

Joint Task Force-Red Hill

Bi-Monthly Quality Validation Working Group Meeting



06 July 2023



BACKGROUND/DESCRIPTION

ENSURING A FREE AND OPEN INDO-PACIFIC

- On January 27, 2023, the Hawai'i Department of Health (DOH) conditionally approves the Independent Third-Party Quality Validation Plan, with the following conditions:
 - ~~Para #1, Provide resumes of those working QV (31 Jan) OUTSTANDING~~
 - ~~Para #2, Provide QV Plan Addendum detailing testing requirements that will follow repairs (28 Feb)~~
 - ~~Para #3a, Provide DoH/EPA our first monthly QV report (23 Feb)~~
 - ~~Para #3b, Provide list of dates of major repair/inspection events that DoH/EPA can attend (23 Feb)~~
 - Para #4, Provide final report (last repair + 30 days)



Quality Validation Report

ENSURING A FREE AND OPEN INDO-PACIFIC

NO.	Validation Complete	Date	Location
34	<p>Contractor replaced (b) (3) (A) welded reinforcement pads and (b) (3) (A) of (b) (3) (A) F-24 piping across (b) (3) (A) locations and (b) (3) (A) low point drains. Shop coating (two part epoxy with polyurethane top coat) of piping was performed prior to delivery, with touch-up coating applied as necessary to weld zones and areas of mechanical damage. Stainless steel restraint bolts installed on selected pipe supports, with Teflon wear pads between new saddles and pipe supports.</p>	05 JUL 23	North Road
35	<p>Contractor replaced (b) (3) (A) welded reinforcement pads and (b) (3) (A) F-76 piping across (b) (3) (A) locations and (b) (3) (A) low point drains. Shop coating of piping was performed prior to delivery, with touch-up coating applied as necessary to weld zones and areas of mechanical damage. Stainless steel restraint bolts installed on selected pipe supports, with Teflon wear pads between new saddles and pipe supports.</p>	05 JUL 23	North Road



Rework - Quality Validation Report

ENSURING A FREE AND OPEN INDO-PACIFIC

NO.	Validation Complete	Date	Location



Relief - Quality Validation Report

ENSURING A FREE AND OPEN INDO-PACIFIC

NO.	Validation Complete	Date	Location

Seeking Repair Relief: #006, UGPH



Testing & Inspection Dates

ENSURING A FREE AND OPEN INDO-PACIFIC

NO.	Testing & Inspection Dates	Date	Location
1			
2			
3			
4			



Around the Horn

ENSURING A FREE AND OPEN INDO-PACIFIC

AGENCIES:

- NAVAL FACILITIES ENGINEERING SYS COMMAND-HAWAII (NAVFAC-HI)
- JOINT TASK FORCE-RED HILL (JTF-RH)
- ENVIRONMENTAL PROTECTION AGENCY (EPA)
- DEPARTMENT OF HEALTH (DOH)
- FLEET LOGISTIC CENTER-PEARL HARBOR (FLC-PH)
- DEFENSE LOGISTIC AGENCY (DLA)
- COMMANDER, NAVY REGION-HAWAII (CNR-HI)
- ENGINEERING AND EXPEDITIONARY WARFARE CENTER (EXWC)
- NAVY-OTHER

QUALITY VALIDATION (QV) REPORT

Red Hill Bulk Fuel Storage Facility Defuel

Validation Firm	HDR Environmental, Operations and Construction, Inc.	Repair No.	034
Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112	Repair ID	(b) (4) AGP.01
Contract No.	FA890315D0007, D.O. FA8903-19-F-0027	Report Date	5 JUL 2023
QV Engineer	(b) (6)		

VALIDATION

Source	PDF Page No.	Facility Geographic Area	Location Reference					
(b) (4)	393	Joint Base Pearl Harbor	North Road					
Repair Description	Crevice corrosion and deep pits at pipe support contact. Repair pipe sections.		Source Contract Reference					
Description of Contractor QC Method(s) Used	Methods outlined in detail in QCP. Pipe butt welds 100% inspection via Phase Array Ultrasonic Testing. Socket welds on piping 100% inspection by (b) (6)		Contractor QC Records Reviewed					
Description of QA Validation and Observations	QA methods outlined in QASP. JTF-RH secondary QA and 3rd Party QV completed. JTF-RH QV visually inspected repair & reviewed contractor QC documentation. Final acceptance by government. Date: 22 JUN 2023							
Rework Needed		Photo Record Attached	Repair Work Validated as Complete					
<input type="radio"/>	Yes	<input checked="" type="radio"/>	No	See Page 2.	<input checked="" type="radio"/>	Yes	<input type="radio"/>	No

Comments

Contractor replaced (b) (3) (A) welded reinforcement pads and (b) (3) (A) F-24 piping across (b) (3) (A) low point drains. Shop coating (two part epoxy with polyurethane top coat) of piping was performed prior to delivery, with touch-up coating applied as necessary to weld zones and areas of mechanical damage. Stainless steel restraint bolts installed on selected pipe supports, with Teflon wear pads between new saddles and pipe supports.

CERTIFICATION

I hereby certify that repair work validated in this report was personally substantiated and this report is true.	QV ENGINEER SIGNATURE	(b) (6)
	DATE	5 JUL 2023

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed new (b) (3) (A) piping to replace areas of corrosion; new protective coating system applied.

(b) (3) (A)

Pipe saddles welded to bottom of pipe with Teflon wear pad along North Road. New stainless steel restraint bolts installed.

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed new low point drain assemblies (typical) (b) (3) (A)

(b) (3) (A)

Contractor installed new (b) (3) (A) piping to replace areas of corrosion; new protective coating system applied.

(b) (4)

(b) (4)

Inspection Date: January 31st through February 2nd 2023

(b) (3) (A)

(b) (4) JBPHH, PAUT of F-24 Line

Accepted per ASME B31.3

SCOPE

(b) (4) conducted a Semi Automated Phased Array Ultrasonic Testing (PAUT) examination for (b) (4) at JBPHH in Honolulu, HI on January 31st through February 2nd, 2023. The purpose of this examination was to test for weld quality in accordance with ASME B31.3.

TECHNIQUE

The welds were scanned with a 5MHz linear array probe using 32 active elements to produce a compound scan utilizing shear waves from 40° to 70° focused at the 1.5 x thickness. The probe indexing was set at the proper distance noted in the attached scan plan to achieve adequate coverage of the area of interest. The adjacent base material was scanned with 0° conventional UT. The client had the welds mechanically wire wheeled to ensure adequate coupling and aid the transmission of ultrasonic energy. The welds were accessible and scanned from both sides of weld center line.

(b) (4)

(b) (4)

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CALIBRATION

Wedge delay, Sensitivity, and TCG calibration

Steel NAVSHIPS calibration standard (S/N: 03-8269) with (b) (3) (A) side drilled holes.

Steel (b) (3) (A) piping calibration standard (S/N: TNE-EII-007) with I.D./O.D. notches.

INSPECTION RESULTS

Specification: ASME Section V

Procedure: NDT-005.6, Rev. A

Acceptance : ASME B31.3

	Description	Results
(b) (3) (A)	F-24 line, final weld. 2/1/23	Accepted
(b) (3) (A)	F-24 line, final weld. 2/1/23	Accepted
(b) (3) (A)	F-24 line, final weld. 1/31/23	Accepted
(b) (3) (A)	F-24 line, final weld. 1/31/23	Rejected
(b) (3) (A)	F-24 line, final weld. 1/31/23	Accepted
(b) (3) (A)	F-24 line, final weld. 1/31/23	Accepted
(b) (3) (A)	F-24 line, final weld. 2/1/23	Accepted
(b) (3) (A)	F-24 line, final weld. 2/2/23	Accepted
(b) (3) (A)	F-24 line, final weld. 2/1/23	Accepted

If you have any questions regarding this matter or require any additional information, please do not hesitate to contact (b) (6)

(b) (6)

Respectfully submitted,

(b) (6)

ACCP UT Level III
API-QUTE
PAUT Level II
AWS CWI
API-570

(b) (4)

(b) (4)

(b) (4)

Inspection Dates: Feb/16/2023 – Feb/18/2023

**Phased Array Ultrasonic Testing of
Line F24**

(b) (3) (A)

(b) (4)

@ JBPHH

(b) (6)

ASNT Level III
API-QUTE
PAUT Level II
AWS CWI
API-570

(b) (4)

(b) (4)

(b) (4)

SCOPE

(b) (4) conducted a Semi Automated Phased Array Ultrasonic Testing (PAUT) examination for (b) (4) at JBPHH in Honolulu, HI from Feb/16/2023 to Feb/18/2023. The purpose of this examination was to test for weld quality in accordance with ASME B31.3.

TECHNIQUE

The welds were scanned with a 5MHz linear array probe using 32 active elements to produce a sectorial scan utilizing shear waves from 40° to 70° focused at the 1.5 x thickness. The probe indexing was set at the proper distance noted in the attached scan plan to achieve adequate coverage of the area of interest. The adjacent base material was scanned with 0° conventional UT. The client had the welds mechanically wire wheeled to ensure adequate coupling and aid the transmission of ultrasonic energy.

Limitations

All welds were accessible and scanned from both sides of weld centerline. Weld volume and HAZ coverage was 100%. Scans were recorded using an Olympus Versa Mouse encoder.

CALIBRATION

Wedge delay, Sensitivity, and TCG calibration

Steel NAVSHIPS calibration standard (S/N: 03-8269) with (b) (3) (A) side drilled holes.
Steel (b) (3) (A) piping calibration standard (S/N: TNE-EII-005) with I.D./O.D. notches

INSPECTION RESULTS

Specification: ASME Section V

Procedure: NDT-005.6, Rev. A

Acceptance : ASME B31.3

Description	Results
(b) (3) (A) final weld. 2/16/23	Accepted
(b) (3) (A) final weld. 2/16/23	Accepted
(b) (3) (A) final weld. 2/16/23	Accepted
(b) (3) (A) final weld. 2/16/23	Accepted
(b) (3) (A) final weld. 2/17/23	Rejected
(b) (3) (A) ng, weld repair. 2/18/23	Accepted
(b) (3) (A) final weld. 2/17/23	Accepted
(b) (3) (A) final weld. 2/16/23	Accepted
(b) (3) (A) final weld. 2/17/23	Accepted
(b) (3) (A) final weld. 2/17/23	Accepted
(b) (3) (A) final weld. 2/18/23	Accepted

(b) (4)

(b) (4)

Inspection Dates: Feb/20/2023 – Feb/26/2023

**Phased Array Ultrasonic Testing of
Line F24**

(b) (3) (A)

(b) (4)

@ JBPHH

(b) (6)

ACCP UT Level III
API-QUTE
PAUT Level II
AWS CWI
API-570

(b) (4)

(b) (4)

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SCOPE

(b) (4) conducted a Semi Automated Phased Array Ultrasonic Testing (PAUT) examination for (b) (4) at JBPHH in Honolulu, HI from Feb/20/2023 to Feb/26/2023. The purpose of this examination was to test for weld quality in accordance with ASME B31.3.

TECHNIQUE

The welds were scanned with a 5MHz linear array probe using 32 active elements to produce a sectorial scan utilizing shear waves from 40° to 70° focused at the 1.5 x thickness. The probe indexing was set at the proper distance noted in the attached scan plan to achieve adequate coverage of the area of interest. The adjacent base material was scanned with 0° conventional UT. The client had the welds mechanically wire wheeled to ensure adequate coupling and aid the transmission of ultrasonic energy.

Limitations

All welds were scanned from both sides of weld centerline when accessible. Welds with access limited to one side of weld centerline (such as pipe to fitting joints) were scanned from pipe side of weld centerline. Weld volume and HAZ coverage was 100%. Scans were recorded using an Olympus Versa Mouse encoder.

CALIBRATION

Wedge delay, Sensitivity, and TCG calibration

Steel NAVSHIPS calibration standard (S/N: 03-8269) with (b) (3) (A) side drilled holes.

Steel (b) (3) (A) piping calibration standard (S/N: TNE-EII-005) with I.D./O.D. notches

(b) (4)

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INSPECTION RESULTS

Specification: ASME Section V

Procedure: NDT-005.6, Rev. A

Acceptance : ASME B31.3

Description	Results
(b) (3) (A) Final weld. 2/20/23	Accepted
(b) (3) (A) Final weld. 2/20/23	Accepted
(b) (3) (A) Final weld. 2/20/23	Rejected
(b) (3) (A) g, weld repair. 2/20/23	Accepted
(b) (3) (A) Final weld. 2/21/23	Rejected
(b) (3) (A) g, weld repair. 2/21/23	Rejected
(b) (3) (A) g, weld repair. 2/22/23	Accepted
(b) (3) (A) Final weld. 2/22/23	Accepted
(b) (3) (A) Final weld. 2/23/23	Accepted
(b) (3) (A) Final weld. 2/23/23	Accepted
(b) (3) (A) Final weld. 2/24/23	Accepted
(b) (3) (A) Final weld. 2/24/23	Accepted
(b) (3) (A) Final weld. 2/24/23	Accepted
(b) (3) (A) Final weld. 2/24/23	Accepted
(b) (3) (A) Final weld. 2/25/23	Accepted
(b) (3) (A) Final weld. 2/25/23	Accepted
(b) (3) (A) Final weld. 2/25/23	Accepted
(b) (3) (A) Final weld. 2/26/23	Accepted
(b) (3) (A) Final weld. 2/26/23	Accepted

(b) (4)

MAGNETIC PARTICLE EXAMINATION RECORD

(b) (4) Location: JBPHH Date: 02/19/2023
 P.O. No.: Job No. 23-049
 (b) (4) Procedure: NDT 003.2 Rev D Code: ASME B31.3

MATERIAL

Type: C/S
 Thickness: Variable
 Geometry
 Pipe Plate Rod
 Other:
 Item: See below...
 Stage of Mfg.: See below...
 Surface Condition: Wire wheel prepped

MAGNETIZING TECHNIQUE

Yoke: AC DC Spacing ^{(b) (4)}
 Amps
 Longitudinal Turns
 Direct
 Circular
 Central Conductor _____ Amps
 Inspection Medium Dry Powder Wet Visible
 Illumination White Ultraviolet

MAGNETIZING EQUIPMENT

Mfg.: Contour probe Serial #: 4778
 Calibration Date 02/11/2023
 Field Verification By: Pie Gauge
 UV Meter : n/a
 MODEL: n/a Serial #: n/a
 Color: #8a (Red)
 Type Batch No.: 14B108

Item(s)	Accept	Reject	Sketch/Notes
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(b) (6)
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Performed By: (b) (6) Level: II Date 02/19/2023 Reviewed By: Date:

(b) (4)

MAGNETIC PARTICLE EXAMINATION RECORD

Client: (b) (4) Location: JBPHH (b) (6), (b) (4) F-24 Piping Date: 3/1/2023
 P.O. No.: NA Job No. 23-049
 (b) (4) Procedure: NDT 003.2 Rev F Code: ASME B31.3
 Report No.: RRH030123A

MATERIAL

Type: C/S
 Thickness: STD
 Geometry
 Pipe Plate Rod
 Other: sleeve
 Item (b) (3) (A)
 Stage of Mfg.: New Welds
 Surface Condition: As Welded/Cleaned

MAGNETIZING TECHNIQUE

Prod: AC DC Spacing (b) (6)
 Amps fixed _____ Coil Dia. _____
 Longitudinal Turns n/a Amp Turns _____
 Direct n/a
 Circular n/a
 Central Conductor n/a
 Amps n/a
 Inspection Medium Dry Powder Color: White Contrast
 Wet Visible Type Batch No.: 18M03K-00736
 Illumination White Ultraviolet

MAGNETIZING EQUIPMENT

Mfg.: Parker Probe Serial #: 23269
 Calibration Due Date 05/2023
 Field Verification By: Pie Gauge
 UV Meter: n/a
 MODEL: n/a Serial #: n/a

Item(s)	Accept	Reject	Item(s)	Accept	Reject	Sketch/Notes
(b) (3) (A)			(b) (3) (A)			Welders: (b) (6), (b) (4)
						**no relevant indications were noted at the time of inspection.

(b) (3) (A)

Welders: (b) (6), (b) (4)

**no relevant indications were noted at the time of inspection.

Performed By: (b) (6)

Date 03/01/2023

Reviewed By:

Date:

Page 1 of 1

(b) (4)

MAGNETIC PARTICLE EXAMINATION RECORD

Client: (b) (4) Location: JBPHH (b) (4) F-24 Piping Date: 3/1/2023
 P.O. No.: NA Job No. 23-049
 (b) (4) Procedure: NDT 003.2 Rev F Code: ASME B31.3
 Report No.: RRH030123B

MATERIAL

Type: C/S
 Thickness: STD
 Geometry
 Pipe Plate Rod
 Other: _____
 Item: Support Bracket
 Stage of Mfg.: New Welds

MAGNETIZING TECHNIQUE

Prod: AC DC Spacing: (b) (4)
 Amps fixed _____ Coil Dia. _____
 Longitudinal Turns n/a Amp Turns _____
 Direct n/a
 Circular n/a
 Central Conductor n/a
 Amps n/a

MAGNETIZING EQUIPMENT

Mfg.: Parker Probe Serial #: 23269
 Calibration Due Date 05/2023
 Field Verification By: Pie Gauge
 UV Meter: n/a
 MODEL: n/a Serial #: n/a

Surface Condition: As Welded/Cleaned
 Illumination White Ultraviolet
 Wet Visible
 Dry Powder Color: Gray
 Type Batch No.: 19K092

Item(s)	Accept	Reject	Item(s)	Accept	Reject	Sketch/Notes
(b) (3)			(A)	<input type="checkbox"/>	<input type="checkbox"/>	Welders: (b) (4), (b) (6)
**no relevant indications were noted at the time of inspection.						
Performed By: (b) (6) Date 03/01/2023 Reviewed By: _____ Date: _____ Page 1 of 1						

(b) (4)

MAGNETIC PARTICLE EXAMINATION RECORD

(b) (4) Location: JBPHH Date: 02/19/2023
P.O. No.: Job No. 23-049
(b) (4) Procedure: NDT 003.2 Rev D Code: ASME B31.3

MATERIAL

MAGNETIZING TECHNIQUE

MAGNETIZING EQUIPMENT

Type: C/S	Yoke: <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC	Coil Dia. _____	Mfg.: Contour probe	Serial #: 4778
Thickness: Variable	Longitudinal Turns _____	Amp Turns _____	Calibration Date 02/11/2023	Field Verification By: Pie Gauge
<input checked="" type="checkbox"/> Pipe <input type="checkbox"/> Plate <input type="checkbox"/> Rod	Direct _____	Central Conductor _____	UV Meter : n/a	Serial #: _____
<input type="checkbox"/> Other: _____	Central Conductor _____	Amps _____	MODEL: n/a	Serial #: n/a
Item: See below...	Inspection Medium _____	<input checked="" type="checkbox"/> Dry Powder <input type="checkbox"/> Wet Visible	Color: #8a (Red)	
Stage of Mfg.: See below...	Illumination <input checked="" type="checkbox"/> White <input type="checkbox"/> Ultraviolet	<input type="checkbox"/> Wet Visible <input type="checkbox"/> Ultraviolet	Type Batch No.: 14B108	
Surface Condition: Wire wheel prepped				

Item(s)	Accept	Reject	Sketch/Notes
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(b) (6)
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Performed By: (b) (6) Level: II Date 02/19/2023 Reviewed By: _____ Date: _____

MAGNETIC PARTICLE EXAMINATION RECORD

(b) (4)

Client: (b) (4)	Location: JBPHH	Date: 03-10-2023
P.O. No.: NA	Job No. 23-049	
(b) (4) Procedure: NDT 003.2 revD	Code: ASME B31.3	
Report No.: KS01302023		

MAGNETIZING TECHNIQUE

MAGNETIZING EQUIPMENT

Type: C/S	Prod: <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC	Spacing	Mfg.: Parker	Serial #: 23962
Thickness: STD	Amps fixed	Coil Dia. _____	Calibration Date 01/01/2023	
Geometry: <input checked="" type="checkbox"/> Pipe <input checked="" type="checkbox"/> Plate <input type="checkbox"/> Rod	Longitudinal Turns <u>n/a</u>	Amp Turns _____	Field Verification By: Pie Gauge	
<input type="checkbox"/> Other: _____	Direct <u>n/a</u>			
Item: New Piping on North Road (F-24)	Circular <u>n/a</u>		UV Meter: n/a	
	Central Conductor <u>n/a</u>		MODEL: n/a	Serial #: n/a
Stage of Mfg.: New	Amps <u>n/a</u>			
Surface Condition: Buffed Clean	Inspection Medium <input checked="" type="checkbox"/> Dry Powder <input type="checkbox"/> Wet Visible	Color: <u>RED</u>		
	Illumination <input checked="" type="checkbox"/> White <input type="checkbox"/> Ultraviolet	Type Batch No.: 22A006		

Item(s)	Accept	Reject	Item(s)	Accept	Reject	Sketch/Notes
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>				MT Inspection was performed on the root pass of the pipe and the final weld for the pipe support pads. No relevant indications were found during this inspection. See Typical Pictures Below.
	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/>	<input type="checkbox"/>				
Performed By: (b) (6)			Date 03/14/2023	Reviewed By:	Date:	Page 1 of 2

(b) (3) (A), (b) (5)

(b) (3) (A), (b) (5)

QUALITY VALIDATION (QV) REPORT

Red Hill Bulk Fuel Storage Facility Defuel

Validation Firm	HDR Environmental, Operations and Construction, Inc.	Repair No.	035
Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112	Repair ID	(b) (4) AGP.02
Contract No.	FA890315D0007, D.O. FA8903-19-F-0027	Report Date	5 JUL 2023
QV Engineer	(b) (6)		

VALIDATION

Source	PDF Page No.	Facility Geographic Area	Location Reference					
(b) (4)	393	Joint Base Pearl Harbor	North Road					
Repair Description	Crevice corrosion and deep pits at pipe support contact. Repair pipe sections.		Source Contract Reference [REDACTED]					
Description of Contractor QC Method(s) Used	Methods outlined in detail in QCP. Pipe butt welds 100% inspection via Phase Array Ultrasonic Testing. Socket welds on piping 100% inspection by (b) (6)		Contractor QC Records Reviewed QCP and Daily Reports.					
Description of QA Validation and Observations	QA methods outlined in QASP. JTF-RH secondary QA and 3rd Party QV completed. JTF-RH QV visually inspected repair & reviewed contractor QC documentation. Final acceptance by government. Date: 22 JUN 2023							
Rework Needed		Photo Record Attached	Repair Work Validated as Complete					
<input type="radio"/>	Yes	<input checked="" type="radio"/>	No	See Page 2.	<input checked="" type="radio"/>	Yes	<input type="radio"/>	No

Comments
 Contractor replaced (b) (3) (A) welded reinforcement pads and (b) (3) (A) F-76 piping across (b) (3) (A) locations and (b) (3) (A) low point drains. Shop coating of piping was performed prior to delivery, with touch-up coating applied as necessary to weld zones and areas of mechanical damage. Stainless steel restraint bolts installed on selected pipe supports, with Teflon wear pads between new saddles and pipe supports.

CERTIFICATION

I hereby certify that repair work validated in this report was personally substantiated and this report is true.	QV ENGINEER SIGNATURE	(b) (6)
	DATE	5 JUL 2023

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Pipe saddles welded to bottom of pipe with Teflon wear pad along (b) (3) (A) New stainless steel restraint bolts installed.

(b) (3) (A)

Contractor installed new (b) (3) (A) piping to replace areas of corrosion; new protective coating system applied.

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed new low point drain assemblies (typical o^{(b) (3) (A)}

(b) (3) (A)

Contractor installed new (b) (3) (A) piping to replace areas of corrosion; new protective coating system applied.

(b) (4)

(b) (4)

Inspection Date: Feb/12/2023

**Phased Array Ultrasonic Testing of
Line F76**

(b) (3) (A)

(b) (4)

@ JBPHH

(b) (6)

ACCP UT Level III
API-QUTE
PAUT Level II
AWS CWI
API-570

(b) (4)

(b) (4)

SCOPE

(b) (4) conducted a Semi Automated Phased Array Ultrasonic Testing (PAUT) examination for (b) (4) at JBPHH in Honolulu, HI on Feb/12/2023. The purpose of this examination was to test for weld quality in accordance with ASME B31.3.

TECHNIQUE

The welds were scanned with a 5MHz linear array probe using 32 active elements to produce a sectorial scan utilizing shear waves from 40° to 70° focused at the 1.5 x thickness. The probe indexing was set at the proper distance noted in the attached scan plan to achieve adequate coverage of the area of interest. The adjacent base material was scanned with 0° conventional UT. The client had the welds mechanically wire wheeled to ensure adequate coupling and aid the transmission of ultrasonic energy.

Limitations

All welds were accessible and scanned from both sides of weld centerline. Weld volume and HAZ coverage was 100%. Scans were recorded using an Olympus Versa Mouse encoder.

CALIBRATION

Wedge delay, Sensitivity, and TCG calibration

Steel NAVSHIPS calibration standard (S/N: 03-8269) with (b) (3) (A) side drilled holes.

Steel (b) (3) (A) piping calibration standard (S/N: TNE-EII-005) with I.D./O.D. notches

INSPECTION RESULTS

Specification: ASME Section V

Procedure: NDT-005.6, Rev. A

Acceptance : ASME B31.3

Description	Results
(b) (3) (A) piping, final weld. 2/12/23	Accepted

(b) (4)

(b) (4)

Inspection Dates: Mar/13/2022 - Mar/20/2022

(b) (3) (A)

**Phased Array Ultrasonic Testing of
Line F76**

(b) (4)

@ JBPHH

(b) (6)

ACCP UT Level III
API-QUTE
PAUT Level II
AWS CWI
API-570

(b) (4)

(b) (4)

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SCOPE
(b) (4)

conducted a Semi Automated Phased Array Ultrasonic Testing (PAUT) examination for (b) (4) at JBPHH in Honolulu, HI from Mar/20/2023 to Mar/29/2023. The purpose of this examination was to test for weld quality in accordance with ASME B31.3.

TECHNIQUE

(b) (3) (A)

Limitations

All welds were scanned from both sides of weld centerline when accessible. Welds with access limited to one side of weld centerline (such as pipe to fitting joints) were scanned from pipe side of weld centerline. Weld volume and HAZ coverage was 100%. Scans were recorded using an Olympus Versa Mouse encoder.

CALIBRATION

Wedge delay, Sensitivity, and TCG calibration

Steel NAVSHIPS calibration standard (S/N: 03-8269) with (b) (3) (A) side drilled holes.

Steel (b) (3) (A) piping calibration standard (S/N: TNE-EII-005) with I.D./O.D. notches

(b) (4)

Page 3 of 20

INSPECTION RESULTS

Specification: ASME Section V

Procedure: NDT-005.6, Rev. A

Acceptance : ASME B31.3

(b) (3) (A)	Description	Results
	g, final weld. 3/29/23	Accepted
	g, final weld. 3/29/23	Accepted
	g, final weld. 3/29/23	Accepted
	g, final weld. 3/29/23	Accepted
	g, final weld. 3/13/23	Accepted
	g, final weld. 3/16/23	Rejected
	ping, final weld. 3/16/23	Rejected
	ping, final weld. 3/17/23	Rejected
	ping, final weld. 3/17/23	Accepted
	g, final weld. 3/16/23	Accepted
	g, final weld. 3/28/23	Accepted
	g, final weld. 3/28/23	Accepted

(b) (4)

MAGNETIC PARTICLE EXAMINATION RECORD

(b) (4)	Location: JBPHH	Date: Apr/01/2023
P.O. No.:	Job No. 23-049	
(b) (4) Procedure: NDT 003.2 Rev D	Code: ASME B31.3	

MATERIAL

MAGNETIZING TECHNIQUE

MAGNETIZING EQUIPMENT

Type: C/S	Yoke: <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC	Coil Dia. _____	Mfg.: Contour probe	Serial #: 4778
Thickness: Variable	Amps _____	Longitudinal Turns _____	Calibration Date 02/11/2023	
<input checked="" type="checkbox"/> Pipe <input type="checkbox"/> Plate <input type="checkbox"/> Rod	Direct _____	Amp Turns _____	Field Verification By: Pie Gauge	
<input type="checkbox"/> Other:	Circular _____	Central Conductor _____	UV Meter : n/a	
Item: See below...	Amps _____	Inspection Medium _____	MODEL: n/a	Serial #: n/a
Stage of Mfg.: See below...	Dry Powder <input checked="" type="checkbox"/>	Wet Visible <input type="checkbox"/>	Color: #8a (Red)	
Surface Condition: Wire wheel prepped	Ultraviolet <input type="checkbox"/>	White <input type="checkbox"/>	Type Batch No.: 14B108	
Item(s)	Accept	Reject	Sketch/Notes	

(b) (3) (A)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

(b) (6)

Performed By: (b) (6) Level: II Date Apr/01/2023 Reviewed By: _____ Date: _____

(b) (4)

MAGNETIC PARTICLE EXAMINATION RECORD

(b) (4) Location: JBPHH Date: Apr/14/2023
P.O. No.: Job No. 23-049
(b) (4) Procedure: NDT 003.2 Rev D Code: ASME B31.3

MATERIAL

Type: C/S
Thickness: Variable
Geometry
 Pipe Plate Rod
 Other:
Item: See below...
Stage of Mfg.: See below...
Surface Condition: Wire wheel prepped

MAGNETIZING TECHNIQUE

Yoke: AC DC Spacing (b) (3) (A)
Amps
Longitudinal Turns
Direct
Circular
Central Conductor _____ Amp Turns _____
Amps
Inspection Medium Dry Powder Wet Visible
Illumination White Ultraviolet

MAGNETIZING EQUIPMENT

Mfg.: Contour probe Serial #: 4778
Calibration Date Apr/10/2023
Field Verification By: Pie Gauge
UV Meter : n/a
MODEL: n/a Serial #: n/a
Color: #8a (Red)
Type Batch No.: 14B108

Item(s)	Accept	Reject	Sketch/Notes
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(b) (6)
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Performed By: (b) (6) Level: II Date Apr/14/2023 Reviewed By: Date:

(b) (4)

MAGNETIC PARTICLE EXAMINATION RECORD

(b) (4) Location: JBPHH Date: Apr/19/2023
P.O. No.: Job No. 23-049
(b) (4) Procedure: NDT 003.2 Rev D Code: ASME B31.3

MATERIAL

MAGNETIZING TECHNIQUE

MAGNETIZING EQUIPMENT

Type: C/S	Yoke: <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC	Spacings (b) (3) (A)	Mfg.: Contour probe	Serial #: 4778
Thickness: Variable	Amps	Coil Dia. _____	Calibration Date Apr/19/2023	
Geometry	Longitudinal Turns _____	Amp Turns _____	Field Verification By: Pie Gauge	
<input checked="" type="checkbox"/> Pipe <input type="checkbox"/> Plate <input type="checkbox"/> Rod	Direct			
<input type="checkbox"/> Other:	Circular _____			
Item: See below...	Central Conductor _____		UV Meter : n/a	Serial #: n/a
	Amps _____		MODEL: n/a	
Stage of Mfg.: See below...	Inspection Medium	<input checked="" type="checkbox"/> Dry Powder	Color: #8a (Red)	
	Wet Visible <input type="checkbox"/>		Type Batch No.: 14B108	
Surface Condition: Wire wheel prepped	Illumination <input checked="" type="checkbox"/> White <input type="checkbox"/> Ultraviolet			
Item(s)	Accept	Reject	Sketch/Notes	
(b) (3) (A)	9/23	<input checked="" type="checkbox"/>	(b) (6)	
(b) (3) (A)	9/23	<input checked="" type="checkbox"/>		
(b) (3) (A)		<input type="checkbox"/>		
(b) (3) (A)		<input type="checkbox"/>		
(b) (3) (A)		<input type="checkbox"/>		
(b) (3) (A)		<input type="checkbox"/>		
(b) (3) (A)		<input type="checkbox"/>		
(b) (3) (A)		<input type="checkbox"/>		
(b) (3) (A)		<input type="checkbox"/>		
(b) (3) (A)		<input type="checkbox"/>		

Performed By: (b) (6) Level: II Date Apr/19/2023 Reviewed By: Date:

MAGNETIC PARTICLE EXAMINATION RECORD

(b) (4)

Client: **(b) (4)** Location: JBP/HH Date: 03-10-2023
 P.O. No.: NA Job No. 23-049
 Procedure: NDT 003.2 revD Code: ASME B31.3
 Report No.: KS01302023

MAGNETIZING TECHNIQUE MAGNETIZING EQUIPMENT

Type: C/S	Prod: <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC	Spacing	Mfg.: Parker	Serial #: 23962
Thickness: STD	Amps <u>fixed</u>	Coil Dia. <u> </u>	Calibration Date 01/01/2023	
Geometry: <input checked="" type="checkbox"/> Pipe <input checked="" type="checkbox"/> Plate <input type="checkbox"/> Rod	Longitudinal Turns <u>n/a</u>	Amp Turns <u> </u>	Field Verification By: Pie Gauge	
<input type="checkbox"/> Other: <u> </u>	Direct <u>n/a</u>			
Item: New Piping on North Road (F-24)	Circular <u>n/a</u>		UV Meter: n/a	
	Central Conductor <u>n/a</u>		MODEL: n/a	Serial #: n/a
Stage of Mfg.: New	Amps <u>n/a</u>			
	Inspection Medium <input checked="" type="checkbox"/> Dry Powder	Color: <u>RED</u>		
	<input type="checkbox"/> Wet Visible			
Surface Condition: Buffed Clean	Illumination <input checked="" type="checkbox"/> White <input type="checkbox"/> Ultraviolet	Type Batch No.: <u>22A006</u>		

Item(s)	Accept	Reject	Item(s)	Accept	Reject	Sketch/Notes
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>				MT Inspection was performed on the root pass of the pipe and the final weld for the pipe support pads. No relevant indications were found during this inspection. See Typical Pictures Below.
	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
	<input checked="" type="checkbox"/>	<input type="checkbox"/>				

Performed By: **(b) (6)** Date 03/14/2023 Reviewed By: _____ Date: _____ Page 1 of 2

(b) (3) (A), (b) (5)

(b) (3) (A), (b) (5)