

Joint Task Force-Red Hill

Bi-Monthly Quality Validation Working Group Meeting



29 June 2023

This brief is classified:



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
9	Design piping system to withstand repeat of surge event. Design of repairs to damaged piping IAW and qualified by pressure test to ASME B31.3. Surge pressures mitigated by operational changes and equalization piping.	27 Jun 23	(b) (3) (A)
31	Replace calcium silicate insulation, stainless straps, and jacketing on (b) (3) (A) compression sleeve pipe coupling near (b) (3) (A)	27 Jun 23	
39	For JP-5 piping between (b) (3) (A) Various sections of pipe are floating from the saddles and the saddles are offset from the support frame. Reset saddles to bear the pipe and to be centered on the support frame. Assume (b) (3) (A) support saddles need to be reset.	27 Jun 23	
96	Replace corroded conduits serving (b) (3) (A)	27 Jun 23	
128	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.	28 Jun 23	
169	Failing Gasket. Remove the failing gasket on the (b) (3) blind flange. Provide and install new gasket.	29 Jun 23	
194	Dent, on long seam. FFS assessment and repair if necessary. FFS failed. Place clamp over piping at (b) (3) (A) on JP-5 line.	28 Jun 23	



Quality Validation Report

ENSURING A FREE AND OPEN INDO-PACIFIC

NO.	Validation Complete	Date	Location
221	Two separate corrosion findings < 6 ft apart. Remaining thickness < the minimum thickness per (b) (3) (A) FFS assessment and repair if necessary. FFS failed. Place clamp over piping at (b) (3) (A) on JP-5 line.	28 Jun 23	(b) (3) (A)
231	For F-24 piping between (b) (3) (A) : Review conditions to assess for proper contact between the pipe and support. Provide shims to bring the pipe support into contact with the pipe. Provide at Pipe Stand numbers (b) (3) (A) and others without proper contact. Assume (b) (3) (A) shims are required. (b) (3) (A)	28 Jun 23	
232	For JP-5 piping between (b) (3) (A) : Review conditions between (b) (3) (A) to assess for proper contact between the pipe and support. Provide shims to bring the pipe support into contact with the pipe in accordance with recommendation in Pipeline Stress Analysis and Structural Evaluation Report dated Sep 202. Provide at Pipe Stand numbers (b) (3) (A) and others without proper contact. Assume (b) (3) (A) shims are required. (b) (3) (A)	28 Jun 23	



Quality Validation Report

ENSURING A FREE AND OPEN INDO-PACIFIC

NO.	Validation Complete	Date	Location
246	For JP-5 piping (b) (3) (A) (b) (3) (A) : Various pipe saddles are missing. Provide and install new support saddles consistent with the type currently in service and finished hot dip galvanized. Assume (b) (3) (A) saddles are required.	28 Jun 23	(b) (3) (A)
247	Provide repairs to execute the DFM Cutover and cross-connect fuel transfer (b) (3) (A) piping in the UGPH. Install new (b) (3) (A) (b) (3) (A) at existing flanged spool.	29 Jun 23	
248	For JP-5 piping between the Sectional valves near (b) (3) (A) Some support frames bear the JP-5 piping directly. Install low friction slide pads between the pipe and the frames. Assume (b) (3) (A) slide pads are required.	28 Jun 23	



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



Transition to Microsoft Teams

ENSURING A FREE AND OPEN INDO-PACIFIC

QUALITY VALIDATION (QV) REPORT							
Red Hill Bulk Fuel Storage Facility Defuel							
Validation Firm	HDR Environmental, Operations and Construction, Inc.			Repair No.			
Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112			Repair ID			
Contract No.	FA890315D0007, D.O. FA8903-19-F-0027			Report Date	xx FEB 2023		
QV Engineer	(b) (6)						
VALIDATION							
Source	PDF Page No.	Facility Geographic Area		Location Reference			
Repair Description	Codes & Criteria:			Source Contract Reference			
Description of Contractor QC Method(s) Used				Contractor QC Records Reviewed			
Description of QA Validation and Observations	Final acceptance by government. Date:						
Rework Needed		Photo Record Attached		Repair Work Validated as Complete			
<input type="radio"/>	Yes	<input checked="" type="radio"/>	No	<input checked="" type="radio"/>	Yes	<input type="radio"/>	No
Comments							
CERTIFICATION							
I hereby certify that repair work validated in this report was personally substantiated and this report is true.		QV ENGINEER SIGNATURE					
		DATE		xx FEB 2023			

QUALITY ASSURANCE VALIDATION REPORT	
Red Hill Bulk Fuel Storage Facility Defuel	
Caption	
Caption	



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.	009
Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112	Repair ID	(b) (4) LAT.03
Contract No.	FA890315D0007, D.O. FA8903-19-F-0027	Report Date	27 JUN 2023
QV Engineer	(b) (6)	Phone	(b) (6)
		Email	(b) (6)

VALIDATION

Source	PDF Page No.	Facility Geographic Area	Location Reference
(b) (4)	389	Tank Gallery	Various
Repair Description	Design piping system to withstand repeat of surge event. Design of repairs to damaged piping IAW and qualified by pressure test to ASME B31.3. Surge pressures mitigated by operational changes and equalization piping.		Source Contract Reference N3943020D2225 N3943021F4207
Description of Contractor QC Method(s) Used	N/A - Effort was for a design for equalization piping and a procedure for operations to mitigate surge pressures. There are no new contractor field actions to QC for this item.		Contractor QC Records Reviewed CQCP and Daily Reports.
Description of QA Validation and Observations	N/A - Effort was for a design for equalization piping and a procedure for operations to mitigate surge pressures. The design and procedures were received as a submittal, reviewed and accepted by the Government. QV has reviewed the design and procedures (Submittals 102 & 103). Final acceptance by government. Date: 14 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 provided piping system design to withstand repeat of surge event. Contractor provided operational changes and designed equalization piping to mitigate surge pressures.

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	27 JUN 2023

(b) (3) (A)

QUALITY VALIDATION (QV) REPORT

Red Hill Bulk Fuel Storage Facility Defuel

Validation Firm	HDR Environmental, Operations and Construction, Inc.	Repair No.	031
Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112	Repair ID	(b) (4) PM.25
Contract No.	FA890315D0007, D.O. FA8903-19-F-0027	Report Date	27 JUN 2023
QV Engineer	(b) (6)		

VALIDATION

Source	PDF Page No.	Facility Geographic Area	Location Reference
(b) (4)	393	Tank Gallery	(b) (3) (A)
Repair Description	Replace calcium silicate insulation, stainless straps, and jacketing on (b) (3) (A) compression sleeve pipe coupling near (b) (3) (A)		Source Contract Reference N3943020D2225 N3943021F4207
Description of Contractor QC Method(s) Used	Methods outlined in CQCP.		Contractor QC Records Reviewed CQCP and Daily Reports.
Description of QA Validation and Observations	Government Quality Assurance is documented by the QSR's in the daily CQC reports using NAVFAC Form 4296/2. Visually inspected completed installation; matched completed construction against design and material submittals. Reviewed NDE reports. JTF-RH secondary QA and 3rd Party QV completed. JTF-RH QV visually inspected repairs and reviewed contractor QC documentation (Work Plan, submittals, daily reports). Final acceptance by government. Date: 14 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 fireproofing materials on the (b) (3) (A) coupling. A specialized jacket was designed for the coupling and installed IAW manufacturer's instructions.

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	27 JUN 2023

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Existing coupling at (b) (3) (A) insulation, sleeve and straps in poor condition.

(b) (3) (A)

Contractor installed new fireproofing jacket at the (b) (3) (A) coupling.

QUALITY VALIDATION (QV) REPORT

Red Hill Bulk Fuel Storage Facility Defuel

Validation Firm	HDR Environmental, Operations and Construction, Inc.	Repair No.	039
Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112	Repair ID	EPRC.P.a
Contract No.	FA890315D0007, D.O. FA8903-19-F-0027	Report Date	27 JUN 2023
QV Engineer	(b) (6)		

VALIDATION

Source	PDF Page No.	Facility Geographic Area	Location Reference
NDAAs	40 [references F-24 line)	Tank Gallery	(b) (3) (A)
Repair Description	For JP-5 piping between the (b) (3) (A) and the saddles are offset from the support frame. Reset saddles to bear the pipe and also be centered on the support frame. Assume (b) (3) (A) support saddles need to be reset.		Source Contract Reference N3943020D2225 N3943021F4207
Description of Contractor QC Method(s) Used	Methods outlined in CQCP.		Contractor QC Records Reviewed CQCP and Daily Reports.
Description of QA Validation and Observations	Government Quality Assurance is documented by the QSR's in the daily CQC reports using NAVFAC Form 4296/2. Visually inspected completed installation; matched completed construction against design and material submittals. Reviewed NDE reports. JTF-RH secondary QA and 3rd Party QV completed. JTF-RH QV visually inspected repairs and reviewed contractor QC documentation (Work Plan, submittals, daily reports). Final acceptance by government. Date:		
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 reset saddles on Pipe Supports (b) (3) (A) to align with the pipe. At Pipe Support (b) (3) (A) shims were provided to bring the saddle in contact with the JP-5 piping. This repair item was executed in conjunction with repairs 232 (provide shims) and 248 (provide Teflon wear pads), providing comprehensive repairs to the 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	27 JUN 2023

(b) (3) (A)

(b) (3) (A)

(b) (3) (A)

QUALITY VALIDATION (QV) REPORT

Red Hill Bulk Fuel Storage Facility Defuel

Validation Firm	HDR Environmental, Operations and Construction, Inc.	Repair No.	096
Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112	Repair ID	JP5.065
Contract No.	FA890315D0007, D.O. FA8903-19-F-0027	Report Date	27 JUN 2023
QV Engineer	(b) (6)		

VALIDATION

Source	PDF Page No.	Facility Geographic Area	Location Reference
NDAAs	53	Tank Gallery	(b) (3) (A)
Repair Description	Replace corroded conduits serving (b) (3) (A) .		Source Contract Reference N3943020D2225 N3943021F4207
Description of Contractor QC Method(s) Used	Methods outlined in CQCP.		Contractor QC Records Reviewed CQCP and Daily Reports.
Description of QA Validation and Observations	QA methods outlined in CQCP. JTF-RH secondary QA and 3rd Party QV completed. JTF-RH QV visually inspected repair & reviewed contractor QC documentation. Final acceptance by government. Date: 14 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 corroded rigid conduit, replaced flex conduit for communications wiring, replaced flex conduit for MOV power with Mineral Insulated (MI) cable to match recent Facility upgrades. Valve has been operationally tested for rotation check, limits set, and automated fuels handling equipment (AFHE) integration.

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	27 JUN 2023

(b) (3) (A)

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	28 JUN 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 Wall Loss observed between 60%-79%. Severe corrosion also observed at pipe support cradle interfaces. Repair pipe.		Source Contract Reference
Description of Contractor QC Method(s) Used	Methods outlined in QCP. 100% of pipeline butt welds inspected by PAUT and RT.		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: 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). 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. **(b) (4)** 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 28 JUN 2023

(b) (3) (A)

(b) (4)

(b) (4)

Inspection Date: August 2nd 2022

(b) (3) (A)

Accepted per ASME B31.3

SCOPE

(b) (4) conducted a Semi Automated Phased Array Ultrasonic Testing (PAUT) examination on for Mechco 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)

Page 2 of 18

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

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)

Accepted per ASME B31.3

SCOPE

(b) (4) conducted a Semi Automated Phased Array Ultrasonic Testing (PAUT) examination on for Mechco 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.

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)

Page 2 of 16

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

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 8th 2022

(b) (3) (A)

Accepted per ASME B31.3

SCOPE

(b) (4) conducted a Semi Automated Phased Array Ultrasonic Testing (PAUT) examination on for Mechco 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)

Page 2 of 11

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

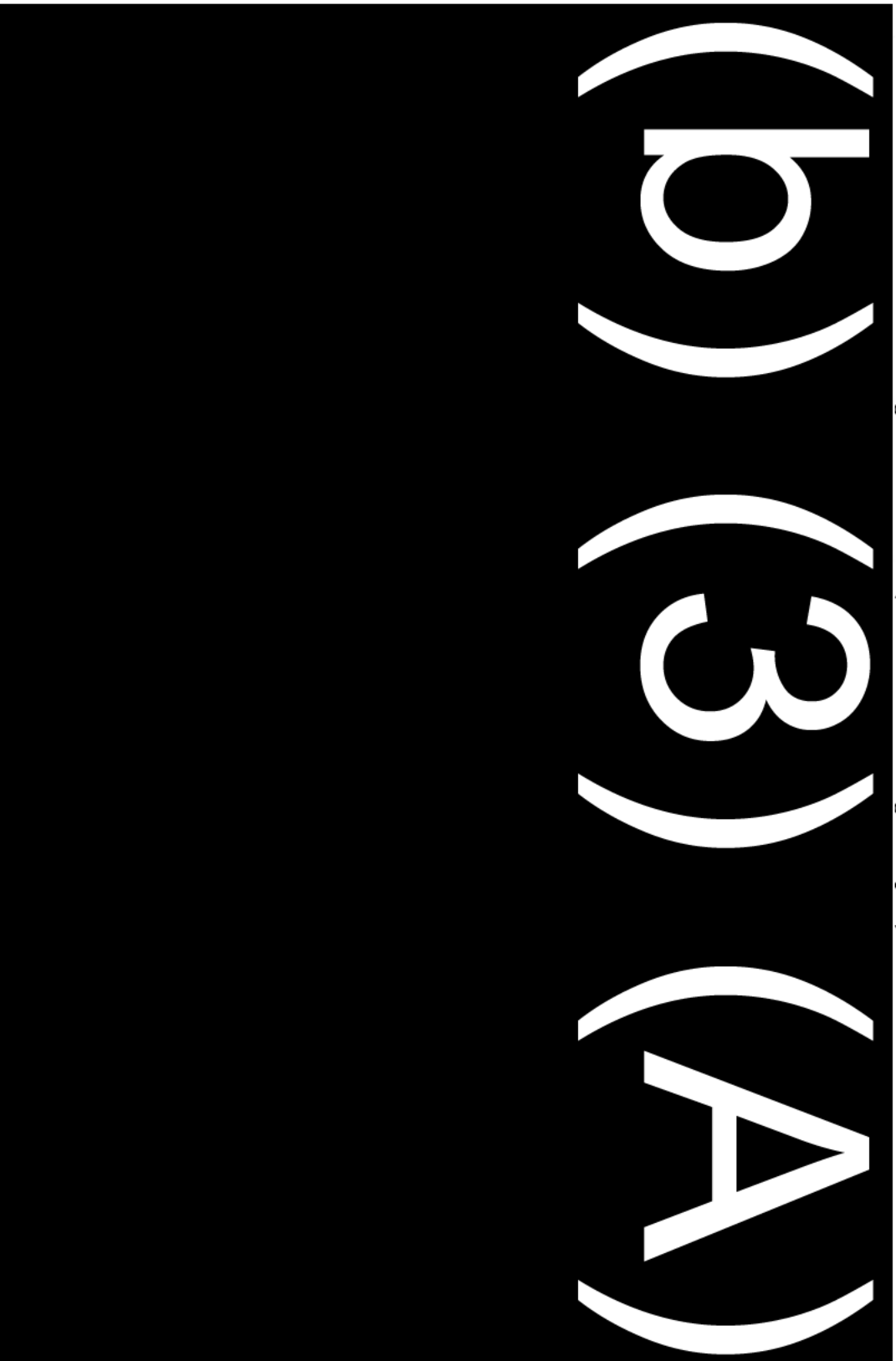
(b) (4)

(b) (3) (A)

(b) (3) (A), (b) (4)

(b) (3) (A)

Figure 1-6 (b) (3) (A) (Red Hill Fuel Storage Complex) Overview



DATE: JAN. 2023
SCALE: NTS
DRAWN BY:
PROJECT: 192996
TASK: A.4.1.059/A.4.1.113

Michael Baker
INTERNATIONAL

Michael Baker International
Virginia Beach, Virginia

FIGURE 1-6
RED HILL FUEL STORAGE COMPLEX OVERVIEW/
SECTIONAL LEAK DETECTION TESTING REPORT
SECTIONS OF PETROLEUM PIPELINES
JOINT BASE PEARL HARBOR - HICKAM, HAWAII

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	█	█	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█	█	█
	█	█	█	█	█	█	█	█	█	█
Table Notes:		(b) (3) (A)	FOR	(b) (3) (A)			2.1	(b) (3) (A)	7 January 2023	Pass
1. █										

QUALITY VALIDATION (QV) REPORT

Red Hill Bulk Fuel Storage Facility Defuel

Validation Firm	HDR Environmental, Operations and Construction, Inc.	Repair No.	169
Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112	Repair ID	F24.A22.01
Contract No.	FA890315D0007, D.O. FA8903-19-F-0027	Report Date	29 JUN 2023
QV Engineer	(b) (6)		

VALIDATION

Source	PDF Page No.	Facility Geographic Area	Location Reference
NDAAs	73	Tank Gallery	(b) (3) (A)
Repair Description	Failing Gasket. Remove the failing gasket on the blind flange. Provide and install new gasket.		Source Contract Reference N3943020D2225 N3943021F4207
Description of Contractor QC Method(s) Used	Methods outlined in QCP.		Contractor QC Records Reviewed QCP and Daily Reports.
Description of QA Validation and Observations	QA methods outlined in CQCP. JTF-RH secondary QA and 3rd Party QV completed. JTF-RH QV visually inspected repair & reviewed contractor QC documentation. Final acceptance by government. Date: 14 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 failing gasket with (b) (3) (A) gasket. Hardware replaced under Repair 044. Flanged connection will be monitored during re-packing for weeps.

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	29 JUN 2023

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Existing condition: failing gasket and lack of thread engagement or (b) (3) (A) high point vent.

(b) (3) (A)

Contractor installed (b) (3) (A) series gasket or (b) (3) (A) high point vent; hardware replaced as part of Repair 044.

QUALITY VALIDATION (QV) REPORT

Red Hill Bulk Fuel Storage Facility Defuel

Validation Firm	HDR Environmental, Operations and Construction, Inc.	Repair No.	194
Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112	Repair ID	JP5.A21.08
Contract No.	FA890315D0007, D.O. FA8903-19-F-0027	Report Date	28 JUN 2023
QV Engineer	(b) (6)		

VALIDATION

Source	PDF Page No.	Facility Geographic Area	Location Reference
EXWC	N/A	(b) (3) (A)	
Repair Description	Dent, on long seam. FFS assessment and repair if necessary. FFS failed. Place clamp over piping at (b) (3) (A) on JP-5 line.		Source Contract Reference N3943020D2225 N3943021F4207
Description of Contractor QC Method(s) Used	Methods outlined in CQCP.		Contractor QC Records Reviewed CQCP and Daily Reports.
Description of QA Validation and Observations	Government Quality Assurance is documented by the QSR's in the daily CQC reports using NAVFAC Form 4296/2. Visually inspected completed installation; matched completed construction against design and material submittals. Reviewed NDE reports. JTF-RH secondary QA and 3rd Party QV completed. JTF-RH QV visually inspected repairs and reviewed contractor QC documentation (Work Plan, submittals, daily reports). Final acceptance by government. Date: 14 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 removed coating and cleaned piping prior to installing (b) (3) (A) (all-stainless, high pressure) double panel repair clamp with NBR gasket to address dent on the long seam of the pipeline.

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	28 JUN 2023

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed (b) (3) (A) pipe clamp to address dents on piping segment

(b) (3) (A)

Contractor installed (b) (3) (A) pipe clamp to address dents on piping segment.

QUALITY VALIDATION (QV) REPORT

Red Hill Bulk Fuel Storage Facility Defuel

Validation Firm	HDR Environmental, Operations and Construction, Inc.	Repair No.	221
Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112	Repair ID	JP5.A21.35
Contract No.	FA890315D0007, D.O. FA8903-19-F-0027	Report Date	28 JUN 2023
QV Engineer	(b) (6)		

VALIDATION

Source	PDF Page No.	Facility Geographic Area	Location Reference
EXWC	N/A	(b) (3) (A)	
Repair Description	Two separate corrosion findings < 6 ft apart. Remaining thickness < the minimum thickness per API 574. 8-ft, FFS assessment and repair if necessary. FFS failed. Place clamp over piping at (b) (3) (A) on JP-5 line.		Source Contract Reference N3943020D2225 N3943021F4207
Description of Contractor QC Method(s) Used	Methods outlined in CQCP.		Contractor QC Records Reviewed CQCP and Daily Reports.
Description of QA Validation and Observations	Government Quality Assurance is documented by the QSR's in the daily CQC reports using NAVFAC Form 4296/2. Visually inspected completed installation; matched completed construction against design and material submittals. Reviewed NDE reports. JTF-RH secondary QA and 3rd Party QV completed. JTF-RH QV visually inspected repairs and reviewed contractor QC documentation (Work Plan, submittals, daily reports). Final acceptance by government. Date: 14 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

JP5.A21.35 originally was identified as (b) (3) (A) during inline inspection in 2016-2017. It was two metal loss indications stated to be approximately 6-feet apart. For FFS assessment identification purposes, the indication ID was split JP5.A21.35 into two (a and b). FFS found JP5.A21.35a was found to be no repair, whereas JP5.A21.35b was found to be a repair. Contractor removed coating and cleaned piping at JP5.A21.35b prior to installing PowerSeal 3122-AS-HP (all-stainless, high pressure) double panel repair clamp with NBR gasket to address area of corrosion within the pipeline.

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	28 JUN 2023

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor removed coating for FFS; indication "A" did not require repair.

(b) (3) (A)

Contractor removed coating for FFS; indication "B" was slated for repair via clamp installation.

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed (b) (3) (A) pipe clamp to address corrosion on piping segment.

(b) (3) (A)

Contractor installed (b) (3) (A) pipe clamp to address corrosion on piping segment.

QUALITY VALIDATION (QV) REPORT

Red Hill Bulk Fuel Storage Facility Defuel

Validation Firm	HDR Environmental, Operations and Construction, Inc.	Repair No.	231
Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112	Repair ID	EPRC.P.d
Contract No.	FA890315D0007, D.O. FA8903-19-F-0027	Report Date	28 JUN 2023
QV Engineer	(b) (6)		

VALIDATION

Source	PDF Page No.	Facility Geographic Area	Location Reference
NDAAs	40	Tank Gallery	(b) (3) (A)
Repair Description	For F-24 piping between (b) (3) (A) Review conditions to assess for proper contact between the pipe and support. Provide shims to bring the pipe support into contact with the pipe. (See Comments).		Source Contract Reference N3943020D2225 N3943021F4207
Description of Contractor QC Method(s) Used	Methods outlined in CQCP.		Contractor QC Records Reviewed CQCP and Daily Reports.
Description of QA Validation and Observations	Government Quality Assurance is documented by the QSR's in the daily CQC reports using NAVFAC Form 4296/2. Visually inspected completed installation; matched completed construction against design and material submittals. Reviewed NDE reports. JTF-RH secondary QA and 3rd Party QV completed. JTF-RH QV visually inspected repairs and reviewed contractor QC documentation (Work Plan, submittals, daily reports). Final acceptance by government. Date: 14 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

(b) (3) (A)

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	28 JUN 2023

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Existing condition: unsupported sections of the F-24 pipeline at (b) (3) (A)

(b) (3) (A)

Contractor installed shims under saddles to ensure contact with the F-24 piping at (b) (3) (A)

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed shims under saddles to ensure contact with the F-24 piping at (b) (3) (A)

(b) (3) (A)

Contractor installed shims under saddles to ensure contact with the F-24 piping at (b) (3) (A)

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed shims under saddles to ensure contact with the F-24 piping at (b) (3) (A)

(b) (3) (A)

Contractor installed shims under saddles to ensure contact with the F-24 piping at (b) (3) (A)

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed shims under saddles to ensure contact with the F-24 piping at (b) (3) (A)

(b) (3) (A)

Contractor installed shims under saddles to ensure contact with the F-24 piping at (b) (3) (A)

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed shims under saddles to ensure contact with the F-24 piping at (b) (3) (A)

(b) (3) (A)

Contractor installed shims under saddles to ensure contact with the F-24 piping at (b) (3) (A)

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed shims under saddles to ensure contact with the F-24 piping at (b) (3) (A)

(b) (3) (A)

Contractor installed shims under saddles to ensure contact with the F-24 piping at (b) (3) (A)

QUALITY VALIDATION (QV) REPORT

Red Hill Bulk Fuel Storage Facility Defuel

Validation Firm	HDR Environmental, Operations and Construction, Inc.	Repair No.	232
Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112	Repair ID	EPRC.P.e
Contract No.	FA890315D0007, D.O. FA8903-19-F-0027	Report Date	28 JUN 2023
QV Engineer	(b) (6)		

VALIDATION

Source	PDF Page No.	Facility Geographic Area	Location Reference
NDAAs	73, 74, 76	Tank Gallery	(b) (3) (A)
Repair Description	For JP-5 piping between (b) (3) (A) to assess for proper contact between the pipe and support. Provide shims to bring the pipe support into contact with the pipe in accordance with recommendation in (See Comments).		Source Contract Reference N3943020D2225 N3943021F4207
Description of Contractor QC Method(s) Used	Methods outlined in CQCP.		Contractor QC Records Reviewed CQCP and Daily Reports.
Description of QA Validation and Observations	Government Quality Assurance is documented by the QSR's in the daily CQC reports using NAVFAC Form 4296/2. Visually inspected completed installation; matched completed construction against design and material submittals. Reviewed NDE reports. JTF-RH secondary QA and 3rd Party QV completed. JTF-RH QV visually inspected repairs and reviewed contractor QC documentation (Work Plan, submittals, daily reports). Final acceptance by government. Date: 14 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

Repair Description Cont.: "Pipeline Stress Analysis and Structural Evaluation Report dated Sep 202. Provide at Pipe Stand numbers **(b) (3) (A)** and others without proper contact. Assume **(b) (3) (A)** shims are required. **(b) (3) (A)**

(b) (3) (A) Contractor installed shims on Pipe Supports **(b) (3) (A)** to contact with the pipe. This repair item was executed in conjunction with repairs 039 (reseal saddles) and 248 (provide Teflon wear pads), providing comprehensive repairs to the 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	28 JUN 2023

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed shims on saddles to ensure contact with the JP-5 piping at (b) (3) (A)

(b) (3) (A)

Contractor installed shims on saddles to ensure contact with the JP-5 piping at (b) (3) (A)

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed shims on saddles to ensure contact with the JP-5 piping at (b) (3) (A)

(b) (3) (A)

Contractor installed shims on saddles to ensure contact with the JP-5 piping at (b) (3) (A)

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed shims on saddles to ensure contact with the JP-5 piping at (b) (3) (A)

(b) (3) (A)

Contractor installed shims on saddles to ensure contact with the JP-5 piping at (b) (3) (A)

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed shims on saddles to ensure contact with the JP-5 piping at (b) (3) (A)

(b) (3) (A)

Contractor installed shims on saddles to ensure contact with the JP-5 piping at (b) (3) (A)

QUALITY VALIDATION (QV) REPORT

Red Hill Bulk Fuel Storage Facility Defuel

Validation Firm	HDR Environmental, Operations and Construction, Inc.	Repair No.	246
Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112	Repair ID	EPRC.P.b
Contract No.	FA890315D0007, D.O. FA8903-19-F-0027	Report Date	28 JUN 2023
QV Engineer	(b) (6)		

VALIDATION

Source	PDF Page No.	Facility Geographic Area	Location Reference					
EXWC	NDAAs Page 53	Tank Gallery	(b) (3) (A)					
Repair Description	For IP-5 piping between the Sectional valves near (b) (3) (A) various pipe saddles are missing. Provide and install new support saddles consistent with the type currently in service and finished hot dip galvanized. Assume (b) (3) (A) saddles are required.		Source Contract Reference N3943020D2225 N3943021F4207					
Description of Contractor QC Method(s) Used	Methods outlined in detail in QCP.		Contractor QC Records Reviewed QCP and Daily Reports					
Description of QA Validation and Observations	Government Quality Assurance is documented by the QSR's in the daily CQC reports using NAVFAC Form 4296/2. Visually inspected completed installation; matched completed construction against design and material submittals. Reviewed NDE reports. JTF-RH secondary QA and 3rd Party QV completed. JTF-RH QV visually inspected repairs and reviewed contractor QC documentation (Work Plan, submittals, daily reports). Final acceptance by government. Date: 14 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 provided new saddles on **(b) (3) (A)** to align with the pipe. This repair item was executed in conjunction with repairs 039 (reseal saddles), 232 (provide shims) and 248 (provide Teflon wear pads), providing comprehensive repairs to the 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	28 JUN 2023

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

New pipe saddle at (b) (3) (A)

(b) (3) (A)

New pipe saddle at (b) (3) (A)

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

New pipe saddle at

(b) (3) (A)

QUALITY VALIDATION (QV) REPORT

Red Hill Bulk Fuel Storage Facility Defuel

Validation Firm	HDR Environmental, Operations and Construction, Inc.	Repair No.	247
Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112	Repair ID	EPRC.K.cc
Contract No.	FA890315D0007, D.O. FA8903-19-F-0027	Report Date	29 JUN 2023
QV Engineer	(b) (6)		

VALIDATION

Source	PDF Page No.	Facility Geographic Area	Location Reference
EXWC	N/A	Underground Pumphouse	Underground Pumphouse
Repair Description	Provide repairs to execute the (b) (3) (A) piping in the UGPH. Install new (b) (3) (A) at existing flanged spool.		Source Contract Reference N3943020D2225 N3943021F4207
Description of Contractor QC Method(s) Used	Methods outlined in detail in QCP.		Contractor QC Records Reviewed QCP and Daily Reports
Description of QA Validation and Observations	QA methods outlined in CQCP. JTF-RH secondary QA and 3rd Party QV completed. JTF-RH QV visually inspected repair & reviewed contractor QC documentation (submittals, design, work plan). Final acceptance by government. Date: 14 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 removed fabricated (b) (3) (A) New bolts and gaskets installed and torqued to manufacturer's specifications. Installation of valve allows for interconnection of product service lines for defuel operations.

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	29 JUN 2023

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Existing spool in JP-5 header in (b) (3) (A)

(b) (3) (A)

(b) (3) (A)

QUALITY VALIDATION (QV) REPORT

Red Hill Bulk Fuel Storage Facility Defuel

Validation Firm	HDR Environmental, Operations and Construction, Inc.	Repair No.	248
Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112	Repair ID	EPRC.P.c
Contract No.	FA890315D0007, D.O. FA8903-19-F-0027	Report Date	28 JUN 2023
QV Engineer	(b) (6)		

VALIDATION

Source	PDF Page No.	Facility Geographic Area	Location Reference
EXWC	N/A	Tank Gallery	(b) (3) (A)
Repair Description	For JP-5 piping between the Sectional valves near (b) (3) (A) Some support frames bear the JP-5 piping directly. Install low friction slide pads between the pipe and the frames. Assume (b) (3) (A) slide pads are required.		Source Contract Reference N3943020D2225 N3943021F4207
Description of Contractor QC Method(s) Used	Methods outlined in detail in CQCP.		Contractor QC Records Reviewed CQCP and Daily Reports
Description of QA Validation and Observations	Government Quality Assurance is documented by the QSR's in the daily CQC reports using NAVFAC Form 4296/2. Visually inspected completed installation; matched completed construction against design and material submittals. Reviewed NDE reports. JTF-RH secondary QA and 3rd Party QV completed. JTF-RH QV visually inspected repairs and reviewed contractor QC documentation (Work Plan, submittals, daily reports). Final acceptance by government. Date: 14 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 installed Teflon wear pads on Pipe Supports (b) (3) (A) to provide a mating surface between the saddle and pipe. This repair item was executed in conjunction with repairs 232 (provide shims) and 039 (reseat saddles), providing comprehensive repairs to the 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 28 JUN 2023	

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed Teflon wear pads on saddles to ensure contact with the JP-5 piping at (b) (3) (A)

(b) (3) (A)

Contractor installed Teflon wear pads on saddles to ensure contact with the JP-5 piping at (b) (3) (A)

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed Teflon wear pads on saddles to ensure contact with the JP-5 piping at (b) (3) (A)

(b) (3) (A)

Contractor installed Teflon wear pads on saddles to ensure contact with the JP-5 piping at (b) (3) (A)

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed Teflon wear pads on saddles to ensure contact with the JP-5 piping at (b) (3) (A)

(b) (3) (A)

Contractor installed Teflon wear pads on saddles to ensure contact with the JP-5 piping at (b) (3) (A)

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed Teflon wear pads on new saddles to ensure contact with the JP-5 piping at (b) (3) (A)

(b) (3) (A)

Contractor installed Teflon wear pads on saddles to ensure contact with the JP-5 piping at (b) (3) (A)

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Contractor installed Teflon wear pads on saddles to ensure contact with the JP-5 piping at (b) (3) (A)

(b) (3) (A)

Contractor installed Teflon wear pads on saddles to ensure contact with the JP-5 piping at (b) (3) (A)