

Joint Task Force-Red Hill

Bi-Monthly Quality Validation Working Group Meeting



03 Aug 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)



RFI from DOH

ENSURING A FREE AND OPEN INDO-PACIFIC

- Repair 005 - What's "a drop" in context?
 - 3 psi over 4 hour duration in 1 psi increments. (b) (3) (A) psi.
- INC-033 - What's the basis for the pressure of the hydrotest?
 - TBD – far exceeded 1.5x Maximum Allowable Pressure requirement.
- Repair 031 – Fire Protection for compression sleeve pipe coupling at Tank 10
 - Did JTF answer DOH questions on fire blankets?



253 Status Update

ENSURING A FREE AND OPEN INDO-PACIFIC

- 253 Repair

- #128 – NDE occurred this week. PT on socket welds for HPV, welds 12-19
- #182, 183, 184, 188 – outstanding NDE report (due this week)
 - Hydrotest spools (report due next week)
- #249 – Hydrotest 4 Aug 23

- Incremental Repair

- INC-026 – Install HPV at (b) (3) (A)
 - Hydrotest spools completed 2 Aug.
 - Revised QV report pending formal report



QV Accounting

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- QV Complete = Sent to DOH/EPA.
 - “253” = 248/253 repairs; 5 remain.
 - Expect sending remaining 5 next week.
 - Outstanding NDE and hydrotest results
 - “INC” = 37/44; 21 remain.
 - Sending 0 on 3 Aug 23.
 - Expect sending 2 next week (28, 30)
 - Expect sending 6 mid Aug
- QV Conditionally Approved
 - DOH = 200
 - EPA = 171



Quality Validation Report

ENSURING A FREE AND OPEN INDO-PACIFIC

NO.	Validation Complete	Date	Location



Rework - Quality Validation Report

ENSURING A FREE AND OPEN INDO-PACIFIC

NO.	Validation Complete	Date	Location
128	Contractor replaced entire (b) (3) (A) [REDACTED]. All pipeline butt welds were inspected by PAUT (Phased Array Ultrasonic Testing) or RT (Radiographic Testing). New gaskets and hardware installed at points of connection. Protective coating applied (two coat epoxy with polyurethane top coat). Piping segment from within (b) (3) (A) [REDACTED] passed leak test January 2023. NDE inspection reports and weld map included for reference. ***PT on socket welds for HPV, welds 12-19***	1 Aug 2023	(b) (3) (A) [REDACTED]

QUALITY VALIDATION (QV) REPORT

Red Hill Bulk Fuel Storage Facility Defuel

Validation Firm	HDR Environmental, Operations and Construction, Inc.	Repair No.	128
Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112	Repair ID	FOR.059
Contract No.	FA890315D0007, D.O. FA8903-19-F-0027	Report Date	3 AUG 2023
QV Engineer	(b) (6)		

VALIDATION

Source	PDF Page No.	Facility Geographic Area	Location Reference
NDA	69	(b) (3) (A)	(b) (3) (A)
Repair Description	Severe corrosion and pitting at several locations between (b) (3) (A) Wall Loss observed between 60%-79%. Severe corrosion also observed at pipe support cradle interfaces. Repair pipe.		Source Contract Reference 47QSHA18D000Y W912DY21F0025 Service Order 620E
Description of Contractor QC Method(s) Used	Methods outlined in QCP. 100% of pipeline butt welds inspected by PAUT and RT. Socket welds by dye penetrant testing (PT).		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: 20 DEC 2022		
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 entire (b) (3) (A) All pipeline butt welds were inspected by PAUT (Phased Array Ultrasonic Testing) or RT (Radiographic Testing). Socket welds 100% inspected by PT. New gaskets and hardware installed at points of connection. Protective coating applied (two coat epoxy with polyurethane top coat). Piping segment from within (b) (3) (A) passed leak test January 2023. NDE inspection reports and weld map included for reference.

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	3 AUG 2023 / Rev1

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Existing condition of piping from (b) (3) (A) with heavy pitting and corrosion.

(b) (3) (A)

New aboveground 12-inch pipeline segment from (b) (3) (A)

(b) (4)

(b) (4)

Inspection Date: August 2nd 2022

(b) (3) (A)

(b) (4) Red Hill, PAUT of Fuel Oil Reclaim line
(b) (3) (A)

Accepted per ASME B31.3

SCOPE

(b) (4) conducted a Semi Automated Phased Array Ultrasonic Testing (PAUT) examination on for (b) (4) at the Red Hill facility in Aiea, HI on August 2nd, 2022. 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. The welds were accessible. Pipe to pipe welds were scanned from both sides of weld centerline. Pipe to fitting welds were scanned from pipe side of weld centerline.

(b) (4)

(b) (4)

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CALIBRATION

Wedge delay calibration

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

Sensitivity and TCG calibration

Steel (b) (3) (A) piping calibration standard (S/N: 42623) 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)	Accepted
(b) (3) (A)	Accepted
(b) (3) (A)	Accepted
(b) (3) (A)	Accepted
(b) (3) (A)	Accepted
(b) (3) (A)	Accepted
(b) (3) (A)	Accepted
(b) (3) (A)	Accepted
(b) (3) (A)	Accepted
(b) (3) (A)	Accepted
(b) (3) (A)	Accepted
(b) (3) (A)	Accepted
(b) (3) (A)	Accepted

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

Respectfully submitted,

(b) (6)

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

(b) (4)

(b) (3) (A)

(b) (4)

(b) (4)

Inspection Date: August 3rd 2022

(b) (3) (A)

(b) (4) Red Hill, PAUT of Fuel Oil Reclaim line
(b) (3) (A)

Accepted per ASME B31.3

SCOPE

(b) (4) conducted a Semi Automated Phased Array Ultrasonic Testing (PAUT) examination on for (b) (4) at the Red Hill facility in Aiea, HI on August 3rd, 2022. The purpose of this examination was to test for weld quality in accordance with ASME B31.3.

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(b) (4)

(b) (4)

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CALIBRATION

Wedge delay calibration

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

Sensitivity and TCG calibration

Steel (b) (3) (A) piping calibration standard (S/N: 42623) 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)		Accepted
(b) (3) (A)		Accepted
(b) (3) (A)		Accepted
(b) (3) (A)		Accepted
(b) (3) (A)		Accepted
(b) (3) (A)		Accepted
(b) (3) (A)		Accepted
(b) (3) (A)		Accepted
(b) (3) (A)		Accepted

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

Respectfully submitted,

(b) (4)

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

(b) (4)

(b) (3) (A)

(b) (4)

(b) (4)

Inspection Date: August 8th 2022

(b) (3) (A)

(b) (4) Red Hill, PAUT of Fuel Oil Reclaim line
(b) (3) (A)

Accepted per ASME B31.3

SCOPE

(b) (4) conducted a Semi Automated Phased Array Ultrasonic Testing (PAUT) examination on for (b) (4) at the Red Hill facility in Aiea, HI on August 8th, 2022. 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. The welds were accessible. Pipe to pipe welds were scanned from both sides of weld centerline. Pipe to fitting welds were scanned from pipe side of weld centerline.

(b) (4)

(b) (4)

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CALIBRATION

Wedge delay calibration

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

Sensitivity and TCG calibration

Steel (b) (3) (A) piping calibration standard (S/N: 42623) 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)	Accepted
(b) (3) (A)	Accepted
(b) (3) (A)	Accepted
(b) (3) (A)	Accepted

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

Respectfully submitted,

(b) (6)

ACCP UT Level III

API-QUTE

PAUT Level II

AWS CWI

API-570

(b) (4)

(b) (3) (A)

(b) (4)

RADIOGRAPHIC INSPECTION REPORT

(b) (4)

W. O. No.: 23-159
Report No.: 6562623
Date: 6/26/23
Page 1 of 1

FORM NDT-005.1

CUSTOMER (b) (4)	CUST JOB#	SPECIFICATION ASME V	ACCEPTANCE ASME B31.3
PROJECT (b) (3) (A)	DWG. NO.	PROCEDURE ASME V REV C	ACC. PROC. B31.3 REV 2015
RT SOURCE IRIS	FILM ALFA DS	PB SCREENS	PENS: ASTM
SOURCE (b) (3) (A)	TYPE 1B	SHIMS MAT'L/THKNS	MATERIAL CS
FOCAL (b) (3) (A)	MATERIAL SS	TECHNIQUE USED 3	THICKNESS (b) (3) (A)
SFD (b) (3) (A)	LOCATION F	EXPOSURE TIME 21 sec	JOINT TYPE
		PROCESSING	PIPE DIA.
		MANUAL AUTOMATIC	

1. Single Wall



Panoramic

2. Single Wall



Offset

3. Double Wall

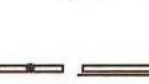


4. Double Wall 0/90



Elliptical

5. Plate



6. Other

WELD #	VIEW #	GEOMETRIC UNSHARPNESS *UG*	ACCEPT REJECT											REMARKS			
			Porosity	Slag Inclusions	Cracks	Lack of Fusion	Lack of Penet.	Undercut	Burn Thru	Suck Back	T.I.	Film Artifact					
(b) (3) (A)	0-7	.020	X														
	7-14	/	X														
	14-0	/	X														
(b) (3) (A)	0-13	.020	X														
	13-26	/	X														
	26-0	/	X														

(b) (6)

(b) (3) (A)

(b) (4)

LIQUID PENETRANT EXAMINATION RECORD

Client: (b) (4)	Location: Red Hill	Page 1 of 1
P.O. No.: PRL-PND-691N	Job No.: 23-159	
(b) (4) Procedure: NDT002.2 Rev C	Code: ASME B31.3	
Report No. GS080223		

ITEM (b) (3) (A) SOCKET WELDS

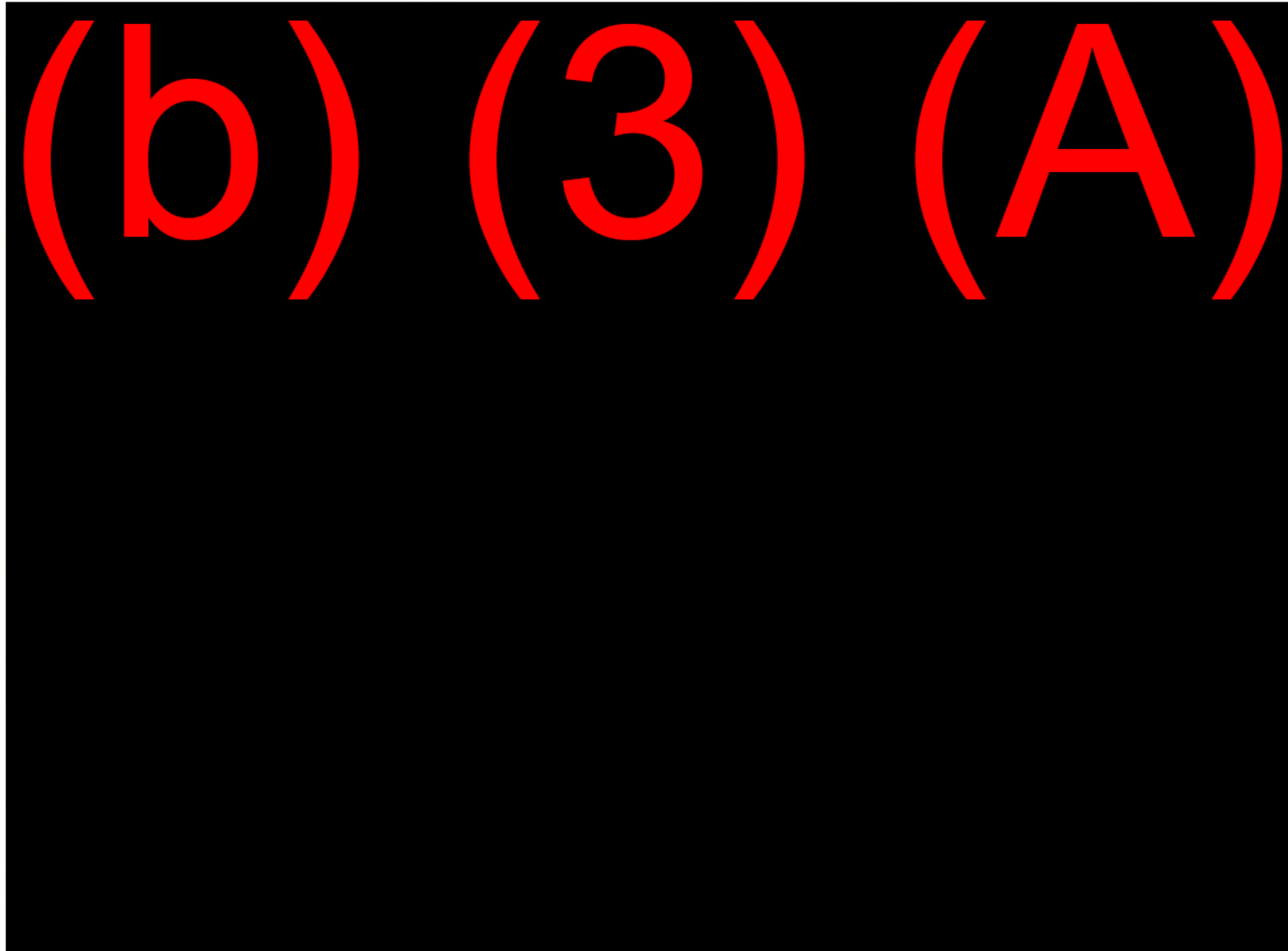
MATERIAL		PENETRANT MATERIAL				TECHNIQUE
TYPE: CS SW		BRAND	DESIGNATION	PO#	BATCH #	Preclean Drying Time: 5 MIN
Surface Condition: <input type="checkbox"/> As Welded <input type="checkbox"/> Ground <input type="checkbox"/> Other _____ <input checked="" type="checkbox"/> New weld	Cleaner	Magnaflux	SKC-S	N/A	21002K 002711	Method of Application: Brush
	Penetrant	Magnaflux	SKL-SP1	N/A	19G04K 01755	Dwell Time: 10 Min
	Emulsifier	N/A	N/A	N/A	N/A	Emulsification Time: N/A
	Developer	Magnaflux	SKD-S2	N/A	20L02U	Developing Time: 15 Min
Temperature: <input checked="" type="checkbox"/> 60° F – 125° F Other _____		Illumination: <input checked="" type="checkbox"/> White FC 150			(b) (4) Control # UV Meter <input type="checkbox"/> N/A <input type="checkbox"/>	

Item(s)	Accept	Reject	Sketch/Notes
(b) (3) (A)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No indications noted at time of inspection.
	<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 type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	

Performed By: (b) (6) Level II Date: 8/02/2023	Reviewed By: _____ Date: _____
--	--------------------------------

(b) (3) (A)

Figure 1-6: ADIT 3 (Red Hill Fuel Storage Complex) Overview



(b) (4)

Table 2-3: Results Summary: NS Pearl Harbor Facility – Tested Per BMP

Fuel System	Test Section	Designation	Product	Length (Feet)	Volume (Gallons)	Reference Pressure ¹ (psi)	Test Method	MDLR (gph)	Test Date	Result
Transfer Pipelines										
	18	(b) (3) (A)	FOR	(b) (3) (A)			2.1	(b) (3) (A)	7 January 2023	Pass
Table Notes:										
1. [Redacted]										
[Redacted]										
[Redacted]										



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