIR- UNDERCUT

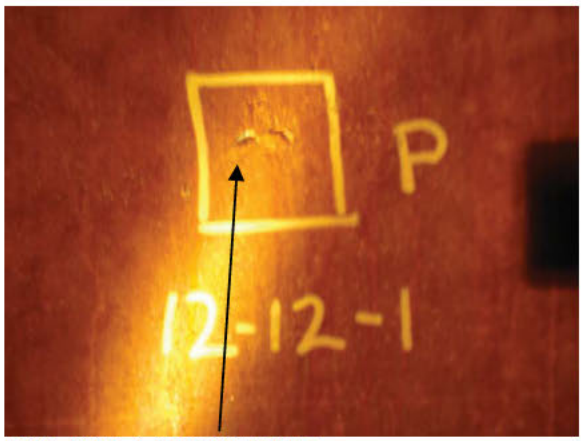
R12-P6-1 WELD REPAIR- LACK OF FUSION

SHELL

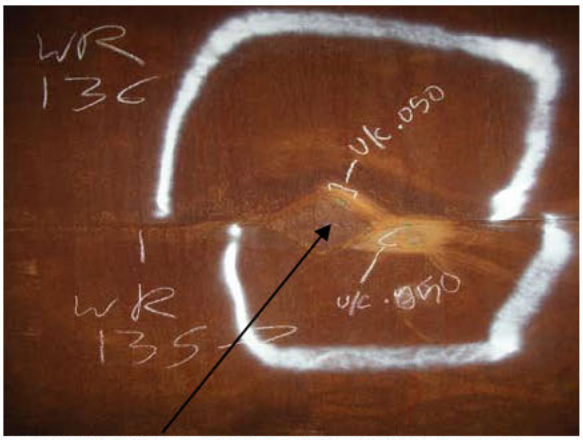
R12-P6-2 WELD REPAIR- UNDERCUT

R12-P9-1 WELD REPAIR- UNDERCUTS

R12-P8-1 WELD REPAIR- UNDERCUT



R12-P12-1 PIT REPAIR



R12-P8-2 WELD REPAIR- UNDERCUT

R13-P2-1 WELD REPAIR- UNDERCUT

SHELL

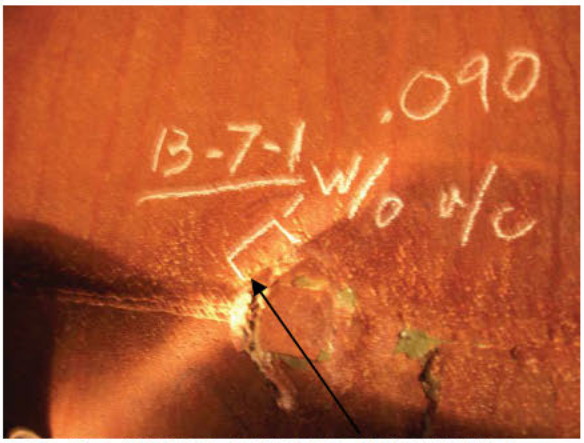
R13-P2-2 PIT REPAIR

R13-P4-3 PIT REPAIR

R13-P4-1 WELD REPAIR- LACK OF FUSION

R13-P4-4 PIT REPAIR

R13-P4-2 WELD REPAIR- UNDERCUT



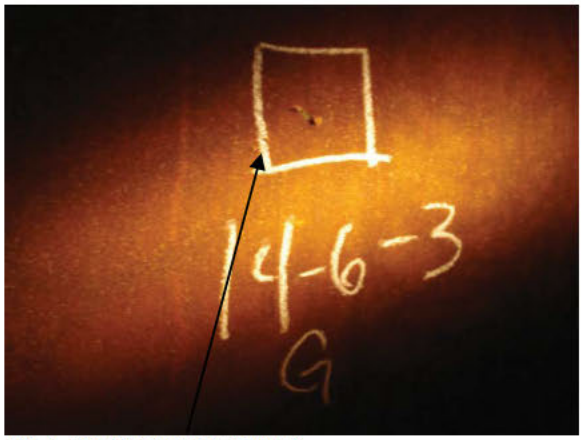
R13-P7-1 WELD REPAIR- UNDERFILL, UNDERCUT

SHELL

R13-P7-2 PIT REPAIR

R14-6-2 WELD REPAIR- UNDERCUT

R13-P8-1 WELD REPAIR- UNDERCUT



R14-P6-3 PIT REPAIR

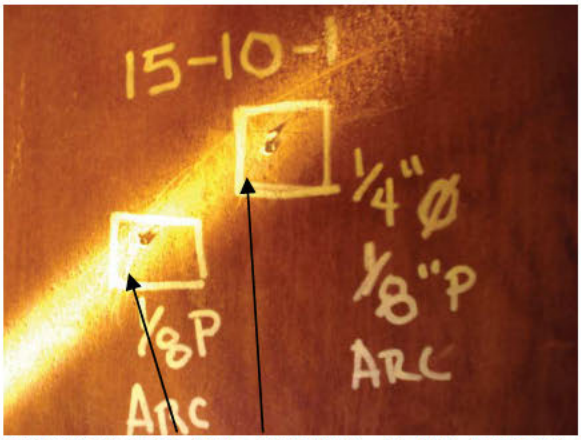
R14-P6-1 WELD REPAIR- LACK OF FUSION

R14-P6-4 WELD REPAIR- UNDERCUT

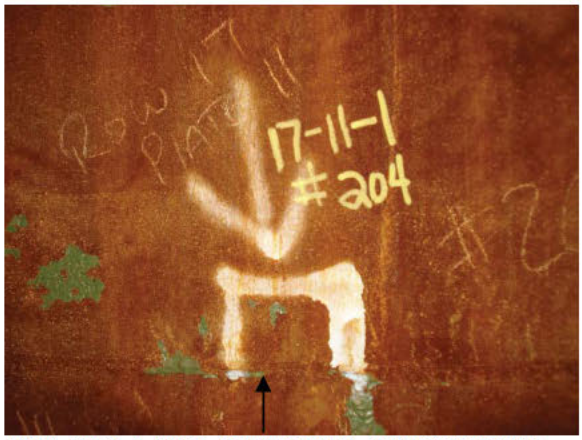
SHELL

R14-P11-1 PIT REPAIR

R16-P7-1 WELD REPAIR- UNDERCUT, POROSITY

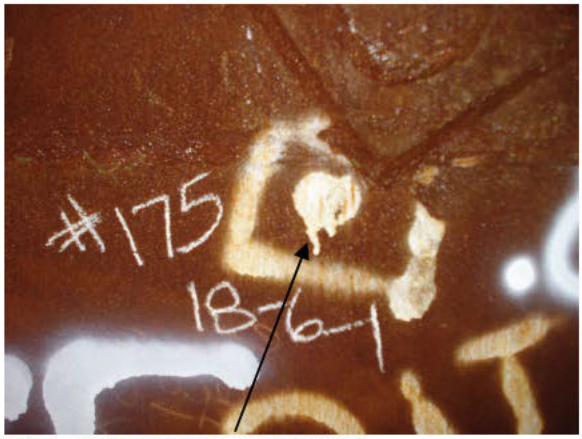


R15-P10-1 PLATE REPAIR- LEAD ARC OUT



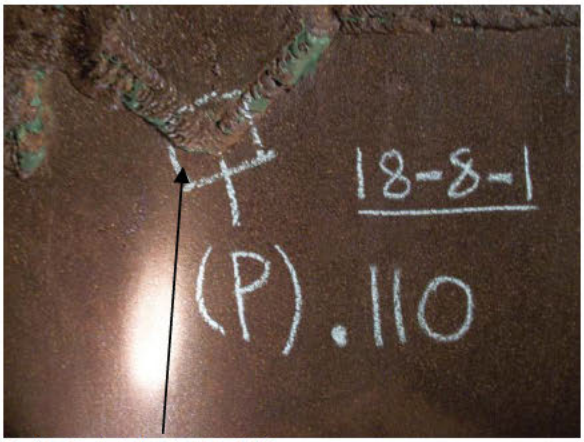
R17-P11-1 WELD REPAIR- UNDERCUT

R16-1 GENERAL CONDITION

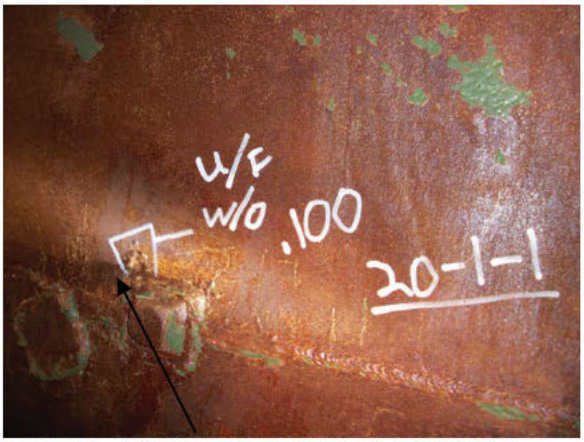


R18-P6-1 GOUGE REPAIR

SHELL



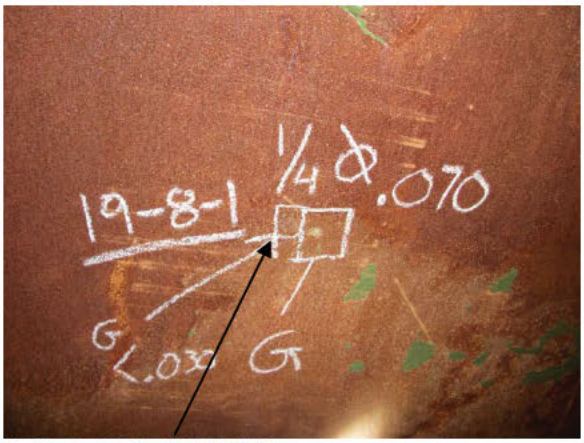
R18-8-1 PIT REPAIR



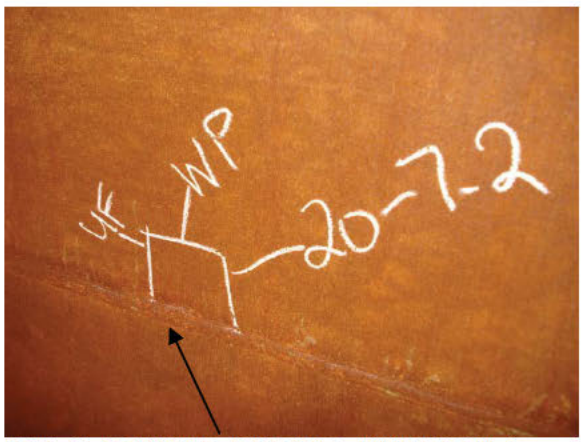
R20-P1-1 WELD REPAIR- UNDERFILL

R18-P16-1 GENERAL CONDITION

R20-P7-1 WELD REPAIR- POROSITY



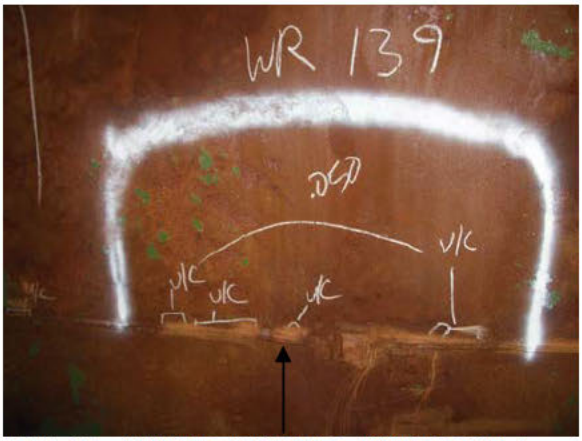
R19-8-1 PIT REPAIR



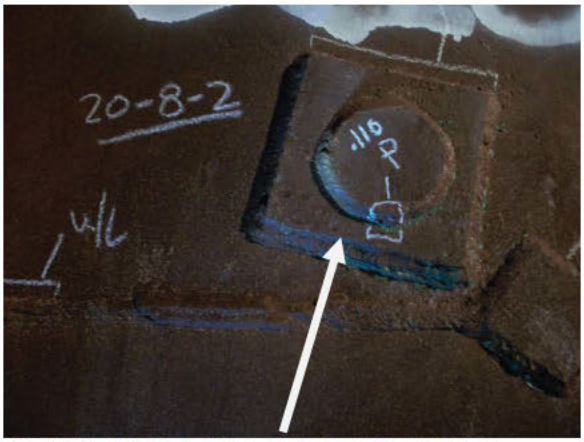
R20-P7-2 WELD REPAIR- UNDERFILL

SHELL

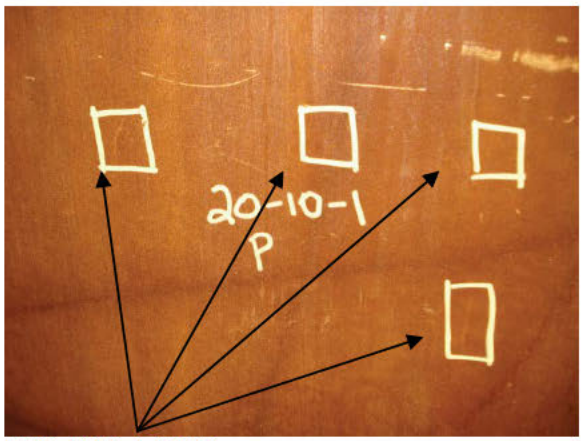
R20-P8-1 GOUGE REPAIR



R20-P8-4 WELD REPAIR- UNDERCUT



R20-P8-2 WELD REPAIR-POROSITY

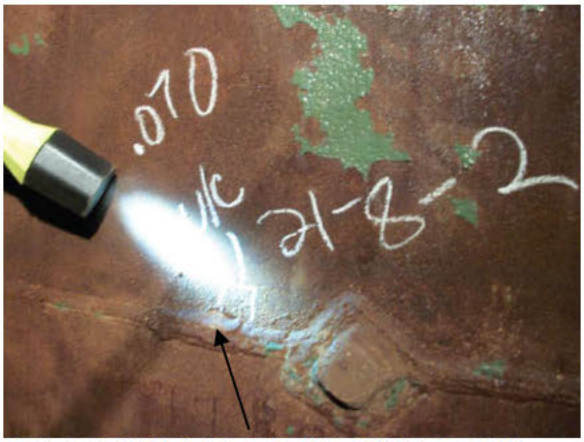


R20-P10-1 PITS

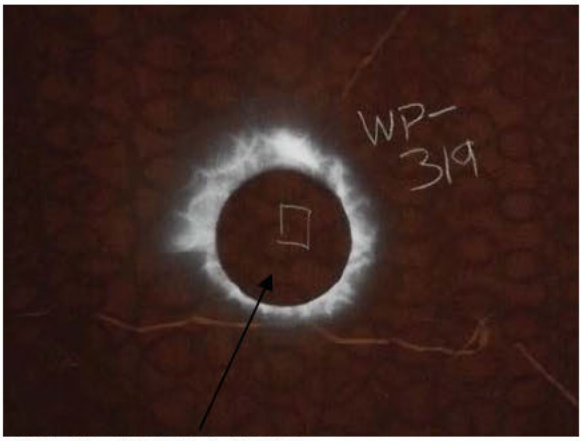
R20-P8-3 GOUGE REPAIR

R21-P6-1 GOUGE REPAIR

SHELL

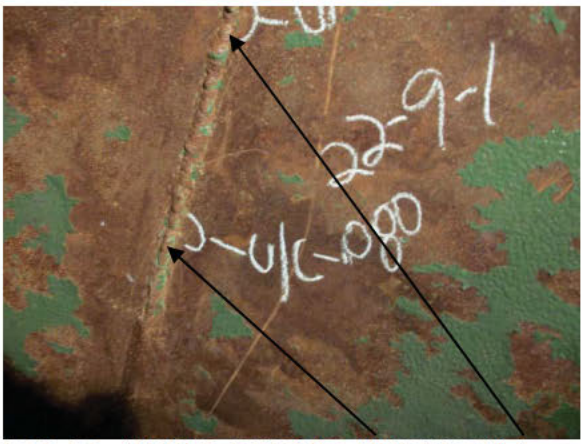


R21-P8-2 WELD REPAIR- UNDERCUT



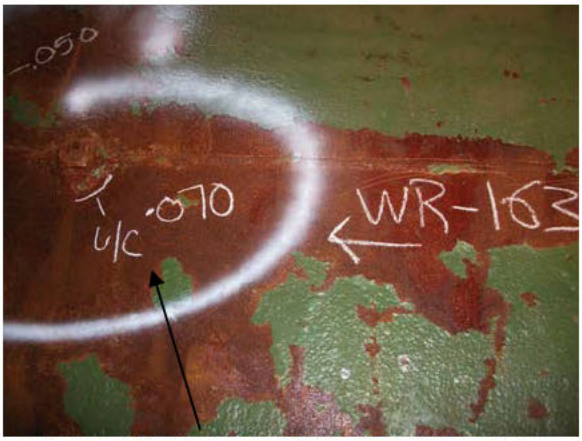
R22-P2-1 PIT REPAIR

R21-P11-1 EXCESS WELD REINFORCEMENT



R22-P9-1 WELD REPAIR- UNDERCUT, UNDERFILL

R21-P12-1 GOUGE REPAIR



R22-P9-2 WELD REPAIR- UNDERCUT

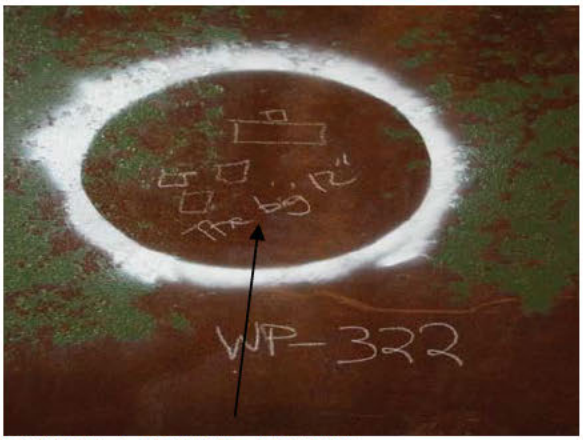
SHELL

R23-P4-1 PIT REPAIR

R24-5-2 PIT REPAIR

R23-P14-1 GENERAL CONDITION

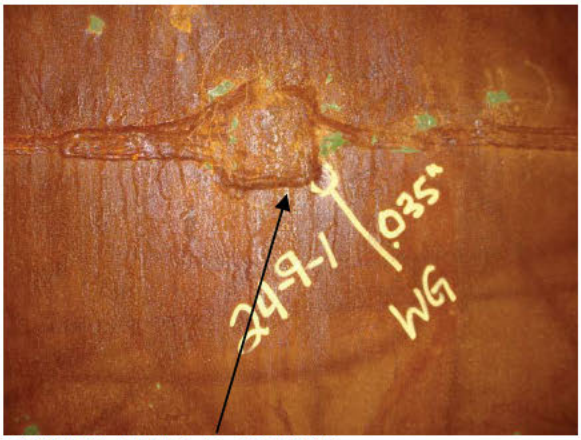
R24-P7-1 PIT REPAIR



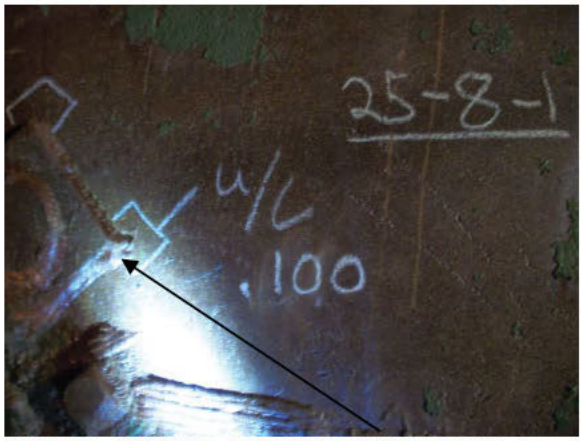
R24-P5-1 GOUGE REPAIR

R24-P7-2 PIT REPAIR

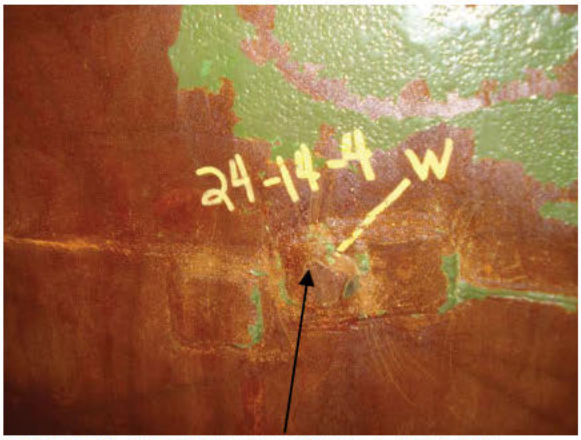
SHELL



R24-P9-1 WELD GOUGE

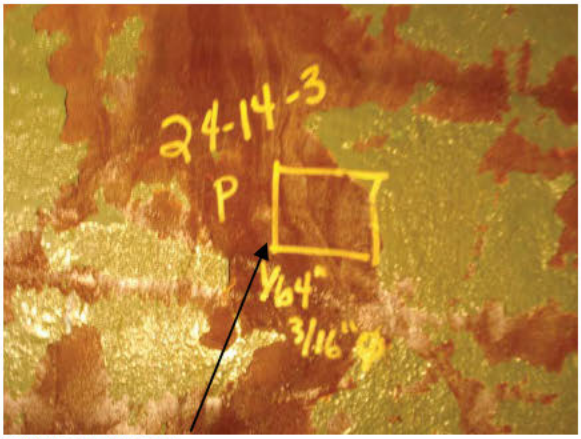


R25-P8-1 WELD REPAIR- UNDERCUT



R24-P14-1 WELD REPAIR- LACK OF FUSION

R25-P8-2 PIT REPAIR



R24-14-3 PIT

R25-P11-1 PIT

SHELL

R25-P13-1 GOUGES

R27-P3-1 WELD REPAIR- LACK OF FUSION

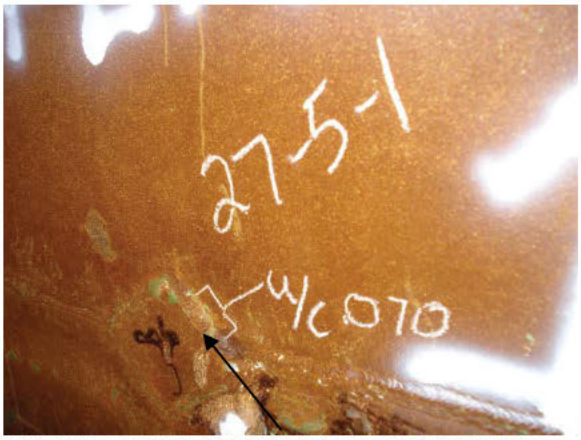
R26-P8-1 GOUGE REPAIR

R27-P3-2 WELD REPAIR- UNDERCUT

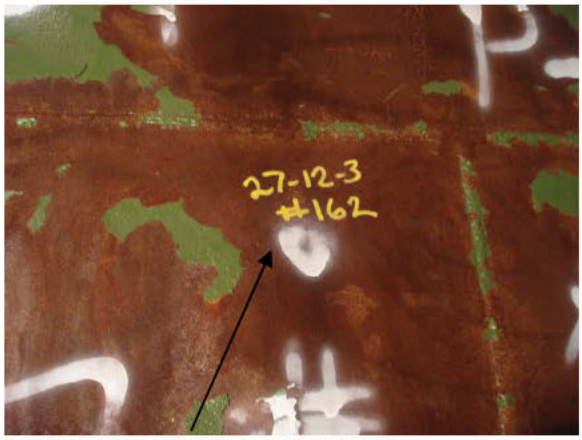
R26-P16-3 WELD REPAIR- UNDERFILL

R27-P4-1 WELD REPAIR- UNDERCUT

SHELL

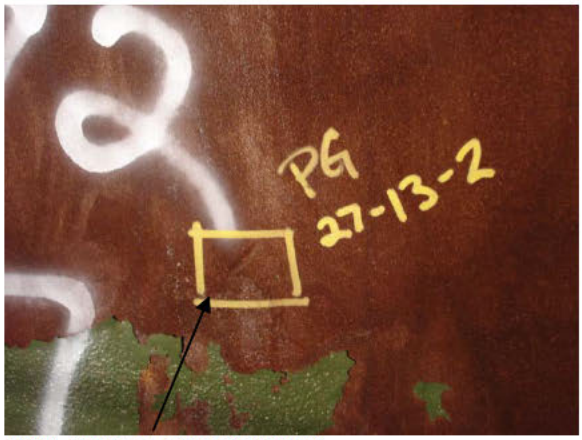


R27-P5-1 WELD REPAIR- UNDERCUT



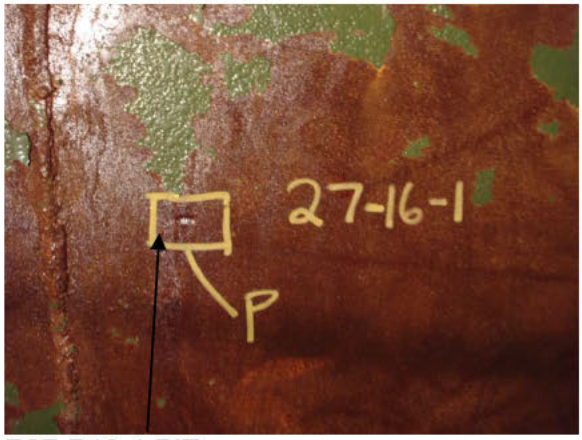
R27-P12-3 GOUGE REPAIR

R27-P6-1 PIT REPAIR



R27-P13-2 PIT REPAIR

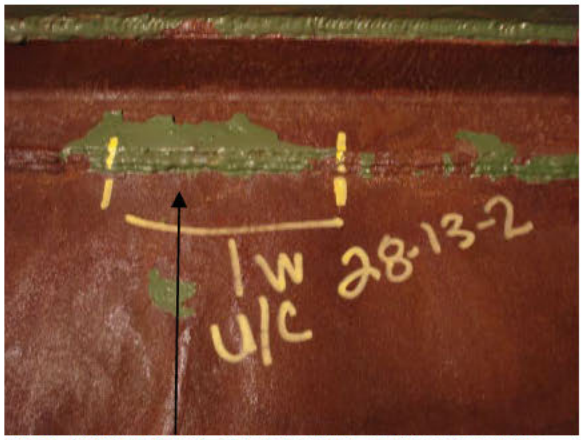
R27-P12-1 GOUGE REPAIR



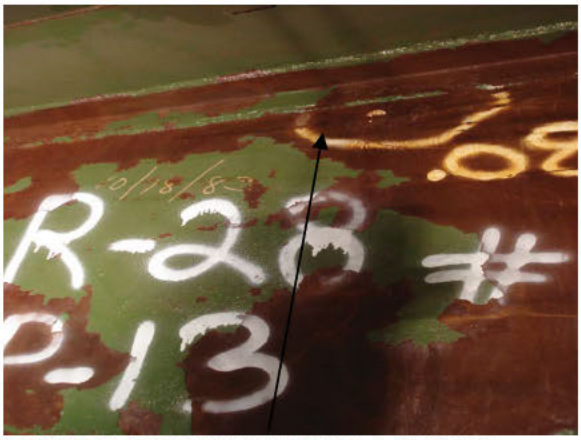
R27-P16-1 PIT

SHELL

R28-P12-1 GENERAL CONDITION



R28-P13-2 WELD REPAIR- UNDERCUT



R28-P13-1 WELD REPAIR- LACK OF FUSION

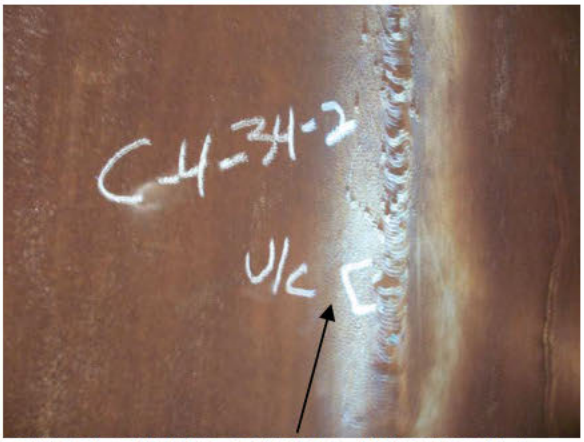
R28-P14-1 WELD REPAIR- LACK OF FUSION

R28-13-1 WELD REPAIR- LACK OF FUSION

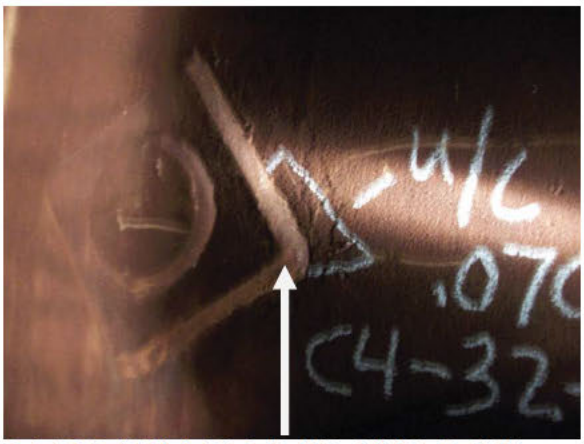
R28-P14-2 WELD REPAIR- POROSITY

LOWER DOME

C4-P1-1 WELD REPAIR- UNDERCUT

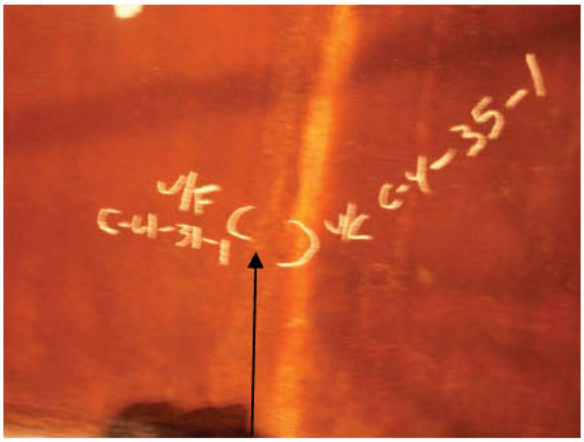


C4-P34-2 WELD REPAIR- UNDERCUT

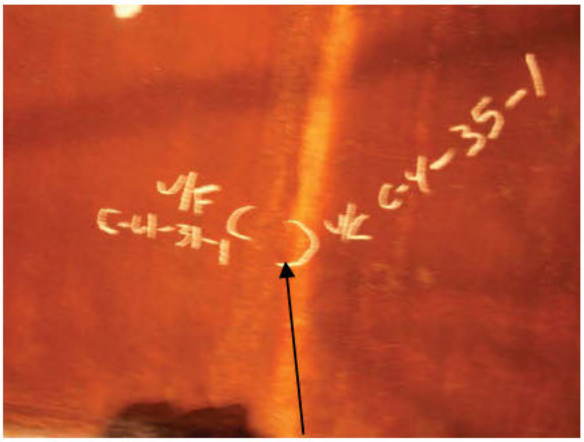


C4-P32-1 WELD REPAIR- UNDERCUT

C4-P34-3 WELD REPAIR- UNDERCUT



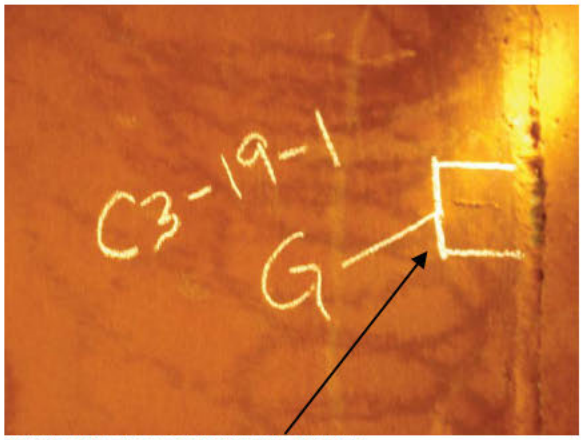
C4-P34-1 WELD REPAIR- UNDERFILL



C4-P35-1 WELD REPAIR- UNDERCUT

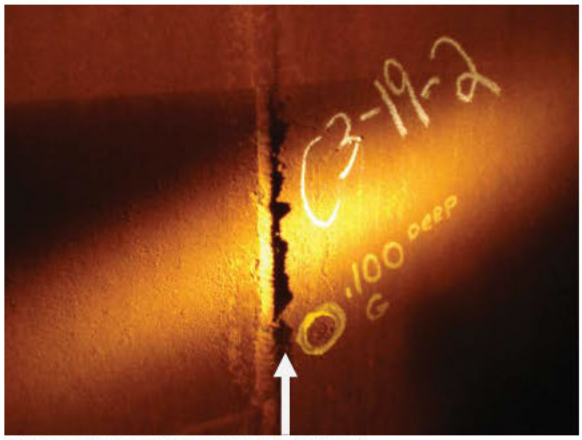
LOWER DOME

C4-P52-1 PIT REPAIR



C3-P19-1 GOUGE REPAIR

C3-P1-1 WELD REPAIR- UNDERCUT



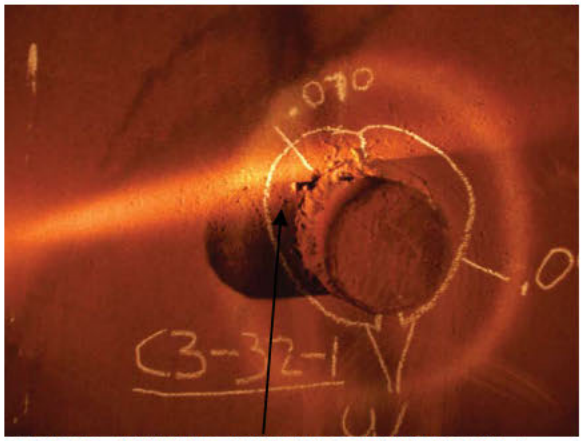
C3-P19-2 GOUGE REPAIR

C3-P1-2 GOUGE REPAIR

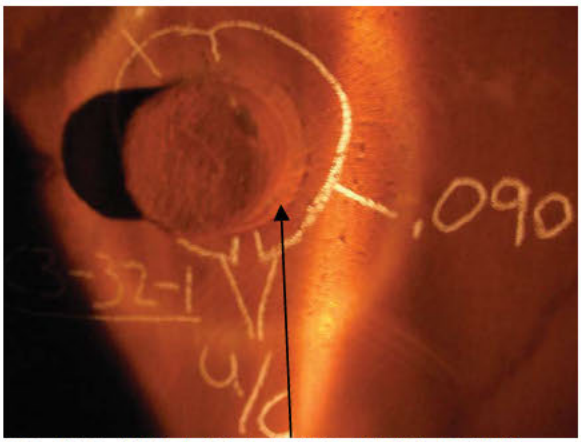
C3-P24-1 PIT REPAIR

LOWER DOME

C3-P29-1 PIT REPAIR

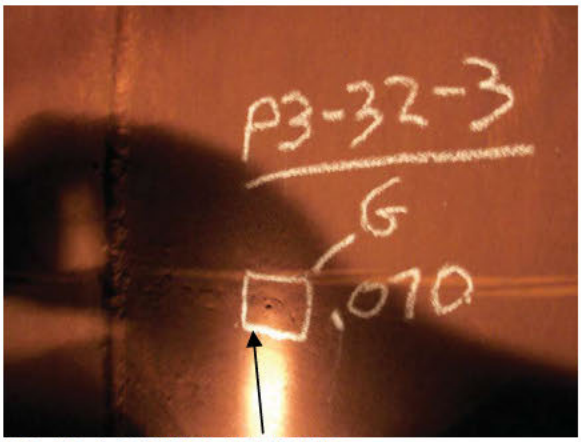


C3-P32-1 WELD REPAIR- UNDERCUT

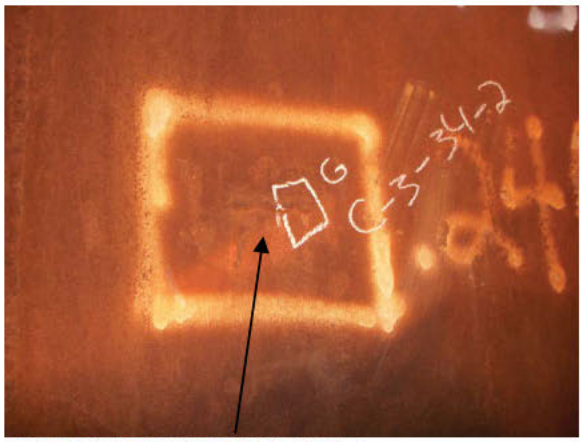


C3-P32-1 WELD REPAIR- UNDERCUT

C3-P34-1 WELD REPAIR- UNDERCUT



C3-32-3 GOUGE REPAIR

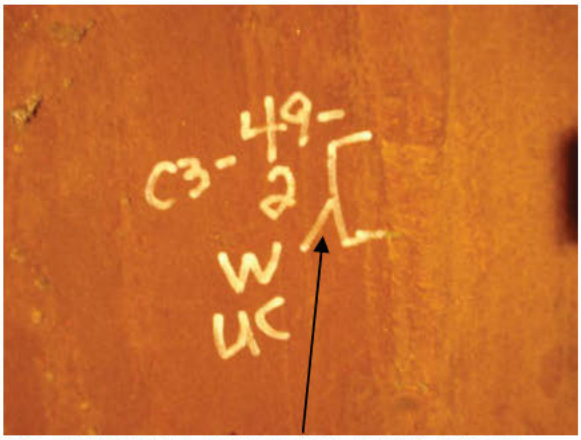


C3-P34-2 GOUGE REPAIR

LOWER DOME

C3-P36-1 WELD REPAIR- UNDERCUT

C2-P15-3 DENT REPAIR



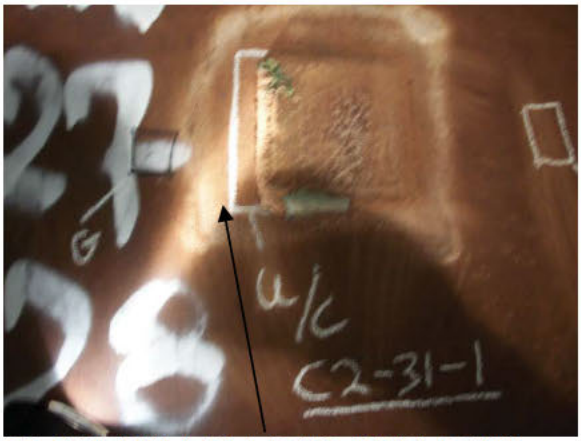
C3-P49-2 WELD REPAIR- UNDERCUT

C2-P16-3 DENT REPAIR

C3-P66-1 GOUGE REPAIR

C2-P18-1 PIT REPAIR

LOWER DOME



C2-P31-1 WELD REPAIR- UNDERCUT

C2-64-1 PIT REPAIR

C2-P34-1 WELD- UNDERCUT

C2-P35-1 PIT REPAIR

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

A WILLBROS COMPANY

APPENDIX D

PROJECT NDT PHOTOGRAPHS
Section D-2

Rev	Date	Description	Reviewed	Approved
P	11/18/10	Preliminary - For Info	RC	TDA
A	11/22/10	Draft Data – For Info	RC	TDA
B	4/2/11	For Review and Approval	JS	TDA
0				
1				
2				
3				

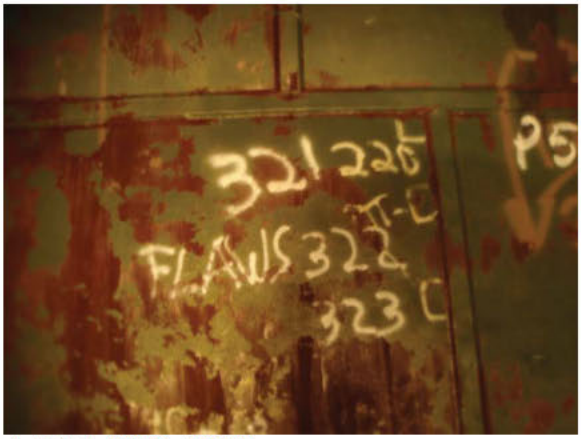
UPPER DOME

A-P4-1 #317

A-P7-1 #324

A-P4-1 #318, #320

A-P10-1 #294



A-P4-1 #322, #323

A-P10-1 #297

UPPER DOME

A-P21-1 #303

A-P31-2 #316

A-P22-1 #304

A-P51-1 #326

A-P31-1 #313

A-P64-1 #331

UPPER DOME

A-P67-1 #330

B-P18-1 #337

B-P8-1 #333

B-P19-1 #339

B-P10-1 #335

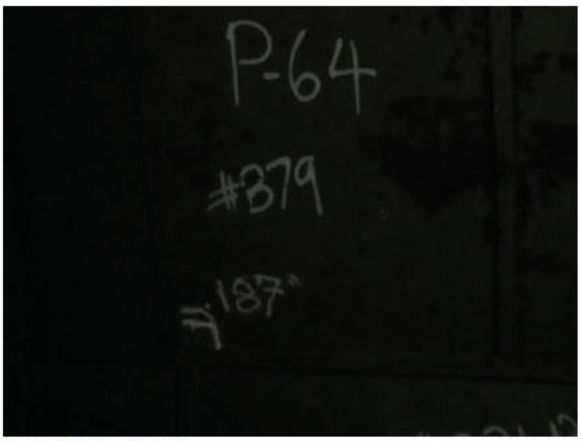
B-P21-1 #340

UPPER DOME

B-P22-1 #343

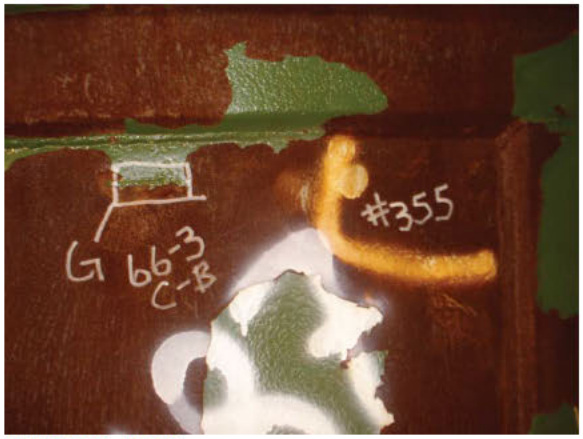
A-P44-1 #354

B-P24-1 #342



B-P64-1 #379

B-P37-1 #325A

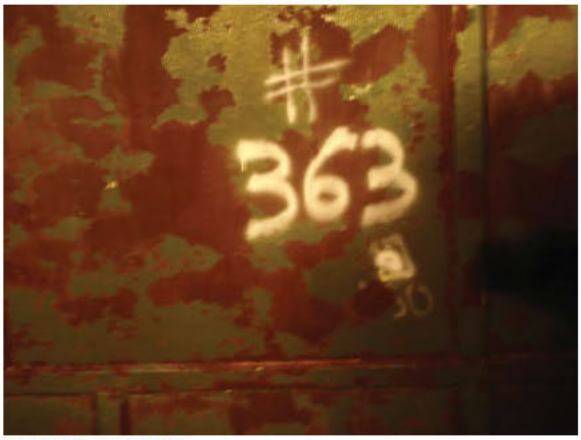


B-P66-3 #355

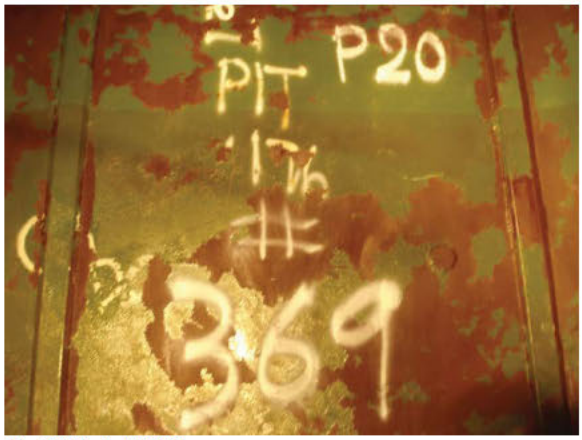
UPPER DOME

C-P2-1 #374

C-P19-2 #364



C-P16-1 #363



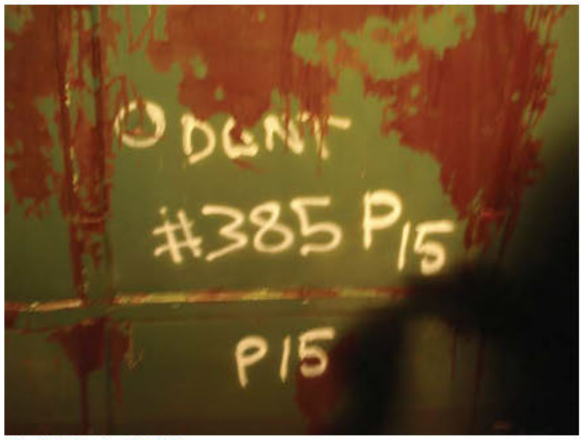
C-P20-1 #369

C-P19-1 #365

C-P21-1 #371

UPPER DOME

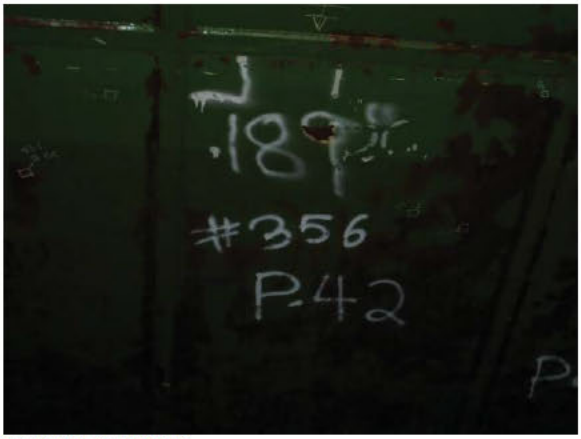
C-P24-1 #367



D-P15-1 #385

C-P32-1 #380

D-P20-1 #388



C-P42-1 #356

D-P35-1 #398

UPPER DOME

D-P37-1 #400

RD-P47-1 #399

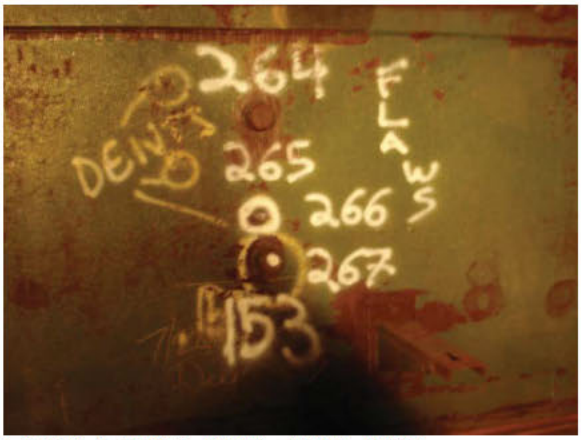
D-P47-1 #382

D-P47-3 #381

SHELL EXTENSION

E2-P2-1 #262, #263

E2-P7-1 #284



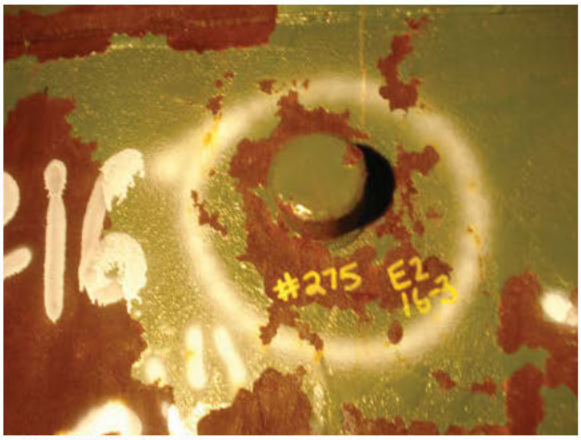
E2-P3-1 #267, #266, #265, #264

E2-P8-1 #281

E2-P7-1 #283

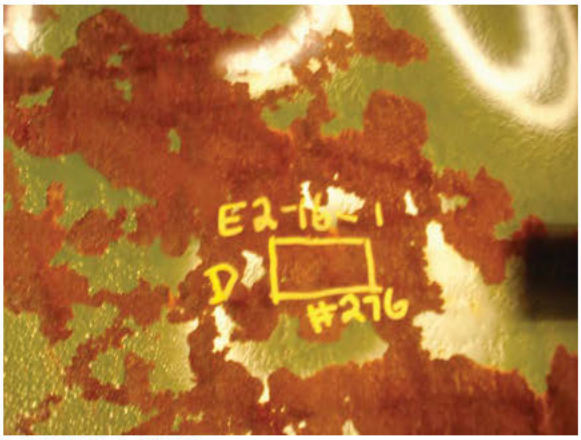
E2-P10-1 #273

SHELL EXTENSION



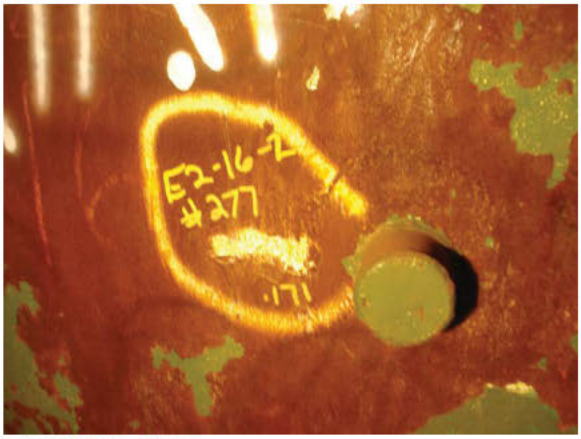
E2-P16-3 #275

E3-P6-1 #282

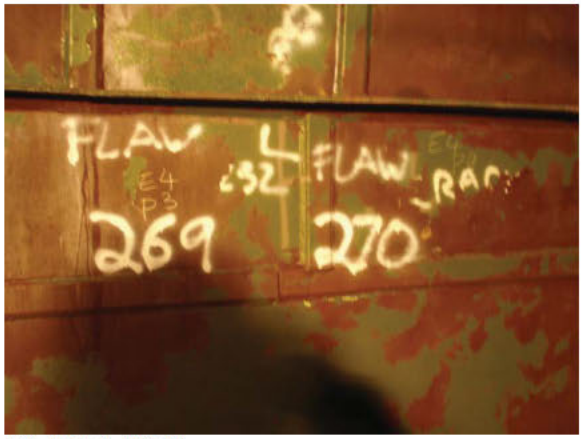


E2-P16-1 #276

E3-P15-1 #274



E2-P16-2 #277



E4-P4-1 #270

SHELL EXTENSION

E4-P5-1 #285A

E4-P15-1 #271

E4-P16-1 #272

SHELL

R1-P12-1 #169

R2-P14-1 #135

R2-P11-1 # 209

R2-P14-2 #134

R2-P13-1 #140

R4-P4-1 #109

SHELL

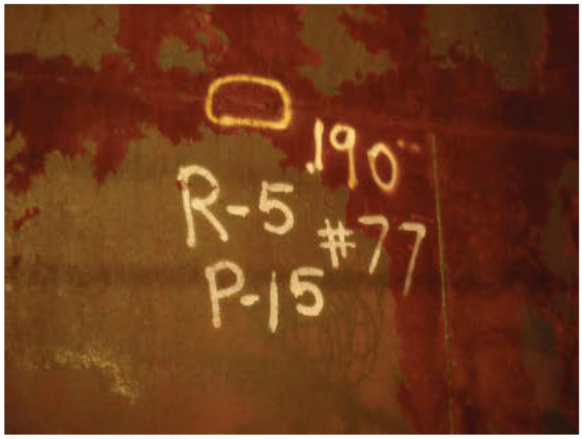
R4-P9-1 #212

R5-P11-2 #208

R5-P3-1 #91

R5-P13-1 #136

R5-P11-1 # 207



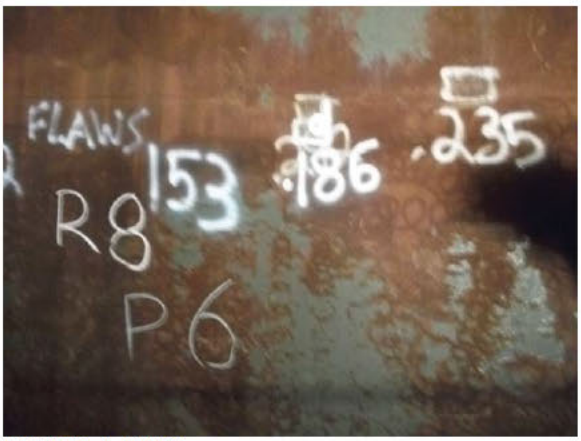
R5-P15-2 #77

SHELL

R5-P16-1 #261

R8-P1-1 #255

R6-P11-1 #211



R8-P6-1 #153

R7-P11-1 #166

R8-P12-1 #167

SHELL

R9-P2-1 #67A

R10-P14-1 #137

R9-P11-1 #165

R10-P15-1 #82

R10-P11-1 #206

R10-P16-1 #250

SHELL

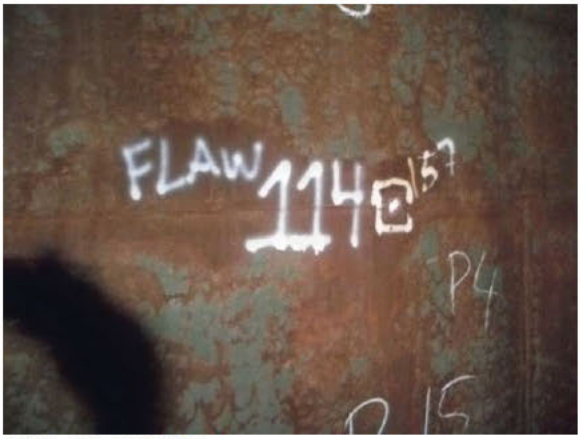
R10-P16-2 #251

R11-P14-1 #81

R10-P16-3 #76

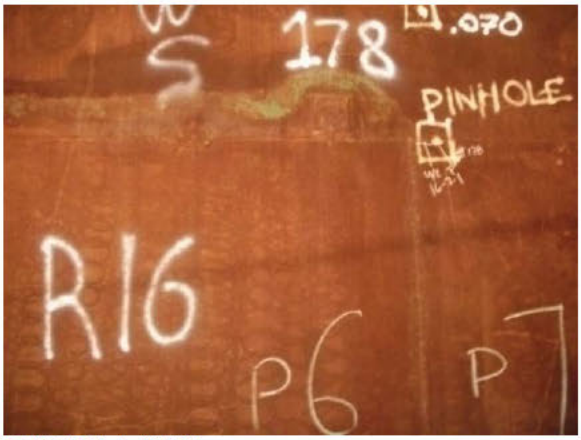
R12-P7-1 #180

R10-P16-4 #75



R15-P4-1 #114

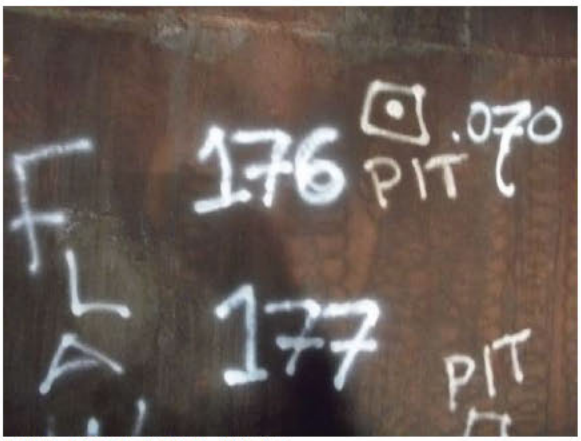
SHELL



R16-P7-1 #178

R16-P15-2 #69

R16-P13-1 #142



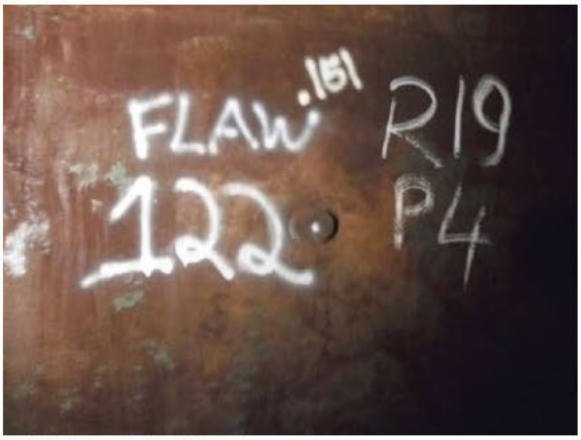
R17-P6-1 #176, #177

R-16-P15-1 #132

R17-P15-1 #132

SHELL

R18-P6-1 #175



R19-P4-1 #122

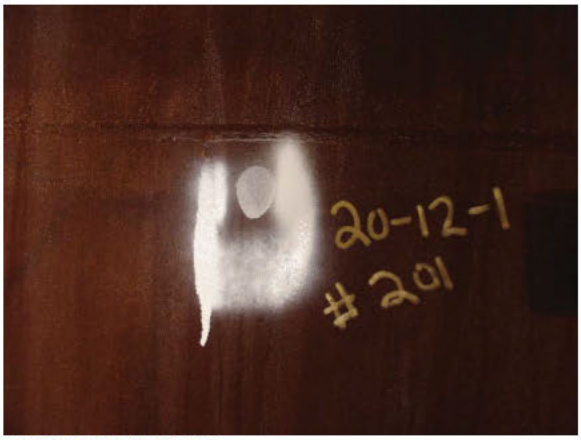
R18-P15-1 #79

R19-P6-1 #197

R19-P2-1 #95

R19-9-1 #214

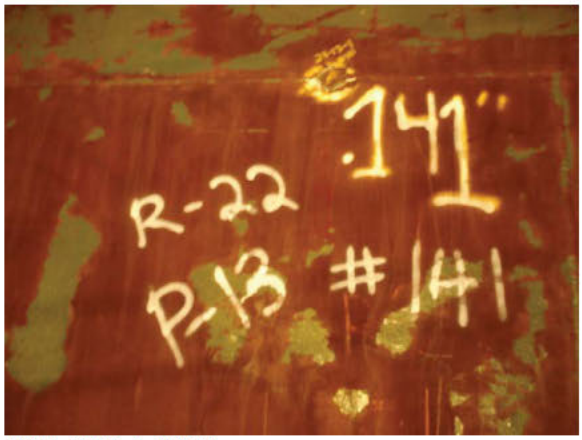
SHELL



R20-P12-1 #201

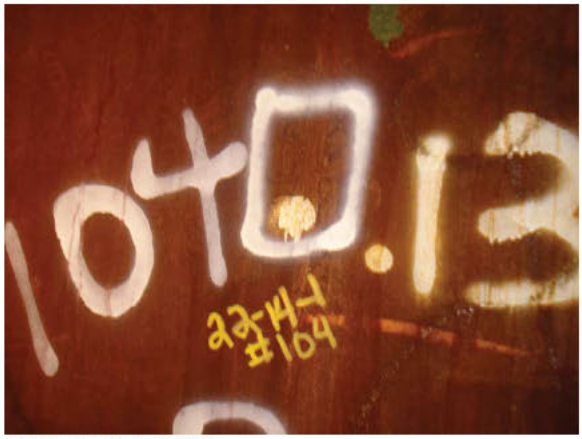
R21-P8-1 #217

R20-P15-1 #68



R22-P13-1 #141

R20-P15-2 #78



R22-P14-1 #104

SHELL

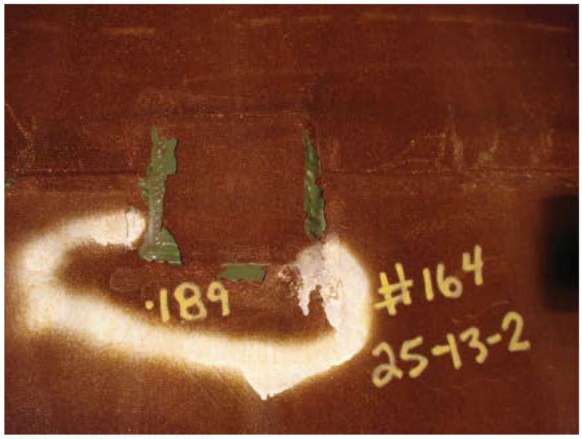
R22-P15-1 #72

R24-P16-1 #52

R23-P13-1 #141

R25-P7-1 #194

R23-P14-1 #138A



R25-P13-2 #164

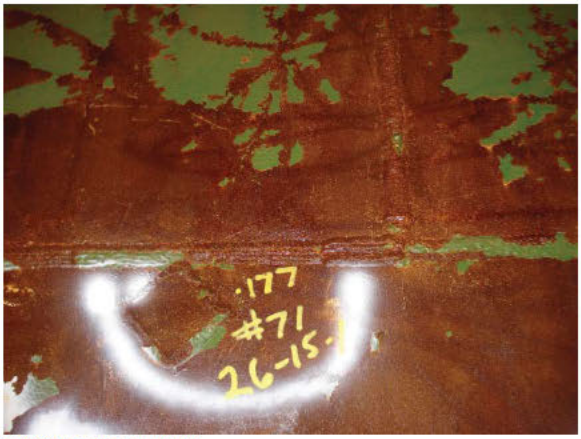
SHELL

R26-P11-1 #203

R26-P15-2 #70

R26-P12-1 #202

R26-P15-2 #70



R26-P15-1 #71

R26-P15-3 #105, #106

SHELL

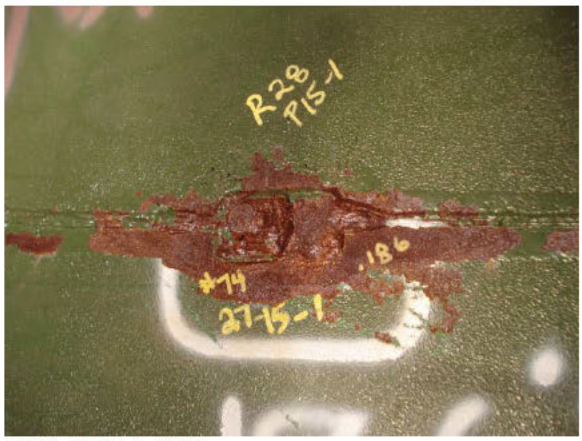
R26-P16-1 #51

R27-P12-4 #161

R27-P9-1 #227

R27-P13-1 #163

R27-P12-2 #159



R27-P15-1 #74

SHELL

R27-P15-2 #55

R28-P3-1 #84

R27-P15-3 #53

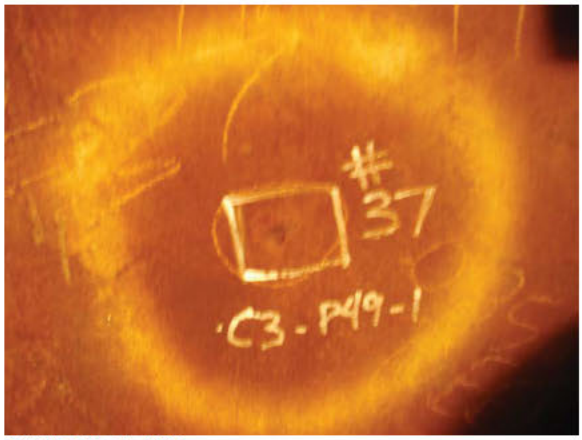
R28-P14-1 #102

R27-P15-4 #54

R28-P15-2 #73

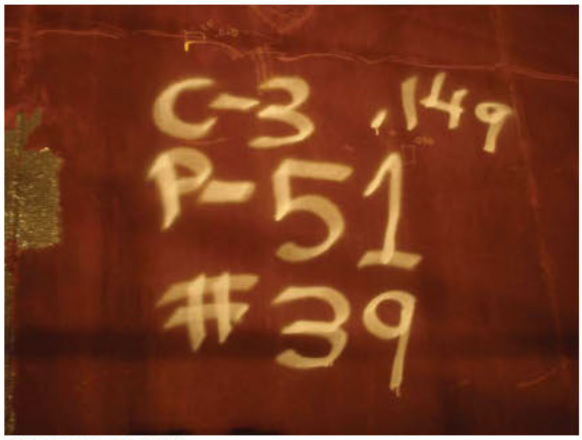
LOWER DOME

C3-P19-1 #43

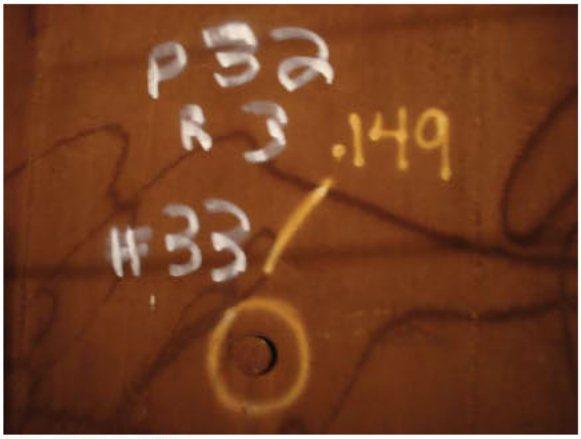


C3-P49-1 #37

C3-P22-1 #41



C3-P51-1 #39



C3-P32-1 #33

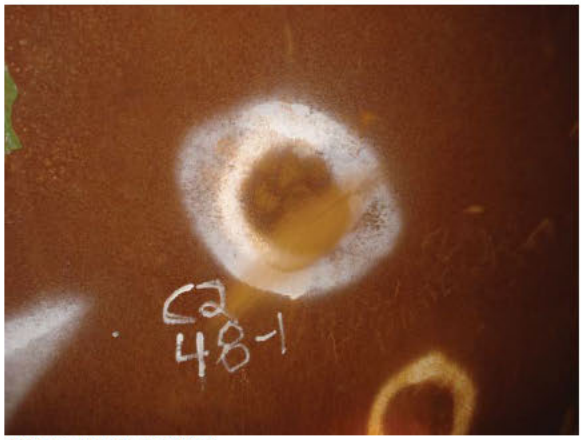
C3-P54-1 NDT #38

LOWER DOME

C2-P15-1 #16

C2-P57-1 #23

C2-P15-2 #17



C2-P48-1 #248A

C2-P16-1 #19

C1-P3-1 #12

LOWER DOME

C1-P10-1 #13, #14

C1-P11-1 #13, #14

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

A WILLBROS COMPANY

Technical Data & Submittal for Project:

Project Title: CLEAN, INSPECT, AND REPAIR STORAGE TANKS
Location: PEARL HARBOR NAVAL STATION, OAHU, HI
Task Order No.: N62583-09-D-0132/0003
WGS Project Number: 54118
Equipment: Tank 5

APPENDIX E
ENGINEERING / CALCULATIONS

Rev	Date	Description	Reviewed	Approved
P	11/18/10	Preliminary - For Info	RC	TDA
A	11/22/10	Draft Data – For Info	RC	TDA
B	4/2/11	For Review and Approval	JS	TDA
0				
1				
2				
3				

PROJECT TITLE - 54118
Clean, Inspect and Repair Fuel Tanks 5 & 17
Redhill Complex – Pearl Harbor, Oahu HI

I. ENGINEERING STRUCTURAL INTEGRITY ANALYSIS – Tank 5

Willbros Government Services, LLC (Willbros) was contracted to perform tank isolation, cleaning, (NDE) non-destructive examinations and testing, visual inspection and an evaluation of the tanks suitability for service. The inspection and evaluation was in accordance with API Standard 653, *Tank Inspection, Repair, Alteration and Reconstruction*, Latest Edition and project specifications listed in the specifications section of the tank inspection report. The inspection and evaluation was modified to fit the conditions and configuration of the Tank 5 (TK 5) underground storage tank (UST) located in the Redhill Complex, Pearl Harbor, Oahu HI.

II. BACKGROUND

The project site is located on the Pearl Harbor Naval Base, Redhill Complex on Oahu, HI. The Redhill Tank Complex provides strategic fuel supply to the USN Pacific Fleet. The Redhill Complex contains twenty (20) UST tanks and ancillary equipment. The complex was originally built beginning in December 1940 and construction was completed in September 1943.

Tank 5 is a vertical underground storage tank (UST) located underground within a hill in the Redhill Complex. Tank 5 is 100 ft. dia. x 250 ft. high; upper and lower dome sections (50 ft. radius each), carbon steel tank construction which has been externally reinforced / encapsulated during construction by a concrete / gunite lining. The tank is constructed of carbon steel plates of original thickness of 0.250" for the upper dome, shell plates and extension; and 0.500" for the lower dome.

III. INSPECTION AND TEST DATA

Willbros subcontractors performed (NDE) non-destructive examination and testing inspection on 100% of the tank's welds, shell, upper and lower dome surfaces to determine the remaining wall thickness and condition of each section or component. During the NDE examinations and inspection all relevant indications observed were identified, recorded and photographed as necessary to document the condition of each relevant indication in the tank. These areas were inspected by certified ASNT Level II NDE Inspection Technicians and reviewed by a certified API 653 Tank Inspector.

The NDE test data was compiled and utilized in the engineering and integrity analysis of Tank 5. The lowest relevant actual component wall thickness was identified in the (RSOL) remaining safe operating life report to show the integrity and RSOL of each pressure retaining component. The minimum thickness was calculated in accordance with API 653 using a modified method due to the UST tank configuration. Willbros performed a detailed stress analysis of the tank components, loadings, applied and assumed stresses as noted in the report.

IV. ENGINEERING CASES FOR ANALYSIS OF LOADS AND STRESSES

Willbros reviewed the tank's UST configuration, available construction details and drawings, service conditions, inspection reports and NDE findings to determine the applicable cases which were relevant to evaluate and determine the appropriate methodology.

a. Case 1 – API 653 / API 650 Tank integrity analysis and evaluation.
b. Case 2 – Internal hydraulic stress from product service.
c. Case 3 – External hydraulic stress from rain or leaking water residential piping.
d. Case 4 – Settlement
e. Case 5 – Concrete / Gunite separation
f. Case 6 – Anchor rod connections to the shell / barrel sections

V. ENGINEERING CASE ANALYSIS – LOADS AND STRESSES

Willbros reviewed the applicable case loadings and potential stresses to determine which cases were relevant and needed to be further evaluated to determine the suitability for service. Willbros evaluated the appropriate methodology to properly analyze the applied loadings or stresses due to the tank's configuration. Willbros selected to perform a detailed stress analysis for the evaluation process since API 653 or API 650 does not have calculations based on the tank's configuration.

a. Case 1 – API 653 / API 650 Tank integrity analysis and evaluation for suitability for service.
   i. Tank 5 is not a standard AST tank configuration and an alternate method must be utilized.
   ii. API 653 bottom evaluation would be the only condition similar to the actual conditions of TK5 where the plates are in contact with another matter which provides a backing support. But there are no relevant calculations to properly evaluate various scenarios which can be present in the tank.
   iii. API 653 Section 4.4.5.4 Unless a stress analysis is performed, the minimum bottom plate thickness in the critical zone of the tank bottom defined in 9.10.1.2 shall be the smaller of one-half the original bottom plate thickness (not including the original corrosion allowance) or 50 % of t_{min} of the lower shell course per 4.3.3.1 but not less than 0.1 in. Isolated pitting will not appreciably affect the strength of the plate. (In this section it defines that a 0.100" min. thickness is the minimal allowable per API 653 for this condition.)
   iv. Willbros chose to perform a detailed stress analysis to evaluate the relevant cases and determine the suitability for service.

b. Case 2 – Internal hydraulic stress from product service.
   i. The tank develops a high internal pressure and hoop stress due to the hydraulic head pressure from the product while in service.
   ii. The tank's design utilizes the reinforced / encapsulated concrete / gunite liner to provide backing support for the tank's pressure retaining components. Therefore the tank's pressure retaining components are much thinner than the requirements for the metal components to resist the internal pressure and hoop stress in a typical configuration.
   iii. Willbros considers this case to be the main area for relevant consideration since the actual pressure retaining components are much thinner than the typical requirements. The main concern is where the tank may have an isolated void or small separation in the liner contact to metal surface. This will result in the pressure retaining components being subjected to the full internal pressure and hoop stress; which could develop into an overstressed condition and potential failure.

c. Case 3 – External hydraulic stress from rain or leaking water residential piping.
   i. The presence of water around the tank from weather related rain or leaks from residential water piping will not form a leak proof column that will develop enough relevant hydraulic head pressure to be considered; since the water should dissipate before reaching a significant head pressure for consideration.

d. Case 4 – Settlement
   i. The tank was constructed underground and reinforced / encapsulated with a concrete / gunite liner around the entire tank. The surrounding soil / surface where the tank was constructed in a volcanic hill.
   ii. Settlement is not considered a relevant case for excessive loadings or stresses.

e. Case 5 – Concrete / Gunite separation
   i. The tank was constructed underground and reinforced / encapsulated with a concrete / gunite liner around the entire tank. The surrounding soil / surface where the tank was constructed in a volcanic hill.
   ii. Settlement is not considered a relevant case for excessive loadings or stresses.
   iii. Therefore major separation is considered not relevant.

f. Case 6 – Anchor rod connections to the shell / barrel sections
   i. The tank was constructed underground and reinforced / encapsulated with a concrete / gunite liner around the entire tank. The surrounding soil / surface where the tank was constructed in a volcanic hill.
   ii. Settlement is not considered a relevant case for excessive loadings or stresses.
   iii. Therefore major separation and excessive loadings or stress at these locations are considered not relevant.

VI. ENGINEERING ANALYSIS – LOADS AND STRESSES

Willbros performed a detailed stress analysis for the evaluation process of the API 653 or API 650 tank due to the non-standard configuration. The stress analysis was performed using Roark's Stress and Strain formulas to evaluate the applicable stresses applied in the cases evaluated. The detailed stress analysis evaluated the applied loadings and stresses, deflection, fiber and membrane stress and compared to the allowable stresses allowed by the governing API 653 code.

VII. ENGINEERING ANALYSIS & CALCULATIONS

Refer to the following pages for the detailed stress analysis and calculations for Tank 5.

Subject Matter Expert – Tanks
Project Manager

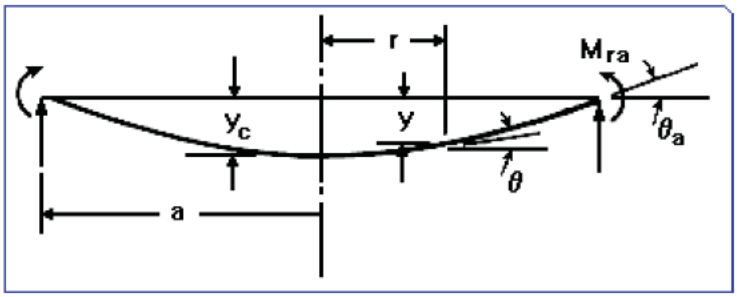
Tim Anderson
Mechanical Engineer
API 653 Certified Inspector #37258

Subject Matter Expert – Tanks
Program Manager

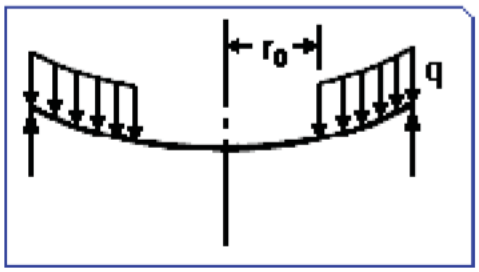
Doug Bayles, P.E. Hawaii 11128-C
Civil / Structural Engineer
API 653 Certified Inspector #1904

Case 10b Solid circular plate fixed; uniformly distributed pressure from r_o to a

Solid circular plate



Uniformly distributed pressure from r_o to a



Notation file Provides a description of Table 24 and the notation used.

Willbros Government Services, LLC.
Redhill Project - Tank 5
100ft Dia. x 250ft Tall Tank,
Built 1943
Carbon steel construction
Engineering / Stress Analysis
-
This stress analysis was used to evaluate the applicable components for applied loadings and resulting stresses. These calculations were used to base the Tmin calculations for the components and determine suitability for service in accordance with API 653.

Enter dimensions, properties and loading:

Plate dimensions:

(See Note 1)	thickness:	$t \equiv 0.14 \cdot in$	t =Tmin localized area
(See Note 2)	radius:	$a \equiv 3 \cdot in$	a = Radius of localized area
(See Note 3)	Applied uniform pressure:	$q \equiv 87 \cdot psi$	q= Pressure at localized area
	Modulus of elasticity:	$E \equiv 30 \cdot 10^6 \cdot \frac{lbf}{in^2}$	
	Poisson's ratio:	$\nu \equiv 0.3$	
	Radial location of applied load:	$r_o \equiv .00001 \cdot in$	

Section Note(s):

-

Note 1: The Tmin calculation is based on iterations of calculations of various wall thicknesses at the specific localized area under evaluation; until the thickness range exceeds the allowable stresses per the relevant code which the tank is being evaluated. Therefore defining the Tmin required for this specific localized area. Calculations can not utilize or compare to the equations or formulas in the evaluating API 653 Code; due to the evaluating code does not account for the support or load resistance provided by the concrete / gunite liner. Therefore the equations or formulas in the evaluating API 653 Code would require a much greater Tmin thickness per the applied loadings and stresses at each location.

-

Note 2: The cases evaluated are localized areas at various elevations and configuration based on location. This location is in the shell region and sized for the area determined possible due to construction methods and filling of concrete / gunite liner. In the vertical section on the liner gravity will aid in the filling process which should reduce the overall size. The size is based on the largest area determined by the grout nozzles and anchor rod connections which penetrate thru the tank's shell.

-

Note 3: The pressure is at the specific localized area under evaluation. The pressure is developed from the hydraulic head pressure at that location and internal hoop stress developed. The pressure will be uniformly applied at that location.

Constants:

Shear modulus: $G \equiv \frac{E}{2 \cdot (1 + \nu)}$

D is a plate constant used in determining boundary values; it is also used in the general equations for deflection, slope, moment and shear. K_{sro} is the tangential shear constant used in determining the deflection due to shear.

$$D \equiv \frac{E \cdot t^3}{12 \cdot \left(1 - \nu^2\right)} \qquad D = 7538.462 \cdot \text{lbf in}$$

$$K_{sro} \equiv -0.30 \cdot \left[1 - \left(\frac{r_o}{a}\right)^2 \cdot \left(1 + 2 \cdot \ln\left(\frac{a}{r_o}\right)\right)\right] \qquad K_{sro} = -0.3$$

Boundary values:

The L_n functions used in the equations below are defined at the end of this document.

M_r is radial moment, Q is shear, y is deflection and θ is slope.

(See Note 4) Due to bending:

At the edge of the plate (a):

$$M_{ra} := \frac{-q}{8 \cdot a^2} \cdot \left(a^2 - r_o^2\right)^2 \qquad M_{ra} = -97.875 \cdot \frac{lbf\ in}{in}$$

$$y_a := 0 \cdot in \qquad y_a = 0 \cdot in$$

$$\theta_a := 0 \cdot deg \qquad \theta_a = 0 \cdot deg$$

(See Note 5) At the center of the plate (c):

$$M_c := q \cdot a^2 \cdot (1 + \nu) \cdot L_{14} \qquad M_c = 63.619 \cdot \frac{lbf\ in}{in}$$

$$y_c := \frac{-q \cdot a^4}{2 \cdot D} \cdot \left(L_{14} - 2 \cdot L_{11}\right) \qquad y_c = -0.015 \cdot in$$

(See Note 6) Due to tangential shear stresses:

$$y_{sro} := \frac{K_{sro} \cdot q \cdot a^2}{t \cdot G} \qquad y_{sro} = -0.0001 \cdot in$$

Section Note(s):

-

Note 4: Bending occurs in each case based on the localized area or spot has a small void or sectional area where the concrete / gunite liner is not in contact with the tank's metal surface. This allows for this area to be subjected to the full hydraulic head and internal hoop stress at that location. Therefore allowing a bending moment and deflection to occur.

-

Note 5: The deflection will be the greatest at the center of the localized area.

-

Note 6: Tangential stresses will reflect the relative or associative hoop stress at that localized spot location.

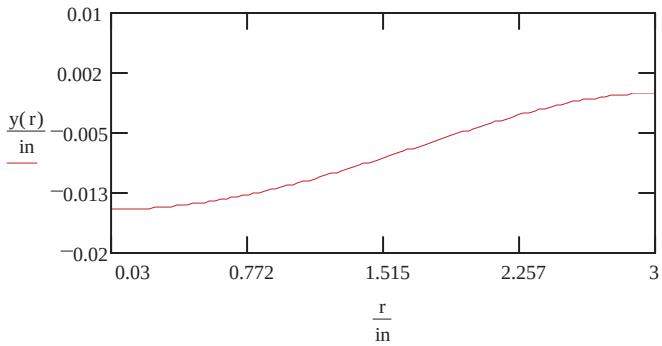
General formulas and graphs for deflection, slope, moment, shear and stress as a function of r:

Define r, the range of the radius:

$$r \equiv \frac{a}{100}, \frac{a}{50} .. a$$

Deflection: (See Note 5)

$$y(r) := y_c + \frac{M_c \cdot r^2}{2 \cdot D \cdot (1+\nu)} + LT_y(r)$$



Deflections at the center and outer radius:

$y(0 \cdot in) = -0.015 \cdot in$ $\qquad$ $y(a) = 0 \cdot in$

Maximum deflection (magnitude):

$Y_{(r) \cdot \frac{100}{in}} := y(r)$ $\qquad$ $A := \max(Y)$ $\qquad$ $B := \min(Y)$

(See Note 5) $\quad y_{max} := (A > -B) \cdot A + (A \le -B) \cdot B$ $\qquad$ $y_{max} = -0.015 \cdot in$ (See Note 7)

Large deflection condition check:

Check to verify that the absolute value of the maximum deflection is less than one-half the plate thickness (an assumption stated in the Notation file which must hold true):

$$check := if\left(\left|y_{max}\right| > \frac{t}{2}, 0, 1\right) \qquad check = 1$$

If $|y_{max}|$ is greater than t/2 (i.e., check = 0), the equations in this table are subject to large errors. For large deflections, use the equations provided in Table 24a to obtain stress and deflection. Read the Notation file for more specific information. Other values are not available.

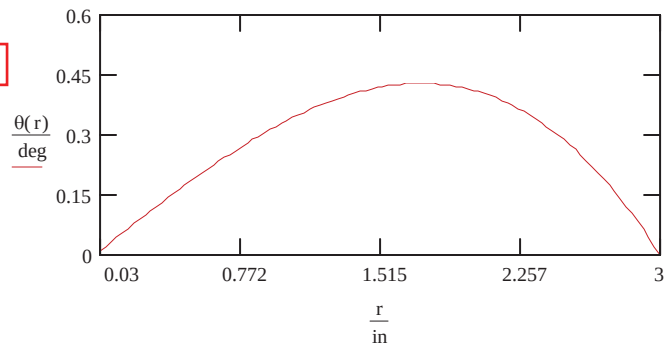
Table 24a

Notation file

Slope:

$$\theta(r) := \frac{M_c \cdot r}{D \cdot (1+\nu)} + LT_\theta(r)$$

Slope Diagram



Slope at center and outer radius:

$\theta(0 \cdot in) = 0 \cdot deg$ $\qquad$ $\theta(a) = 0 \cdot deg$

Maximum slope (magnitude):

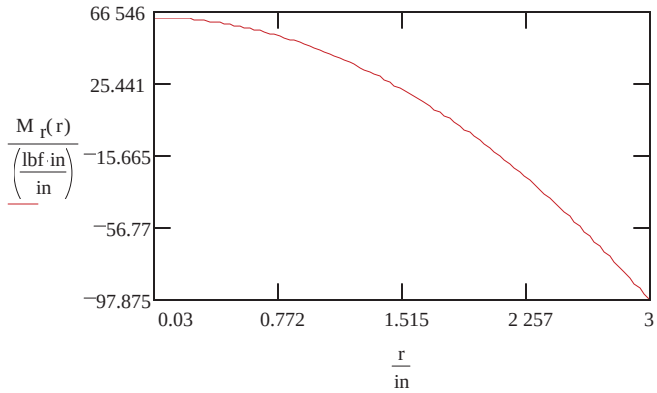
$S_{(r) \cdot \frac{100}{in}} := \theta(r)$ $\qquad$ $A := \max(S)$ $\qquad$ $B := \min(S)$

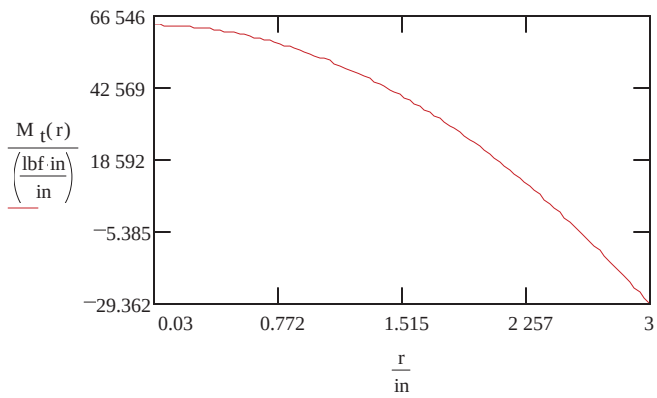
$\theta_{max} := (A > -B) \cdot A + (A \le -B) \cdot B$ $\qquad$ $\theta_{max} = 0.429 \cdot deg$

Moment; radial and tangential:

$$M_r(r) := M_c + LT_M(r) \qquad M_t(r) := \frac{\theta(r)\cdot D\cdot\left(1-\nu^2\right)}{r} + \nu\cdot M_r(r)$$

Moment Diagram





Radial and tangential moment at center and outer radius:

$M_r(0 \cdot in) = 63.619 \cdot \frac{lbf\ in}{in}$ $\qquad$ $M_r(a) = -97.875 \cdot \frac{lbf\ in}{in}$

$M_t(0.01 \cdot in) = 63.618 \cdot \frac{lbf\ in}{in}$ $\qquad$ $M_t(a) = -29.362 \cdot \frac{lbf\ in}{in}$

Maximum radial and tangential moment (magnitude):

$Mr_{(r) \frac{100}{in}} := M_r(r)$ $\qquad$ $Ar := \max(Mr)$ $\qquad$ $B := \min(Mr)$

$Mt_{(r) \cdot \frac{100}{in}} := M_t(r)$ $\qquad$ $At := \max(Mt)$ $\qquad$ $Bt := \min(Mt)$

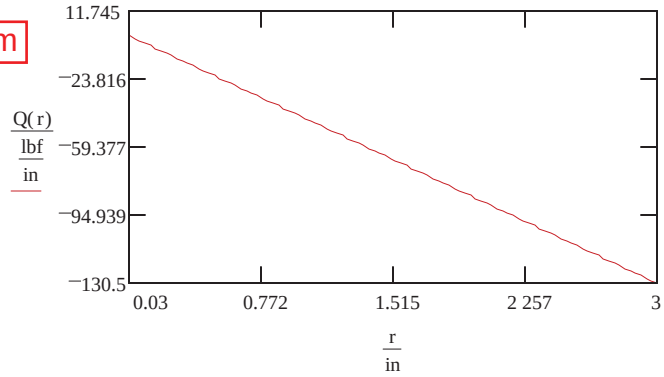
$Mr_{max} := (Ar > -B) \cdot Ar + (Ar \le -B) \cdot B$ $\qquad$ $Mr_{max} = -97.875 \cdot \frac{lbf\ in}{in}$

$Mt_{max} := (At > -Bt) \cdot At + (At \le -Bt) \cdot Bt$ $\qquad$ $Mt_{max} = 63.609 \cdot \frac{lbf\ in}{in}$

Shear:

$$Q(r) := LT_Q(r)$$

Shear Diagram



Shear at center and outer radius:

$$Q(0.01 \cdot in) = -0.435 \cdot \frac{lbf}{in} \qquad Q(a) = -130.5 \cdot \frac{lbf}{in}$$

Maximum shear (magnitude):

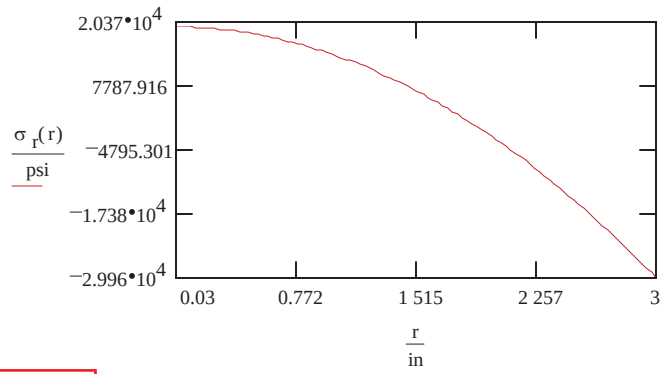
$$V_{(r) \cdot \frac{100}{in}} := Q(r) \qquad A := \max(V) \qquad B := \min(V)$$

$$Q_{max} := (A > -B) \cdot A + (A \le -B) \cdot B \qquad Q_{max} = -130.5 \cdot \frac{lbf}{in}$$

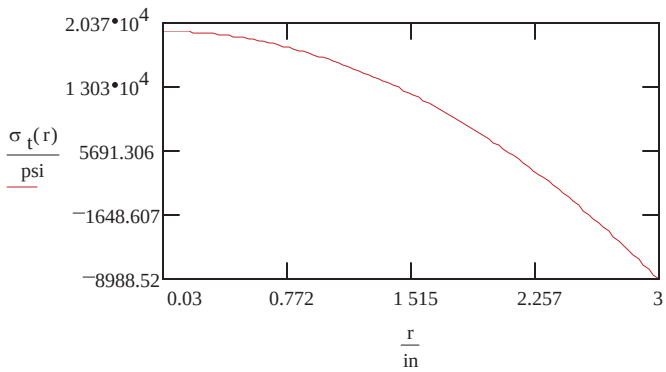
Bending stresses; radial and tangential:

$$\sigma_r(r) := \frac{6 \cdot M_r(r)}{t^2} \qquad \sigma_t(r) := \frac{6 \cdot M_t(r)}{t^2}$$

Radial Stress



Tangential Stress



Section Note(s):

-

Note 7: Bending will occur in each localized area or spot that has a small void or sectional area where the concrete / gunite liner is not in contact with the tank's metal surface. This allows for this area to be subjected to the full hydraulic head and internal hoop stress at that location. Therefore allowing a bending moment and deflection to occur.

-

Tangential stresses will reflect the relative or associative hoop stress at that localized spot location. Radial stresses will reflect the relative or associative bending moment stress at that localized spot location.

-

The deflection will be the greatest at the center of the localized area for the tank's plate fiber and membrane stresses.

Radial and tangential stress at center and outer radius:

Radial Stress

$\sigma_r(0.01 \cdot in) = 1.947 \cdot 10^4 \cdot psi$ $\sigma_r(a) = -2.996 \cdot 10^4 \cdot psi$

Tangential Stress

$\sigma_t(0.01 \cdot in) = 1.947 \cdot 10^4 \cdot psi$ $\sigma_t(a) = -8988.52 \cdot psi$

Maximum radial and tangential stresses:

$\sigma r_{r \cdot \frac{100}{in}} := \sigma_r(r)$ $Ar := \max(\sigma r)$ $Br := \min(\sigma r)$

$\sigma t_{r \cdot \frac{100}{in}} := \sigma_t(r)$ $At := \max(\sigma t)$ $Bt := \min(\sigma t)$

$\sigma r_{max} := (Ar > -Br) \cdot Ar + (Ar \le -Br) \cdot Br$ $\sigma r_{max} = -2.996 \cdot 10^4 \cdot psi$

$\sigma t_{max} := (At > -Bt) \cdot At + (At \le -Bt) \cdot Bt$ $\sigma t_{max} = 1.947 \cdot 10^4 \cdot psi$

Review the maximum values for deflection, slope, moment, stress and shear:

$y_{max} = -0.015 \cdot in$

$\theta_{max} = 0.429 \cdot deg$

$Mr_{max} = -97.875 \cdot \frac{lbf\ in}{in}$

$Mt_{max} = 63.609 \cdot \frac{lbf\ in}{in}$

$\boxed{\sigma r_{max} = -2.996 \cdot 10^4 \cdot psi}$

$\boxed{\sigma t_{max} = 1.947 \cdot 10^4 \cdot psi}$

$Q_{max} = -130.5 \cdot \frac{lbf}{in}$

Total deflection of plate (bending induced plus shear induced):

$y_{ro.total} := y(0 \cdot in) + y_{sro}$

$\boxed{y_{ro.total} = -0.015 \cdot in}$

The remainder of the document displays the general plate functions and constants used in the equations above.

$$L_{11} \equiv \frac{1}{64} \cdot \left[1 + 4 \cdot \left(\frac{r_o}{a}\right)^2 - 5 \cdot \left(\frac{r_o}{a}\right)^4 - 4 \cdot \left(\frac{r_o}{a}\right)^2 \cdot \left[2 + \left(\frac{r_o}{a}\right)^2 \right] \cdot \ln\left(\frac{a}{r_o}\right) \right]$$

$$L_{14} \equiv \frac{1}{16} \cdot \left[1 - \left(\frac{r_o}{a}\right)^4 - 4 \cdot \left(\frac{r_o}{a}\right)^2 \cdot \ln\left(\frac{a}{r_o}\right) \right]$$

$$G_{11}(r) \equiv \frac{1}{64} \cdot \left[\begin{array}{l} 1 + 4 \cdot \left(\frac{r_o}{r}\right)^2 - 5 \cdot \left(\frac{r_o}{r}\right)^4 \ldots \\ + - \left[4 \cdot \left(\frac{r_o}{r}\right)^2 \cdot \left[2 + \left(\frac{r_o}{r}\right)^2 \right] \cdot \ln\left(\frac{r}{r_o}\right) \right] \end{array} \right] \cdot \left(r > r_o\right)$$

$$G_{14}(r) \equiv \frac{1}{16} \cdot \left[1 - \left(\frac{r_o}{r}\right)^4 - 4 \cdot \left(\frac{r_o}{r}\right)^2 \cdot \ln\left(\frac{r}{r_o}\right) \right] \cdot \left(r > r_o\right)$$

$$G_{17}(r) \equiv \frac{1}{4} \cdot \left[1 - \left(\frac{1-\nu}{4}\right) \cdot \left[1 - \left(\frac{r_o}{r}\right)^4 \right] - \left(\frac{r_o}{r}\right)^2 \cdot \left[1 + (1+\nu) \cdot \ln\left(\frac{r}{r_o}\right) \right] \right] \cdot \left(r > r_o\right)$$

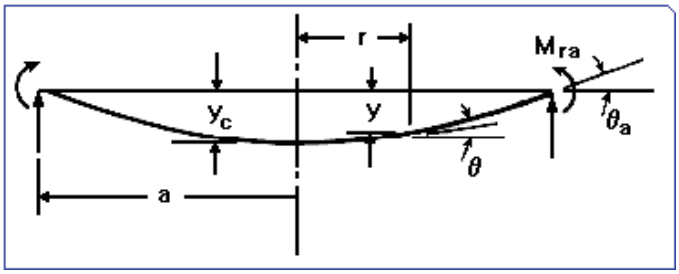
$$LT_y(r) \equiv \frac{-q \cdot r^4}{D} \cdot G_{11}(r) \qquad LT_M(r) \equiv -q \cdot r^2 \cdot G_{17}(r)$$

$$LT_\theta(r) \equiv \frac{-q \cdot r^3}{D} \cdot G_{14}(r) \qquad LT_Q(r) \equiv -\frac{q}{2 \cdot r} \cdot \left(r^2 - r_o^2\right) \cdot \left(r \geq r_o\right)$$

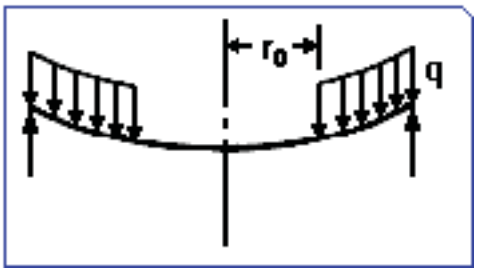
End of Section

Case 10b Solid circular plate fixed; uniformly distributed pressure from r_o to a

Solid circular plate



Uniformly distributed pressure from r_o to a



Notation file Provides a description of Table 24 and the notation used.

Willbros Government Services, LLC.
Redhill Project - Tank 5
100ft Dia. x 250ft Tall Tank,
Built 1943
Carbon steel construction
Engineering / Stress Analysis
-
This stress analysis was used to evaluate the applicable components for applied loadings and resulting stresses. These calculations were used to base the Tmin calculations for the components and determine suitability for service in accordance with API 653.

Enter dimensions, properties and loading:

Plate dimensions:

thickness: $t \equiv 0.4 \cdot in$

radius: $a \equiv 6 \cdot in$

Applied uniform pressure: $q \equiv 108 \cdot psi$

Modulus of elasticity: $E \equiv 30 \cdot 10^6 \cdot \frac{lbf}{in^2}$

Poisson's ratio: $\nu \equiv 0.3$

Radial location of applied load: $r_o \equiv .00001 \cdot in$

Constants:

Shear modulus: $G \equiv \frac{E}{2 \cdot (1 + \nu)}$

D is a plate constant used in determining boundary values; it is also used in the general equations for deflection, slope, moment and shear. K_{sro} is the tangential shear constant used in determining the deflection due to shear.

$$D \equiv \frac{E \cdot t^3}{12 \cdot \left(1 - \nu^2\right)} \qquad D = 1.758 \cdot 10^5 \cdot \text{lbf in}$$

$$K_{sro} \equiv -0.30 \cdot \left[1 - \left(\frac{r_o}{a}\right)^2 \cdot \left(1 + 2 \cdot \ln\left(\frac{a}{r_o}\right)\right)\right] \qquad K_{sro} = -0.3$$

Boundary values:

The L_n functions used in the equations below are defined at the end of this document.

M_r is radial moment, Q is shear, y is deflection and θ is slope.

Due to bending:

At the edge of the plate (a):

$$M_{ra} := \frac{-q}{8 \cdot a^2} \cdot \left(a^2 - r_o^2\right)^2 \qquad M_{ra} = -486 \cdot \frac{lbf\ in}{in}$$

$$y_a := 0 \cdot in \qquad y_a = 0 \cdot in$$

$$\theta_a := 0 \cdot deg \qquad \theta_a = 0 \cdot deg$$

At the center of the plate (c):

$$M_c := q \cdot a^2 \cdot (1 + \nu) \cdot L_{14} \qquad M_c = 315.9 \cdot \frac{lbf\ in}{in}$$

$$y_c := \frac{-q \cdot a^4}{2 \cdot D} \cdot \left(L_{14} - 2 \cdot L_{11}\right) \qquad y_c = -0.012 \cdot in$$

Due to tangential shear stresses:

$$y_{sro} := \frac{K_{sro} \cdot q \cdot a^2}{t \cdot G} \qquad y_{sro} = -0.0003 \cdot in$$

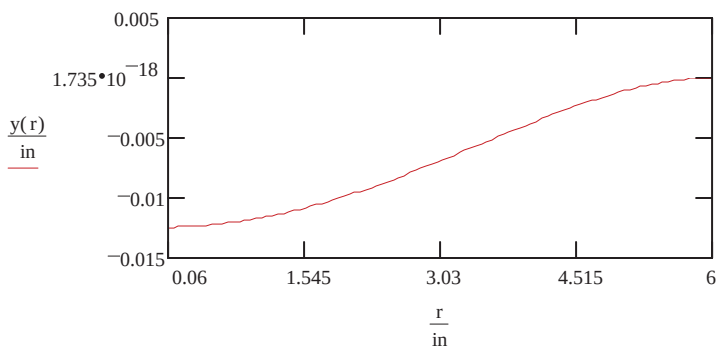
General formulas and graphs for deflection, slope, moment, shear and stress as a function of r:

Define r, the range of the radius:

$$r \equiv \frac{a}{100}, \frac{a}{50} .. a$$

Deflection:

$$y(r) := y_c + \frac{M_c \cdot r^2}{2 \cdot D \cdot (1+\nu)} + LT_y(r)$$



Deflections at the center and outer radius:

$y(0 \cdot in) = -0.012 \cdot in$ $\qquad$ $y(a) = 0 \cdot in$

Maximum deflection (magnitude):

$Y_{(r) \cdot \frac{100}{in}} := y(r)$ $\qquad$ $A := \max(Y)$ $\qquad$ $B := \min(Y)$

$y_{max} := (A > -B) \cdot A + (A \le -B) \cdot B$ $\qquad$ $y_{max} = -0.012 \cdot in$

Large deflection condition check:

Check to verify that the absolute value of the maximum deflection is less than one-half the plate thickness (an assumption stated in the Notation file which must hold true):

$$check := if\left(\left|y_{max}\right| > \frac{t}{2}, 0, 1\right) \qquad check = 1$$

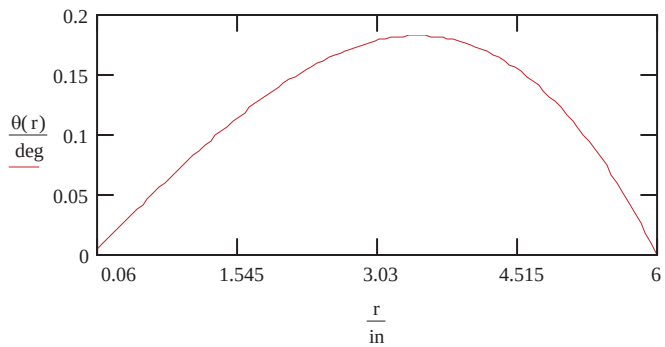
If $|y_{max}|$ is greater than t/2 (i.e., check = 0), the equations in this table are subject to large errors. For large deflections, use the equations provided in Table 24a to obtain stress and deflection. Read the Notation file for more specific information. Other values are not available.

Table 24a

Notation file

Slope:

$$\theta(r) := \frac{M_c \cdot r}{D \cdot (1+\nu)} + LT_\theta(r)$$



Slope at center and outer radius:

$\theta(0 \cdot in) = 0 \cdot deg$ $\qquad$ $\theta(a) = 0 \cdot deg$

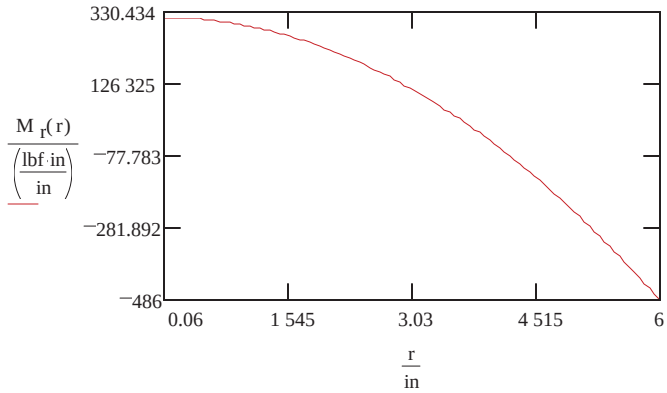
Maximum slope (magnitude):

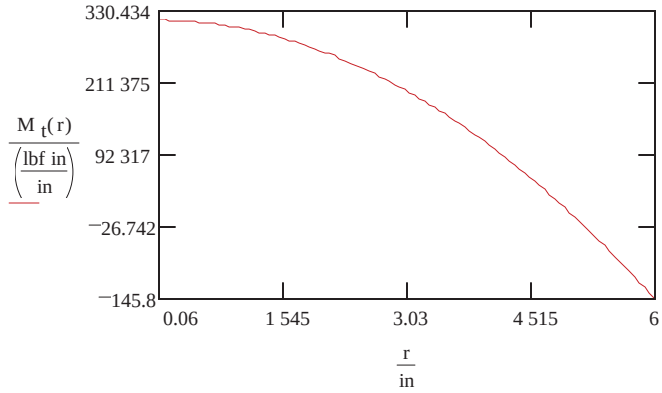
$S_{(r) \cdot \frac{100}{in}} := \theta(r)$ $\qquad$ $A := \max(S)$ $\qquad$ $B := \min(S)$

$\theta_{max} := (A > -B) \cdot A + (A \le -B) \cdot B$ $\qquad$ $\theta_{max} = 0.183 \cdot deg$

Moment; radial and tangential:

$$M_r(r) := M_c + LT_M(r) \qquad M_t(r) := \frac{\theta(r)\cdot D\cdot\left(1-\nu^2\right)}{r} + \nu\cdot M_r(r)$$





Radial and tangential moment at center and outer radius:

$M_r(0 \cdot in) = 315.9 \cdot \frac{lbf \cdot in}{in}$ $\qquad$ $M_r(a) = -486 \cdot \frac{lbf\ in}{in}$

$M_t(0.01 \cdot in) = 315.899 \cdot \frac{lbf\ in}{in}$ $\qquad$ $M_t(a) = -145.8 \cdot \frac{lbf \cdot in}{in}$

Maximum radial and tangential moment (magnitude):

$Mr_{(r)\frac{100}{in}} := M_r(r)$ $\qquad$ $Ar := \max(Mr)$ $\qquad$ $B := \min(Mr)$

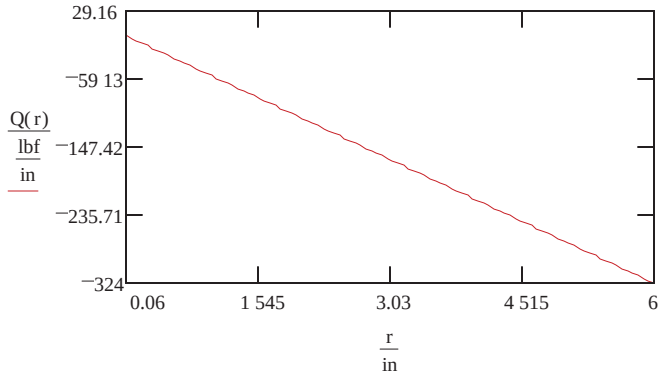
$Mt_{(r)\cdot\frac{100}{in}} := M_t(r)$ $\qquad$ $At := \max(Mt)$ $\qquad$ $Bt := \min(Mt)$

$Mr_{max} := (Ar > -B) \cdot Ar + (Ar \le -B) \cdot B$ $\qquad$ $Mr_{max} = -486 \cdot \frac{lbf\ in}{in}$

$Mt_{max} := (At > -Bt) \cdot At + (At \le -Bt) \cdot Bt$ $\qquad$ $Mt_{max} = 315.854 \cdot \frac{lbf\ in}{in}$

Shear:

$$Q(r) := LT_Q(r)$$



Shear at center and outer radius:

$$Q(0.01 \cdot in) = -0.54 \cdot \frac{lbf}{in} \qquad Q(a) = -324 \cdot \frac{lbf}{in}$$

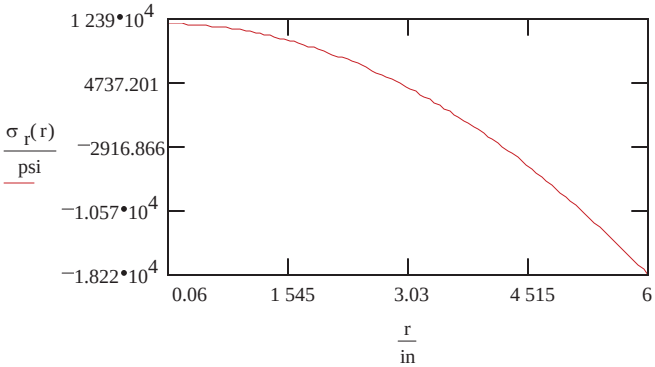
Maximum shear (magnitude):

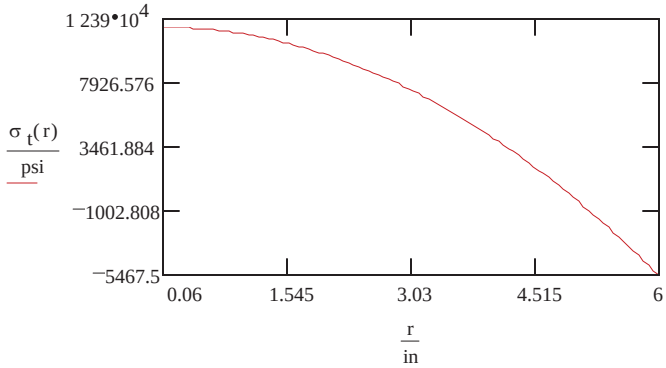
$$V_{(r) \cdot \frac{100}{in}} := Q(r) \qquad A := \max(V) \qquad B := \min(V)$$

$$Q_{max} := (A > -B) \cdot A + (A \le -B) \cdot B \qquad Q_{max} = -324 \cdot \frac{lbf}{in}$$

Bending stresses; radial and tangential:

$$\sigma_r(r) := \frac{6 \cdot M_r(r)}{t^2} \qquad \sigma_t(r) := \frac{6 \cdot M_t(r)}{t^2}$$





Radial and tangential stress at center and outer radius:

$\sigma_r(0.01 \cdot in) = 1.185 \cdot 10^4 \cdot psi$ $\qquad$ $\sigma_r(a) = -1.822 \cdot 10^4 \cdot psi$

$\sigma_t(0.01 \cdot in) = 1.185 \cdot 10^4 \cdot psi$ $\qquad$ $\sigma_t(a) = -5467.5 \cdot psi$

Maximum radial and tangential stresses:

$\sigma r_{r \cdot \frac{100}{in}} := \sigma_r(r)$ $\qquad$ $Ar := \max(\sigma r)$ $\qquad$ $Br := \min(\sigma r)$

$\sigma t_{r \cdot \frac{100}{in}} := \sigma_t(r)$ $\qquad$ $At := \max(\sigma t)$ $\qquad$ $Bt := \min(\sigma t)$

$\sigma r_{max} := (Ar > -Br) \cdot Ar + (Ar \le -Br) \cdot Br$ $\qquad$ $\sigma r_{max} = -1.822 \cdot 10^4 \cdot psi$

$\sigma t_{max} := (At > -Bt) \cdot At + (At \le -Bt) \cdot Bt$ $\qquad$ $\sigma t_{max} = 1.184 \cdot 10^4 \cdot psi$

Review the maximum values for deflection, slope, moment, stress and shear:

$y_{max} = -0.012 \cdot in$ $\qquad$ $\theta_{max} = 0.183 \cdot deg$

$Mr_{max} = -486 \cdot \frac{lbf\ in}{in}$ $\qquad$ $Mt_{max} = 315.854 \cdot \frac{lbf\ in}{in}$

$\sigma r_{max} = -1.822 \cdot 10^4 \cdot psi$ $\qquad$ $\sigma t_{max} = 1.184 \cdot 10^4 \cdot psi$

$Q_{max} = -324 \cdot \frac{lbf}{in}$

Total deflection of plate (bending induced plus shear induced):

$y_{ro.total} := y(0 \cdot in) + y_{sro}$ $\qquad$ $y_{ro.total} = -0.013 \cdot in$

The remainder of the document displays the general plate functions and constants used in the equations above.

$$L_{11} \equiv \frac{1}{64} \cdot \left[1 + 4 \cdot \left(\frac{r_o}{a}\right)^2 - 5 \cdot \left(\frac{r_o}{a}\right)^4 - 4 \cdot \left(\frac{r_o}{a}\right)^2 \cdot \left[2 + \left(\frac{r_o}{a}\right)^2 \right] \cdot \ln\left(\frac{a}{r_o}\right) \right]$$

$$L_{14} \equiv \frac{1}{16} \cdot \left[1 - \left(\frac{r_o}{a}\right)^4 - 4 \cdot \left(\frac{r_o}{a}\right)^2 \cdot \ln\left(\frac{a}{r_o}\right) \right]$$

$$G_{11}(r) \equiv \frac{1}{64} \cdot \left[\begin{array}{l} 1 + 4 \cdot \left(\frac{r_o}{r}\right)^2 - 5 \cdot \left(\frac{r_o}{r}\right)^4 \ldots \\ + - \left[4 \cdot \left(\frac{r_o}{r}\right)^2 \cdot \left[2 + \left(\frac{r_o}{r}\right)^2 \right] \cdot \ln\left(\frac{r}{r_o}\right) \right] \end{array} \right] \cdot \left(r > r_o\right)$$

$$G_{14}(r) \equiv \frac{1}{16} \cdot \left[1 - \left(\frac{r_o}{r}\right)^4 - 4 \cdot \left(\frac{r_o}{r}\right)^2 \cdot \ln\left(\frac{r}{r_o}\right) \right] \cdot \left(r > r_o\right)$$

$$G_{17}(r) \equiv \frac{1}{4} \cdot \left[1 - \left(\frac{1-\nu}{4}\right) \cdot \left[1 - \left(\frac{r_o}{r}\right)^4 \right] - \left(\frac{r_o}{r}\right)^2 \cdot \left[1 + (1+\nu) \cdot \ln\left(\frac{r}{r_o}\right) \right] \right] \cdot \left(r > r_o\right)$$

$$LT_y(r) \equiv \frac{-q \cdot r^4}{D} \cdot G_{11}(r) \qquad LT_M(r) \equiv -q \cdot r^2 \cdot G_{17}(r)$$

$$LT_\theta(r) \equiv \frac{-q \cdot r^3}{D} \cdot G_{14}(r) \qquad LT_Q(r) \equiv -\frac{q}{2 \cdot r} \cdot \left(r^2 - r_o^2\right) \cdot \left(r \geq r_o\right)$$

End of Section

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

A WILLBROS COMPANY

APPENDIX E

ENGINEERING / CALCULATIONS
Remaining Safe Operating Life
Section E-1

Rev	Date	Description	Reviewed	Approved
P	11/18/10	Preliminary - For Info	RC	TDA
A	11/22/10	Draft Data – For Info	RC	TDA
B	4/2/11	For Review and Approval	JS	TDA
0				
1				
2				
3				

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Upper Dome	A	1	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Upper Dome	A	2	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	3	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Upper Dome	A	4	0.250	0.080	0.140	-0.060	68.26	0.002	-24.09	
Upper Dome	A	5	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Upper Dome	A	6	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	7	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	8	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	9	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	10	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Upper Dome	A	11	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	12	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	13	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	14	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	15	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	16	0.250	0.095	0.140	-0.045	68.26	0.002	-19.82	
Upper Dome	A	17	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	18	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	19	0.250	0.155	0.140	0.015	68.26	0.001	10.78	
Upper Dome	A	20	0.250	0.110	0.140	-0.030	68.26	0.002	-14.63	
Upper Dome	A	21	0.250	0.157	0.140	0.017	68.26	0.001	12.48	
Upper Dome	A	22	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Upper Dome	A	23	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Upper Dome	A	24	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	25	0.250	0.100	0.140	-0.040	68.26	0.002	-18.20	
Upper Dome	A	26	0.250	0.195	0.140	0.055	68.26	0.001	68.26	
Upper Dome	A	27	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Upper Dome	A	28	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	29	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	30	0.250	0.165	0.140	0.025	68.26	0.001	20.08	
Upper Dome	A	31	0.250	0.150	0.140	0.010	68.26	0.001	6.83	
Upper Dome	A	32	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	33	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	34	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Upper Dome	A	35	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Upper Dome	A	36	0.250	0.200	0.140	0.060	68.26	0.001	81.91	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Upper Dome	A	37	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Upper Dome	A	38	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	39	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	40	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Upper Dome	A	41	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	42	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	43	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Upper Dome	A	44	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	45	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	46	0.250	0.135	0.140	-0.005	68.26	0.002	-2.97	
Upper Dome	A	47	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Upper Dome	A	48	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	49	0.250	0.110	0.140	-0.030	68.26	0.002	-14.63	
Upper Dome	A	50	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	51	0.250	0.145	0.140	0.005	68.26	0.002	3.25	
Upper Dome	A	52	0.250	0.095	0.140	-0.045	68.26	0.002	-19.82	
Upper Dome	A	53	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	54	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	55	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	56	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	57	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	58	0.250	0.060	0.140	-0.080	68.26	0.003	-28.74	
Upper Dome	A	59	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Upper Dome	A	60	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	61	0.250	0.140	0.140	0.000	68.26	0.002	0.00	
Upper Dome	A	62	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	63	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	64	0.250	0.131	0.140	-0.009	68.26	0.002	-5.16	
Upper Dome	A	65	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	66	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	67	0.250	0.174	0.140	0.034	68.26	0.001	30.54	
Upper Dome	A	68	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Upper Dome	A	69	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	A	70	0.250	0.125	0.140	-0.015	68.26	0.002	-8.19	
Upper Dome	A	71	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Upper Dome	A	72	0.250	0.160	0.140	0.020	68.26	0.001	15.17	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Upper Dome	B	1	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Upper Dome	B	2	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	3	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	4	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	5	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	6	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	7	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	8	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	9	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Upper Dome	B	10	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	11	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	12	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	13	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	14	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	15	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	16	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	17	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	18	0.250	0.175	0.140	0.035	68.26	0.001	31.85	
Upper Dome	B	19	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	20	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	21	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Upper Dome	B	22	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	23	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	24	0.250	0.150	0.140	0.010	68.26	0.001	6.83	
Upper Dome	B	25	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	26	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	27	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Upper Dome	B	28	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	29	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	30	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Upper Dome	B	31	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	32	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	33	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	34	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	35	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	36	0.250	0.205	0.140	0.065	68.26	0.001	98.60	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Upper Dome	B	37	0.250	0.176	0.140	0.036	68.26	0.001	33.21	
Upper Dome	B	38	0.250	0.100	0.140	-0.040	68.26	0.002	-18.20	
Upper Dome	B	39	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	40	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	41	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Upper Dome	B	42	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	43	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	44	0.250	0.155	0.140	0.015	68.26	0.001	10.78	
Upper Dome	B	45	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	46	0.250	0.165	0.140	0.025	68.26	0.001	20.08	
Upper Dome	B	47	0.250	0.175	0.140	0.035	68.26	0.001	31.85	
Upper Dome	B	48	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	49	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	50	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	51	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	52	0.250	0.165	0.140	0.025	68.26	0.001	20.08	
Upper Dome	B	53	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	54	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	55	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Upper Dome	B	56	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Upper Dome	B	57	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Upper Dome	B	58	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	59	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Upper Dome	B	60	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	61	0.250	0.175	0.140	0.035	68.26	0.001	31.85	
Upper Dome	B	62	0.250	0.185	0.140	0.045	68.26	0.001	47.26	
Upper Dome	B	63	0.250	0.185	0.140	0.045	68.26	0.001	47.26	
Upper Dome	B	64	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Upper Dome	B	65	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Upper Dome	B	66	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Upper Dome	B	67	0.250	0.165	0.140	0.025	68.26	0.001	20.08	
Upper Dome	B	68	0.250	0.175	0.140	0.035	68.26	0.001	31.85	
Upper Dome	B	69	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	B	70	0.250	0.155	0.140	0.015	68.26	0.001	10.78	
Upper Dome	B	71	0.250	0.100	0.140	-0.040	68.26	0.002	-18.20	
Upper Dome	B	72	0.250	0.230	0.140	0.090	68.26	0.000	307.17	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Upper Dome	C	1	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Upper Dome	C	2	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Upper Dome	C	3	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	4	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	5	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	6	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	7	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	8	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Upper Dome	C	9	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	10	0.250	0.120	0.140	-0.020	68.26	0.002	-10.50	
Upper Dome	C	11	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Upper Dome	C	12	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	13	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	14	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	15	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	16	0.250	0.135	0.140	-0.005	68.26	0.002	-2.97	
Upper Dome	C	17	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	18	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	19	0.250	0.145	0.140	0.005	68.26	0.002	3.25	
Upper Dome	C	20	0.250	0.145	0.140	0.005	68.26	0.002	3.25	
Upper Dome	C	21	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Upper Dome	C	22	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Upper Dome	C	23	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	24	0.250	0.150	0.140	0.010	68.26	0.001	6.83	
Upper Dome	C	25	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Upper Dome	C	26	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Upper Dome	C	27	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	28	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Upper Dome	C	29	0.250	0.140	0.140	0.000	68.26	0.002	0.00	
Upper Dome	C	30	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	31	0.250	0.140	0.140	0.000	68.26	0.002	0.00	
Upper Dome	C	32	0.250	0.075	0.140	-0.065	68.26	0.003	-25.35	
Upper Dome	C	33	0.250	0.130	0.140	-0.010	68.26	0.002	-5.69	
Upper Dome	C	34	0.250	0.145	0.140	0.005	68.26	0.002	3.25	
Upper Dome	C	35	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Upper Dome	C	36	0.250	0.230	0.140	0.090	68.26	0.000	307.17	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Upper Dome	C	37	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	38	0.250	0.175	0.140	0.035	68.26	0.001	31.85	
Upper Dome	C	39	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	40	0.250	0.175	0.140	0.035	68.26	0.001	31.85	
Upper Dome	C	41	0.250	0.175	0.140	0.035	68.26	0.001	31.85	
Upper Dome	C	42	0.250	0.165	0.140	0.025	68.26	0.001	20.08	
Upper Dome	C	43	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	44	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	45	0.250	0.140	0.140	0.000	68.26	0.002	0.00	
Upper Dome	C	46	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	47	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	C	48	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Upper Dome	D	1	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Upper Dome	D	2	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Upper Dome	D	3	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Upper Dome	D	4	0.250	0.175	0.140	0.035	68.26	0.001	31.85	
Upper Dome	D	5	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Upper Dome	D	6	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	D	7	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Upper Dome	D	8	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	D	9	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Upper Dome	D	10	0.250	0.140	0.140	0.000	68.26	0.002	0.00	
Upper Dome	D	11	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Upper Dome	D	12	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	D	13	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Upper Dome	D	14	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Upper Dome	D	15	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	D	16	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Upper Dome	D	17	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Upper Dome	D	18	0.250	0.150	0.140	0.010	68.26	0.001	6.83	
Upper Dome	D	19	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Upper Dome	D	20	0.250	0.135	0.140	-0.005	68.26	0.002	-2.97	
Upper Dome	D	21	0.250	0.155	0.140	0.015	68.26	0.001	10.78	
Upper Dome	D	22	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Upper Dome	D	23	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	D	24	0.250	0.230	0.140	0.090	68.26	0.000	307.17	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Upper Dome	D	25	0.250	0.150	0.140	0.010	68.26	0.001	6.83	
Upper Dome	D	26	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Upper Dome	D	27	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Upper Dome	D	28	0.250	0.145	0.140	0.005	68.26	0.002	3.25	
Upper Dome	D	29	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Upper Dome	D	30	0.250	0.203	0.140	0.063	68.26	0.001	91.50	
Upper Dome	D	31	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Upper Dome	D	32	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Upper Dome	D	33	0.250	0.185	0.140	0.045	68.26	0.001	47.26	
Upper Dome	D	34	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Upper Dome	D	35	0.250	0.155	0.140	0.015	68.26	0.001	10.78	
Upper Dome	D	36	0.250	0.145	0.140	0.005	68.26	0.002	3.25	
Upper Dome	D	37	0.250	0.155	0.140	0.015	68.26	0.001	10.78	
Upper Dome	D	38	0.250	0.175	0.140	0.035	68.26	0.001	31.85	
Upper Dome	D	39	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	D	40	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	D	41	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	D	42	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	D	43	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	D	44	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	D	45	0.250	0.185	0.140	0.045	68.26	0.001	47.26	
Upper Dome	D	46	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	D	47	0.250	0.125	0.140	-0.015	68.26	0.002	-8.19	
Upper Dome	D	48	0.250	0.150	0.140	0.010	68.26	0.001	6.83	
Upper Dome	E	1	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	E	2	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	E	3	0.250	0.140	0.140	0.000	68.26	0.002	0.00	
Upper Dome	E	4	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	E	5	0.250	0.000	0.140	-0.140	68.26	0.004	-38.23	
Upper Dome	E	6	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	E	7	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	E	8	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Upper Dome	E	9	0.250	0.062	0.140	-0.078	68.26	0.003	-28.32	
Upper Dome	E	10	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Upper Dome	E	11	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Upper Dome	E	12	0.250	0.230	0.140	0.090	68.26	0.000	307.17	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Upper Dome	E	13	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Upper Dome	E	14	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	E	15	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	E	16	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	E	17	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Upper Dome	E	18	0.250	0.125	0.140	-0.015	68.26	0.002	-8.19	
Upper Dome	E	19	0.250	0.030	0.140	-0.110	68.26	0.003	-34.13	
Upper Dome	E	20	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	E	21	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	E	22	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	E	23	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	E	24	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	F	1	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Upper Dome	Top MW	1	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Shell Extension	E1	1	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E1	2	0.250	0.198	0.140	0.058	68.26	0.001	76.14	
Shell Extension	E1	3	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E1	4	0.250	0.191	0.140	0.051	68.26	0.001	59.00	
Shell Extension	E1	5	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E1	6	0.250	0.192	0.140	0.052	68.26	0.001	61.20	
Shell Extension	E1	7	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E1	8	0.250	0.210	0.140	0.070	68.26	0.001	119.46	
Shell Extension	E1	9	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E1	10	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E1	11	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E1	12	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E1	13	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E1	14	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E1	15	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E1	16	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E2	1	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E2	2	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Shell Extension	E2	3	0.250	0.153	0.140	0.013	68.26	0.001	9.15	
Shell Extension	E2	4	0.250	0.210	0.140	0.070	68.26	0.001	119.46	
Shell Extension	E2	5	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E2	6	0.250	0.230	0.140	0.090	68.26	0.000	307.17	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Shell Extension	E2	7	0.250	0.144	0.140	0.004	68.26	0.002	2.58	
Shell Extension	E2	8	0.250	0.145	0.140	0.005	68.26	0.002	3.25	
Shell Extension	E2	9	0.250	0.150	0.140	0.010	68.26	0.001	6.83	
Shell Extension	E2	10	0.250	0.090	0.140	-0.050	68.26	0.002	-21.33	
Shell Extension	E2	11	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Shell Extension	E2	12	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell Extension	E2	13	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell Extension	E2	14	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell Extension	E2	15	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell Extension	E2	16	0.250	0.171	0.140	0.031	68.26	0.001	26.79	
Shell Extension	E3	1	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E3	2	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E3	3	0.250	0.120	0.140	-0.020	68.26	0.002	-10.50	
Shell Extension	E3	4	0.250	0.210	0.140	0.070	68.26	0.001	119.46	
Shell Extension	E3	5	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell Extension	E3	6	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E3	7	0.250	0.175	0.140	0.035	68.26	0.001	31.85	
Shell Extension	E3	8	0.250	0.210	0.140	0.070	68.26	0.001	119.46	
Shell Extension	E3	9	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E3	10	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E3	11	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E3	12	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E3	13	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E3	14	0.250	0.185	0.140	0.045	68.26	0.001	47.26	
Shell Extension	E3	15	0.250	0.141	0.140	0.001	68.26	0.002	0.63	
Shell Extension	E3	16	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E4	1	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E4	2	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Shell Extension	E4	3	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E4	4	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell Extension	E4	5	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E4	6	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E4	7	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell Extension	E4	8	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E4	9	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Shell Extension	E4	10	0.250	0.230	0.140	0.090	68.26	0.000	307.17	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Shell Extension	E4	11	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E4	12	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E4	13	0.250	0.000	0.140	-0.140	68.26	0.004	-38.23	
Shell Extension	E4	14	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell Extension	E4	15	0.250	0.177	0.140	0.037	68.26	0.001	34.60	
Shell Extension	E4	16	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Shell	1	1	0.250	0.140	0.140	0.000	68.26	0.002	0.00	
Shell	1	2	0.250	0.125	0.140	-0.015	68.26	0.002	-8.19	
Shell	1	3	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	1	4	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	1	5	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	1	6	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Shell	1	7	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	1	8	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Shell	1	9	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	1	10	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	1	11	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Shell	1	12	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Shell	1	13	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	1	14	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	1	15	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	1	16	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Shell	2	1	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Shell	2	2	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	2	3	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	2	4	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	2	5	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	2	6	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	2	7	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	2	8	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Shell	2	9	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	2	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	2	11	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Shell	2	12	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	2	13	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	2	14	0.250	0.171	0.140	0.031	68.26	0.001	26.79	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Shell	2	15	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	2	16	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Shell	3	1	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	3	2	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	3	3	0.250	0.195	0.140	0.055	68.26	0.001	68.26	
Shell	3	4	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	3	5	0.250	0.175	0.140	0.035	68.26	0.001	31.85	
Shell	3	6	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	3	7	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	3	8	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	3	9	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	3	10	0.250	0.185	0.140	0.045	68.26	0.001	47.26	
Shell	3	11	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	3	12	0.250	0.120	0.140	-0.020	68.26	0.002	-10.50	
Shell	3	13	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	3	14	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Shell	3	15	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	3	16	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	4	1	0.250	0.130	0.140	-0.010	68.26	0.002	-5.69	
Shell	4	2	0.250	0.225	0.140	0.085	68.26	0.000	232.08	
Shell	4	3	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	4	4	0.250	0.177	0.140	0.037	68.26	0.001	34.60	
Shell	4	5	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	4	6	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	4	7	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	4	8	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	4	9	0.250	0.140	0.140	0.000	68.26	0.002	0.00	
Shell	4	10	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	4	11	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	4	12	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	4	13	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	4	14	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	4	15	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	4	16	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	5	1	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	5	2	0.250	0.230	0.140	0.090	68.26	0.000	307.17	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Shell	5	3	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Shell	5	4	0.250	0.201	0.140	0.061	68.26	0.001	84.98	
Shell	5	5	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	5	6	0.250	0.203	0.140	0.063	68.26	0.001	91.50	
Shell	5	7	0.250	0.201	0.140	0.061	68.26	0.001	84.98	
Shell	5	8	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Shell	5	9	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Shell	5	10	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	5	11	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	5	12	0.250	0.175	0.140	0.035	68.26	0.001	31.85	
Shell	5	13	0.250	0.197	0.140	0.057	68.26	0.001	73.41	
Shell	5	14	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	5	15	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Shell	5	16	0.250	0.150	0.140	0.010	68.26	0.001	6.83	
Shell	6	1	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Shell	6	2	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	6	3	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	6	4	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	6	5	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	6	6	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	6	7	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	6	8	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Shell	6	9	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Shell	6	10	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	6	11	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	6	12	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	6	13	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	6	14	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	6	15	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	6	16	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	7	1	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	7	2	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	7	3	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	7	4	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	7	5	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	7	6	0.250	0.205	0.140	0.065	68.26	0.001	98.60	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Shell	7	7	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	7	8	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Shell	7	9	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	7	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	7	11	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	7	12	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	7	13	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	7	14	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	7	15	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Shell	7	16	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	8	1	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Shell	8	2	0.250	0.225	0.140	0.085	68.26	0.000	232.08	
Shell	8	3	0.250	0.125	0.140	-0.015	68.26	0.002	-8.19	
Shell	8	4	0.250	0.210	0.140	0.070	68.26	0.001	119.46	
Shell	8	5	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	8	6	0.250	0.186	0.140	0.046	68.26	0.001	49.06	
Shell	8	7	0.250	0.225	0.140	0.085	68.26	0.000	232.08	
Shell	8	8	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Shell	8	9	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	8	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	8	11	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	8	12	0.250	0.153	0.140	0.013	68.26	0.001	9.15	
Shell	8	13	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	8	14	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	8	15	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	8	16	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	9	1	0.250	0.195	0.140	0.055	68.26	0.001	68.26	
Shell	9	2	0.250	0.225	0.140	0.085	68.26	0.000	232.08	
Shell	9	3	0.250	0.225	0.140	0.085	68.26	0.000	232.08	
Shell	9	4	0.250	0.225	0.140	0.085	68.26	0.000	232.08	
Shell	9	5	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	9	6	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	9	7	0.250	0.210	0.140	0.070	68.26	0.001	119.46	
Shell	9	8	0.250	0.150	0.140	0.010	68.26	0.001	6.83	
Shell	9	9	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	9	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Shell	9	11	0.250	0.093	0.140	-0.047	68.26	0.002	-20.43	
Shell	9	12	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	9	13	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	9	14	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	9	15	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	9	16	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	10	1	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	10	2	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	10	3	0.250	0.140	0.140	0.000	68.26	0.002	0.00	
Shell	10	4	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	10	5	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	10	6	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	10	7	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	10	8	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Shell	10	9	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Shell	10	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	10	11	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	10	12	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	10	13	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	10	14	0.250	0.194	0.140	0.054	68.26	0.001	65.82	
Shell	10	15	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	10	16	0.250	0.175	0.140	0.035	68.26	0.001	31.85	
Shell	11	1	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	11	2	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	11	3	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	11	4	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	11	5	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	11	6	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Shell	11	7	0.250	0.210	0.140	0.070	68.26	0.001	119.46	
Shell	11	8	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Shell	11	9	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	11	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	11	11	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	11	12	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	11	13	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	11	14	0.250	0.186	0.140	0.046	68.26	0.001	49.06	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Shell	11	15	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	11	16	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	12	1	0.250	0.196	0.140	0.056	68.26	0.001	70.79	
Shell	12	2	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	12	3	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	12	4	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	12	5	0.250	0.197	0.140	0.057	68.26	0.001	73.41	
Shell	12	6	0.250	0.140	0.140	0.000	68.26	0.002	0.00	
Shell	12	7	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Shell	12	8	0.250	0.225	0.140	0.085	68.26	0.000	232.08	
Shell	12	9	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Shell	12	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	12	11	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	12	12	0.250	0.175	0.140	0.035	68.26	0.001	31.85	
Shell	12	13	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	12	14	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	12	15	0.250	0.197	0.140	0.057	68.26	0.001	73.41	
Shell	12	16	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	13	1	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	13	2	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Shell	13	3	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	13	4	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Shell	13	5	0.250	0.210	0.140	0.070	68.26	0.001	119.46	
Shell	13	6	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	13	7	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Shell	13	8	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Shell	13	9	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	13	10	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	13	11	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	13	12	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	13	13	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	13	14	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	13	15	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	13	16	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	14	1	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Shell	14	2	0.250	0.210	0.140	0.070	68.26	0.001	119.46	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Shell	14	3	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	14	4	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	14	5	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	14	6	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Shell	14	7	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	14	8	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	14	9	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	14	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	14	11	0.250	0.204	0.140	0.064	68.26	0.001	94.97	
Shell	14	12	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	14	13	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	14	14	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	14	15	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	14	16	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	15	1	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	15	2	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	15	3	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	15	4	0.250	0.157	0.140	0.017	68.26	0.001	12.48	
Shell	15	5	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	15	6	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Shell	15	7	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	15	8	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	15	9	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	15	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	15	11	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Shell	15	12	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	15	13	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	15	14	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	15	15	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	15	16	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	16	1	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	16	2	0.250	0.210	0.140	0.070	68.26	0.001	119.46	
Shell	16	3	0.250	0.210	0.140	0.070	68.26	0.001	119.46	
Shell	16	4	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	16	5	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	16	6	0.250	0.230	0.140	0.090	68.26	0.000	307.17	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Shell	16	7	0.250	0.160	0.140	0.020	68.26	0.001	15.17	
Shell	16	8	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	16	9	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	16	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	16	11	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	16	12	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	16	13	0.250	0.189	0.140	0.049	68.26	0.001	54.83	
Shell	16	14	0.250	0.185	0.140	0.045	68.26	0.001	47.26	
Shell	16	15	0.250	0.187	0.140	0.047	68.26	0.001	50.92	
Shell	16	16	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	17	1	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	17	2	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	17	3	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	17	4	0.250	0.210	0.140	0.070	68.26	0.001	119.46	
Shell	17	5	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	17	6	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Shell	17	7	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	17	8	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	17	9	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	17	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	17	11	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Shell	17	12	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	17	13	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	17	14	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	17	15	0.250	0.177	0.140	0.037	68.26	0.001	34.60	
Shell	17	16	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	18	1	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	18	2	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	18	3	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	18	4	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	18	5	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	18	6	0.250	0.155	0.140	0.015	68.26	0.001	10.78	
Shell	18	7	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	18	8	0.250	0.140	0.140	0.000	68.26	0.002	0.00	
Shell	18	9	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	18	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Shell	18	11	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	18	12	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	18	13	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	18	14	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	18	15	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Shell	18	16	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	19	1	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	19	2	0.250	0.149	0.140	0.009	68.26	0.001	6.08	
Shell	19	3	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	19	4	0.250	0.151	0.140	0.011	68.26	0.001	7.58	
Shell	19	5	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	19	6	0.250	0.154	0.140	0.014	68.26	0.001	9.95	
Shell	19	7	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	19	8	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Shell	19	9	0.250	0.155	0.140	0.015	68.26	0.001	10.78	
Shell	19	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	19	11	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	19	12	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	19	13	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	19	14	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	19	15	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	19	16	0.250	0.197	0.140	0.057	68.26	0.001	73.41	
Shell	20	1	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	20	2	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	20	3	0.250	0.210	0.140	0.070	68.26	0.001	119.46	
Shell	20	4	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	20	5	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	20	6	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	20	7	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	20	8	0.250	0.140	0.140	0.000	68.26	0.002	0.00	
Shell	20	9	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	20	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	20	11	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	20	12	0.250	0.110	0.140	-0.030	68.26	0.002	-14.63	
Shell	20	13	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	20	14	0.250	0.220	0.140	0.080	68.26	0.000	182.03	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Shell	20	15	0.250	0.198	0.140	0.058	68.26	0.001	76.14	
Shell	20	16	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	21	1	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Shell	21	2	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	21	3	0.250	0.210	0.140	0.070	68.26	0.001	119.46	
Shell	21	4	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	21	5	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	21	6	0.250	0.155	0.140	0.015	68.26	0.001	10.78	
Shell	21	7	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	21	8	0.250	0.140	0.140	0.000	68.26	0.002	0.00	
Shell	21	9	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	21	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	21	11	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	21	12	0.250	0.187	0.140	0.047	68.26	0.001	50.92	
Shell	21	13	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	21	14	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	21	15	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	21	16	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	22	1	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	22	2	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	22	3	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	22	4	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	22	5	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	22	6	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	22	7	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	22	8	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	22	9	0.250	0.170	0.140	0.030	68.26	0.001	25.60	
Shell	22	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	22	11	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	22	12	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	22	13	0.250	0.141	0.140	0.001	68.26	0.002	0.63	
Shell	22	14	0.250	0.137	0.140	-0.003	68.26	0.002	-1.81	
Shell	22	15	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	22	16	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	23	1	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	23	2	0.250	0.230	0.140	0.090	68.26	0.000	307.17	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Shell	23	3	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	23	4	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Shell	23	5	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Shell	23	6	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	23	7	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	23	8	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	23	9	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	23	10	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	23	11	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	23	12	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	23	13	0.250	0.188	0.140	0.048	68.26	0.001	52.85	
Shell	23	14	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	23	15	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	23	16	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	24	1	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	24	2	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	24	3	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	24	4	0.250	0.210	0.140	0.070	68.26	0.001	119.46	
Shell	24	5	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Shell	24	6	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	24	7	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Shell	24	8	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	24	9	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	24	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	24	11	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	24	12	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	24	13	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	24	14	0.250	0.139	0.140	-0.001	68.26	0.002	-0.61	
Shell	24	15	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	24	16	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	25	1	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	25	2	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	25	3	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	25	4	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	25	5	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	25	6	0.250	0.230	0.140	0.090	68.26	0.000	307.17	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Shell	25	7	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	25	8	0.250	0.150	0.140	0.010	68.26	0.001	6.83	
Shell	25	9	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	25	10	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	25	11	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	25	12	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	25	13	0.250	0.175	0.140	0.035	68.26	0.001	31.85	
Shell	25	14	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	25	15	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	25	16	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	26	1	0.250	0.200	0.140	0.060	68.26	0.001	81.91	
Shell	26	2	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	26	3	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	26	4	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	26	5	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	26	6	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	26	7	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	26	8	0.250	0.205	0.140	0.065	68.26	0.001	98.60	
Shell	26	9	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	26	10	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	26	11	0.250	0.181	0.140	0.041	68.26	0.001	40.56	
Shell	26	12	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	26	13	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	26	14	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	26	15	0.250	0.177	0.140	0.037	68.26	0.001	34.60	
Shell	26	16	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	27	1	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	27	2	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	27	3	0.250	0.135	0.140	-0.005	68.26	0.002	-2.97	
Shell	27	4	0.250	0.175	0.140	0.035	68.26	0.001	31.85	
Shell	27	5	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Shell	27	6	0.250	0.190	0.140	0.050	68.26	0.001	56.88	
Shell	27	7	0.250	0.215	0.140	0.075	68.26	0.001	146.27	
Shell	27	8	0.250	0.187	0.140	0.047	68.26	0.001	50.92	
Shell	27	9	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	27	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Shell	27	11	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	27	12	0.250	0.164	0.140	0.024	68.26	0.001	19.05	
Shell	27	13	0.250	0.172	0.140	0.032	68.26	0.001	28.00	
Shell	27	14	0.250	0.115	0.140	-0.025	68.26	0.002	-12.64	
Shell	27	15	0.250	0.137	0.140	-0.003	68.26	0.002	-1.81	
Shell	27	16	0.250	0.199	0.140	0.059	68.26	0.001	78.97	
Shell	28	1	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	28	2	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	28	3	0.250	0.180	0.140	0.040	68.26	0.001	39.01	
Shell	28	4	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	28	5	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	28	6	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	28	7	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	28	8	0.250	0.230	0.140	0.090	68.26	0.000	307.17	
Shell	28	9	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	28	10	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	28	11	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	28	12	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	28	13	0.250	0.083	0.140	-0.057	68.26	0.002	-23.30	
Shell	28	14	0.250	0.167	0.140	0.027	68.26	0.001	22.21	
Shell	28	15	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Shell	28	16	0.250	0.220	0.140	0.080	68.26	0.000	182.03	
Lower Dome	C4	1	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	2	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	3	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	4	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	5	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	6	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	7	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	8	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	9	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	10	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	11	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	12	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	13	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	14	0.250	0.220	0.190	0.030	68.26	0.000	68.26	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Lower Dome	C4	15	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	16	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	17	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	18	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	19	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	20	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	21	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	22	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	23	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	24	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	25	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	26	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C4	27	0.250	0.240	0.190	0.050	68.26	0.000	341.30	
Lower Dome	C4	28	0.250	0.240	0.190	0.050	68.26	0.000	341.30	
Lower Dome	C4	29	0.250	0.240	0.190	0.050	68.26	0.000	341.30	
Lower Dome	C4	30	0.250	0.240	0.190	0.050	68.26	0.000	341.30	
Lower Dome	C4	31	0.250	0.240	0.190	0.050	68.26	0.000	341.30	
Lower Dome	C4	32	0.250	0.240	0.190	0.050	68.26	0.000	341.30	
Lower Dome	C4	33	0.250	0.240	0.190	0.050	68.26	0.000	341.30	
Lower Dome	C4	34	0.250	0.240	0.190	0.050	68.26	0.000	341.30	
Lower Dome	C4	35	0.250	0.240	0.190	0.050	68.26	0.000	341.30	
Lower Dome	C4	36	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	37	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	38	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	39	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	40	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	41	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	42	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	43	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	44	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	45	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	46	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	47	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	48	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	49	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	50	0.250	0.230	0.190	0.040	68.26	0.000	136.52	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Lower Dome	C4	51	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	52	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	53	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	54	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	55	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	56	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	57	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	58	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	59	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	60	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	61	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	62	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	63	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	64	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	65	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C4	66	0.250	0.230	0.190	0.040	68.26	0.000	136.52	
Lower Dome	C3	1	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	2	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	3	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	4	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	5	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	6	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	7	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	8	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	9	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	10	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	11	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	12	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	13	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	14	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	15	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	16	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	17	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	18	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	19	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	20	0.250	0.220	0.190	0.030	68.26	0.000	68.26	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Lower Dome	C3	21	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	22	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	23	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	24	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	25	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	26	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	27	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	28	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	29	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	30	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	31	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	32	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	33	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	34	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	35	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	36	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	37	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	38	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	39	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	40	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	41	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	42	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	43	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	44	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	45	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	46	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	47	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	48	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	49	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	50	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	51	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	52	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	53	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	54	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	55	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	56	0.250	0.220	0.190	0.030	68.26	0.000	68.26	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Lower Dome	C3	57	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	58	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	59	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	60	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	61	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	62	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	63	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	64	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	65	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C3	66	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	1	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	2	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	3	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	4	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	5	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	6	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	7	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	8	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	9	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	10	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	11	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	12	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	13	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	14	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	15	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	16	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	17	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	18	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	19	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	20	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	21	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	22	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	23	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	24	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	25	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	26	0.250	0.220	0.190	0.030	68.26	0.000	68.26	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Lower Dome	C2	27	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	28	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	29	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	30	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	31	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	32	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	33	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	34	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	35	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	36	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	37	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	38	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	39	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	40	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	41	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	42	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	43	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	44	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	45	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	46	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	47	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	48	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	49	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	50	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	51	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	52	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	53	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	54	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	55	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	56	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	57	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	58	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	59	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	60	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	61	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	62	0.250	0.220	0.190	0.030	68.26	0.000	68.26	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Lower Dome	C2	63	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	64	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	65	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C2	66	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	1	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	2	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	3	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	4	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	5	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	6	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	7	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	8	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	9	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	10	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	11	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	12	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	13	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	14	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	15	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	16	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	17	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	18	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	19	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	20	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	21	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	22	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	23	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	24	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	25	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	26	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	27	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	28	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	29	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	30	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	31	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	32	0.250	0.220	0.190	0.030	68.26	0.000	68.26	

Tank Engineering / Integrity Analysis
Remaining Safe Operating Life (RSOL)

Project No: 54118 **Description:** Tank 5 Vertical Storage Tank, UST, Dome top & bottom 100 ft dai x 250 ft H **Location:** Redhill Complex; Pearl Harbor HI

COMPONENT			Original Thickness, in.	Remaining Thickness, in.	Thickness Minimum, in.	Remaining Corr Allow., in.	Years in Service	Corrosion Rate, mpy	RSOL Years	Comments / Remarks
Area	Row No.	Plate No.								
Lower Dome	C1	33	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	34	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	35	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	36	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	37	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	38	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	39	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	40	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	41	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	42	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	43	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Lower Dome	C1	44	0.250	0.220	0.190	0.030	68.26	0.000	68.26	
Floor	1	1	0.500	0.480	0.400	0.080	68.26	0.000	273.04	

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

A WILLBROS COMPANY

Technical Data & Submittal for Project:

Project Title: CLEAN, INSPECT, AND REPAIR STORAGE TANKS
Location: PEARL HARBOR NAVAL STATION, OAHU, HI
Task Order No.: N62583-09-D-0132/0003
WGS Project Number: 54118
Equipment: Tank 5

APPENDIX F
MISCELLANOUS DATA

Rev	Date	Description	Reviewed	Approved
P	11/18/10	Preliminary - For Info	RC	TDA
A	11/22/10	Draft Data – For Info	RC	TDA
B	4/2/11	For Review and Approval	JS	TDA
0				
1				
2				
3				

WILLBROS GOVERNMENT SERVICES (U.S.), LLC

A WILLBROS COMPANY

APPENDIX F

MISCELLANOUS DATA
Tank 5 Historical Records and Data
Section F-1

Rev	Date	Description	Reviewed	Approved
P	11/18/10	Preliminary - For Info	RC	TDA
A	11/22/10	Draft Data – For Info	RC	TDA
B	4/2/11	For Review and Approval	JS	TDA
0				
1				
2				
3				

RED HILL TANK
N0. 5 PRODUCT:
JP-5

DATE	REMARKS
10/20/52	Cleaned tank. Labor Cost: $1950. Material: $430
10/11/63	Calibrated gauge.
5/14/64	Cleaned tank.
3/21/65	Telltale #2 started to leak. Rate of leakage one gallon in 1 hour 15 minutes with 14'-10-1/2" ullage. NSFO leakage analyzed. Oil is clean; analysis identical with product in tank. Leak in telltale piping suspected. Tank worked on intermittently for six months; no leak found. Tank filled. Trace amount of leakage in telltale #2. Suspect leak partially rusted over. Estimated labor . cost: $1800.
4/6/70	Emptied and cleaned for conversion. Contract N62471-70 C0288, Red Hill Increment I for conversion to Navy Distillate.
2/10/71	Emptied and cleaned for conversion. Converted to Navy Distillate. Telemeter system installed.
12/29/71	Turned back by contractor to NSC and topped off with Navy Distillate.
2/10/72	Telltale leak found--about 2 quarts per day.
8/73	32" line blanked in tank.
8/8/74	Emptied tank.
8/19/74	Tank opened and washed down for conversion from Navy Distillate to JP-5. Blank installed on 32" line inside tank. Bottom welds i44 plates extending up for approximately 6') magnafluxed by Shipyard QAR. See report on file.

8/21/74 Inspected tank--okay.

10/74 Tank converted from Navy Distillate to JP-5.

12/23/75 Leak on 10' sample tap. Transfer JP-5 to Tank 55 and PC Tank 4. Completed 25 December 1975. Started to transfer to Red Hill at 0950, 30 December 1975. Finished 2030, 3 January 1976.

12/29/75 Facilities Branch installed 4-3/4" valves on sample lines.

1/76	A leak in a sample line required an unusual transfer of JP-5 to a cleaned Pearl City JP-4 Tank 4. Repairs were completed and product returned to Tank 5.
5/10/81	Tank was removed from service and turned over to the contractor for initial repairs and lining.
4/21/82	The Deputy Director and Distribution Facilities Specialist participated in a final inspection of tank. Many discrepancies were noted and tank was not accepted.
4/22/82	Reinspection of tank was held at which time the tank passed.
4/1/83	Tank is still being tested for leaks. If necessary, the contractor will return in August or September 1983 for a final rework.