Markings Removed

	QUALITY VALIDATION (QV) REPORT									
	Red Hill Bulk Fuel Storage Facility Defuel									
Validation Firm HDR Environmental, Operations			ns and Construction, Inc.			Repair No.	36	95		
	Address	9781 S. M	leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	F24.002	
Co	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	29 MAR 2	023
Q	V Engineer	(b) (6)		Phone (b) (6	3)	Email	(b) (6)	
					VALIDATION					9
Sou	irce	P	DF Page N	o.	Facility Geograph	ic Area		Location	Reference	
NDAA		40			RHTF		Tanks 1-6	3		
Tank sample piping open to the atmosphere. If the isolar valves were bumped open, this could lead to fuel spill. Repair Description Provide threaded caps on tank sample piping downstreas isolation valves.			oill.	Source Contract Reference Service Order 6			1F0025			
Description of Contractor QC Method(s) Used			outlined in	lined in detail in QCP.			Contractor QC Records Reviewed		QCP and Reports.	Daily
Vali	otion of QA idation and bservations		outlined in		Date: 17 FEB 2023					
	Rework	Needed	, ,		Photo Record Attached	i	Repair	Work Vali	dated as Cor	mplete
0	Yes	•	No		See Page 2.		•	Yes	0	No
Comments Threaded caps on tank sample piping(b) (3) (A) nstalled.										
	CERTIFICATION									
		work validate		QV ENG	GINEER SIGNATURE (b) (6)					
report was pe report is true.		estantiated and	d this		DATE	29 MAR 2	29 MAR 2023			

				QUALI [*]	TY VALIDATION (QV) REPO	ORT			
				Red Hill B	ulk Fuel Storage Fac	ility Defue	el			
Valida	ation Firm	HDR Env	ironmenta	I, Operatio	ns and Construction,	Inc.		Repair No.	38	
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112			F24.004	
Cor	ntract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	29 MAR 2	023
QV	Engineer	(b) (e	6)		Phone (b) (6	5)	Email	(h) (6	3)	
					VALIDATION					
Sour	ce	F	DF Page N	lo.	Facility Geograph	ic Area		Location	Reference	
NDAA		40			RHTF		Tanks 2,	3, 4, 6, 15	& 16	
Repair D	escription	The end of threaded p (b) (3) (A	the valves lug on ball	equipped with a (b) (3) (A) is not secured with a pipe plug. Provide valve drain. Tank 2 – (b) (3) (A) DRBs: Tank 3 – (A) DRBs: Tank 6 – (b) (3) (A) DRBs: Tank 6 – (b) (3) (A) DRBs: Tank 16 – (b) (3) (A) DRBS: Tank 16 – (b) (3) (A)		Sour	ce Contract Reference	Service Order 650		
Description of Contractor QC Method(s) Used					Contractor QC Records Reviewed		Daily			
Valid	ion of QA lation and servations		outlined in		Date: 17 FEB 2023					
	Rework	Needed			Photo Record Attached		Repair	r Work Vali	idated as Complete	
0	Yes	\odot	No		See Page 2.		\odot	Yes	0	No
hereby certify	y that repair		ed in this		CERTIFICATION INEER SIGNATURE	(b) (6)			
hereby certify that repair work validated in this eport was personally substantiated and this eport is true.								2010		

	QUALITY VALIDATION (QV) REPORT									
	Red Hill Bulk Fuel Storage Facility Defuel									
Vali	Validation Firm HDR Environmental, Operations and Construction, Inc.				Inc.		Repair No.	52		
	Address	9781 S. M	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	F24.039	
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	20 MAR 2	.023
Q	V Engineer	(b) (6)		Phone (b) (6)	Email	/b \ //	3)	
			,		VALIDATION					
Sou	ırce	P	DF Page N	o.	Facility Geograph	ic Area		Location	Reference	
NDAA		43			UGPH		Various			
It was noted that several of the pressure transducers are past due for calibration. (Calibration due date of 10/23/18). Repair Description Perform calibration of all temperature and pressure devices in the UGPH.			/23/18).	SP4702-21-F-0013 Source Contract Reference			-F-0013			
Description of Contractor QC Method(s) Used Use of written Inspection Test Procedure and applicable calibration instruments.			cable	Contractor QC Records Reviewed						
Val	otion of QA idation and bservations	JTF-RH/C	QV team 06	6 MAR 23.		3 NOV 22 s	site visit. Ir	ndependen	tly checked	d by
			otance by go		Date: 21 SEP 2022		Repair Work Validated as Complete			
0	Yes	Needed	No		Photo Record Attached See Page 2.	1	Repair	Yes	Contacted as Con	No
Comments Calibration completed by (b) (4) CERTIFICATION										
I hereby cert	ify that repair	work validate	ed in this	QV ENG	INEER SIGNATURE	(b) (6)			
report was p report is true		stantiated and	d this		DATE	20 MAR 2				

(b) (3) (A) ue 9/21/2023

(b) (3) (A)



Client: DLA			Site:	NAVSUP FLC Pea
Test Equipment Required:	1. 2. 3. 4. 5. 6. 7. 8. 9.	Hydraulic/Pneumatic Hand Pump Fluke 725 Tester Fluke 700P07 Pressure Module Teflon tape Slop Buckets small screwdriver hand tools 3-way manifold P&ID's Manufacturer O&M Manual		
		Manufacturer	SIE	EMENS
Device:		Model Number:	7N	IF4033-1E10-1NC7-Z
Pressure Indicating Transmitter		Serial Number (if applicable):	IX-	F318-9039432
		Tag Number:	(b)	(3) (A)
Objective:		Inspect PIT. Verify field calibration	and re-ca	alibrate if needed.

Test Set-up:	2. Coordinate all testing with site Operations personnel.	
Procedure:		
1	Trace the conduit to and from the device to the nearest junction box or RIU/TIU/PCP (I.e., visible, w/in similar classification area, on associated equipment pad, etc.), and locate all associated conduit fittings. (I.e., EYSs, GUAs, couplings) If applicable, inspect MI cable for general condition, tightness, does not exceed bend radius, and has a drip/expansion loop. Ensure all unused conduit entries on the PIT have an explosion-proof plug installed. • Document any conduit, conduit fittings, and/or MI cable for damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
2	Trace all stainless steel process tubing from the PIT to the pipeline. Inspect all associated valves, couplings and fittings for fuel leaks. Check for proper infrastructural support of the tubing (tubing straps, supports) to ensure tubing is not sagging or unsupported. Document any stainless steel tubing, valves, and fittings damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
3	As applicable, remove the access cover/threaded plug of the conduit seal to verify the seal is filled with hardened sealing compound to the extent that all electrical conductors and conduit penetrations to and from the seal are encased: • If sealed, document findings in COMMENTS section of this Inspection Test Procedure, and reinstall plug. • If NOT sealed, document findings in COMMENTS section of this Inspection Test	√



	B. I. I. II. III. CORRECTIVE ACTION TROUBLE TISSUE!	1
	Procedure, reinstall plug, and call in a CORRECTIVE ACTION TROUBLE TICKET for necessary corrective actions	
4	Verify barcode/AFHE device tag labeling are correct and intact.	✓
5	Visually inspect the PIT for corrosion and general condition. Make notes in the comments as to the condition of the PIT. Ensure the PIT LCD contrast is clear, legible, and is free of condensation or dust.	✓
6	Open electrical enclosure and inspect & tighten all electrical connections. Replace worn or damaged parts if required. Ensure all cables and wires are labeled correctly.	✓
7	Close PIT Isolation valve.	✓
8	If PIT is equipped with a manifold, skip to step 9. Otherwise carefully remove the plug in the tee located between the PIT and the isolation valve.	✓
9	Connect the test manifold to the tee using appropriate piping or tubing connections.	✓
10	Connect the hand pump and the Fluke 700P07 Pressure Module to the manifold.	✓
11	Connect the Fluke 700P07 Pressure Module to the Fluke 725 Calibrator.	✓
12	Start pumping the hand pump and stop pumping when pressure equals 0%, 50%, and 100% of the range. Record the pressure reading of the Fluke 725 and PIT local indicator below. O% Equivalent PSIG/Inch Hg. i.e. low end of equipment range. O% PIT Reading O% Calibrator Reading So% Equivalent PSIG/Inch Hg. i.e. mid-point of equipment range. So% PIT Reading O% Calibrator Reading Inch Hg. i.e. high end of equipment range. O% PIT Reading O% PIT Reading O% PIT Reading O% Calibrator Reading	(b) (3) (A)
13	Using the hand pump, pump the pressure to trigger the High and High-High alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	V
14	Using the hand pump, create a vacuum to trigger the Low and Low-Low alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
15	Use the Calibration Check Forms to verify the deviation is within tolerance.	√
16	Fill out and affix the new calibration/inspection tag/sticker to the appropriate device with the appropriate tag number, date completed, next due date, and technician's initials.	✓
17	Verify all alarms and PIT graphics are normalized and all PIT events and alarms were properly logged to the ARG.	√



Comments:			
Acceptance Criteria			Accept
All steps checked a	bove. Accept or Reject (Choose which applies.)		Иссорг
Signature:	(b) (6)		
Maintenance Tech	nician:		
(b) (6)		Date: (DDMMMYYYY): 16-Sep-2022	_



Client: DLA			Site:	NAVSUP FLC Pea
Test Equipment Required:	1. 2. 3. 4. 5. 6. 7. 8. 9.	Hydraulic/Pneumatic Hand Pump Fluke 725 Tester Fluke 700P07 Pressure Module Teflon tape Slop Buckets small screwdriver hand tools 3-way manifold P&ID's Manufacturer O&M Manual		
		Manufacturer	SIE	EMENS
Device:		Model Number:	7N	IF4033-1E10-1NC7-Z
Pressure Indicating Transmitter		Serial Number (if applicable):	IX-	F318-9039434
		Tag Number:	(b) (6)
Objective:		Inspect PIT. Verify field calibration	and re-ca	alibrate if needed.

Test Set-up:	2. Coordinate all testing with site Operations personnel.	
Procedure:		
1	Trace the conduit to and from the device to the nearest junction box or RIU/TIU/PCP (I.e., visible, w/in similar classification area, on associated equipment pad, etc.), and locate all associated conduit fittings. (I.e., EYSs, GUAs, couplings) If applicable, inspect MI cable for general condition, tightness, does not exceed bend radius, and has a drip/expansion loop. Ensure all unused conduit entries on the PIT have an explosion-proof plug installed. • Document any conduit, conduit fittings, and/or MI cable for damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	√
2	<u>Trace</u> all stainless steel process tubing from the PIT to the pipeline. Inspect all associated valves, couplings and fittings for fuel leaks. Check for proper infrastructural support of the tubing (tubing straps, supports) to ensure tubing is not sagging or unsupported. <u>Document</u> any stainless steel tubing, valves, and fittings damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
3	As applicable, remove the access cover/threaded plug of the conduit seal to verify the seal is filled with hardened sealing compound to the extent that all electrical conductors and conduit penetrations to and from the seal are encased: • If sealed, document findings in COMMENTS section of this Inspection Test Procedure, and reinstall plug. • If NOT sealed, document findings in COMMENTS section of this Inspection Test	√



	D	r
	Procedure, reinstall plug, and call in a CORRECTIVE ACTION TROUBLE TICKET for necessary corrective actions	
4	Verify barcode/AFHE device tag labeling are correct and intact.	✓
5	Visually inspect the PIT for corrosion and general condition. Make notes in the comments as to the condition of the PIT. Ensure the PIT LCD contrast is clear, legible, and is free of condensation or dust.	✓
6	Open electrical enclosure and inspect & tighten all electrical connections. Replace worn or damaged parts if required. Ensure all cables and wires are labeled correctly.	✓
7	Close PIT Isolation valve.	✓
8	If PIT is equipped with a manifold, skip to step 9. Otherwise carefully remove the plug in the tee located between the PIT and the isolation valve.	✓
9	Connect the test manifold to the tee using appropriate piping or tubing connections.	✓
10	Connect the hand pump and the Fluke 700P07 Pressure Module to the manifold.	✓
11	Connect the Fluke 700P07 Pressure Module to the Fluke 725 Calibrator.	✓
12	Start pumping the hand pump and stop pumping when pressure equals 0%, 50%, and 100% of the range. Record the pressure reading of the Fluke 725 and PIT local indicator below. • 0% Equivalent PSIG/Inch Hg. i.e. low end of equipment range. • 0% PIT Reading • 0% Calibrator Reading • 50% Equivalent PSIG/Inch Hg. i.e. mid-point of equipment range. • 50% PIT Reading • 50% Calibrator Reading • 100% Equivalent PSIG/Inch Hg. i.e. high end of equipment range • 100% PIT Reading • 100% Calibrator Reading	(b) (3) (A)
13	Using the hand pump, pump the pressure to trigger the High and High-High alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	√
14	Using the hand pump, create a vacuum to trigger the Low and Low-Low alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
15	Use the Calibration Check Forms to verify the deviation is within tolerance.	✓
16	Fill out and affix the new calibration/inspection tag/sticker to the appropriate device with the appropriate tag number, date completed, next due date, and technician's initials.	✓
17	Verify all alarms and PIT graphics are normalized and all PIT events and alarms were properly logged to the ARG.	✓



Comments:				
Acceptance Criteri	a:			Accept
All steps checked a	bove. Accept or Reject (Choose which applies.)			7 косорт
Signature:	(b) (6)			
Maintenance Tech	nnician:			
(b) (6)		Date: (DDMMMYYYY):	16-Sep-2022	_



Client: DLA			Site:	NAVSUP FLC Pea
Test Equipment Required:	1. 2. 3. 4. 5. 6. 7. 8. 9.	Hydraulic/Pneumatic Hand Pump Fluke 725 Tester Fluke 700P07 Pressure Module Teflon tape Slop Buckets small screwdriver hand tools 3-way manifold P&ID's Manufacturer O&M Manual		
		Manufacturer	SIE	EMENS
Device:		Model Number:	7N	IF4033-1EA10-1NC7-Z
Pressure Indicating Transmitter		Serial Number (if applicable):	IX-	F318-9039436
		Tag Number:	(b)	(3) (A)
Objective:		Inspect PIT. Verify field calibration	and re-ca	alibrate if needed.

Test Set-up:	2. Coordinate all testing with site Operations personnel.									
Procedure:										
1	Trace the conduit to and from the device to the nearest junction box or RIU/TIU/PCP (I.e., visible, w/in similar classification area, on associated equipment pad, etc.), and locate all associated conduit fittings. (I.e., EYSs, GUAs, couplings) If applicable, inspect MI cable for general condition, tightness, does not exceed bend radius, and has a drip/expansion loop. Ensure all unused conduit entries on the PIT have an explosion-proof plug installed. • Document any conduit, conduit fittings, and/or MI cable for damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	√								
2	<u>Trace</u> all stainless steel process tubing from the PIT to the pipeline. Inspect all associated valves, couplings and fittings for fuel leaks. Check for proper infrastructural support of the tubing (tubing straps, supports) to ensure tubing is not sagging or unsupported. <u>Document</u> any stainless steel tubing, valves, and fittings damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓								
3	As applicable, remove the access cover/threaded plug of the conduit seal to verify the seal is filled with hardened sealing compound to the extent that all electrical conductors and conduit penetrations to and from the seal are encased: • If sealed, document findings in COMMENTS section of this Inspection Test Procedure, and reinstall plug. • If NOT sealed, document findings in COMMENTS section of this Inspection Test	√								



	D. I. I. II. III. CORRECTIVE ACTION TO CHOICE TO COMP	1
	Procedure, reinstall plug, and call in a CORRECTIVE ACTION TROUBLE TICKET for necessary corrective actions	
4	Verify barcode/AFHE device tag labeling are correct and intact.	✓
5	Visually inspect the PIT for corrosion and general condition. Make notes in the comments as to the condition of the PIT. Ensure the PIT LCD contrast is clear, legible, and is free of condensation or dust.	✓
6	Open electrical enclosure and inspect & tighten all electrical connections. Replace worn or damaged parts if required. Ensure all cables and wires are labeled correctly.	✓
7	Close PIT Isolation valve.	✓
8	If PIT is equipped with a manifold, skip to step 9. Otherwise carefully remove the plug in the tee located between the PIT and the isolation valve.	✓
9	Connect the test manifold to the tee using appropriate piping or tubing connections.	✓
10	Connect the hand pump and the Fluke 700P07 Pressure Module to the manifold.	✓
11	Connect the Fluke 700P07 Pressure Module to the Fluke 725 Calibrator.	✓
12	Start pumping the hand pump and stop pumping when pressure equals 0%, 50%, and 100% of the range. Record the pressure reading of the Fluke 725 and PIT local indicator below. O% Equivalent PSIG/Inch Hg. i.e. low end of equipment range. O% PIT Reading O% Calibrator Reading So% Equivalent PSIG/Inch Hg. i.e. mid-point of equipment range. So% PIT Reading O% Calibrator Reading O% Calibrator Reading O% Calibrator Reading O% PIT Reading O% PIT Reading O% PIT Reading O% Calibrator Reading	(b) (3) (A)
13	Using the hand pump, pump the pressure to trigger the High and High-High alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
14	Using the hand pump, create a vacuum to trigger the Low and Low-Low alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
15	Use the Calibration Check Forms to verify the deviation is within tolerance.	✓
16	Fill out and affix the new calibration/inspection tag/sticker to the appropriate device with the appropriate tag number, date completed, next due date, and technician's initials.	✓
17	Verify all alarms and PIT graphics are normalized and all PIT events and alarms were properly logged to the ARG.	√



Comments:	(b) (3) (A)			
Acceptance Criteri				Accept
All steps checked a	bove. Accept or Reject (Choose which applies.)			7 косорт
Signature:	(b) (6)			
Maintenance Tech	nnician:			-
(b) (6)		Date: (DDMMMYYYY):	21-Sep-2022	



Client: DLA			Site:	NAVSUP FLC Pea
Test Equipment Required:	1. 2. 3. 4. 5. 6. 7. 8. 9.	Hydraulic/Pneumatic Hand Pump Fluke 725 Tester Fluke 700P07 Pressure Module Teflon tape Slop Buckets small screwdriver hand tools 3-way manifold P&ID's Manufacturer O&M Manual		
		Manufacturer	SII	EMENS
Device:		Model Number:	7N	1F4033-1EA10-1NC7-Z
Pressure Indicating Transmitter		Serial Number (if applicable):	IX	-F318-9039438
		Tag Number:	(b)	(3) (A)
Objective:	Inspect PIT. Verify field calibration	and re-c	alibrate if needed.	

Test Set-up:	2. Coordinate all testing with site Operations personnel.	
Procedure:		
1	Trace the conduit to and from the device to the nearest junction box or RIU/TIU/PCP (I.e., visible, w/in similar classification area, on associated equipment pad, etc.), and locate all associated conduit fittings. (I.e., EYSs, GUAs, couplings) If applicable, inspect MI cable for general condition, tightness, does not exceed bend radius, and has a drip/expansion loop. Ensure all unused conduit entries on the PIT have an explosion-proof plug installed. • Document any conduit, conduit fittings, and/or MI cable for damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	√
2	Trace all stainless steel process tubing from the PIT to the pipeline. Inspect all associated valves, couplings and fittings for fuel leaks. Check for proper infrastructural support of the tubing (tubing straps, supports) to ensure tubing is not sagging or unsupported. Document any stainless steel tubing, valves, and fittings damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
3	As applicable, remove the access cover/threaded plug of the conduit seal to verify the seal is filled with hardened sealing compound to the extent that all electrical conductors and conduit penetrations to and from the seal are encased: • If sealed, document findings in COMMENTS section of this Inspection Test Procedure, and reinstall plug. • If NOT sealed, document findings in COMMENTS section of this Inspection Test	✓



	B I ' I II I II' CORRECTIVE ACTION TROUBLE TISSUE !	r
	Procedure, reinstall plug, and call in a CORRECTIVE ACTION TROUBLE TICKET for necessary corrective actions	
4	Verify barcode/AFHE device tag labeling are correct and intact.	✓
5	Visually inspect the PIT for corrosion and general condition. Make notes in the comments as to the condition of the PIT. Ensure the PIT LCD contrast is clear, legible, and is free of condensation or dust.	✓
6	Open electrical enclosure and inspect & tighten all electrical connections. Replace worn or damaged parts if required. Ensure all cables and wires are labeled correctly.	✓
7	Close PIT Isolation valve.	✓
8	If PIT is equipped with a manifold, skip to step 9. Otherwise carefully remove the plug in the tee located between the PIT and the isolation valve.	✓
9	Connect the test manifold to the tee using appropriate piping or tubing connections.	✓
10	Connect the hand pump and the Fluke 700P07 Pressure Module to the manifold.	✓
11	Connect the Fluke 700P07 Pressure Module to the Fluke 725 Calibrator.	✓
12	Start pumping the hand pump and stop pumping when pressure equals 0%, 50%, and 100% of the range. Record the pressure reading of the Fluke 725 and PIT local indicator below. O% Equivalent PSIG/Inch Hg. i.e. low end of equipment range. O% PIT Reading O% Calibrator Reading Fow Equivalent PSIG/Inch Hg. i.e. mid-point of equipment range. So% PIT Reading OM Calibrator Reading OM Calibrator Reading OM Calibrator Reading OM Equivalent PSIG/Inch Hg. i.e. high end of equipment range OM PIT Reading OM Calibrator Reading	(b) (3) (A)
13	Using the hand pump, pump the pressure to trigger the High and High-High alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
14	Using the hand pump, create a vacuum to trigger the Low and Low-Low alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
15	Use the Calibration Check Forms to verify the deviation is within tolerance.	√
16	Fill out and affix the new calibration/inspection tag/sticker to the appropriate device with the appropriate tag number, date completed, next due date, and technician's initials.	✓
17	Verify all alarms and PIT graphics are normalized and all PIT events and alarms were properly logged to the ARG.	√



Comments:	(b) (3) (A)			
Acceptance Criteri				Accept
All steps checked a	bove. Accept or Reject (Choose which applies.)			7 косорт
Signature:	(b) (6)			
Maintenance Tech	nnician:			-
(b) (6)		Date: (DDMMMYYYY): 21-Sep-202	22	_

				QUALI	TY VALIDATION (QV) REPO	ORT					
	Red Hill Bulk Fuel Storage Facility Defuel											
Vali	dation Firm	HDR Env	ironmental	, Operatio		Repair No.	80					
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	JP5.003			
C	Contract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	29 MAR 2	2023		
Q	V Engineer	(b) (6	5)		Phone (b) (6	5)	Email	/b \ //	6)			
	,				VALIDATION							
Son	urce	I	PDF Page N	o.	Facility Geograph	ic Area		Location	Reference			
NDAA		47			RHTF		Tanks 7,	8, 9, 10, 11	1, 12, 16 &	20		
Repair	Description	Tank sample piping (b) (3) (A) are open to the atmosphere. If the isolation valves were to be bumped or inadvertently forced open, this could lead to an accidental fuel spill. Provide threaded caps on tank sample piping (b) (3) (A) 47QSHA18D0 W912DY21F0 Service Order						21F0025				
Cor	escription of ntractor QC nod(s) Used	Methods outlined in detail in QCP. Contractor Records Review						~ ~	QCP and Reports.	Daily		
Val	ption of QA lidation and observations		outlined in	QASP.								
			otance by go	overnment.	Date: 17 FEB 2023							
0	Yes	Needed	No		Photo Record Attached See Page 2.	l	Repair	Work Valid	dated as Co	mplete No		
Comments Threaded caps on tank sample piping downstream of isolation valves installed. CERTIFICATION I hereby certify that repair work validated in this report was personally substantiated and this report is true. QV ENGINEER SIGNATURE DATE 29 MAR 2023												

	QUALITY VALIDATION (QV) REPORT											
	Red Hill Bulk Fuel Storage Facility Defuel											
Vali	dation Firm	HDR Env	ironmental	, Operatio	ns and Construction,	Inc.		Repair No.	81	97		
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	JP5.005	30		
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	29 MAR 2	023		
Q	V Engineer	(b) (6	S)		Phone (b) (6)	Email	(h) $(g$	3)			
					VALIDATION					2		
Sou	urce	F	DF Page N	0.	Facility Geograph	ic Area		Location	Reference			
NDAA		47	-		RHTF		Tank 16					
Repair l	Description	HPV on Tank 16 iet fuel piping (b) (3) (A) (b) (3) (A) is missing a threaded plug. Some fuel was noted inside the valve body. Provide threaded plug on high point vent. 47QSHA18DO W912DY21F0 Service Order							1F0025			
Cor	scription of ntractor QC nod(s) Used	Contractor QC Records Reviewed							QCP and Reports.	Daily		
Val	otion of QA idation and bservations		outlined in		Date: 17 FEB 2023							
	Rework	Needed	suries by ge		Photo Record Attached	ı	Repair	Work Vali	dated as Cor	mplete		
0	Yes	•	No		See Page 2.		•	Yes	0	No		
Comments Threaded plug on HPV, Tank 16 jet fuel piping(b) (3) (A) installed.												
					CERTIFICATION							
		work validate		QV ENG	INEER SIGNATURE	(b) ((6)					
report is true		Stantiated all	a ano		DATE	29 MAR 2	2023					

QUALITY VALIDATION (QV) REPORT										
			Red Hill B	ulk Fuel Storage Fac	ility Defue	el				
on Firm	HDR Env	ironmenta	, Operatio	ns and Construction,	Inc.		DESCRIPTION 100 TO 100	82		
Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112			JP5.006		
ract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report	29 MAR 2	023	
ngineer	(b) (6)		Phone (b) (6	3)	Email	(b) (6)		
			4	VALIDATION						
	F	PDF Page N	lo.	Facility Geograph	ic Area		Location	Reference		
	47			RHTF		Tanks 7-	10			
The DBB valves are equipped with a drain valve in lieu of a plug. The end of the valves is not secured with a pipe plug. Install plugs. Tank 7 – (b) (3) (A) DBBs; Tank 8 – (b) (3) (A) DBB; Tank 9 – (b) (3) (A) DBB; Tank 10 – (b)						47QSHA1 W912DY2 Service O	1F0025			
Description of Contractor QC Method(s) Used				utlined in detail in QCP. Contractor QC Records Reviewed QCP and Reports.					Daily	
n of QA tion and rvations	Methods	outlined in	QASP.							
		otance by go					1			
Yes	Needed	No		See Page 2.	1	Repair	Yes	dated as Cor	No	
ug on DI	BB valve ir	nstalled.		CERTIFICATION						
	Address Fact No. Ingineer Cription Officion of QA In of QA In of QA In on and In or an	Address 9781 S. Marct No. FA89031: Ingineer (b) (47 The DBB plug. The Install plu	PDF Page N Address 9781 S. Meridian Bl Fact No. FA890315D0007, D Ingineer (b) (6) PDF Page N 47 The DBB valves are plug. The end of the Install plugs. Tank in DBB; Tank 9 — (b) (c) Methods outlined in the ption of etor QC s) Used Methods outlined in the ption of etor QC s) Used Methods outlined in the ption of etor QC s) Used Methods outlined in the ption of etor QC s) Used	PDF Page No. The DBB valves are equipped plug. The end of the valves is Install plugs. Tank 7 – (b) (3) DBB; Tank 9 – (b) (3) (A) DBB; Tank 9 – (b) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	Phone (D) (6) Phone (D) (6) Phone (D) (6) Phone (D) (6) VALIDATION PDF Page No. Facility Geograph Address (Page No. Facility Geograph Property (Page No. Facility Geograph Facil	Address 9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112 act No. FA890315D0007, D.O. FA8903-19-F-0027 Ingineer (b) (6) Phone (b) (6) VALIDATION PDF Page No. Facility Geographic Area 47 RHTF The DBB valves are equipped with a drain valve in lieu of a plug. The end of the valves is not secured with a pipe plug. Install plugs. Tank 7 – (b) (3) (A) DBBs; Tank 8 – (b) (3) (A) DBB; Tank 10 – (b) (3) (A) DBB; Tank 10 – (b) (3) (A) DBB Methods outlined in detail in QCP. Methods outlined in QASP. Methods outlined in QASP. Methods outlined in QASP. Final acceptance by government. Date: 17 FEB 2023 Rework Needed Photo Record Attached Yes No See Page 2.	Address 9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112 Pact No. FA890315D0007, D.O. FA8903-19-F-0027 (b) (6) Phone (b) (6) Email VALIDATION PDF Page No. Facility Geographic Area 47 RHTF Tanks 7- The DBB valves are equipped with a drain valve in lieu of a plug. The end of the valves is not secured with a pipe plug. Install plugs. Tank 7 – (b) (3) (A) DBB; Tank 8 – (b) (3) (A) DBB; Tank 8 – (b) (3) (A) DBB; Tank 8 – (b) (3) (A) DBB; Tank 10 – (b) (3) (A) BB Methods outlined in detail in QCP. Correction of otor QC s) Used Methods outlined in QASP. Methods outlined in QASP. Methods outlined in QASP. Final acceptance by government. Date: 17 FEB 2023 Rework Needed Photo Record Attached Repair Yes No See Page 2.	Por Firm HDR Environmental, Operations and Construction, Inc. Repair ID Repair ID Report Date Report Date	Address 9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112 Repair No. P5890315D0007, D.O. FA8903-19-F-0027 Report Date 29 MAR 2 Report Date 29 MAR	

	QUALITY VALIDATION (QV) REPORT										
]	Red Hill B	ulk Fuel Storage Fac	ility Defue	l .				
Vali	dation Firm	HDR Env	ironmental	, Operatio	ns and Construction,	Inc.		Repair No.	083		
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	JP5.014		
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	28 MAR 2	2023	
Q	V Engineer	(b) (d	6)		Phone (b) (6)	Email	(b) (6	3)		
VALIDATION											
Sor	urce	F	DF Page N	o.	Facility Geograph	ic Area		Location	Reference		
NDAA		48			Harbor Tunnel		(b) (3)) (A)			
Repair :	Description	One indication was observed approximately inches from setup on the (b) (3) (A) IP-5 pipeline. Remove pipe wrap and inspect the pipeline at these locations.						ce Contract Reference	N3943020 TO N3943021		
Cor	scription of ntractor QC nod(s) Used	100000000000000000000000000000000000000	work provid	ded.				ntractor QC s Reviewed	N/A		
Val	ption of QA lidation and bservations	Update:			ed EXWC - Comprehe Service Assessment	ensive Rep	air List Re	commenda	ations		
		Final accep	otance by go	overnment.	Date: 08 MAR 2023	1					
	Rework	Needed	200403		Photo Record Attached	l)	Work Vali	dated as Cor	mplete	
0	Yes	•	No		N/A		•	Yes	\circ	No	
Localized pipelines.	Comments Localized Fitness for Service (FFS) assessments were conducted at specific indications on Red Hill F-24 and JP-5 transfer pipelines. Selection of indications was limited to mechanical integrity principles under assumed service conditions, and leveraged previous integrity management work.										
0.50 2008 - 990					ecommendations / Pig	oeline Fitne	see for San	vice Asses	ement		
. COSTOTION	o. 2700	Jonipren	0.10176 116	Juli Liot I (CERTIFICATION			1.00 / 10000	o.nont		
I hereby cert	tify that repair	work validate	ed in this	QV ENG	INEER SIGNATURE	(b)	(6)				
	ersonally sub	stantiated an			DATE	28 MAR 2	'	\			



Naval Facilities Engineering Systems Command Engineering and Expeditionary Warfare Center 1000 23rd Avenue Port Hueneme, CA 93043 Red Hill Bulk Fuel Storage Facility
Pipeline Repairs for Defuel
08 Mar 2023

Comprehensive Repair List Recommendations Update: Pipeline Fitness for Service Assessment

Ref: (a) API Standard 570 Piping Inspection Code: In-service Inspection, Rating, Repair, and Alteration of Piping Systems, 4th Ed, Feb 2016

- (b) API Recommended Practice 1183 Assessment and Management of Pipeline Dents, 1st Ed, Errata 1, Jan 2021
- (c) API 579-1/ASME FFS-1 Fitness for Service, Dec 2021
- (d) NAVFAC EXWC HAR 2022-2301, 19 Oct 2022

Encl: (1) FFS New Repair Actionable Summary, 08Mar2023

(2) Comprehensive Repair List Table, 08Mar2023

Localized Fitness for Service (FFS) assessments were conducted at specific indications on Red Hill F-24 and JP-5 transfer pipelines. Selection of indications was limited to mechanical integrity principles under assumed service conditions, and leveraged previous integrity management work.

F-24 and JP-5 pipelines and pipe stands were also screened for concerns of mechanical and structural integrity using principles of API 570.

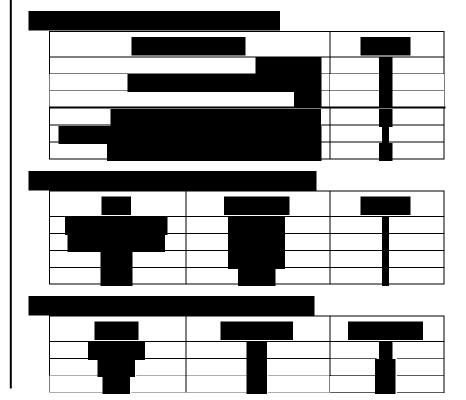
Enclosure (1) details FFS assessment results. Enclosure (2) provided details on RMMR-recommended actions.

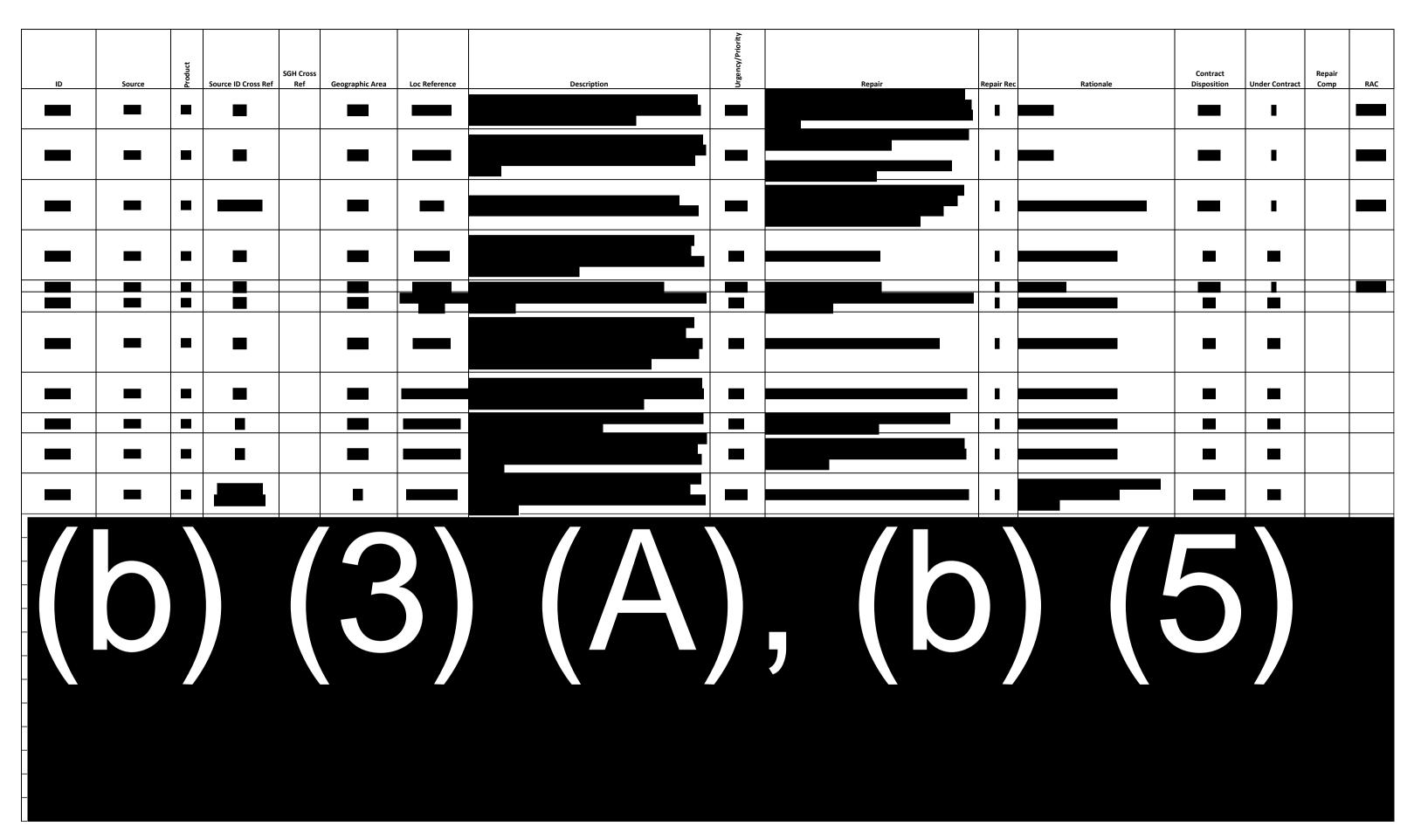
Assessment Assumptions

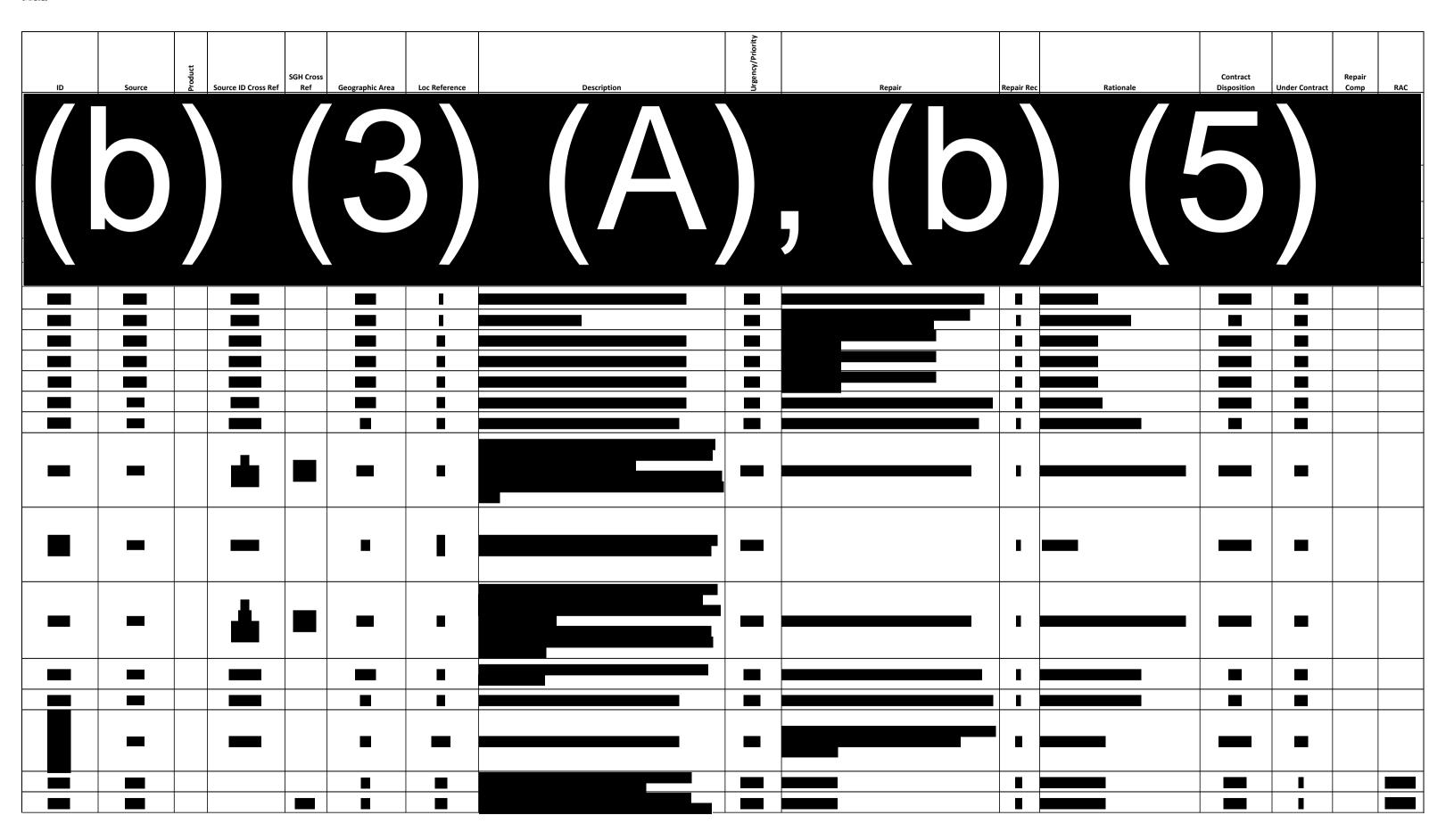
- 1. Service conditions of gravity transfer defuel
- 2. Assessment limits: Red Hill and the Underground Pumphouse
- 3. Indications cleared at lowest of Level 2 or Level 3 FFS
- 4. Temporary repairs acceptable for service conditions
- 5. Recommendations based on information known as of the date of this document. Should conditions change or further information become available, these recommendations are subject to change.

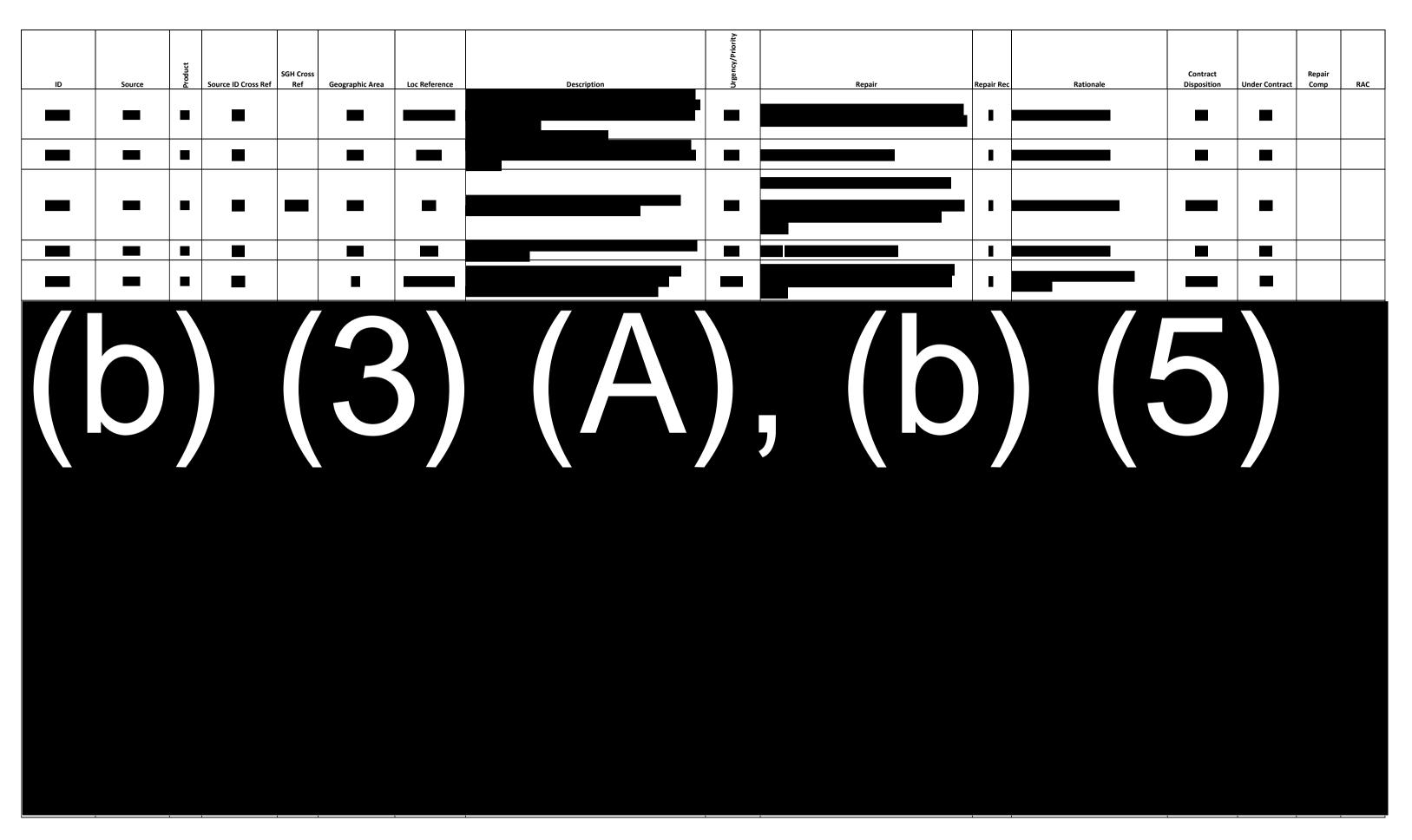
FFS Assessment Sources of Indications

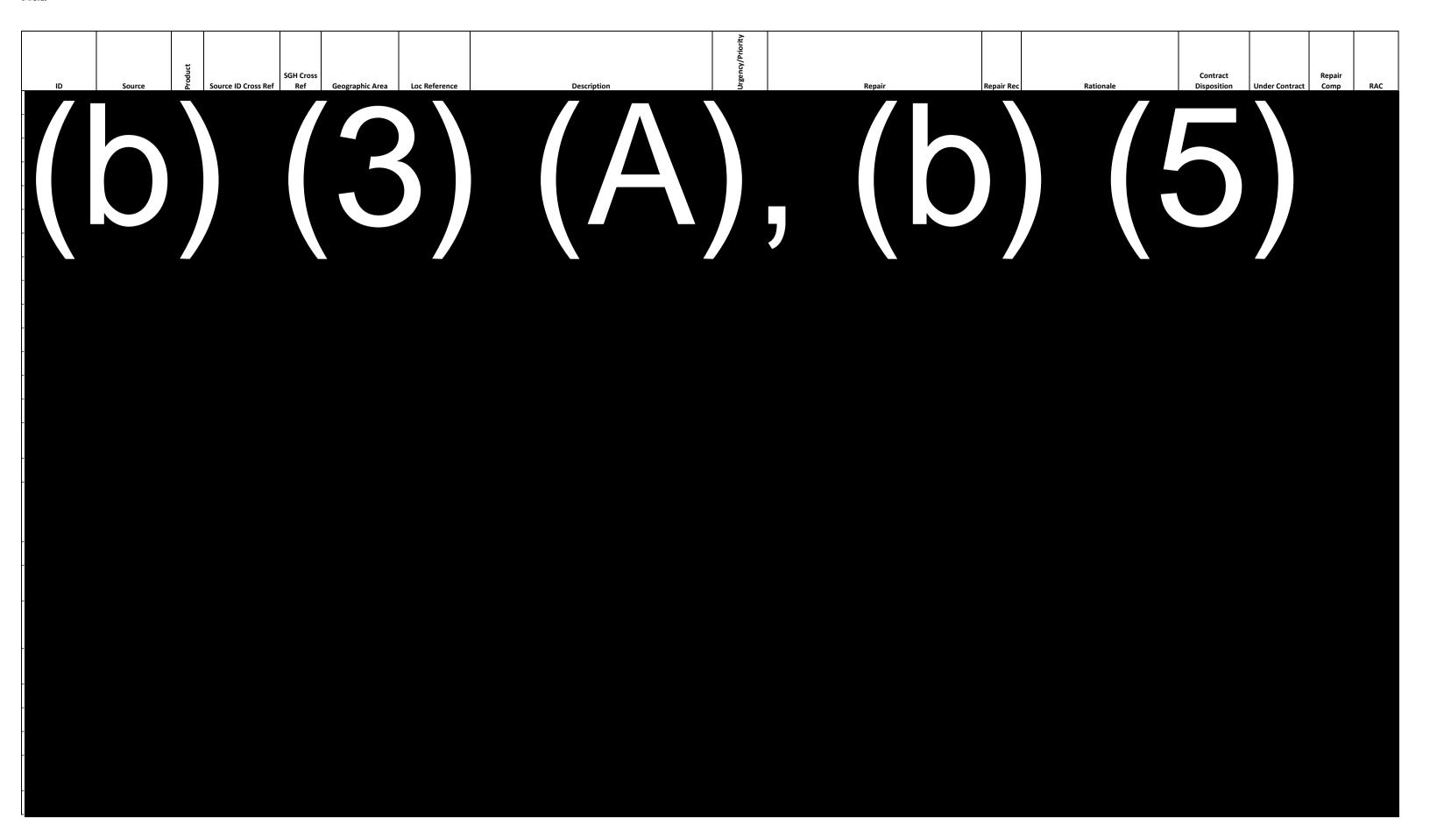
Source	Year	Title
EEI	2017	Pipeline Inline Inspection
EEI	2019	Update to FFS, (b) (3) (A) Pipelines
NDAA	2022	Fuel Transfer System Inspection Report
EEI	2022	Pipeline API Integrity Screening Survey











ID	Source	50 Source ID Cross Ref	SGH Cross f Ref Geographic Area Loc Reference	Description	Urgency/Priority	Repair Rec	Contract Rationale Disposition	Repair Under Contract Comp RAC
-	-							
-	-							
	-							
-	-							
					-			

QUALITY VALIDATION (QV) REPORT										
Red Hill Bulk Fuel Storage Facility Defuel										
Vali	dation Firm	HDR Environmental, Operations and Construction, Inc.					Repair No.	89		
	Address	9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112						Repair ID	JP5.047	
C	Contract No.	FA890315D0007, D.O. FA8903-19-F-0027						Report Date	20 MAR 2	2023
Q	V Engineer	(b) (6)		Phone (b) (6)		Email	/b) /	6)	
					VALIDATION					
So	urce	PDF Page No.			Facility Geograph	Location Reference				
NDAA		52			UGPH Various					
Repair Description		It was noted that several of the pressure transducers are past due for calibration. (Calibration due date of 10/23/18). Perform calibration of all temperature and pressure devices in the UGPH.					SP4702-21-F-001 Source Contract Reference		I-F-0013	
Co	Description of Contractor QC Method(s) Used						Inspection form. Contractor QC Records Reviewed		n form.	
Va	ption of QA lidation and observations						d by			
			ptance by go	overnment.	Date: 21 SEP 2022		l	*** * ** **		4000
0	Yes	Needed	No		Photo Record Attached See Page 2.	1	Repair	Yes	dated as Co	No
Comments Calibration completed by (b) (4)										
CERTIFICATION (b) (c)										
	tify that repair personally sub			QV ENG	INEER SIGNATURE	(b) (6)			
report is true					DATE 20 MAR 2		2023			

(b) (3) (A) n Due 9/21/2023

(b) (3) (A)

(b)(3)(A)



Client: DLA				NAVSUP FLC Pea	
Test Equipment Required:	1. 2. 3. 4. 5. 6. 7. 8. 9.	Hydraulic/Pneumatic Hand Pump Fluke 725 Tester Fluke 700P07 Pressure Module Teflon tape Slop Buckets small screwdriver hand tools 3-way manifold P&ID's Manufacturer O&M Manual			
		Manufacturer	SIE	EMENS	
Device:		Model Number:	7N	1F4033-1E10-1NC7-Z	
Pressure Indicating Transmitter		Serial Number (if applicable):	IX.	F318-9039428	
		Tag Number:	(b) (3) (A)	
Objective:		Inspect PIT. Verify field calibration and re-calibrate if needed.			

Test Set-up:	2. Coordinate all testing with site Operations personnel.	
Procedure:		
1	Trace the conduit to and from the device to the nearest junction box or RIU/TIU/PCP (I.e., visible, w/in similar classification area, on associated equipment pad, etc.), and locate all associated conduit fittings. (I.e., EYSs, GUAs, couplings) If applicable, inspect MI cable for general condition, tightness, does not exceed bend radius, and has a drip/expansion loop. Ensure all unused conduit entries on the PIT have an explosion-proof plug installed. • Document any conduit, conduit fittings, and/or MI cable for damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	√
2	Trace all stainless steel process tubing from the PIT to the pipeline. Inspect all associated valves, couplings and fittings for fuel leaks. Check for proper infrastructural support of the tubing (tubing straps, supports) to ensure tubing is not sagging or unsupported. Document any stainless steel tubing, valves, and fittings damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
3	As applicable, remove the access cover/threaded plug of the conduit seal to verify the seal is filled with hardened sealing compound to the extent that all electrical conductors and conduit penetrations to and from the seal are encased: • If sealed, document findings in COMMENTS section of this Inspection Test Procedure, and reinstall plug. • If NOT sealed, document findings in COMMENTS section of this Inspection Test	✓



	B I ' I II I II' CORRECTIVE ACTION TROUBLE TIETE	1
	Procedure, reinstall plug, and call in a CORRECTIVE ACTION TROUBLE TICKET for necessary corrective actions	
4	Verify barcode/AFHE device tag labeling are correct and intact.	✓
5	Visually inspect the PIT for corrosion and general condition. Make notes in the comments as to the condition of the PIT. Ensure the PIT LCD contrast is clear, legible, and is free of condensation or dust.	✓
6	Open electrical enclosure and inspect & tighten all electrical connections. Replace worn or damaged parts if required. Ensure all cables and wires are labeled correctly.	✓
7	Close PIT Isolation valve.	✓
8	If PIT is equipped with a manifold, skip to step 9. Otherwise carefully remove the plug in the tee located between the PIT and the isolation valve.	✓
9	Connect the test manifold to the tee using appropriate piping or tubing connections.	✓
10	Connect the hand pump and the Fluke 700P07 Pressure Module to the manifold.	✓
11	Connect the Fluke 700P07 Pressure Module to the Fluke 725 Calibrator.	✓
12	Start pumping the hand pump and stop pumping when pressure equals 0%, 50%, and 100% of the range. Record the pressure reading of the Fluke 725 and PIT local indicator below. O% Equivalent PSIG/Inch Hg. i.e. low end of equipment range. O% PIT Reading O% Calibrator Reading So% Equivalent PSIG/Inch Hg. i.e. mid-point of equipment range. So% PIT Reading O% Calibrator Reading O% Calibrator Reading O% Equivalent PSIG/Inch Hg. i.e. high end of equipment range O% PIT Reading O% PIT Reading O% Calibrator Reading	(b) (3) (A)
13	Using the hand pump, pump the pressure to trigger the High and High-High alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	V
14	Using the hand pump, create a vacuum to trigger the Low and Low-Low alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
15	Use the Calibration Check Forms to verify the deviation is within tolerance.	✓
16	Fill out and affix the new calibration/inspection tag/sticker to the appropriate device with the appropriate tag number, date completed, next due date, and technician's initials.	✓
17	Verify all alarms and PIT graphics are normalized and all PIT events and alarms were properly logged to the ARG.	✓



Comments:							
Acceptance Criteria:							
All steps checked a	bove. Accept or Reject (Choose which applies.)			Accept			
Signature:	(b) (6)						
Maintenance Technician:							
(b) (6)		Date: (DDMMMYYYY):	16-Sep-2022	_			



Client: DLA			Site:	NAVSUP FLC Pea
Test Equipment Required:	1. 2. 3. 4. 5. 6. 7. 8. 9.	Hydraulic/Pneumatic Hand Pump Fluke 725 Tester Fluke 700P07 Pressure Module Teflon tape Slop Buckets small screwdriver hand tools 3-way manifold P&ID's Manufacturer O&M Manual		
		Manufacturer	SIE	EMENS
Device:		Model Number:	7N	1F4033-1E10-1NC7-Z
Pressure Indicating Transmitter		Serial Number (if applicable): IX-F318-9039429		F318-9039429
		Tag Number:	(b)) (3) (A)
Objective: Inspect PIT. Verify field calibration		Inspect PIT. Verify field calibration	and re-c	alibrate if needed.

Test Set-up:	2. Coordinate all testing with site Operations personnel.	
Procedure:		
1	Trace the conduit to and from the device to the nearest junction box or RIU/TIU/PCP (I.e., visible, w/in similar classification area, on associated equipment pad, etc.), and locate all associated conduit fittings. (I.e., EYSs, GUAs, couplings) If applicable, inspect MI cable for general condition, tightness, does not exceed bend radius, and has a drip/expansion loop. Ensure all unused conduit entries on the PIT have an explosion-proof plug installed. • Document any conduit, conduit fittings, and/or MI cable for damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
2	Trace all stainless steel process tubing from the PIT to the pipeline. Inspect all associated valves, couplings and fittings for fuel leaks. Check for proper infrastructural support of the tubing (tubing straps, supports) to ensure tubing is not sagging or unsupported. Document any stainless steel tubing, valves, and fittings damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
3	As applicable, remove the access cover/threaded plug of the conduit seal to verify the seal is filled with hardened sealing compound to the extent that all electrical conductors and conduit penetrations to and from the seal are encased: • If sealed, document findings in COMMENTS section of this Inspection Test Procedure, and reinstall plug. • If NOT sealed, document findings in COMMENTS section of this Inspection Test	√



D	1
Procedure, reinstall plug, and call in a CORRECTIVE ACTION TROUBLE TICKET for necessary corrective actions	
Verify barcode/AFHE device tag labeling are correct and intact.	✓
Visually inspect the PIT for corrosion and general condition. Make notes in the comments as to the condition of the PIT. Ensure the PIT LCD contrast is clear, legible, and is free of condensation or dust.	✓
Open electrical enclosure and inspect & tighten all electrical connections. Replace worn or damaged parts if required. Ensure all cables and wires are labeled correctly.	✓
Close PIT Isolation valve.	✓
If PIT is equipped with a manifold, skip to step 9. Otherwise carefully remove the plug in the tee located between the PIT and the isolation valve.	✓
Connect the test manifold to the tee using appropriate piping or tubing connections.	✓
Connect the hand pump and the Fluke 700P07 Pressure Module to the manifold.	✓
Connect the Fluke 700P07 Pressure Module to the Fluke 725 Calibrator.	✓
Start pumping the hand pump and stop pumping when pressure equals 0%, 50%, and 100% of the range. Record the pressure reading of the Fluke 725 and PIT local indicator below. O% Equivalent PSIG/Inch Hg. i.e. low end of equipment range. O% PIT Reading O% Calibrator Reading So% Equivalent PSIG/Inch Hg. i.e. mid-point of equipment range. So% PIT Reading So% Calibrator Reading 100% Equivalent PSIG/Inch Hg. i.e. high end of equipment range 100% PIT Reading 100% Calibrator Reading	(b) (3) (A)
Using the hand pump, pump the pressure to trigger the High and High-High alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	V
Using the hand pump, create a vacuum to trigger the Low and Low-Low alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
Use the Calibration Check Forms to verify the deviation is within tolerance.	✓
Fill out and affix the new calibration/inspection tag/sticker to the appropriate device with the appropriate tag number, date completed, next due date, and technician's initials.	✓
Verify all alarms and PIT graphics are normalized and all PIT events and alarms were properly logged to the ARG.	✓
	Verify barcode/AFHE device tag labeling are correct and intact. Visually inspect the PIT for corrosion and general condition. Make notes in the comments as to the condition of the PIT. Ensure the PIT LCD contrast is clear, legible, and is free of condensation or dust. Open electrical enclosure and inspect & tighten all electrical connections. Replace worn or damaged parts if required. Ensure all cables and wires are labeled correctly. Close PIT Isolation valve. If PIT is equipped with a manifold, skip to step 9. Otherwise carefully remove the plug in the tee located between the PIT and the isolation valve. Connect the test manifold to the tee using appropriate piping or tubing connections. Connect the hand pump and the Fluke 700P07 Pressure Module to the manifold. Connect the Fluke 700P07 Pressure Module to the Fluke 725 Calibrator. Start pumping the hand pump and stop pumping when pressure equals 0%, 50%, and 100% of the range. Record the pressure reading of the Fluke 725 and PIT local indicator below. • 0% Equivalent PSIG/Inch Hg. i.e. low end of equipment range. • 0% PIT Reading • 50% Calibrator Reading • 50% Equivalent PSIG/Inch Hg. i.e. mid-point of equipment range. • 50% PIT Reading • 100% Equivalent PSIG/Inch Hg. i.e. high end of equipment range • 100% TIR Reading • 100% Calibrator Reading Using the hand pump, pump the pressure to trigger the High and High-High alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen. Using the hand pump, create a vacuum to trigger the Low and Low-Low alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen. Use the Calibration Check Forms to verify the deviation is within tolerance. Fill out and affix the new calibration/inspection tag/sticker to the appropriate device with the appropriate tag number, date comp



Comments:			
Acceptance Criteri	a:		Accept
All steps checked a	bove. Accept or Reject (Choose which applies.)		лесорг
Signature:	(b) (6)		
Maintenance Tech	nician:		
(b) (6)		Date: (DDMMMYYYY):16-Sep-20.	22



Client: DLA			Site:	NAVSUP FLC Pea
Test Equipment Required:	1. 2. 3. 4. 5. 6. 7. 8. 9.	Hydraulic/Pneumatic Hand Pump Fluke 725 Tester Fluke 700P07 Pressure Module Teflon tape Slop Buckets small screwdriver hand tools 3-way manifold P&ID's Manufacturer O&M Manual		
		Manufacturer	SIE	MENS
Device:		Model Number:	7M	F4033-1E10-1NC7-Z
Pressure Indicating Transmitter		Serial Number (if applicable): IX-F318-9039431		F318-9039431
		Tag Number:	(b)	(3) (A)
Objective: Inspect PIT. Verify field calibration		and re-ca	librate if needed.	

Test Set-up:	2. Coordinate all testing with site Operations personnel.	
Procedure:		
1	Trace the conduit to and from the device to the nearest junction box or RIU/TIU/PCP (I.e., visible, w/in similar classification area, on associated equipment pad, etc.), and locate all associated conduit fittings. (I.e., EYSs, GUAs, couplings) If applicable, inspect MI cable for general condition, tightness, does not exceed bend radius, and has a drip/expansion loop. Ensure all unused conduit entries on the PIT have an explosion-proof plug installed. • Document any conduit, conduit fittings, and/or MI cable for damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	√
2	<u>Trace</u> all stainless steel process tubing from the PIT to the pipeline. Inspect all associated valves, couplings and fittings for fuel leaks. Check for proper infrastructural support of the tubing (tubing straps, supports) to ensure tubing is not sagging or unsupported. <u>Document</u> any stainless steel tubing, valves, and fittings damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
3	As applicable, remove the access cover/threaded plug of the conduit seal to verify the seal is filled with hardened sealing compound to the extent that all electrical conductors and conduit penetrations to and from the seal are encased: • If sealed, document findings in COMMENTS section of this Inspection Test Procedure, and reinstall plug. • If NOT sealed, document findings in COMMENTS section of this Inspection Test	√



	Procedure, reinstall plug, and call in a CORRECTIVE ACTION TROUBLE TICKET for necessary corrective actions	
4	Verify barcode/AFHE device tag labeling are correct and intact.	✓
5	Visually inspect the PIT for corrosion and general condition. Make notes in the comments as to the condition of the PIT. Ensure the PIT LCD contrast is clear, legible, and is free of condensation or dust.	✓
6	Open electrical enclosure and inspect & tighten all electrical connections. Replace worn or damaged parts if required. Ensure all cables and wires are labeled correctly.	✓
7	Close PIT Isolation valve.	✓
8	If PIT is equipped with a manifold, skip to step 9. Otherwise carefully remove the plug in the tee located between the PIT and the isolation valve.	✓
9	Connect the test manifold to the tee using appropriate piping or tubing connections.	✓
10	Connect the hand pump and the Fluke 700P07 Pressure Module to the manifold.	✓
11	Connect the Fluke 700P07 Pressure Module to the Fluke 725 Calibrator.	✓
12	Start pumping the hand pump and stop pumping when pressure equals 0%, 50%, and 100% of the range. Record the pressure reading of the Fluke 725 and PIT local indicator below. O% Equivalent PSIG/Inch Hg. i.e. low end of equipment range. O% PIT Reading O% Calibrator Reading So% Equivalent PSIG/Inch Hg. i.e. mid-point of equipment range. So% PIT Reading O% Calibrator Reading 100% Equivalent PSIG/Inch Hg. i.e. high end of equipment range 100% PIT Reading 100% Calibrator Reading	(b) (3) (A)
13	Using the hand pump, pump the pressure to trigger the High and High-High alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	√
14	Using the hand pump, create a vacuum to trigger the Low and Low-Low alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
15	Use the Calibration Check Forms to verify the deviation is within tolerance.	✓
16	Fill out and affix the new calibration/inspection tag/sticker to the appropriate device with the appropriate tag number, date completed, next due date, and technician's initials.	✓
17	Verify all alarms and PIT graphics are normalized and all PIT events and alarms were properly logged to the ARG.	√



Comments:				
Acceptance Criteria				Accept
All steps checked a	bove. Accept or Reject (Choose which applies.)			Иссорг
Signature:	(b) (6)			
Maintenance Tech	nician:			
(b) (6)		Date: (DDMMMYYYY):	16-Sep-2022	



Client: DLA			Site:	NAVSUP FLC Pea
Test Equipment Required:	1. 2. 3. 4. 5. 6. 7. 8. 9.	Hydraulic/Pneumatic Hand Pump Fluke 725 Tester Fluke 700P07 Pressure Module Teflon tape Slop Buckets small screwdriver hand tools 3-way manifold P&ID's Manufacturer O&M Manual		
		Manufacturer	SIE	EMENS
Device:		Model Number:	7N	1F4033-1EA10-1NC7-Z
Pressure Indicating Transmitter		Serial Number (if applicable): IX-F318-9039435		F318-9039435
		Tag Number:	(b) (3) (A)
Objective: Inspect PIT. Verify field calibration as		and re-c	alibrate if needed.	

Test Set-up:	2. Coordinate all testing with site Operations personnel.	
Procedure:		
1	Trace the conduit to and from the device to the nearest junction box or RIU/TIU/PCP (I.e., visible, w/in similar classification area, on associated equipment pad, etc.), and locate all associated conduit fittings. (I.e., EYSs, GUAs, couplings) If applicable, inspect MI cable for general condition, tightness, does not exceed bend radius, and has a drip/expansion loop. Ensure all unused conduit entries on the PIT have an explosion-proof plug installed. • Document any conduit, conduit fittings, and/or MI cable for damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
2	<u>Trace</u> all stainless steel process tubing from the PIT to the pipeline. Inspect all associated valves, couplings and fittings for fuel leaks. Check for proper infrastructural support of the tubing (tubing straps, supports) to ensure tubing is not sagging or unsupported. <u>Document</u> any stainless steel tubing, valves, and fittings damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
3	As applicable, remove the access cover/threaded plug of the conduit seal to verify the seal is filled with hardened sealing compound to the extent that all electrical conductors and conduit penetrations to and from the seal are encased: • If sealed, document findings in COMMENTS section of this Inspection Test Procedure, and reinstall plug. • If NOT sealed, document findings in COMMENTS section of this Inspection Test	√



-	B I ' I II I II' CORRECTIVE ACTION TROUBLE TISSUE !	1
	Procedure, reinstall plug, and call in a CORRECTIVE ACTION TROUBLE TICKET for necessary corrective actions	
4	Verify barcode/AFHE device tag labeling are correct and intact.	✓
5	Visually inspect the PIT for corrosion and general condition. Make notes in the comments as to the condition of the PIT. Ensure the PIT LCD contrast is clear, legible, and is free of condensation or dust.	✓
6	Open electrical enclosure and inspect & tighten all electrical connections. Replace worn or damaged parts if required. Ensure all cables and wires are labeled correctly.	✓
7	Close PIT Isolation valve.	✓
8	If PIT is equipped with a manifold, skip to step 9. Otherwise carefully remove the plug in the tee located between the PIT and the isolation valve.	✓
9	Connect the test manifold to the tee using appropriate piping or tubing connections.	✓
10	Connect the hand pump and the Fluke 700P07 Pressure Module to the manifold.	✓
11	Connect the Fluke 700P07 Pressure Module to the Fluke 725 Calibrator.	✓
12	Start pumping the hand pump and stop pumping when pressure equals 0%, 50%, and 100% of the range. Record the pressure reading of the Fluke 725 and PIT local indicator below. O% Equivalent PSIG/Inch Hg. i.e. low end of equipment range. O% PIT Reading O% Calibrator Reading So% Equivalent PSIG/Inch Hg. i.e. mid-point of equipment range. So% PIT Reading Omega Calibrator Reading Toom Equivalent PSIG/Inch Hg. i.e. high end of equipment range. 100% Equivalent PSIG/Inch Hg. i.e. high end of equipment range.	(b) (3) (A)
13	Using the hand pump, pump the pressure to trigger the High and High-High alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
14	Using the hand pump, create a vacuum to trigger the Low and Low-Low alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
15	Use the Calibration Check Forms to verify the deviation is within tolerance.	√
16	Fill out and affix the new calibration/inspection tag/sticker to the appropriate device with the appropriate tag number, date completed, next due date, and technician's initials.	✓
17	Verify all alarms and PIT graphics are normalized and all PIT events and alarms were properly logged to the ARG.	✓



Comments:	(b) (3) (A)			
Acceptance Criteria	a:			Accept
All steps checked a	bove. Accept or Reject (Choose which applies.)			лосорг
Signature:	(b) (6)			
Maintenance Tech	nician:			
(b) (6)		Date: (DDMMMYYYY): 21-5	Sep-2022	_



Client: DLA			Site:	NAVSUP FLC Pea
Test Equipment Required:	1. 2. 3. 4. 5. 6. 7. 8. 9.	Hydraulic/Pneumatic Hand Pump Fluke 725 Tester Fluke 700P07 Pressure Module Teflon tape Slop Buckets small screwdriver hand tools 3-way manifold P&ID's Manufacturer O&M Manual		
		Manufacturer	SIE	EMENS
Device:		Model Number:	7N	1F4033-1EA10-1NC7-Z
Pressure Indicating Transmitter		Serial Number (if applicable):	IX	F318-9039437
		Tag Number:	(b)	(3) (A)
Objective:		Inspect PIT. Verify field calibration	and re-c	alibrate if needed.

Test Set-up:	2. Coordinate all testing with site Operations personnel.	
Procedure:		
1	Trace the conduit to and from the device to the nearest junction box or RIU/TIU/PCP (I.e., visible, w/in similar classification area, on associated equipment pad, etc.), and locate all associated conduit fittings. (I.e., EYSs, GUAs, couplings) If applicable, inspect MI cable for general condition, tightness, does not exceed bend radius, and has a drip/expansion loop. Ensure all unused conduit entries on the PIT have an explosion-proof plug installed. • Document any conduit, conduit fittings, and/or MI cable for damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	√
2	<u>Trace</u> all stainless steel process tubing from the PIT to the pipeline. Inspect all associated valves, couplings and fittings for fuel leaks. Check for proper infrastructural support of the tubing (tubing straps, supports) to ensure tubing is not sagging or unsupported. <u>Document</u> any stainless steel tubing, valves, and fittings damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
3	As applicable, remove the access cover/threaded plug of the conduit seal to verify the seal is filled with hardened sealing compound to the extent that all electrical conductors and conduit penetrations to and from the seal are encased: • If sealed, document findings in COMMENTS section of this Inspection Test Procedure, and reinstall plug. • If NOT sealed, document findings in COMMENTS section of this Inspection Test	√



	B. I. I. II. III. CORRECTUS ACTION TROUBLE TICKET	1
	Procedure, reinstall plug, and call in a CORRECTIVE ACTION TROUBLE TICKET for necessary corrective actions	
4	Verify barcode/AFHE device tag labeling are correct and intact.	✓
5	Visually inspect the PIT for corrosion and general condition. Make notes in the comments as to the condition of the PIT. Ensure the PIT LCD contrast is clear, legible, and is free of condensation or dust.	✓
6	Open electrical enclosure and inspect & tighten all electrical connections. Replace worn or damaged parts if required. Ensure all cables and wires are labeled correctly.	✓
7	Close PIT Isolation valve.	√
8	If PIT is equipped with a manifold, skip to step 9. Otherwise carefully remove the plug in the tee located between the PIT and the isolation valve.	✓
9	Connect the test manifold to the tee using appropriate piping or tubing connections.	✓
10	Connect the hand pump and the Fluke 700P07 Pressure Module to the manifold.	✓
11	Connect the Fluke 700P07 Pressure Module to the Fluke 725 Calibrator.	✓
12	Start pumping the hand pump and stop pumping when pressure equals 0%, 50%, and 100% of the range. Record the pressure reading of the Fluke 725 and PIT local indicator below. O% Equivalent PSIG/Inch Hg. i.e. low end of equipment range. O% PIT Reading O% Calibrator Reading So% Equivalent PSIG/Inch Hg. i.e. mid-point of equipment range. So% PIT Reading O% Calibrator Reading O% Calibrator Reading O% Equivalent PSIG/Inch Hg. i.e. high end of equipment range O% PIT Reading O% PIT Reading O% Calibrator Reading	(b) (3) (A)
13	Using the hand pump, pump the pressure to trigger the High and High-High alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
14	Using the hand pump, create a vacuum to trigger the Low and Low-Low alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
15	Use the Calibration Check Forms to verify the deviation is within tolerance.	√
16	Fill out and affix the new calibration/inspection tag/sticker to the appropriate device with the appropriate tag number, date completed, next due date, and technician's initials.	✓
17	Verify all alarms and PIT graphics are normalized and all PIT events and alarms were properly logged to the ARG.	✓



Comments:	(b) (3) (A)		
Acceptance Criteri			SACRETOR STATE
	bove. Accept or Reject (Choose which applies.)		Accept
Signature:	(b) (6)		
Maintenance Tech	nnician:		
(b) (6)		Date: (DDMMMYYYY): 21-Sep-2022	

				QUALI	TY VALIDATION (QV) REPO	ORT			
				Red Hill B	ulk Fuel Storage Fac	ility Defue	el			
Validation	n Firm	m HDR Environmental, Operations and Construction, Inc.						Repair No.	097	
A	ddress	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	JP5.077	
Contra	ct No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	I JX MIAR A	2023
QV En	gineer	(b) (6	5)		Phone (b) (6	3)	Email	(b) (6	5)	
					VALIDATION					
Source		F	DF Page N	lo.	Facility Geograph	ic Area		Location	Reference	
NDAA		52	<u> </u>		Harbor Tunnel		(b) (3)	(A)		
Repair Descr	ription	(b)	(3) (<i>P</i>	A), (b)	(5)	Source	ce Contract Reference	NICOLOGIA	
Descript Contract Method(s)	or QC	N/A - no v	work provid	ded.				ntractor QC s Reviewed		
Description Validation	on and				ed EXWC - Compreh Service Assessment	ensive Rep	pair List Re	ecommend	ations	
		Final accep	otance by go	overnment.	Date: 08 MAR 2023	179	T			
R	lework	Needed			Photo Record Attached	1	Repair	Work Vali	dated as Co	mplete
O z	Yes	\odot	No		N/A		\odot	Yes	0	No
pipelines. Sele leveraged prev FFS performed	ection vious i	of indication of	ons was lir anagemen ired for de	nited to me t work. fuel.	ere conducted at spechanical integrity prince	nciples und	der assume	ed service	conditions,	
hereby certify tha				QV ENG	INEER SIGNATURE	(b) (6)			
report was person report is true.	any sub	stantiated an	นแทร		DATE	28 MAR 2	2023			

				QUALI [*]	TY VALIDATION (QV) REPO	ORT			
]	Red Hill B	ulk Fuel Storage Fac	ility Defue	el			
Valid	lation Firm	HDR Env	ironmental	, Operatio	ns and Construction,	Inc.		Repair No.	104	
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112			F76.076	
Co	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	JU MAR J	023
Q	V Engineer	(b) (6	(b) (6) Phone (b) (6)					(b) (6)	
				<u> </u>	VALIDATION					
Sou	rce	F	PDF Page N	o.	Facility Geograph	ic Area		Location	Reference	
NDAA		62	-		UGPH		Various			
Repair I	Description	It was noted that several of the pressure transducers are past due for calibration. (Calibration due date of 10/23/18). Perform calibration of all temperature and pressure devices in the UGPH.			/23/18).	SP4702-21-F-00 Source Contract Reference			-F-001	
Con	scription of tractor QC od(s) Used				cable	Contractor QC Records Reviewed			form.	
Vali	tion of QA idation and oservations		on completi QV team 00		ecked by SGH during	3 NOV 22 s	site visit. Ir	ndependen	tly checked	l by
		Final accep	ptance by go	overnment.	Date: 21 SEP 2022	19				
	Rework	Needed			Photo Record Attached	i		Work Vali	dated as Cor	nplete
\circ	Yes	\odot	No		See Page 2.		\odot	Yes	O	No
Comments	Yes	Needed (b)(3)(A	No		Photo Record Attached	i	Repair	C1002	dated as Cor	r
					CERTIFICATION					
		work validate		QV ENG	CERTIFICATION	(b)	(6)			

(b) (3) (A)

(b) (3) (A) Due 9/21/2023

(b) (3) (A)

(b) (3) (A)



Client: DLA			Site:	NAVSUP FLC Pea
Test Equipment Required:	1. 2. 3. 4. 5. 6. 7. 8. 9.	Hydraulic/Pneumatic Hand Pump Fluke 725 Tester Fluke 700P07 Pressure Module Teflon tape Slop Buckets small screwdriver hand tools 3-way manifold P&ID's Manufacturer O&M Manual		
		Manufacturer	SIE	EMENS
Device:		Model Number:	7N	1F4033-1E10-1NC7-Z
Pressure Indicating Transmitter		Serial Number (if applicable):	IX.	F318-9039398
		Tag Number:	(b) (3) (A)
Objective:		Inspect PIT. Verify field calibration	and re-c	alibrate if needed.

Test Set-up:	2. Coordinate all testing with site Operations personnel.	
Procedure:		
1	Trace the conduit to and from the device to the nearest junction box or RIU/TIU/PCP (I.e., visible, w/in similar classification area, on associated equipment pad, etc.), and locate all associated conduit fittings. (I.e., EYSs, GUAs, couplings) If applicable, inspect MI cable for general condition, tightness, does not exceed bend radius, and has a drip/expansion loop. Ensure all unused conduit entries on the PIT have an explosion-proof plug installed. • Document any conduit, conduit fittings, and/or MI cable for damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
2	Trace all stainless steel process tubing from the PIT to the pipeline. Inspect all associated valves, couplings and fittings for fuel leaks. Check for proper infrastructural support of the tubing (tubing straps, supports) to ensure tubing is not sagging or unsupported. Document any stainless steel tubing, valves, and fittings damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
3	As applicable, remove the access cover/threaded plug of the conduit seal to verify the seal is filled with hardened sealing compound to the extent that all electrical conductors and conduit penetrations to and from the seal are encased: • If sealed, document findings in COMMENTS section of this Inspection Test Procedure, and reinstall plug. • If NOT sealed, document findings in COMMENTS section of this Inspection Test	√



	B I ' I II I II' CORRECTIVE ACTION TROUBLE TICKET	1
	Procedure, reinstall plug, and call in a CORRECTIVE ACTION TROUBLE TICKET for necessary corrective actions	
4	Verify barcode/AFHE device tag labeling are correct and intact.	✓
5	Visually inspect the PIT for corrosion and general condition. Make notes in the comments as to the condition of the PIT. Ensure the PIT LCD contrast is clear, legible, and is free of condensation or dust.	✓
6	Open electrical enclosure and inspect & tighten all electrical connections. Replace worn or damaged parts if required. Ensure all cables and wires are labeled correctly.	✓
7	Close PIT Isolation valve.	✓
8	If PIT is equipped with a manifold, skip to step 9. Otherwise carefully remove the plug in the tee located between the PIT and the isolation valve.	✓
9	Connect the test manifold to the tee using appropriate piping or tubing connections.	✓
10	Connect the hand pump and the Fluke 700P07 Pressure Module to the manifold.	✓
11	Connect the Fluke 700P07 Pressure Module to the Fluke 725 Calibrator.	√
12	Start pumping the hand pump and stop pumping when pressure equals 0%, 50%, and 100% of the range. Record the pressure reading of the Fluke 725 and PIT local indicator below. O% Equivalent PSIG/Inch Hg. i.e. low end of equipment range. O% PIT Reading O% Calibrator Reading Fow Equivalent PSIG/Inch Hg. i.e. mid-point of equipment range. So% PIT Reading O% Calibrator Reading O% Calibrator Reading O% Equivalent PSIG/Inch Hg. i.e. high end of equipment range. O% PIT Reading O% PIT Reading O% Calibrator Reading	(b) (3) (A)
13	Using the hand pump, pump the pressure to trigger the High and High-High alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
14	Using the hand pump, create a vacuum to trigger the Low and Low-Low alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
15	Use the Calibration Check Forms to verify the deviation is within tolerance.	✓
16	Fill out and affix the new calibration/inspection tag/sticker to the appropriate device with the appropriate tag number, date completed, next due date, and technician's initials.	✓
17	Verify all alarms and PIT graphics are normalized and all PIT events and alarms were properly logged to the ARG.	✓



Comments:		
Acceptance Criteria	a:	Accept
All steps checked a	bove. Accept or Reject (Choose which applies.)	лесорі
Signature:	(b) (6)	
Maintenance Tech	nician:	
(b) (6)	Date: (DDMMMYYYY): 16-Sep-2022	_



Client: DLA			Site:	NAVSUP FLC Pea
Test Equipment Required:	1. 2. 3. 4. 5. 6. 7. 8. 9.	Hydraulic/Pneumatic Hand Pump Fluke 725 Tester Fluke 700P07 Pressure Module Teflon tape Slop Buckets small screwdriver hand tools 3-way manifold P&ID's Manufacturer O&M Manual		
		Manufacturer	SIE	EMENS
Device:		Model Number:	7N	1F4033-1E10-1NC7-Z
Pressure Indicating Transmitter		Serial Number (if applicable):	IX.	-F318-9039430
		Tag Number:	(b)) (3) (A)
Objective:		Inspect PIT. Verify field calibration	and re-c	alibrate if needed.

Test Set-up:	2. Coordinate all testing with site Operations personnel.	
Procedure:		
1	Trace the conduit to and from the device to the nearest junction box or RIU/TIU/PCP (I.e., visible, w/in similar classification area, on associated equipment pad, etc.), and locate all associated conduit fittings. (I.e., EYSs, GUAs, couplings) If applicable, inspect MI cable for general condition, tightness, does not exceed bend radius, and has a drip/expansion loop. Ensure all unused conduit entries on the PIT have an explosion-proof plug installed. • Document any conduit, conduit fittings, and/or MI cable for damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
2	Trace all stainless steel process tubing from the PIT to the pipeline. Inspect all associated valves, couplings and fittings for fuel leaks. Check for proper infrastructural support of the tubing (tubing straps, supports) to ensure tubing is not sagging or unsupported. Document any stainless steel tubing, valves, and fittings damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
3	As applicable, remove the access cover/threaded plug of the conduit seal to verify the seal is filled with hardened sealing compound to the extent that all electrical conductors and conduit penetrations to and from the seal are encased: • If sealed, document findings in COMMENTS section of this Inspection Test Procedure, and reinstall plug. • If NOT sealed, document findings in COMMENTS section of this Inspection Test	√



	Procedure, reinstall plug, and call in a CORRECTIVE ACTION TROUBLE TICKET for necessary corrective actions	
4	Verify barcode/AFHE device tag labeling are correct and intact.	√
5	Visually inspect the PIT for corrosion and general condition. Make notes in the comments as to the condition of the PIT. Ensure the PIT LCD contrast is clear, legible, and is free of condensation or dust.	✓
6	Open electrical enclosure and inspect & tighten all electrical connections. Replace worn or damaged parts if required. Ensure all cables and wires are labeled correctly.	✓
7	Close PIT Isolation valve.	✓
8	If PIT is equipped with a manifold, skip to step 9. Otherwise carefully remove the plug in the tee located between the PIT and the isolation valve.	✓
9	Connect the test manifold to the tee using appropriate piping or tubing connections.	✓
10	Connect the hand pump and the Fluke 700P07 Pressure Module to the manifold.	✓
11	Connect the Fluke 700P07 Pressure Module to the Fluke 725 Calibrator.	✓
12	Start pumping the hand pump and stop pumping when pressure equals 0%, 50%, and 100% of the range. Record the pressure reading of the Fluke 725 and PIT local indicator below. O% Equivalent PSIG/Inch Hg. i.e. low end of equipment range. O% PIT Reading O% Calibrator Reading So% Equivalent PSIG/Inch Hg. i.e. mid-point of equipment range. So% PIT Reading O% Calibrator Reading O% Calibrator Reading O% Equivalent PSIG/Inch Hg. i.e. high end of equipment range 100% PIT Reading 100% Calibrator Reading	(b) (3) (A)
13	Using the hand pump, pump the pressure to trigger the High and High-High alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
14	Using the hand pump, create a vacuum to trigger the Low and Low-Low alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
15	Use the Calibration Check Forms to verify the deviation is within tolerance.	√
16	Fill out and affix the new calibration/inspection tag/sticker to the appropriate device with the appropriate tag number, date completed, next due date, and technician's initials.	✓
17	Verify all alarms and PIT graphics are normalized and all PIT events and alarms were properly logged to the ARG.	✓



Comments:				
Acceptance Criteria				Accept
All steps checked a	bove. Accept or Reject (Choose which applies.)			recopt
Signature:	(b) (6)			
Maintenance Tech	nician:			
(b) (6)		Date: (DDMMMYYYY):	16-Sep-2022	



Client: DLA			Site:	NAVSUP FLC Pea
Test Equipment Required:	1. 2. 3. 4. 5. 6. 7. 8. 9.	Hydraulic/Pneumatic Hand Pump Fluke 725 Tester Fluke 700P07 Pressure Module Teflon tape Slop Buckets small screwdriver hand tools 3-way manifold P&ID's Manufacturer O&M Manual		
		Manufacturer	SIE	MENS
Device:		Model Number:	7M	F4033-1E10-1NC7-Z
Pressure Indicating Transmitter		Serial Number (if applicable):	IX-	F318-9039433
		Tag Number:	(b)	(3) (A)
Objective:		Inspect PIT. Verify field calibration	and re-ca	librate if needed.

Test Set-up:	2. Coordinate all testing with site Operations personnel.	
Procedure:		
1	Trace the conduit to and from the device to the nearest junction box or RIU/TIU/PCP (I.e., visible, w/in similar classification area, on associated equipment pad, etc.), and locate all associated conduit fittings. (I.e., EYSs, GUAs, couplings) If applicable, inspect MI cable for general condition, tightness, does not exceed bend radius, and has a drip/expansion loop. Ensure all unused conduit entries on the PIT have an explosion-proof plug installed. • Document any conduit, conduit fittings, and/or MI cable for damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
2	Trace all stainless steel process tubing from the PIT to the pipeline. Inspect all associated valves, couplings and fittings for fuel leaks. Check for proper infrastructural support of the tubing (tubing straps, supports) to ensure tubing is not sagging or unsupported. Document any stainless steel tubing, valves, and fittings damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
3	As applicable, remove the access cover/threaded plug of the conduit seal to verify the seal is filled with hardened sealing compound to the extent that all electrical conductors and conduit penetrations to and from the seal are encased: • If sealed, document findings in COMMENTS section of this Inspection Test Procedure, and reinstall plug. • If NOT sealed, document findings in COMMENTS section of this Inspection Test	√



ř		r
	Procedure, reinstall plug, and call in a CORRECTIVE ACTION TROUBLE TICKET for necessary corrective actions	
4	Verify barcode/AFHE device tag labeling are correct and intact.	✓
5	Visually inspect the PIT for corrosion and general condition. Make notes in the comments as to the condition of the PIT. Ensure the PIT LCD contrast is clear, legible, and is free of condensation or dust.	✓
6	Open electrical enclosure and inspect & tighten all electrical connections. Replace worn or damaged parts if required. Ensure all cables and wires are labeled correctly.	✓
7	Close PIT Isolation valve.	√
8	If PIT is equipped with a manifold, skip to step 9. Otherwise carefully remove the plug in the tee located between the PIT and the isolation valve.	✓
9	Connect the test manifold to the tee using appropriate piping or tubing connections.	✓
10	Connect the hand pump and the Fluke 700P07 Pressure Module to the manifold.	✓
11	Connect the Fluke 700P07 Pressure Module to the Fluke 725 Calibrator.	√
12	Start pumping the hand pump and stop pumping when pressure equals 0%, 50%, and 100% of the range. Record the pressure reading of the Fluke 725 and PIT local indicator below. O% Equivalent PSIG/Inch Hg. i.e. low end of equipment range. O% PIT Reading O% Calibrator Reading Fow Equivalent PSIG/Inch Hg. i.e. mid-point of equipment range. So% PIT Reading Omega Calibrator Reading Toom Equivalent PSIG/Inch Hg. i.e. high end of equipment range. Omega Calibrator Reading Omega Calibrator Reading Omega Calibrator Reading Omega Calibrator Reading	(b) (3) (A)
13	Using the hand pump, pump the pressure to trigger the High and High-High alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
14	Using the hand pump, create a vacuum to trigger the Low and Low-Low alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
15	Use the Calibration Check Forms to verify the deviation is within tolerance.	✓
16	Fill out and affix the new calibration/inspection tag/sticker to the appropriate device with the appropriate tag number, date completed, next due date, and technician's initials.	✓
17	Verify all alarms and PIT graphics are normalized and all PIT events and alarms were properly logged to the ARG.	✓



Comments:				
Acceptance Criteria	a:			Accept
All steps checked a	bove. Accept or Reject (Choose which applies.)			Лесорг
Signature:	(b) (6)			
Maintenance Tech	nician:			
(b) (6)	=	Date: (DDMMMYYYY):	16-Sep-2022	_



Client: DLA			Site:	NAVSUP FLC Pea
Test Equipment Required:	1. 2. 3. 4. 5. 6. 7. 8. 9.	Hydraulic/Pneumatic Hand Pump Fluke 725 Tester Fluke 700P07 Pressure Module Teflon tape Slop Buckets small screwdriver hand tools 3-way manifold P&ID's Manufacturer O&M Manual		
		Manufacturer	SIE	EMENS
Device:		Model Number:	7N	1F4033-1EA10-1NC7-Z
Pressure Indicating Transmitter		Serial Number (if applicable):	IX.	F318-9039399
		Tag Number:	(b) (3) (A)
Objective: Inspect PIT. Verify field calibration		and re-c	alibrate if needed.	

Test Set-up:	2. Coordinate all testing with site Operations personnel.	
Procedure:		
1	Trace the conduit to and from the device to the nearest junction box or RIU/TIU/PCP (I.e., visible, w/in similar classification area, on associated equipment pad, etc.), and locate all associated conduit fittings. (I.e., EYSs, GUAs, couplings) If applicable, inspect MI cable for general condition, tightness, does not exceed bend radius, and has a drip/expansion loop. Ensure all unused conduit entries on the PIT have an explosion-proof plug installed. • Document any conduit, conduit fittings, and/or MI cable for damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
2	Trace all stainless steel process tubing from the PIT to the pipeline. Inspect all associated valves, couplings and fittings for fuel leaks. Check for proper infrastructural support of the tubing (tubing straps, supports) to ensure tubing is not sagging or unsupported. Document any stainless steel tubing, valves, and fittings damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
3	As applicable, remove the access cover/threaded plug of the conduit seal to verify the seal is filled with hardened sealing compound to the extent that all electrical conductors and conduit penetrations to and from the seal are encased: • If sealed, document findings in COMMENTS section of this Inspection Test Procedure, and reinstall plug. • If NOT sealed, document findings in COMMENTS section of this Inspection Test	√



	D. I. '. II I. II' CODDECTIVE ACTION TROUBLE TICKET (г
	Procedure, reinstall plug, and call in a CORRECTIVE ACTION TROUBLE TICKET for necessary corrective actions	
4	Verify barcode/AFHE device tag labeling are correct and intact.	✓
5	Visually inspect the PIT for corrosion and general condition. Make notes in the comments as to the condition of the PIT. Ensure the PIT LCD contrast is clear, legible, and is free of condensation or dust.	✓
6	Open electrical enclosure and inspect & tighten all electrical connections. Replace worn or damaged parts if required. Ensure all cables and wires are labeled correctly.	✓
7	Close PIT Isolation valve.	✓
8	If PIT is equipped with a manifold, skip to step 9. Otherwise carefully remove the plug in the tee located between the PIT and the isolation valve.	✓
9	Connect the test manifold to the tee using appropriate piping or tubing connections.	✓
10	Connect the hand pump and the Fluke 700P07 Pressure Module to the manifold.	✓
11	Connect the Fluke 700P07 Pressure Module to the Fluke 725 Calibrator.	√
12	Start pumping the hand pump and stop pumping when pressure equals 0%, 50%, and 100% of the range. Record the pressure reading of the Fluke 725 and PIT local indicator below. O% Equivalent PSIG/Inch Hg. i.e. low end of equipment range. O% PIT Reading O% Calibrator Reading So% Equivalent PSIG/Inch Hg. i.e. mid-point of equipment range. 50% PIT Reading Took Calibrator Reading 100% Equivalent PSIG/Inch Hg. i.e. high end of equipment range 100% PIT Reading 100% Calibrator Reading	(b) (3) (A)
13	Using the hand pump, pump the pressure to trigger the High and High-High alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
14	Using the hand pump, create a vacuum to trigger the Low and Low-Low alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
15	Use the Calibration Check Forms to verify the deviation is within tolerance.	✓
16	Fill out and affix the new calibration/inspection tag/sticker to the appropriate device with the appropriate tag number, date completed, next due date, and technician's initials.	✓
17	Verify all alarms and PIT graphics are normalized and all PIT events and alarms were properly logged to the ARG.	✓



Comments:	(b) (3) (A)		
Acceptance Criteri			Accept
All steps checked a	bove. Accept or Reject (Choose which applies.)		, tooopt
Signature:	(b) (6)		
Maintenance Tech	inician:		
(b) (6)		21 San 2022	
(5) (5)		Date: (DDMMMYYYY): 21-Sep-2022	



Client: DLA			Site:	NAVSUP FLC Pea
Test Equipment Required:	1. 2. 3. 4. 5. 6. 7. 8. 9.	Hydraulic/Pneumatic Hand Pump Fluke 725 Tester Fluke 700P07 Pressure Module Teflon tape Slop Buckets small screwdriver hand tools 3-way manifold P&ID's Manufacturer O&M Manual		
		Manufacturer	SIE	EMENS
Device:		Model Number:	7M	IF4033-1EA10-1NC7-Z
Pressure Indicating Transmitter		Serial Number (if applicable):	IX-	F318-9039400
		Tag Number:	(b)	(3) (A)
Objective: Inspect PIT. Verify field		Inspect PIT. Verify field calibration	and re-ca	alibrate if needed.

Test Set-up:	2. Coordinate all testing with site Operations personnel.	
Procedure:		
1	Trace the conduit to and from the device to the nearest junction box or RIU/TIU/PCP (I.e., visible, w/in similar classification area, on associated equipment pad, etc.), and locate all associated conduit fittings. (I.e., EYSs, GUAs, couplings) If applicable, inspect MI cable for general condition, tightness, does not exceed bend radius, and has a drip/expansion loop. Ensure all unused conduit entries on the PIT have an explosion-proof plug installed. • Document any conduit, conduit fittings, and/or MI cable for damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	√
2	<u>Trace</u> all stainless steel process tubing from the PIT to the pipeline. Inspect all associated valves, couplings and fittings for fuel leaks. Check for proper infrastructural support of the tubing (tubing straps, supports) to ensure tubing is not sagging or unsupported. <u>Document</u> any stainless steel tubing, valves, and fittings damage or corrosion in the COMMENTS section of this Inspection Test Procedure Form—call in a CORRECTIVE ACTION TROUBLE TICKET for any necessary corrective actions.	✓
3	As applicable, remove the access cover/threaded plug of the conduit seal to verify the seal is filled with hardened sealing compound to the extent that all electrical conductors and conduit penetrations to and from the seal are encased: • If sealed, document findings in COMMENTS section of this Inspection Test Procedure, and reinstall plug. • If NOT sealed, document findings in COMMENTS section of this Inspection Test	√



	D. J. '. III J. III' CODDECTIVE ACTION TROUGHT TOWER	r
	Procedure, reinstall plug, and call in a CORRECTIVE ACTION TROUBLE TICKET for necessary corrective actions	
4	Verify barcode/AFHE device tag labeling are correct and intact.	✓
5	Visually inspect the PIT for corrosion and general condition. Make notes in the comments as to the condition of the PIT. Ensure the PIT LCD contrast is clear, legible, and is free of condensation or dust.	✓
6	Open electrical enclosure and inspect & tighten all electrical connections. Replace worn or damaged parts if required. Ensure all cables and wires are labeled correctly.	✓
7	Close PIT Isolation valve.	✓
8	If PIT is equipped with a manifold, skip to step 9. Otherwise carefully remove the plug in the tee located between the PIT and the isolation valve.	✓
9	Connect the test manifold to the tee using appropriate piping or tubing connections.	✓
10	Connect the hand pump and the Fluke 700P07 Pressure Module to the manifold.	✓
11	Connect the Fluke 700P07 Pressure Module to the Fluke 725 Calibrator.	✓
12	Start pumping the hand pump and stop pumping when pressure equals 0%, 50%, and 100% of the range. Record the pressure reading of the Fluke 725 and PIT local indicator below. O% Equivalent PSIG/Inch Hg. i.e. low end of equipment range. O% PIT Reading O% Calibrator Reading So% Equivalent PSIG/Inch Hg. i.e. mid-point of equipment range. So% PIT Reading Omega Calibrator Reading Toom Equivalent PSIG/Inch Hg. i.e. high end of equipment range. Omega Calibrator Reading Toom Equivalent PSIG/Inch Hg. i.e. high end of equipment range.	(b) (3) (A)
13	Using the hand pump, pump the pressure to trigger the High and High-High alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
14	Using the hand pump, create a vacuum to trigger the Low and Low-Low alarms of the PIT. Coordinate with the control center to ensure all alarms, yellow and red frames around the PIT, and trending lines functioned correctly on the PIT Detail screen.	✓
15	Use the Calibration Check Forms to verify the deviation is within tolerance.	✓
16	Fill out and affix the new calibration/inspection tag/sticker to the appropriate device with the appropriate tag number, date completed, next due date, and technician's initials.	✓
17	Verify all alarms and PIT graphics are normalized and all PIT events and alarms were properly logged to the ARG.	✓



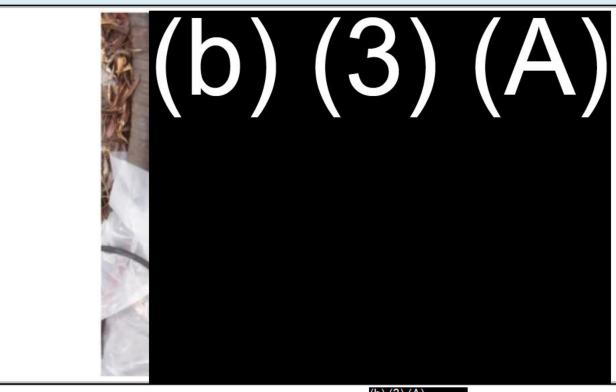
Comments:	(b) (3) (A)		
Acceptance Criteri	a:		Accept
All steps checked a	bove. Accept or Reject (Choose which applies.)		riccopt
Signature:	(b) (6)		
Maintenance Tech	nician:		·
(b) (6)		Date: (DDMMMYYYY): 21-Sep-2022	

QUALITY VALIDATION (QV) REPORT											
Red Hill Bulk Fuel Storage Facility Defuel											
Validation Firm HDR Environmental, Operations and Construction, Inc.							Repair No.	122	97		
Address	9781 S. N	Meridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	FOR.046			
Contract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	29 MAR 2023			
QV Engineer	(b) (6)	Phone (b) (6)			Email	(b) (6)				
				VALIDATION					Ö		
Source	I	PDF Page N	o.	. Facility Geographic Area L					Location Reference		
NDAA	68			RHTF		Main Sun	пр				
Repair Description	(b) (3) (<i>i</i>	A)is missir	ng a body o	pump discharge pipin cavity relief handle ar le and plug.	g within nd does	Sour	Source Contract Reference 47QSHA18D00 W912DY21F00 Service Order 6				
Description of Contractor QC Method(s) Used		outlined in	detail in QCP.			Contractor QC Records Reviewed		QCP and Daily Reports.			
Methods outlined in QASP. Description of QA Validation and Observations											
Reworl	Needed	ptance by go	overnment.	Date: 17 FEB 2023 Photo Record Attached	t	Renair	Work Vali	dated as Cor	mnlete		
Yes	•	No		See Page 2.	•	•	Yes	0	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 DATE 29 MAR 2023											

(b) (3) (A)

(b) (3) (A)

QUALITY VALIDATION (QV) REPORT											
Red Hill Bulk Fuel Storage Facility Defuel											
Vali	Validation Firm HDR Environmental, Operations and Construction, Inc.							Repair No.	125		
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	FOR.055		
C	ontract No.	FA89031	5D0007, D	.O. FA890		Report Date	21 FEB 2	023			
Q	V Engineer	(b) (6)		Phone (b) (6	6)	Email	(b) (6	6)		
					VALIDATION					, and the second	
Sor	urce	I	PDF Page N	o.	Facility Geograph	ic Area	Location Reference				
NDAA		69			(b) (3) (A)		(b) (3) (A	A)			
Condition of (b) (3) (A) Repair Description Repair Description FOR pipeline is unknown. Per the 2021 CP Report, this section of (b) (3) (A) pipe had ineffective magnesium anodes. Perform borescope examination of the (b) (3) (A) segment to assess internal condition of the pipeline.						Sour	ce Contract Reference	Contract: N3943020 Task Orde N3943022	er:		
Description of Contractor QC Method(s) Used								N/A Contractor QC Records Reviewed			
Description of QA Validation and Observations Inspection report reviewed by Prime Contract engineer. NAVFAC EXWC reviewed and concurred with									urred with		
		Final accep	otance by go	overnment.	Date: 17 FEB 2023						
	Rework	Needed		Photo Record Attached			Repair	Work Valid	dated as Cor	mplete	
O	Yes	•	No		See Page 2.		\odot	Yes	O	No	
Comments (b) (4) vas retained by NAVFAC EXWC to perform an internal inspection of an (b) (3) (A) of FOR Piping using borescope technology at Joint Base Pearl Harbor Hickam (JBPHH). None of the anomalies identified were significant enough for the piping to be removed from service, and calculations show adequate service life and pressure capacity for continued used well past the expected Defuel Operation completion date. CERTIFICATION											
(b) (C)											
report was p	ersonally sub	work validate estantiated an		QV ENG	QV ENGINEER SIGNATURE						
report is true) .			DATE 21 FEB 2		2023					



(b) (3) (A)

QUALITY VALIDATION (QV) REPORT												
Red Hill Bulk Fuel Storage Facility Defuel												
Validation Firm HDR Environmental, Operations and Construction, Inc.						Inc.		Repair No.	145			
\$	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	JP5.HP.0	01		
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	29 MAR 2	2023		
Q	V Engineer	(b) (6)	Phone (b) (6)			Email	mail (b) (6)				
					VALIDATION							
Sou	urce	F	DF Page N	lo.	Facility Geograph	ic Area	Location Reference					
UGPH		2			(b) (3) (A)		(b) (3)	(A)				
failed boot seals at concrete wall penetrations in Repair Description						or ^{(b) (3) (A)}	Sour	ce Contract Reference	C			
Description of Contractor QC Method(s) Used				detail in QCP.			Contractor QC Records Reviewed					
Val	Methods outlined in QASP. Description of QA Validation and Observations Final acceptance by government. Date: 20 MAR 2023											
	Rework	Needed		Photo Record Attached			Repair Work Validated as Complete			mplete		
0	Yes	•	No		See Page 2.		•	Yes	0	No		
Comments EXWC approved the use of flexible sealant in place of mechanically adjustable elastomeric seals in cases where there is not sufficient room to place mechanical seals. USACE QA and ET were on site to verify that the mechanical seals could not be installed due to piping not being centered in casings. CERTIFICATION												
I hereby cod	tify that renair	work validate	ed in this	QV ENG	INEER SIGNATURE	(b) (6	5)					
I hereby certify that repair work validated in the report was personally substantiated and this report is true.				DATE 29 MAR 2023								

QUALITY ASSURANCE VALIDATION REPORT

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Repaired pipe seals (b)(3)(A)

				QUALIT	Y VALIDATION (QV) REPO	RT			
]	Red Hill Bı	ılk Fuel Storage Fac	ility Defue	ı			
Valid	lation Firm	HDR Env	ironmental	, Operation	s and Construction,	Inc.		Repair No.	146	
	Address	9781 S. N	/leridian Bl	vd., Suite 4	00, Englewood, CO	80112		Repair ID	JP5.HP.0	02
Co	ontract No.	FA89031	5D0007, D	.O. FA8903	3-19-F-0027			Report Date	29 MAR 2	2023
Q'	V Engineer	(b) (6	3)		Phone (b) (6)	Email	(b) (6	3)	
					VALIDATION					
Sou	ırce	F	DF Page N	lo.	Facility Geograph	ic Area		Location	Reference	
UGPH		2			(b) (3) (A)		(b) (3)	(A)		
Repair I	Description	stomer	ric seals at nechanical	concrete w	chanically adjustable vall penetration for e elastomeric seals	iping.	Sour	ce Contract Reference	47QSHA1 W912DY2 Service O	21F0025
Con	scription of stractor QC od(s) Used		thods outlined in detail in QCP.					ntractor QC s Reviewed	QCP and Reports.	Daily
Val	tion of QA idation and oservations		outlined in		Date: 20 MAR 2023					
	Rework	Needed			Photo Record Attached	1	Repair	Work Vali	dated as Co	mplete
0	Yes	•	No		See Page 2.		•	Yes	0	No
not sufficie	ent room to	o place me	chanical s	eals. USA0 entered in o	of mechanically adjucted of mechanically adjucted of the control o					
					NEER SIGNATURE	(b) (6)			
	ersonally sub	work validate estantiated an		WA SINGI	DATE	29 MAR 2	2023			

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Repaired pipe seals (F-24 (bottom); JP-5 (center); F-76 (top))

				QUALI	TY VALIDATION (QV) REPO	ORT				
]	Red Hill B	ulk Fuel Storage Fac	ility Defue	1				
Valid	dation Firm	HDR Env	ironmental	, Operatio	ns and Construction,	Inc.		Repair No.	147		
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	JP5.HP.0	03	
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	29 MAR 2	2023	
Q	V Engineer	(b) (6)		Phone (b) (6	5)	Email	(b) (6	5)		
					VALIDATION						
Sou	ırce	I	PDF Page N	o.	Facility Geograph	ic Area		Location	Reference	60	
UGPH		2			(b) (3) (A)		(b) (3)	(A)			
Repair I	Description	stomer Provide n	ric seals at	concrete	echanically adjustable wall penetration for ble elastomeric seals	piping.	Source Contract Reference 47QSHA18D W912DY21F Service Orde				
Cor	scription of atractor QC od(s) Used	2022-202	outlined in	detail in C	CP.		ntractor QC s Reviewed	QCP and Reports.	Daily		
Val	otion of QA idation and bservations		outlined in	QASP.							
	D 1		ptance by go		Date: 20 MAR 2023		ъ.	TT 1 T 1'	1, 1, 6	000011004000	
0	Yes	Needed	No		Photo Record Attached See Page 2.	1	Repair	Yes	dated as Cor	No	
not suffici	ent room t		chanical s	eals. USA							
					CERTIFICATION	[/b) //	2)				
		work validate		QV ENG	INEER SIGNATURE	(a) (e	0)	U			
report is true		and all	1800 Wester ()		DATE	29 MAR 2	2023				

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

				QUALI	TY VALIDATION (QV) REPO	ORT			
]	Red Hill B	ulk Fuel Storage Fac	ility Defue	1			
Valid	dation Firm	HDR Env	ironmental	, Operation	ns and Construction,	Inc.		Repair No.	148	
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	JP5.HP.0	04
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	29 MAR 2	2023
Q'	V Engineer	(b) (6	i)		Phone (b) (6)	Email	(b) (6	3)	
					VALIDATION					
Sou	arce	F	DF Page N	lo.	Facility Geograph	ic Area		Location	Reference	
UGPH		2			(b) (3) (A)	3	(b) (3) ((A)		
Repair I	Description	stomer Provide m	ric seals at nechanicall	concrete \	echanically adjustable wall penetration for ble ble elastomeric seals	piping.	Source	ce Contract Reference	47QSHA1 W912DY2 Service O	21F0025
Con	Description of Contractor QC Method(s) Used			detail in Q	ICP.		ntractor QC s Reviewed	QCP and Reports.	Daily	
Val	otion of QA idation and bservations		outlined in		Date: 20 MAR 2023					
	Rework	Needed	runee of 8-		Photo Record Attached	1	Repair	Work Vali	dated as Co	mplete
0	Yes	•	No		See Page 2.		•	Yes	0	No
not sufficie	proved the		chanical s	eals. USA	of mechanically adju CE QA and ET were casings.					
I hereby cert	ify that repair	work validate	ed in this	QV ENG	INEER SIGNATURE	(b) (6	j)			
	ersonally sub	stantiated and			DATE	29 MAR 2	2023	U		

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Repaired pipe seals (JP-5 (left); F-76 (right))

			QUALITY VALIDATION	QV) REPO	RT			
			Red Hill Bulk Fuel Storage Fa	cility Defuel				
Validation I	irm HDR Env	rironmenta	, Operations and Construction	Inc.		Repair No.	149	
Add	ress 9781 S. N	Meridian Bl	vd., Suite 400, Englewood, CC	80112		Repair ID	JP5.HP.0	0x
Contract	No. FA89031	5D0007, D	.O. FA8903-19-F-0027			Report Date	29 MAR 2	2023
QV Engi	neer (b) (6	3)	Phone (b) (6)	Email	/b) //	6)	
			VALIDATION					
Source]	PDF Page N	o. Facility Geograp	nic Area		Location	Reference	
UGPH	2	100	(b) (3) (A)		(b) (3) (A	A)		
Repair Descrip	ipin (A) ipin	boot seals g. Replace	at concrete wall penetrations to boot seals.	or	Sour	ce Contract Reference	47QSHA1 W912DY2 Service O	21F0025
Descriptio Contractor Method(s) U	n of QC	outlined in	detail in QCP.		ntractor QC s Reviewed	QCP and Reports.	Daily	
Description of Validation Observat	QA and ions	outlined in	QASP.					
Rev	vork Needed		Photo Record Attache	d	Repair	Work Vali	dated as Co	mplete
Ye	s •	No	See Page 2.		\odot	Yes	0	No
not sufficient roo	m to place me	chanical s	nt in place of mechanically adjeals. USACE QA and ET were entered in casings. CERTIFICATION	e on site to ve				

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

				QUALIT	Y VALIDATION (QV) REPO	ORT				
]	Red Hill Bu	ılk Fuel Storage Fac	ility Defue	l				
Vali	dation Firm	HDR Env	ironmental	, Operation	s and Construction,	Inc.		Repair No.	150		
	Address	9781 S. N	/leridian Bl	vd., Suite 4	00, Englewood, CO	80112		Repair ID	JP5.HP.0	06	
C	ontract No.	FA89031	5D0007, D	.O. FA8903	3-19-F-0027			Report Date	29 MAR 2	2023	
Q	V Engineer	(b) (6)		Phone (b) (6		Email	(b) (6)		
			***	•	VALIDATION						
Soi	urce	F	PDF Page N	lo.	Facility Geograph	ic Area		Location	Reference		
UGPH		2			(b) (3) (A)		(b) (3)	(A)			
Repair I	Description	stomer	ric seals at nechanical	concrete w	chanically adjustable /all penetration for e elastomeric seals	piping.	Source Contract W912DY21F Reference Service Orde				
Con	scription of ntractor QC nod(s) Used		ethods outlined in detail in QCP.					ntractor QC s Reviewed	QCP and Reports.	Daily	
Val	otion of QA lidation and bservations		outlined in		Date: 20 MAR 2023						
	Rework	Needed			Photo Record Attached	1	Repair	Work Vali	dated as Co	mplete	
0	Yes	•	No		See Page 2.		•	Yes	0	No	
not suffici	proved the	o place me	chanical s	eals. USA0 entered in c	of mechanically adjucted of mechanically adjucted of the control o						
				-		(h) (6	3)				
report was p	ersonally sub	work validate estantiated an		QV ENGI	NEER SIGNATURE	(0) (0	<i>'</i>)	U			
report is true).				DATE	29 MAR 2	9 MAR 2023				

Red Hill Bulk Fuel Storage Facility Defuel

				QUALITY VALIDATION	(QV) REPO	ORT			
]	Red Hill Bulk Fuel Storage	Facility Defu	el			
Valid	dation Firm	HDR Env	ironmental	, Operations and Construction	on, Inc.		Repair No.	151	
	Address	9781 S. N	/leridian Bl	vd., Suite 400, Englewood, 0	00 80112		Repair ID	JP5.HP.0	07
C	ontract No.	FA89031	5D0007, D	.O. FA8903-19-F-0027			Report Date	29 MAR 2	2023
Q'	V Engineer	(b) (6	5)	Phone (b)	(6)	Email	(b) (6	3)	
				VALIDATION	Ĭ				
Sou	ırce	I	PDF Page N	o. Facility Geogr	aphic Area		Location	Reference	
UGPH		2		(b) (3) (A)		(b) (3)	(A)		
Repair I	Description	elastome	ric seals at nechanical	and no mechanically adjusta concrete wall penetration fo y adjustable elastomeric sea	r piping.	Sour	ce Contract Reference	47QSHA1 W912DY2 Service O	21F0025
Con	scription of atractor QC aod(s) Used		outlined in	detail in QCP.	1	ntractor QC s Reviewed		Daily	
Val	otion of QA idation and bservations		outlined in	QASP.	13				
	Rework	Needed	ounce of go	Photo Record Attac		Repair	r Work Vali	dated as Co	mplete
0	Yes	•	No	See Page 2.		•	Yes	0	No
not sufficient not be ins	ent room to talled due	o place me to piping n	echanical s ot being co	nt in place of mechanically a eals. USACE QA and ET we entered in casings. CERTIFICATION QV ENGINEER SIGNATURE	on site to				

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

	Red Hill Bulk	Fuel Storage Fac					
		. aci otornge i ne	ility Defue	l			
C Made :	al, Operations a	nd Construction,	lnc.		Repair No.	152	
S. Meridian E	Blvd., Suite 400,	Englewood, CO	80112		Repair ID	JP5.HP.0	08
0315D0007,	D.O. FA8903-19	9-F-0027			Report Date	29 MAR 2	2023
(6)		Phone (b) (6)		Email	(1) (0))	
	V	/ALIDATION		· ·	`		
PDF Page	No.	Facility Geographi	c Area	20	Location	Reference	
		(3) (A)		(b) (3) (A			
meric seals	s and no mecha at concrete wall ally adjustable e	piping.	Source	ee Contract Reference	47QSHA1 W912DY2 Service O	21F0025	
ods outlined i	n detail in QCP.		tractor QC Reviewed	QCP and Reports.	Daily		
ods outlined i		e: 20 MAR 2023					
d		to Record Attached		Repair	Work Vali	dated as Co	mplete
) No		See Page 2.		•	Yes	0	No
e mechanical ng not being	seals. USACE centered in casi	ERTIFICATION					
	lidated in this d and this	OV ENGINE		lidated in this QV ENGINEER SIGNATURE (b)	lidated in this QV ENGINEER SIGNATURE (b) (6)	didated in this d and this	QV ENGINEER SIGNATURE (b) (6)

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A), (b) (6)

				QUALITY VALIDATION (QV) REPO	ORT			
]	Red Hill Bulk Fuel Storage Fa	cility Defue	l			
Validatio	on Firm	HDR Env	ironmental	, Operations and Construction	Inc.		Repair No.	153	
A	Address	9781 S. N	/leridian Bl	/d., Suite 400, Englewood, CC	80112		Repair ID	F24.HP.0	01
Contr	act No.	FA89031	5D0007, D	O. FA8903-19-F-0027			Report Date	29 MAR 2	2023
QV E	ngineer	(b) (6)	Phone (b) (6	5)	Email	(b) (6)	
	,	\		VALIDATION					
Source		I	PDF Page N	o. Facility Geograp	nic Area		Location	Reference	
UGPH		2		(b) (3) (A)		(b) (3) (A			
Repair Desc	cription	failed ing. Re	boot seals eplace boo	at concrete wall penetrations f	or ^{(b) (3) (A)}	Sour	ce Contract Reference	47QSHA1 W912DY2 Service O	21F0025
Descrip Contrac Method(s	tor QC		outlined in	detail in QCP.		ntractor QC s Reviewed	QCP and Reports.	Daily	
Description Validat Obser	200		outlined in	QASP. vernment. Date: 20 MAR 2023					
	Rework	Needed	ounce of go	Photo Record Attache	d	Repair	Work Vali	dated as Co	mplete
0	Yes	•	No	See Page 2.		•	Yes	0	No
not sufficient	room to	o place me to piping n	chanical s ot being co	nt in place of mechanically adjudies. USACE QA and ET were entered in casings. CERTIFICATION QV ENGINEER SIGNATURE	on site to				

Red Hill Bulk Fuel Storage Facility Defuel

				QUALIT	TY VALIDATION (QV) REPO	ORT			
			1	Red Hill B	ulk Fuel Storage Fac	ility Defu	el			
Vali	dation Firm	HDR Env	ironmenta	, Operation	ns and Construction,	Inc.		Repair No.	154	
	Address	9781 S. N	/leridian Bl	vd., Suite 4	100, Englewood, CO	80112		Repair ID	F24.HP.0	02
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	29 MAR 2	2023
Q	V Engineer	(b) (6	5)		Phone (b) (6	5)	Email	(b) (6	6)	
					VALIDATION					
Son	urce	I	PDF Page N	lo.	Facility Geograph	ic Area		Location	Reference	
JGPH		2			(b) (3) (A)		(b) (3) (A	A)		
Repair 1	Description	elastome	ric seals at nechanical	concrete v	echanically adjustable wall penetration for ble le elastomeric seals	iping.	Source	ce Contract Reference	47QSHA1 W912DY2 Service C	21F0025
Description of Contractor QC Method(s) Used				detail in Q	CP.		ntractor QC s Reviewed		Daily	
Val	otion of QA lidation and bservations		outlined in		Date: 20 MAR 2023					
	Rework	Needed	, , ,		Photo Record Attached	l	Repair	Work Vali	dated as Co	mplete
0	Yes	•	No		See Page 2.		•	Yes	0	No
ot suffici ot be ins	proved the ent room to stalled due	o place me to piping n	echanical s oot being co	eals. USA	of mechanically adjuCE QA and ET were casings. CERTIFICATION INEER SIGNATURE		verify that t			
	ersonally sub			DATE 29 MAR 2023						

Red Hill Bulk Fuel Storage Facility Defuel

			QUALITY VALIDATION (QV) REPO	ORT			
		į	Red Hill Bulk Fuel Storage Fa	cility Defu	el			
Validation Firm	HDR Env	ironmenta	, Operations and Construction	Inc.		Repair No.	155	
Addres	s 9781 S. M	Meridian Bl	vd., Suite 400, Englewood, CC	80112		Repair ID	F24.HP.0	03
Contract No	FA89031	5D0007, D	.O. FA8903-19-F-0027			Report Date	29 MAR 2	2023
QV Enginee	(b) (6)		Phone (D)	(6)	Email	/I- \ /C		
			VALIDATION					
Source	1	PDF Page N	o. Facility Geograp	nic Area		Location	Reference	
UGPH	2		(b) (3) (A)		(b) (3) (A)	2	
Repair Description	stome Provide n	ric seals at	and no mechanically adjustab concrete wall penetration for y adjustable elastomeric seals	oiping.	Sour	ce Contract Reference	47QSHA1 W912DY2 Service O	21F0025
Description of Contractor Qo Method(s) Use	f	outlined in	detail in QCP.		ntractor QC s Reviewed	QCP and Reports.	Daily	
Description of QA Validation an Observation	A d s	outlined in	QASP.					
Rewor	k Needed	plance by go	Photo Record Attache	d	Repair	Work Vali	dated as Co	mplete
Yes	•	No	See Page 2.		•	Yes	0	No
not sufficient room	to place me	chanical s	nt in place of mechanically adjeals. USACE QA and ET were entered in casings. CERTIFICATION	e on site to				

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

				QUALI	TY VALIDATION (QV) REPO	RT					
]	Red Hill B	ulk Fuel Storage Fac	ility Defue	l					
Vali	dation Firm	HDR Env	ironmental	, Operatio	ns and Construction,	Inc.		Repair No.	156			
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	F24.HP.0	04		
С	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	29 MAR 2	023		
Q	V Engineer	(b) (6			Phone (b) (6))	Email	(b) (6)			
					VALIDATION							
Sou	ırce	F	DF Page N	· 0.	Facility Geograph	ic Area		Location	Reference			
UGPH		2			(b) (3) (A)		(b) (3) ((A)				
Repair l	Description	stomer Provide m replace be	nechanical	and no me concrete y adjustab	echanically adjustable wall penetration for ble elastomeric seals	piping.	Sour	ce Contract Reference	47QSHA1 W912DY2 Service O	1F0025		
Cor	scription of ntractor QC nod(s) Used	Methods	outlined in	detail in C	QCP.			ntractor QC s Reviewed	QCP and Reports.	Daily		
Val	otion of QA idation and bservations		outlined in		Date: 20 MAR 2023							
	Rework	Needed	nance by ge		Photo Record Attached	1	Repair	Work Vali	dated as Cor	mplete		
0	Yes	•	No		See Page 2.		•	Yes	0	No		
not suffici	ent room to		chanical s	eals. USA	of mechanically adju CE QA and ET were casings.							
		work validate		QV ENG	INEER SIGNATURE	(b)	(6)					
report was p report is true		stantiated an	d this		DATE	29 MAR 2	2023	AR 2023				

Red Hill Bulk Fuel Storage Facility Defuel

				QUALITY VALIDATION (QV) REPO	RT			
]	Red Hill Bulk Fuel Storage Fa	cility Defuel	l			
Valida	ation Firm	HDR Env	ironmenta	Operations and Construction,	Inc.		Repair No.	157	
	Address	9781 S. N	/leridian Bl	vd., Suite 400, Englewood, CO	80112		Repair ID	F24.HP.0	05
Con	ntract No.	FA89031	5D0007, D	O. FA8903-19-F-0027			Report Date	29 MAR 2	2023
QV	Engineer	(b) (6)	Phone (b) (3)	Email	(b) (6	5)	
				VALIDATION		2			
Sour	ce	I	PDF Page N	o. Facility Geograph	nic Area		Location	Reference	
UGPH		2		(b) (3) (A)		Trench C	over B0		
Repair D	escription		boot seals	at concrete wall penetrations for seals.	or ^{(b) (3) (A)}	Sour	ce Contract Reference	47QSHA1 W912DY2 Service O	21F0025
Cont	cription of ractor QC od(s) Used		outlined in	detail in QCP.			ntractor QC s Reviewed	QCP and Reports.	Daily
Valid	ion of QA lation and servations		outlined in	QASP. vernment. Date: 20 MAR 2023					
	Rework	Needed	ounce of g	Photo Record Attache	d	Repair	Work Vali	dated as Co	mplete
0	Yes	•	No	See Page 2.		•	Yes	0	No
not sufficie	nt room to	o place me to piping n	chanical s ot being co	nt in place of mechanically adjustals. USACE QA and ET were natered in casings. CERTIFICATION QV ENGINEER SIGNATURE	on site to v				

Red Hill Bulk Fuel Storage Facility Defuel

			QUALITY VALIDATION	QV) REPO	RT				
			Red Hill Bulk Fuel Storage Fa	cility Defuel					
Validation Fir	m HDR Env	ironmenta	, Operations and Construction	Inc.		Repair No.	158		
Addre	ss 9781 S. M	Meridian Bl	vd., Suite 400, Englewood, CC	80112		Repair ID F24.HP.006			
Contract N	o. FA89031	5D0007, D	.O. FA8903-19-F-0027		Report Date 29 MAR 20				
QV Engine	er (b) (6	3)	Phone (b) (6	5)	Email				
		,	VALIDATION						
Source]	PDF Page N	o. Facility Geograp	nic Area		Location	Reference		
UGPH	(b) (3) (A)								
Repair Description	elastome Provide n	ric seals at	and no mechanically adjustab concrete wall penetration for y adjustable elastomeric seals	Sour	ce Contract Reference	Camina Ouday 647			
Description Contractor Q Method(s) Use	of C	outlined in	detail in QCP.			ntractor QC s Reviewed			
Description of Q Validation at Observation	A nd ns	outlined in	QASP.						
Rewo	rk Needed	planee by go	Photo Record Attache	d	Repair Work Validated as Complete				
Yes	•	No	See Page 2.		•	Yes	0	No	
not sufficient room	to place me le to piping n	chanical s	nt in place of mechanically adjeals. USACE QA and ET were entered in casings. CERTIFICATION QV ENGINEER SIGNATURE	e on site to v					

Red Hill Bulk Fuel Storage Facility Defuel

QUALITY VALIDATION (QV) REPORT												
]	Red Hill B	ulk Fuel Storage Fac	ility Defue	ı					
Valid	dation Firm	HDR Env	ironmental	, Operatio	ns and Construction,	Inc.		Repair No.	159			
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	F24.HP.007			
С	Contract No. FA890315D0007, D.O. FA8903-19-F-0027							Report Date	29 MAR 2	023		
Q	V Engineer	(b) ((6)		Phone (b) (6)	Email	(b) (6)				
VALIDATION												
Source PDF Page No. Facility Geographic						ic Area		Location	Reference			
UGPH		3			(b) (3) (A)		(b) (3) (A)				
Repair l	Description	elastome	ric seals at nechanical	and no mechanically adjustable to concrete wall penetration for piping. ly adjustable elastomeric seals and			Source Contract W91		47QSHA18D000Y W912DY21F0025 Service Order 647			
Description of Contractor QC Method(s) Used				n detail in QCP.			Contractor QC Report			Daily		
Methods outlined in QASP. Description of QA Validation and Observations												
	Rework	Needed	plance by go		Date: 20 MAR 2023 Photo Record Attached	1	Repair Work Validated as Complete					
0	Yes	•	No		See Page 2.		•	Yes	0	No		
Comments EXWC approved the use of flexible sealant in place of mechanically adjustable elastomeric seals in cases where there is not sufficient room to place mechanical seals. USACE QA and ET were on site to verify that the mechanical seals could not be installed due to piping not being centered in casings. CERTIFICATION												
		work validate		QV ENG	INEER SIGNATURE	(b) (6)					
report was p report is true		stantiated an	d this		DATE	29 MAR 2	2023					

Red Hill Bulk Fuel Storage Facility Defuel

				QUALITY VALIDATION	(QV) REPO	ORT					
			1	Red Hill Bulk Fuel Storage F	acility Defu	el					
Valid	ation Firm	HDR Env	ironmenta	, Operations and Construction	n, Inc.		Repair No.	160			
	Address	9781 S. N	//eridian Bl	vd., Suite 400, Englewood, C	O 80112		Repair ID	08			
Co	ontract No.	FA89031	5D0007, D	.O. FA8903-19-F-0027			Report Date		2023		
Q7	/ Engineer	(b) (6)	Phone (b) ((6)	Email (b) (6)					
				VALIDATION		415					
Sou	rce	I	PDF Page N	o. Facility Geogra	phic Area		Location	Reference			
UGPH		3		(b) (3) (A)		(b) (3)	(A)				
Repair I	Description	astome	ric seals at nechanical	and no mechanically adjustal concrete wall penetration for y adjustable elastomeric seal	Sour	ce Contract Reference	Camina Order 647				
Con	cription of tractor QC od(s) Used		outlined in	detail in QCP.		ntractor QC s Reviewed					
Vali	tion of QA dation and oservations		outlined in	QASP.	3	•					
	Rework	Needed	planee by go	Photo Record Attach	Repair Work Validated as Complete						
0	Yes	•	No	See Page 2.		•	Yes	0	No		
not sufficie	ent room to alled due	o place me to piping n	echanical s lot being co	nt in place of mechanically acted in USACE QA and ET we entered in casings. CERTIFICATIO QV ENGINEER SIGNATURE	re on site to						

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Typical seals before repair

(b) (3) (A), (b) (6)

			QUALITY VALIDATION (QV) REPO	RT					
		į	Red Hill Bulk Fuel Storage Fa	cility Defuel						
Validation Fi	m HDR Env	rironmenta	, Operations and Construction,	Inc.		Repair No.	161			
Addre	ess 9781 S. N	Meridian Bl	vd., Suite 400, Englewood, CO	80112		Repair ID	F76.HP.0	01		
Contract N	To. FA89031	5D0007, D	.O. FA8903-19-F-0027			Report Date	29 MAR 2	2023		
QV Engine	er (b) (6	5)	Phone (b) (6)	Email	(b) (6)			
			VALIDATION							
Source	1	PDF Page N	o. Facility Geograpl	nic Area		Location	Reference			
UGPH	3	100	(b) (3) (A)		(b) (3)	(A)	(A)			
Repair Descripti	ing. Re	boot seals eplace boo	at concrete wall penetrations for Sour			ce Contract Reference	Camina Ouday 617			
Description Contractor (Method(s) Us	of QC	outlined in	detail in QCP.			ntractor QC s Reviewed	QCP and Daily Reports.			
Description of Q Validation a Observation	QA nd ms	outlined in	QASP.							
Rewo	ork Needed	pariet of g	Photo Record Attache	d	Repair Work Validated as Complet					
Yes	•	No	See Page 2.		•	Yes	0	No		
not sufficient roon	n to place me	echanical s	nt in place of mechanically adjusted in USACE QA and ET were entered in casings. CERTIFICATION QV ENGINEER SIGNATURE	on site to v						

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

QUALITY VALIDATION (QV) REPORT												
]	Red Hill Bı	ulk Fuel Storage Fac	ility Defue	l					
Vali	dation Firm	HDR Env	ironmental	, Operation	ns and Construction,	Inc.		Repair No.	162			
	Address	9781 S. N	/leridian Bl	vd., Suite 4	100, Englewood, CO	80112		Repair ID	F76.HP.0	02		
C	ontract No.	FA89031	5D0007, D	.O. FA8903	3-19-F-0027			Report Date	29 MAR 2	2023		
Q	V Engineer	(b) (6	3)		Phone (b) (6)	Email	(b) (6)			
VALIDATION												
Sou	ırce	I	DF Page N	o.	Facility Geograph	ic Area		Location	Reference			
UGPH		3			(b) (3) (A)		(b) (3)	(A)				
Repair l	Description	elastome	ric seals at nechanicall	and no mechanically adjustable to concrete wall penetration for bipling. ly adjustable elastomeric seals and			Source	Source Contract W912DY		A18D000Y Y21F0025 Order 647		
Cor	scription of ntractor QC nod(s) Used	Methods	outlined in	n detail in QCP.					QCP and Daily Reports.			
Val	otion of QA idation and bservations		outlined in									
	D 1		otance by go		Date: 20 MAR 2023		Repair Work Validated as Complete					
0	Yes	Needed	No		Photo Record Attached See Page 2.	ı	Repair	Yes	O atted as Co	No		
Comments EXWC approved the use of flexible sealant in place of mechanically adjustable elastomeric seals in cases where there is not sufficient room to place mechanical seals. USACE QA and ET were on site to verify that the mechanical seals could not be installed due to piping not being centered in casings. CERTIFICATION												
I hereby cert	ify that repair	work validate	ed in this	QV ENGI	NEER SIGNATURE	(b) (6)					
	ersonally sub				DATE	29 MAR 2	2023					

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Typical seals before repair

QUALITY VALIDATION (QV) REPORT											
]	Red Hill B	ulk Fuel Storage Fac	ility Defue	l				
Valid	dation Firm	HDR Env	ironmental	, Operatio	ns and Construction,	Inc.		Repair No.	163		
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112	Repair ID F76.HP.00			03	
С	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	29 MAR 2	2023	
Q	V Engineer	(b) (6	5)		Phone (b) (6	5)	Email	(b) (6	5)		
VALIDATION											
Sot	ırce	I	PDF Page N	o.	Facility Geograph	ic Area		Location	Reference		
UGPH		3			(b) (3) (A)		(b) (3)	(A)			
Repair I	Description	astome Provide n	ric seals at	and no mechanically adjustable iping. concrete wall penetration for iping. ly adjustable elastomeric seal			Source	ce Contract Reference	C		
Description of Contractor QC Method(s) Used				detail in QCP.				ntractor QC s Reviewed			
Val	otion of QA idation and bservations		outlined in	QASP.							
			ptance by go		Date: 20 MAR 2023		Repair Work Validated as Complete				
0	Yes	Needed	No		Photo Record Attached See Page 2.	1	Repair	Yes	dated as Cor	No	
Comments EXWC approved the use of flexible sealant in place of mechanically adjustable elastomeric seals in cases where there is not sufficient room to place mechanical seals. USACE QA and ET were on site to verify that the mechanical seals could not be installed due to piping not being centered in casings.											
					CERTIFICATION						
		work validate		QV ENG	INEER SIGNATURE	(b) ((6)				
report is true		and all	DATE				29 MAR 2023				

Red Hill Bulk Fuel Storage Facility Defuel

	QUALITY VALIDATION (QV) REPORT										
]	Red Hill B	Bulk Fuel Storage Fac	ility Defue	l				
Vali	dation Firm	HDR Env	ironmental	, Operatio	ns and Construction,	Inc.		Repair No.	164		
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	F76.HP.0	04	
C	ontract No.	FA89031	5D0007, D	.O. FA890)3-19-F-0027			Report Date	29 MAR 2	2023	
Q	V Engineer	(b) (6	5)	ł.	Phone (b) (6)	Email	(b) (6	3)		
					VALIDATION						
Sou	ırce	I	DF Page N	o.	Facility Geograph	ic Area		Location	n Reference		
UGPH		3			(b) (3) (A)		(b) (3)	(A)			
Repair l	Description	elastome	boot seals ric seals at nechanicall oot seals.	iping.	Source	ce Contract Reference	47QSHA1 W912DY2 Service C	21F0025			
Cor	scription of ntractor QC nod(s) Used	Methods	outlined in	detail in C	QCP.			tractor QC Reviewed		Daily	
Val	otion of QA idation and bservations		outlined in								
	D 1		otance by go	overnment.	Date: 20 MAR 2023		ъ.	TT7 1 T7 1'	1 1 0	1.0	
0	Yes	Needed	No		Photo Record Attached See Page 2.	ı	Repair	Yes	dated as Co	No	
not suffici											
I hereby cert	ify that repair	work validate	ed in this	QV ENG	SINEER SIGNATURE	(b) (6	3)				
I hereby certify that repair work validated in this report was personally substantiated and this report is true. QV ENGINEER SIGNATE DATE					DATE	29 MAR 2	2023				

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

			QUALITY VALIDATION (QV) REPUR	₹1					
		1	ted Hill Bulk Fuel Storage Fa	cility Defuel						
Validation Fire	n HDR Env	rironmenta	Operations and Construction	Inc.		Repair No.	165			
Addres	ss 9781 S. N	Meridian Bl	d., Suite 400, Englewood, CC	80112		Repair ID	F76.HP.0	05		
Contract No	FA89031	5D0007, D	O. FA8903-19-F-0027			Report Date	29 MAR 2	2023		
QV Enginee	er (b) (6)	Phone (b) (6)	Email (b) (6)					
	<u>'</u>		VALIDATION							
Source	I	PDF Page N	o. Facility Geograph	nic Area		Location	Reference			
UGPH	3		(b) (3) (A)		(b) (3) (A)				
Repair Description	ing. Re	boot seals eplace boo	at concrete wall penetrations f seals.	(b) (3) (A) Or	Sour	ce Contract Reference	47QSHA1 W912DY2 Service O	21F0025		
Description of Contractor Q Method(s) Use	of C	outlined in	detail in QCP.			ntractor QC s Reviewed	QCP and Reports.	Daily		
Description of Q. Validation an Observation	A d as	outlined in	QASP. vernment. Date: 20 MAR 2023							
Rewo	rk Needed	, , ,	Photo Record Attache	d	Repair	Work Vali	dated as Co	mplete		
Yes	•	No	See Page 2.		•	Yes	0	No		
not sufficient room	to place me	chanical s	nt in place of mechanically adjuds. USACE QA and ET were ntered in casings. CERTIFICATION	on site to ve						

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

				QUALITY VALIDATION	QV) REPO	ORT			
]	Red Hill Bulk Fuel Storage Fa	cility Defue	l			
Vali	dation Firm	HDR Env	ironmenta	, Operations and Construction	, Inc.		Repair No.	166	
	Address	9781 S. N	/leridian Bl	vd., Suite 400, Englewood, CC	80112		Repair ID	F76.HP.0	06
C	ontract No.	FA89031	5D0007, D	.O. FA8903-19-F-0027			Report Date	29 MAR 2	2023
Q	V Engineer	(b) (6	5)	Phone (b)	6)	Email	/b) //	3)	
			<u>*</u>	VALIDATION					
Sou	urce	I	PDF Page N	o. Facility Geograp	nic Area		Location	Reference	
UGPH		3		(b) (3) (A)		(b) (3) (A	()		
Repair l	Description	elastome	ric seals at nechanical	and no mechanically adjustab concrete wall penetration for y adjustable elastomeric seal	piping.	Sour	ce Contract Reference	47QSHA1 W912DY2 Service O	21F0025
Cor	scription of ntractor QC nod(s) Used		outlined in	detail in QCP.			ntractor QC s Reviewed	QCP and Reports.	Daily
Val	otion of QA lidation and bservations		outlined in	QASP.					
	Rework	Needed	ptance by go	Photo Record Attache	d	Repair	Work Vali	dated as Co	mplete
0	Yes	•	No	See Page 2.		•	Yes	0	No
not suffici	proved the ent room to stalled due	o place me to piping n	echanical s lot being co	nt in place of mechanically adjects. USACE QA and ET were entered in casings. CERTIFICATION QV ENGINEER SIGNATURE	e on site to v				

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Repaired pipe seals (b) (3) (A)

	QUALITY VALIDATION (QV) REPORT Red Hill Bulk Fuel Storage Facility Defuel									
]	Red Hill B	ulk Fuel Storage Fac	ility Defue	l			
Valid	dation Firm	HDR Env	ironmental	i, Operatio	ns and Construction,	Inc.		Repair No.	167	
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	F76.HP.0	07
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	29 MAR 2	2023
Q'	V Engineer	(b) (6	\mathbf{S}		Phone (b) (6)	Email	(b) (6)	
					VALIDATION					
Sou	ırce	I	PDF Page N	lo.	Facility Geograph			Location	Reference	
UGPH		3			(b) (3) (A)		(b) (3)	(A)		
Repair I	Description	stome	ric seals at nechanical	concrete v	echanically adjustable wall penetration for ble elastomeric seal	iping.	Sour	ce Contract Reference	47QSHA1 W912DY2 Service C	21F0025
Cor	scription of ntractor QC nod(s) Used		Methods outlined in detail in QCP. Contractor QC Records Reviewed							Daily
Val	otion of QA idation and bservations		outlined in							
	Dawork	Final acception Needed	otance by go		Date: 20 MAR 2023 Photo Record Attached	1	Danair	Work Vali	dated as Co	lata
0	Yes	•	No		See Page 2.		(A)	Yes	O	No
Comments EXWC approved the use of flexible sealant in place of mechanically adjustable elastomeric seals in cases where there is not sufficient room to place mechanical seals. USACE QA and ET were on site to verify that the mechanical seals could not be installed due to piping not being centered in casings.										
					CERTIFICATION					
		work validate	work validated in this QV ENGINEER SIGNATURE			(b) ((6)			
report was porting true		samuatea an	น แแร		DATE	29 MAR 2	2023			

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Repaired pipe seals (b) (3) (A)

Address	HDR Environr	R	ed Hill Bu						
Address	HDR Environr		tu IIII Du	lk Fuel Storage Fac	ility Defue	el			
		mental,	Operations	s and Construction,	Inc.		Repair No.	168	
Contract No.	9781 S. Merid	lian Blv	d., Suite 40	00, Englewood, CO	80112		Repair ID	F76.HP.0	08
	FA890315D00	007, D.C	O. FA8903	-19-F-0027			Report Date	29 MAR 2	2023
QV Engineer	(b) (6)			Phone (b) (6)	Email	(b) (6)	
				VALIDATION		,			
Source	PDF I	Page No	v.	Facility Geograph	ic Area		Location	Reference	
JGPH	3			b) (3) (A)		(b) (3)	(A)		
	failed boot elastomeric se Provide mecha replace boot s	piping.	Source Contract Reference 47QSHA18 W912DY21 Service Ord						
Description of Contractor QC Method(s) Used	Methods outlin	ned in d	detail in QC	CP.		ntractor QC s Reviewed	QCP and Reports.	Daily	
Description of QA Validation and Observations	Methods outlin			Date: 20 MAR 2023					
Rework				hoto Record Attached	l	Repair	Work Vali	dated as Co	mplete
Yes	• 1	No		See Page 2.		•	Yes	0	No
EXWC approved the not sufficient room to not be installed due to the hereby certify that repair aport was personally subs	o place mechar to piping not be	nical sea	als. USAC	E QA and ET were	on site to				

Red Hill Bulk Fuel Storage Facility Defuel

(b) (3) (A)

Typical seals before repair

(b) (3) (A), (b) (6)

Repaired pipe seals (b) (3) (A)

	QUALITY VALIDATION (QV) REPORT Red Hill Bulk Fuel Storage Facility Defuel									
			1	Red Hill B	ulk Fuel Storage Fac	ility Defue	l			
Vali	dation Firm	HDR Env	ironmental	, Operatio	ns and Construction,	Inc.		Repair No.	170	
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	F24.A22.0	02
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	28 MAR 2	2023
Q	V Engineer	(b) (6)		Phone (b) (6)	Email	(h) (6)	5)	
					VALIDATION					
Son	urce	F	PDF Page N	lo.	Facility Geograph	ic Area		Location	Reference	
EXWC		73			Tank Gallery		(b) (3) (A)		
Repair	Description		ve coating ent and rep		ect. Fitness for servic ssary.	e (FFS)	Sour	ce Contract Reference	N3943020 TO N394302	
Cor	scription of ntractor QC nod(s) Used		A - no work provided. Contractor QC Records Reviewed						N/A	
Val	otion of QA lidation and bservations	Update:	Pipeline Fi	tness for S	ed EXWC - Compreh Service Assessment	ensive Rep	oair List Re	ecommenda	ations	
			otance by go	overnment.	Date: 08 MAR 2023	. 1				10000 4 104000
0	Yes	Needed	No		Photo Record Attached	1	Repair	Work Valid	Cated as Co	No
Comments Localized Fitness for Service (FFS) assessments were conducted at specific indications on Red Hill F-24 and JP-5 trans pipelines. Selection of indications was limited to mechanical integrity principles under assumed service conditions, and leveraged previous integrity management work. FFS performed, no repair required for defuel.										
Reference	e: EXWC -	Compreh	ensive Rep	oair List Re	ecommendations / Pip	oeline Fitne	ess for Ser	vice Asses	sment	
					CERTIFICATION					
I hereby certify that repair work validated in this report was personally substantiated and this										
report was p report is true	Signatura variante e resta e resta e rest	stantiated an	a this		DATE	28 MAR 2	2023			

	QUALITY VALIDATION (QV) REPORT										
			1	Red Hill B	ulk Fuel Storage Fac	ility Defue	l	-			
Valid	dation Firm	HDR Env	ironmental	, Operatio	ns and Construction,	Inc.		Repair No.	171		
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112	1	Repair ID	F24.A22.0)3	
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	28 MAR 2	023	
Q	V Engineer	(b) (6	5)		Phone (b) (6)	Email	(b) (e	3)		
	-				VALIDATION						
Sou	ırce	F	DF Page N	o.	Facility Geograph	ic Area		Location	Reference		
EXWC		73			Tank Gallery		(b) (3) (A)				
Repair l	Description	Remove repair if no		ng and ins	spect. FFS assessme	nt and	Sourc	ce Contract Reference	N3943020 TO N3943021		
Description of Contractor QC Method(s) Used								tractor QC Reviewed	N/A		
Val	otion of QA idation and bservations	Update:			ed EXWC - Comprehe Service Assessment	ensive Rep	air List Re	commenda	ations		
			otance by go		Date: 08 MAR 2023						
	872	Needed	40000		Photo Record Attached		0	CROOP	dated as Cor	V3957	
0	Yes	•	No		N/A		\odot	Yes	O	No	
Localized pipelines. leveraged FFS perfo	Comments Localized Fitness for Service (FFS) assessments were conducted at specific indications on Red Hill F-24 and JP-5 transfer bipelines. Selection of indications was limited to mechanical integrity principles under assumed service conditions, and everaged previous integrity management work. FFS performed, no repair required for defuel.										
. to loi di lot	C. EXTO	Complete	5/10/40 136	Zan Elot IX	ecommendations / Pip	, J	.50 101 0611		J. I. Olit		
I hereby cert	ify that repair	work validate	ed in this	QV ENG	INEER SIGNATURE	(b)	(6)				
	ersonally sub	stantiated an			DATE	28 MAR 2	2023				

	QUALITY VALIDATION (QV) REPORT Red Hill Bulk Fuel Storage Facility Defuel										
]	Red Hill B	ulk Fuel Storage Fac	ility Defue	l				
Vali	dation Firm	HDR Envi	ironmental	, Operation	ns and Construction,	Inc.		Repair No.	172		
	Address	9781 S. M	leridian Bl	vd., Suite 4	100, Englewood, CO	80112		- 3	F24.A22.0)4	
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	28 MAR 2	2023	
Q	V Engineer	(b) (6	3)		Phone (b) (6)	Email	/1- \ /	6)		
					VALIDATION			\	,		
Son	urce	P	DF Page N	o.	Facility Geograph	ic Area		Location	Reference		
EXWC		EXWC			(b) (3) (A)	20	(b) (3) (A	A)			
Repair	Description	necessary	_	FFS asses	ssment and repair if		Sour	ce Contract Reference	N3943020 TO N3943021		
Cor	scription of ntractor QC nod(s) Used	1700 000 000 000 000 000 000 000 000 000	work provid	ded.				ntractor QC s Reviewed	N/A		
Val	otion of QA lidation and bservations	Update: I	Pipeline Fi	tness for S	ed EXWC - Comprehervice Assessment	ensive Rep	oair List Re	ecommenda	ations		
	Rework	Needed	tance by go		Date: 08 MAR 2023 Photo Record Attached	1	Renair	Work Vali	dated as Co	mnlete	
0	Yes	•	No		N/A		•	Yes	0	No	
Comments Localized Fitness for Service (FFS) assessments were conducted at specific indications on Red Hill F-24 and JP-5 trans pipelines. Selection of indications was limited to mechanical integrity principles under assumed service conditions, and leveraged previous integrity management work. FFS performed, no repair required for defuel.											
Reference	e: EXWC	- Comprehe	ensive Rep	oair List Re	ecommendations / Pip	eline Fitne	ess for Ser	vice Asses	sment		
					CERTIFICATION						
		work validate		QV ENG	INEER SIGNATURE	(b) (6	6)				
report was p report is true	Signatura notari na 🕳 na sistema e regi	estantiated and	d this		DATE	28 MAR 2	2023				

	QUALITY VALIDATION (QV) REPORT Red Hill Bulk Fuel Storage Facility Defuel									
]	Red Hill B	ulk Fuel Storage Fac	ility Defue	l			
Vali	dation Firm	HDR Env	ironmental	, Operatio	ns and Construction,	Inc.		Repair No.	173	
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		35	F24.A22.0	05
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	28 MAR 2	2023
Q	V Engineer	(b) (6)		Phone (b) (6)	Email	(h) (6)	\mathbf{S}	10113
					VALIDATION	_				
Son	urce	F	PDF Page N	o.	Facility Geograph	ic Area		Location	Reference	
EXWC		EXWC			(b) (3) (A)		(b) (3)	(A)		
Repair	Description	necessary	_	FFS asses	ssment and repair if		Sour	ce Contract Reference	N3943020 TO N394302	
Cor	scription of ntractor QC nod(s) Used	1000 CONTRACTOR OF CONTRACTOR	- no work provided. Contractor Quality Records Reviewe					~	N/A	
Val	otion of QA lidation and bservations	Update:	Pipeline Fi	tness for S	ed EXWC - Comprehe Service Assessment	ensive Rep	air List Re	ecommenda	ations	
	n 1		otance by go		Date: 08 MAR 2023	. 1	ъ.	*** 1 ** 1'	1.1.0	4
0	Yes	Needed	No	,	Photo Record Attached N/A		Repair	Work Vali Yes	O ated as Co	No
Comments Localized Fitness for Service (FFS) assessments were conducted at specific indications on Red Hill F pipelines. Selection of indications was limited to mechanical integrity principles under assumed servi leveraged previous integrity management work. FFS performed, no repair required for defuel.										
Reference	e: EXWC	- Compreh	ensive Rep	oair List Re	ecommendations / Pip	eline Fitne	ess for Ser	vice Asses	sment	
		25			CERTIFICATION					
I hereby certify that repair work validated in this QV ENGINEER SIGNATURE (b) (6)					6)					
report was p report is true		stantiated an	d this		DATE	28 MAR 2	2023			

	QUALITY VALIDATION (QV) REPORT Red Hill Bulk Fuel Storage Facility Defuel									
]	Red Hill B	ulk Fuel Storage Fac	ility Defue	l			
Vali	dation Firm	HDR Env	ironmental	, Operatio	ns and Construction,	Inc.		Repair No.	174	
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		35	F24.A22.0	06
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	28 MAR 2	2023
Q	V Engineer	(b) (6))		Phone (b) (6	(5)	Email	/le \ //	6)	
					VALIDATION					
Son	urce	F	DF Page N	o.	Facility Geograph	ic Area		Location	Reference	
EXWC		EXWC			(b) (3) (A)		(b) (3) ((A)		
Repair	Description	necessary	_	FFS asses	ssment and repair if		Sour	ce Contract Reference	N3943020 TO N394302	
Description of Contractor QC Method(s) Used				ded.				ntractor QC s Reviewed	N/A	
Val	otion of QA lidation and bservations	Update:			ed EXWC - Comprehe Service Assessment	ensive Rep	oair List Re	ecommenda	ations	
	n 1		otance by go		Date: 08 MAR 2023		ъ.	*** 1 ** 1'	1 . 1 . 0	4
0	Yes	Needed	No		Photo Record Attached		Repair	Work Valid	C C C C C C C C C C C C C C C C C C C	No
Comments Localized Fitness for Service (FFS) assessments were conducted at specific indications on Repipelines. Selection of indications was limited to mechanical integrity principles under assumed leveraged previous integrity management work.										
955 000 - 1990		epair requ			91 991 GAMA		20 020	12 21		
Reference	e: EXWC	- Compreh	ensive Rep	oair List Re	ecommendations / Pip	peline Fitne	ess for Ser	vice Asses	sment	
					CERTIFICATION	<u>/b) /</u>	6)			
I hereby certify that repair work validated in this report was personally substantiated and this				INEER SIGNATURE	(a) (6)				
report is true		ANTERIOR DE 1957 (1955) 1955 (1955) 1955 (1955) 1955 (1955) 1955 (1955) 1955 (1955) 1955 (1955) 1955 (1955) 19	100 PV (100 PP 100		DATE	28 MAR 2	2023			

	QUALITY VALIDATION (QV) REPORT Red Hill Bulk Fuel Storage Facility Defuel										
]	Red Hill B	ulk Fuel Storage Fac	ility Defue	l				
Vali	dation Firm	HDR Env	ironmental	, Operatio	ns and Construction,	Inc.		Repair No.	175		
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	F24.A22.0	07	
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	28 MAR 2	2023	
Q	V Engineer	(b) (6)		Phone (b) (6	5)	Email	/b) /	6)		
					VALIDATION						
Sou	urce	F	DF Page N	o.	Facility Geograph	ic Area		Location	Reference		
EXWC		EXWC	_		(b) (3) (A)		(b) (3) ((A)			
Repair 1	Description	necessary	_	FFS asses	ssment and repair if		Sour	ce Contract Reference	N3943020 TO N394302		
Description of Contractor QC Method(s) Used								ntractor QC s Reviewed	N/A		
Val	otion of QA lidation and bservations	Update:	Pipeline Fi	tness for S	ed EXWC - Compreh Service Assessment	ensive Rep	oair List Re	commenda	ations		
	D 1		otance by go		Date: 08 MAR 2023		ъ.	337 1 37 1	1 1. 6	4.2	
0	Yes	Needed	No		Photo Record Attached		(e)	Work Vali Yes	O	No	
pipelines. leveraged FFS perfo	Comments Localized Fitness for Service (FFS) assessments were conducted at specific indications on Red Hill F-24 and JP-5 transfer bipelines. Selection of indications was limited to mechanical integrity principles under assumed service conditions, and everaged previous integrity management work. FFS performed, no repair required for defuel. Reference: EXWC - Comprehensive Repair List Recommendations / Pipeline Fitness for Service Assessment										
					CERTIFICATION						
		work validate		QV ENG	INEER SIGNATURE	(b) ((6)				
report was p report is true		stantiated an	a this		DATE	28 MAR 2	2023				

	QUALITY VALIDATION (QV) REPORT Red Hill Bulk Fuel Storage Facility Defuel										
]	Red Hill B	ulk Fuel Storage Fac	ility Defue	l				
Valid	dation Firm	HDR Env	ironmental	, Operatio	ns and Construction,	Inc.		Repair No.	176		
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	F24.A22.0	08	
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	28 MAR 2	2023	
Q	V Engineer	(b) (6	3)		Phone (b) (6	6)	Email	/b \ /	6)		
					VALIDATION	- 10				-	
Sou	urce	F	DF Page N	o.	Facility Geograph	ic Area		Location	Reference		
EXWC		EXWC			(b) (3) (A)		(b) (3) (A)			
Repair l	Description	necessary	_	FFS asses	ssment and repair if		Sour	ce Contract Reference	N3943020 TO N394302		
Description of Contractor QC Method(s) Used								ntractor QC s Reviewed	N/A		
Val	otion of QA idation and bservations	Update:	Pipeline Fi	tness for S	ed EXWC - Compreh Service Assessment	ensive Rep	oair List Re	ecommenda	ations		
	D 1		otance by go		Date: 08 MAR 2023		ъ :	337 1 37 1:	1 1. 6	4.2	
0	Yes	Needed	No		Photo Record Attached		Repair	Work Valid	O	No	
pipelines. leveraged FFS perfo	Comments Localized Fitness for Service (FFS) assessments were conducted at specific indications on Red Hill F-24 and JP-5 transfer bipelines. Selection of indications was limited to mechanical integrity principles under assumed service conditions, and everaged previous integrity management work. FFS performed, no repair required for defuel. Reference: EXWC - Comprehensive Repair List Recommendations / Pipeline Fitness for Service Assessment										
					CERTIFICATION						
I hereby cert	ify that repair	work validate	ed in this	QV ENG	INEER SIGNATURE	(b) (6)				
	ersonally sub	stantiated an			DATE	28 MAR 2	,				

QUALITY VALIDATION (QV) REPORT													
	Red Hill Bulk Fuel Storage Facility Defuel												
Valid	lation Firm	HDR Envi	ironmental	, Operatio	ns and Construction,	Inc.		Repair No.	177				
	Address	9781 S. M	/leridian Bl	vd., Suite	400, Englewood, CO	80112		Repair ID	F24.A22.0	09			
Co	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	28 MAR 2	2023			
Q	V Engineer	(b) (6)		Phone (b) (6	5)	Email	(h) (6)				
	VALIDATION												
Sou	irce	P	DF Page N	o.	Facility Geograph:	ic Area		Location	Reference				
EXWC		EXWC	_		(b) (3) (A)		(b) (3) ((A)					
Repair I	Description	necessary	_	FFS asses	ssment and repair if		Sour	ce Contract Reference	N3943020 TO N394302				
Description of Contractor QC Method(s) Used					d. Contractor QC Records Reviewed								
Vali	tion of QA idation and bservations	Update: I	Pipeline Fi	tness for S	ed EXWC - Comprehe Service Assessment Date: 08 MAR 2023	ensive Rep	oair List Re	commenda	ations				
	Rework	Needed	otance by go		Photo Record Attached	1	Repair Work Validated as Complete						
0	Yes	•	No		N/A		•	Yes	0	No			
pipelines. leveraged FFS perfo													
					CERTIFICATION								
		work validate		QV ENG	INEER SIGNATURE	(b) ((6)						
report was per report is true.		estantiated and this			DATE	28 MAR 2	2023	-					

			QUALITY VALIDATION (QV) REPORT					
		1	Red Hill Bulk Fuel Storage Fa	cility Defuel		Aller			
Validation Fi		pair No. 178							
Addre	ss 9781 S. M	Meridian Bl	vd., Suite 400, Englewood, CO	80112	Repair	20.00	.10		
Contract N	o. FA89031	5D0007, D	O.O. FA8903-19-F-0027			port Date 28 MAR	2023		
QV Engine	er (b)	(6)	Phone (b) (6	5) E	mail (b)	(6)			
		, ,	VALIDATION						
Source]	PDF Page N	lo. Facility Geograph	nic Area	Loca	tion Reference			
EXWC	EXWC		(b) (3) (A)	(b)	(3) (A)				
Repair Descripti	necessar	_	FFS assessment and repair if		Source Cont Refere	ract TO	20D2225 21F4207		
Description Contractor (Method(s) Us	of QC	work provi	Re	N/A Contractor QC Records Reviewed					
Description of Q Validation a Observation	Update:		nd approved EXWC - Comprehitness for Service Assessment	ensive Repair Lis	st Recommo	endations			
	Final acce	ptance by go	overnment. Date: 08 MAR 2023						
Rewo	ork Needed	ı	Photo Record Attache	d R	epair Work	Validated as C	ompl		
Yes	•	No	N/A	(Yes	· O	No		
pipelines. Selecti everaged previou FFS performed, n	on of indicati is integrity man	ons was ling anagemen ired for de		inciples under ass	sumed serv	rice conditions			
hereby certify that rep			QV ENGINEER SIGNATURE	(b) (6)					
eport was personally eport is true.	substantiated an	ia this	DATE	28 MAR 2023	R 2023				

	QUALITY VALIDATION (QV) REPORT											
]	Red Hill B	ulk Fuel Storage Fac	ility Defuel	l					
Valid	dation Firm	HDR Envi	ironmental	, Operatio	ns and Construction,	Repair No.	179					
	Address 9781 S. Meridian Blvd., Suite 400, Englewood, CO 80112							Repair ID	F24.A22.	11		
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	28 MAR 2	2023		
Q	V Engineer	(b) (e	6)		Phone (b) (6)	Email	(h) (G				
					VALIDATION							
Sou	urce	P	DF Page N	o.	Facility Geograph	ic Area		Location	Reference			
EXWC		EXWC			(b) (3) (A)	70	(b) (3) (A)				
Dent on long seam. FFS assessment and represent Description							Source Contract Reference N3943020D2225 TO N3943021F4207					
Cor	scription of ntractor QC nod(s) Used	1700 000 000 000 000 000 000 000 000 000	work provid	ded.				ntractor QC s Reviewed	N/A			
Val	otion of QA lidation and bservations	Update: I	Pipeline Fi	tness for S	ed EXWC - Comprehe Service Assessment	ensive Rep	oair List Re	ecommenda	ations			
	Rework	Needed	otance by go		Date: 08 MAR 2023 Photo Record Attached	. 1	Renair	Work Vali	dated as Co	mplete		
0	Yes	•	No		N/A		(Yes	0	No		
Localized pipelines. leveraged	Comments Localized Fitness for Service (FFS) assessments were conducted at specific indications on Red Hill F-24 and JP-5 transfer pipelines. Selection of indications was limited to mechanical integrity principles under assumed service conditions, and leveraged previous integrity management work. FFS performed, no repair required for defuel.											
Reference	e: EXWC	- Compreh	ensive Rep	oair List Re	ecommendations / Pip	eline Fitne	ess for Ser	vice Asses	sment			
					CERTIFICATION							
		work validate		QV ENG	INEER SIGNATURE	(b) (6)					
report was p	Signatura notari na 🕳 na sistema e regi	estantiated and this			DATE	28 MAR 2	2023					

QUALITY VALIDATION (QV) REPORT													
Red Hill Bulk Fuel Storage Facility Defuel													
Valida	ation Firm	HDR Env	ironmental	, Operation	s and Construction,	Inc.		Repair No.	180				
	Address	9781 S. N	/leridian Bl	vd., Suite 4		Repair ID	F24.A22.	12					
Co	ntract No.	FA89031	5D0007, D	.O. FA8903			Report Date	28 MAR 2	2023				
QV	Engineer	(b) (e	3)		6)	Email	/1 \ /0)					
VALIDATION													
Sour	ce	F	DF Page N	o.	Facility Geograph	ic Area		Location	Reference				
EXWC		EXWC			(b) (3) (A)		(b) (3	3) (A)					
Repair D	escription	necessary	_	FFS asses	sment and repair if		Source	ce Contract Reference	N3943020 TO N394302				
Description of Contractor QC Method(s) Used							N/A Contractor QC Records Reviewed						
Valid	ion of QA dation and servations	Update:			d EXWC - Comprehervice Assessment	ensive Rep	air List Re	commenda	ations				
		Final accep	otance by go	overnment.	Date: 08 MAR 2023	, in							
	936	Needed	2000	I	Photo Record Attached	1	0	(1880)	dated as Co	1/3700			
Committee	Yes	•	No		N/A		\odot	Yes	0	No			
Comments Localized Fitness for Service (FFS) assessments were conducted at specific indications on Red Hill F-24 and JP-5 transfer pipelines. Selection of indications was limited to mechanical integrity principles under assumed service conditions, and leveraged previous integrity management work. FFS performed, no repair required for defuel. Reference: EXWC - Comprehensive Repair List Recommendations / Pipeline Fitness for Service Assessment													
					CERTIFICATION								
I hereby certify				QV ENGI	NEER SIGNATURE	(b)	(6)						
report was per report is true.	isonany SUD	saniialeo an	น แแร	DATE 28 MAR 2023)23					

QUALITY VALIDATION (QV) REPORT												
]	Red Hill B	ulk Fuel Storage Fac	ility Defue	l	191				
Vali	dation Firm	HDR Env	ironmental	, Operation	ns and Construction,	Inc.		Repair No.	181			
	Address	9781 S. N	/leridian Bl	vd., Suite	400, Englewood, CO	80112		- 3	F24.A22.	13		
C	Contract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	28 MAR 2	2023		
Q	V Engineer	(b) (6)		Phone (b) (6)	Email	(h) ((3)			
VALIDATION												
Son	urce	I	PDF Page N	o.	Facility Geograph	ic Area		Location	Reference			
EXWC		EXWC			(b) (3) (A)		(b) (3) ((A)		90		
Repair	Description	necessar	•	FFS asses	ssment and repair if		Sour	ce Contract Reference	N3943020 TO N3943021			
Cor	escription of ntractor QC nod(s) Used	100000000000000000000000000000000000000	work provid	ded.	d. Contractor QC Records Reviewed							
JTF-RH reviewed and approved EXWC - Comprehensive Repair List Recommendations Update: Pipeline Fitness for Service Assessment Validation and Observations												
			otance by go		Date: 08 MAR 2023	. 1						
	88	Needed		}	Photo Record Attached	l .	_	(1889)	dated as Co	139av		
Commonto	Yes	•	No		N/A		\odot	Yes	O	No		
pipelines. leveraged	Fitness fo Selection previous i	of indication	ons was lir anagemen	nited to me t work.	ere conducted at spe echanical integrity pri							
0.50 2002 - HONO	ormed, no i				ecommendations / Pip	neline Fitne	es for Ser	vice Asses	sment			
. Colorello	o. 2,000	Jonipren	CHOITE INC	Juli Liot I C	CERTIFICATION			1.00 / 10000	o.nont			
Lhamb	Life , the at a second		ad in this	QV ENG	INEER SIGNATURE	(b)	(6)					
	tify that repair personally sub e.				DATE	28 MAR 2	2023					

			QUALI	TY VALIDATION (QV) REPO	RT					
			Red Hill B	ulk Fuel Storage Fac	ility Defue	l					
Validation F	irm HDR Env	rironmenta	I, Operatio	ns and Construction,	Inc.		Repair No.	185			
Addı	ess 9781 S. I	Meridian Bl	lvd., Suite	80112		Repair ID	F24.A22.1	17			
Contract	No. FA89031	5D0007, D	O.O. FA890		Report Date	28 MAR 2	023				
QV Engir	eer (b) (6)		6)	Email	/b) //	3)				
		•		VALIDATION							
Source	1	PDF Page N	lo.	Facility Geograph	ic Area		Location	Reference			
EXWC		NDAA, 72 Tank Gallery									
Repair Description patch plate on repair if necessary.							Source Contract Reference N3943020D222 TO N3943021F420				
Description of Contractor QC Method(s) Used							N/A Contractor QC Records Reviewed				
Description of Validation Observati	QA and			ed EXWC - Compreh Service Assessment	ensive Rep	pair List Re	commenda	ations			
	Final acce	ptance by go	overnment.	Date: 08 MAR 2023		Tr.					
Rew	ork Needed	17.70		Photo Record Attached	ı	Repair	Work Vali	dated as Co	mplete		
Yes	•	No		N/A		\odot	Yes	0	No		
pipelines. Select everaged previous FFS performed,	tion of indication of integrity menorepair required	ons was ling anagemen aired for de	mited to me t work. fuel.	vere conducted at speechanical integrity pri	nciples und	der assume	ed service	conditions,			
hereby certify that re			QV ENG	INEER SIGNATURE	(b)	(6)					
eport is true.	maetustams000001.41 55.73,165.1	uni Princip Al	DATE 28 MAR			2023					

	QUALITY VALIDATION (QV) REPORT											
]	Red Hill B	ulk Fuel Storage Fac	ility Defue	l					
Vali	dation Firm	HDR Env	ironmental	, Operatio	, Operations and Construction, Inc.				186			
	Address	9781 S. N	/leridian Bl	vd., Suite	80112		Repair ID	F24.A22.	18			
C	ontract No.	FA89031	5D0007, D	.O. FA890	3-19-F-0027			Report Date	28 MAR 2	2023		
Q	V Engineer	(b) (6	5)		Phone (b) (6)	Email	(h) (6)			
					VALIDATION							
Son	urce	F	PDF Page N	lo.	Facility Geograph	ic Area		Location	Reference			
EXWC		NDAA, 44	ı		Harbor Tunnel		(b) (3)	(A)				
Repair	Description	and repair	s of pitting r if necess		pipe wrap. FFS asse	ssment	Sour	ce Contract Reference	N3943020 TO N394302			
Description of Contractor QC Method(s) Used				ded.	ed. Contractor QC Records Reviewed							
Val	otion of QA lidation and bservations	Update:			ed EXWC - Comprehe Service Assessment	ensive Rep	oair List Re	ecommenda	ations			
			otance by go	overnment.	Date: 08 MAR 2023					CONTROL MANAGEMENT		
\circ	Yes	Needed	No		Photo Record Attached		Repair	Work Valid	dated as Co	Mo No		
Localized pipelines. leveraged	Comments Localized Fitness for Service (FFS) assessments were conducted at specific indications on Red Hill F-24 and JP-5 transfer pipelines. Selection of indications was limited to mechanical integrity principles under assumed service conditions, and leveraged previous integrity management work. FFS performed, no repair required for defuel.											
Reference	e: EXWC	- Compreh	ensive Rep	oair List Re	ecommendations / Pip	oeline Fitne	ess for Ser	vice Asses	sment			
					CERTIFICATION		(0)					
		work validate		QV ENG	INEER SIGNATURE	(b) ((6)					
report is true	Signatura notari na 🕳 na sistema e regi	estantiated and this			DATE	28 MAR 2	2023					